EPA PROGRESS REPORT 2012

PACIFIC SOUTHWEST REGION

EPA

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

From the Regional Administrator

Dear Readers,

Over the past year, I've seen many of the remarkable environmental successes EPA and our federal, state, local and tribal partners have accomplished across the Pacific Southwest.

These projects include building safe drinking water and wastewater infrastructure for Indian tribes, cleanups of toxic mine waste, solar-powered treatment of contaminated groundwater, and cleaner diesel engines in Los Angeles and the San Joaquin Valley.

We finalized California's No-Discharge Zone, which protects offshore waters by prohibiting the dumping of sewage by oceangoing vessels. And our enforcement actions in the Pacific Southwest last year will result in almost $4 billion in environmental improvements.

Meanwhile, air quality continues to improve in our urban areas. We're working with state agencies to control pollution in hundreds of water bodies. Sixty-one federal facilities have accepted our challenge to reduce their environmental footprints.

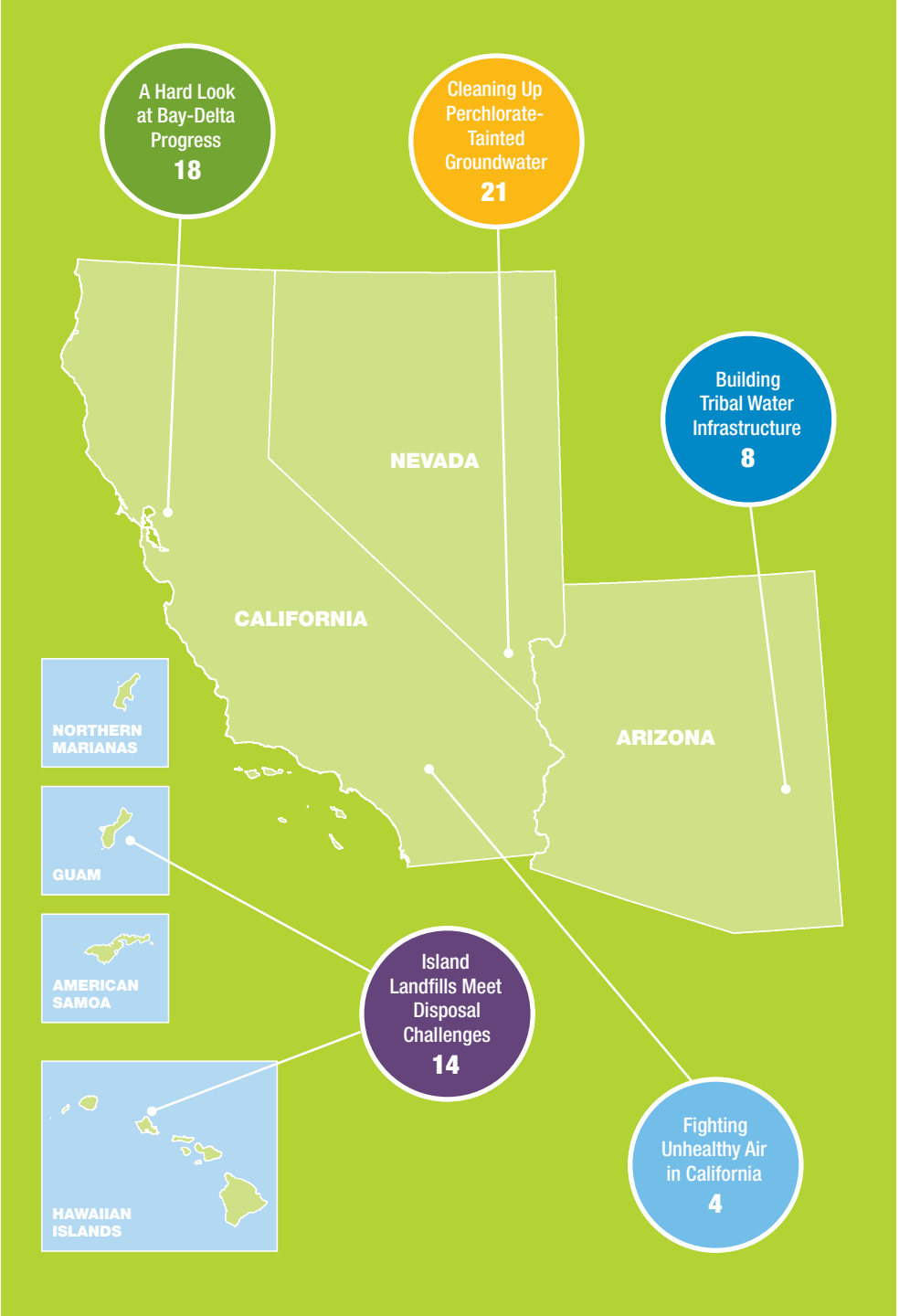
We're also proud to be part of the White House Council on Strong Cities, Strong Communities (SC2), collaborating with other agencies and city officials to spur economic development in urban areas like Fresno.

We invite you to learn more about our regional priorities at www.epa.gov/region9/strategicplan.

As all environmental issues are at their source local, we want to continue working with you in your communities to develop innovative and cost-effective solutions to protect public health and the environment throughout the Pacific Southwest.

Jared Blumenfeld
Regional Administrator
EPA Pacific Southwest Region

Cover: The California coast near Santa Barbara



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CLEAN AIR

Air Quality Improves Across Region

Since 1970, the Pacific Southwest's population has doubled, while the distance travelled by motor vehicles has tripled. Nevertheless, air quality has improved dramatically everywhere – though some areas still have a long way to go.

Decades of work brings results

We all breathe healthier air thanks to federal regulations stemming from the Clean Air Act of 1970 and the Amendments of 1977 and 1990 – such as the phaseout of leaded gasoline, and cleaner car and truck engines – along with actions at the state and local level intended to meet or exceed federal requirements (see charts, page 5).

The trend toward healthier air is evident even in California's South Coast (the Los Angeles area) and San Joaquin Valley – though these areas still have some of the nation's worst air quality. Both areas have met clean air standards for sulfur dioxide and carbon monoxide consistently since 2002. But levels of ozone (smog) and particulates, despite continuing improvement, have failed to meet health standards.

Since 2000, there have been new, tougher standards for ozone and particulates. In the 1990s, health studies found exposure to ground-level ozone to be harmful at lower levels and shorter time periods than previously known. Particulate pollution – dust, soot, and aerosols – was found to be harmful at smaller sizes, which can penetrate deeper into human lungs.

For these reasons, EPA more than a decade ago added new air quality standards for 8-hour exposure to ozone, and for fine particulates, known as $PM_{2.5}$. Under the Clean Air Act, states are responsible for submitting clean air plans to EPA that show how and when they will achieve the standards.

Fighting Unhealthy Air in California

Fine particulate pollution levels – first measured in 1999 – had improved by 43% in the South Coast by 2010, but only 14% in the San Joaquin Valley. Further clean air measures were needed.

New plans set aggressive goals

In 2011, EPA approved California's clean air plans for the Valley and South Coast, which include most of California's population. One goal of the plans is to achieve the national health standard for 8-hour ozone exposure within 12 years.

For the San Joaquin Valley, another goal is to reduce fine particulate pollution by 34% from 2009 levels, meeting the $PM_{2.5}$ standard by the end of 2014. The California Air Resources Board (CARB) predicts that on average, this will prevent 640 premature deaths per year in the valley.

As part of these plans, CARB had submitted three of the most innovative mobile source emissions rules in the nation, including the In-Use Diesel Truck and Bus rule, which affects more than 1 million diesel engines in California.

Dozens of local rules were upgraded to further reduce pollution from specific industries. For example, a San Joaquin Valley rule regulating confined animal feeding operations will reduce smog-forming volatile organic compound (VOC) emissions by 25 tons per day.

This year, EPA is preparing to act on at least 10 more San Joaquin Valley rules, including emissions limits for fumigants, oil wells and pipelines.

"When the Clean Air Act was signed over 40 years ago, the goal was to make sure every single American could breathe healthy air," says EPA Regional Administrator Jared Blumenfeld. "That promise has still never been realized in the San Joaquin Valley, so we're working with CARB and the Valley's Air District on a number of actions to make it happen."

EPA spotlight

AIR PLANNERS

Doris Lo, Frances Wicher and Wienke Tax (left to right) have over 60 years of combined experience at EPA working on air quality plans, permits, rules and enforcement. Most recently, the three worked closely to evaluate ozone and particulate matter plans for California's South Coast and San Joaquin Valley, and approve state and local regulations for these pollutants. Their expertise is much in demand, as California continues to develop new air quality plans for more stringent health standards.

Clean Technology for Cleaner Air

Advances in technology have brought far cleaner engines to new diesel trucks and locomotives. Now the challenge is to get cleaner engines into existing vehicles, which last for decades, and to speed adoption of other clean-tech advances.

Collaboration speeds deployment

EPA is making grants to vehicle fleet owners to hasten the replacement of dirty diesel engines, especially in areas with unhealthy air, like the South Coast and San Joaquin Valley.

In January 2012, EPA announced $7.9 million in grant funds to help fund cleaner diesel engines throughout the Pacific Southwest as part of the West Coast Collaborative. One of these grants helped pay for cleaner locomotives in the San Joaquin Valley, like the diesel-electric hybrid pictured at right. It's not only cleaner, but uses 50% less fuel than its predecessor on a freight line between Lodi and the Port of Stockton, Calif.

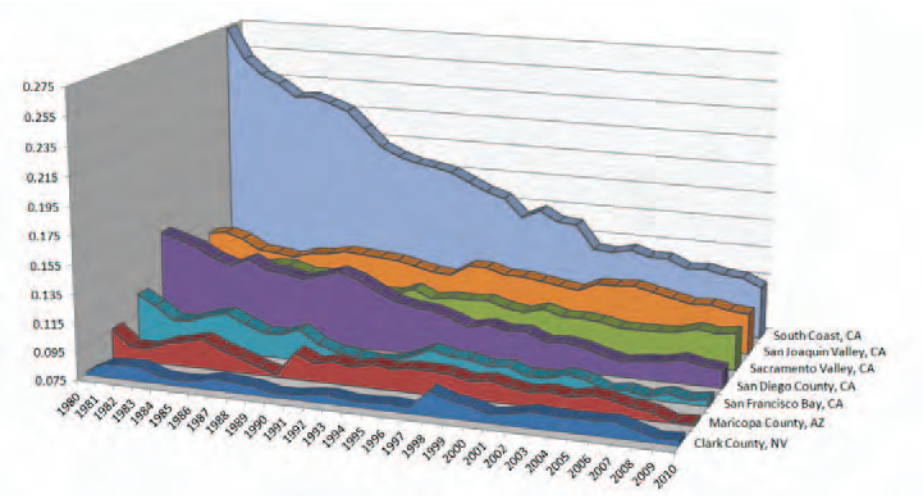
In February, EPA partnered with CARB, the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District to convene in Bakersfield with local governments, vehicle fleet owners, and dozens of innovative companies to accelerate development and deployment of cleaner technology for trucks and buses, including battery-electric, fuel cell, and hybrid vehicles. California's first electric school bus made its public debut there.

In parts of the Los Angeles area, diesel emissions from beer and soft drink delivery trucks are a significant part of the problem. To help ratchet down these emissions, EPA issued a $1.5 million grant to the South Coast Air Quality Management District to help pay for cleaner engines on beverage trucks in the heavily-impacted Boyle Heights area. The new fleet hit the roads in February 2012.

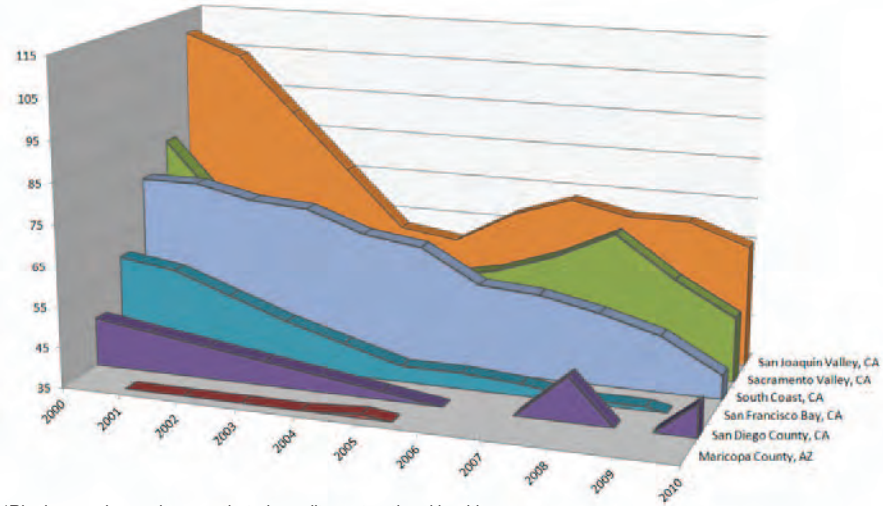
This new diesel-electric hybrid locomotive, purchased with partial funding from EPA, is cleaner and uses 50% less fuel than its predecessor on a freight line in California's San Joaquin Valley. Far right: Improved air quality in Los Angeles.

Air Quality Trends

Ozone (smog) Levels,* 1980-2010



$PM_{2.5}$ (fine particulate) Levels,* 2000-2010



*Blank areas in graph mean that air quality met national health standard during that period. For details on the data sources, go to www.epa.gov/region9/air/trends

CLEAN WATER

California's Impaired Waters

California has expanded water monitoring to more rivers, streams and lakes than ever before, more than doubling its list of polluted waters. EPA is working with the state's Water Boards to complete and implement hundreds of pollution control plans for these waters.

More waters tested, found polluted

Of California's 3 million acres of lakes, bays, wetlands and estuaries, more than half have been assessed, with 1.6 million acres failing to meet water quality goals. Of these, 1.4 million acres still need pollution control plans known as TMDLs (Total Maximum Daily Loads).

Of the state's 215,000 miles of shoreline, streams and rivers, about 45,000 have been assessed, with 30,000 miles not meeting water quality goals. The most common contaminants are pesticides, bacteria, dissolved metals, and oxygen-depleting nutrients.

Waterways added to the impaired list in 2011 include portions of the San Joaquin River, where high temperatures threaten salmon and trout.

The listings lead to development of TMDLs or other actions for these water bodies to restore them to swimmable, fishable conditions. Work is already underway to address waters currently listed.

The data show:

- More beaches, both inland and coastal, are on the list because bacteria reached unsafe levels for swimming.
- Trash impairment listings have increased by 76% due to better reporting. California's Trash Policy, now under development, will address impacts to wildlife and the Pacific Ocean.

- California's statewide sport fish monitoring has increased by 24% the number of waterways with fish that are unsafe to eat, often due to mercury levels.
- Waters impaired by pesticides increased 36%. California's Irrigated Lands Regulatory Program has achieved reduced pesticide levels in surface waters.

www.epa.gov/region9/mediacenter/impaired-waters

Restoring Napa River Watershed

In the Napa Valley, which has some of the nation's most valuable agricultural land, 40 vineyard owners are transforming 135 acres of riverbank to wildlife habitat to prevent floods and erosion and to restore salmon runs.

EPA grant builds on local stewardship

EPA and Napa County pooled nearly $3.3 million in federal, state and local funding to restore water quality as well as riparian and aquatic habitats in the Napa River watershed.

Steelhead trout and Chinook salmon populations in the Napa River have suffered steep declines as a result of sediment clogging the river and covering spawning gravel. Erosion has also degraded the river channel, severely reducing habitat for young fish. The 55-mile-long river is also prone to winter flooding.

"The Napa River represents one of the most important watersheds within the San Francisco Bay-Delta estuary for the recovery of regional steelhead and salmon populations," says EPA Regional Administrator Jared Blumenfeld. "This $1.5 million EPA grant will help manage erosion, improve spawning gravel, and create habitat."

The grant builds on more than two decades of local stewardship involving landowners, Napa County, elected officials and partner agencies.

The project will help restore water quality by:

- restoring river function to improve fish habitat
- eradicating invasive Giant Reed and planting native riparian trees
- assisting ranchers in reducing erosion, and implementing practices to reduce sediment runoff from rural roads and stream crossings

The project is one of dozens funded by EPA in the San Francisco Bay Area to implement TMDLs and watershed plans (see map, next page).

www.epa.gov/region9/mediacenter/napariver

Building Tribal Water Infrastructure

Many areas on tribal lands still lack basic drinking water and wastewater services. With federal funding, construction is underway or completed on 12 drinking water projects and 42 wastewater treatment projects.

Recovery Act projects benefit 16 tribes

With funding from the 2009 American Recovery and Reinvestment Act, EPA issued grants to more than a dozen tribes totaling $30.7 million to build drinking water and wastewater facilities in areas lacking adequate infrastructure. EPA is working with the Indian Health Service and the tribes to oversee construction.

The drinking water projects are providing potable water in areas where local springs and groundwater supplies are insufficient or have unsafe levels of arsenic, uranium, fluoride or bacteria. Some homes at Navajo Nation and Hopi Tribe are receiving piped water for the first time.

By January 2012, the completed facilities had brought safe drinking water to more than 3,000 tribal homes, and improved wastewater treatment facilities to serve over 2,400 homes. More than 11,000 homes will be served when all projects are finished.

On the Navajo Nation, EPA funded 26 septic tank and drainfield replacement projects in 25 communities. The new septic tanks are made from 85%-100% recycled plastic and the drainfields are made from 100% recycled materials.

At the White Mountain Apache Tribe's reservation in Arizona, the White River Surface Water Treatment Plant allows 1,667 homes to supplement a declining well field with river water. The system's innovative design features will save the tribe $54,000 annually in energy costs compared to a traditional treatment plant.

EPA spotlight

ERSKINE BENJAMIN II

Erskine Benjamin oversees EPA funding to Indian tribes to build wastewater and drinking water facilities. His biggest project this year is a secondary wastewater treatment system under construction on the Tule River Indian Reservation near Porterville, Calif. It will replace 268 home septic systems, many of which are old and failing. Erskine joined EPA in 2009 and has bachelor's and master's degrees in engineering from the University of Florida in Gainesville and the Georgia Institute of Technology.

Map: For more information on EPA-funded water projects in the San Francisco Bay watershed, visit www.epa.gov/region9/water/watershed/sfbaywqfund

San Francisco Bay Water Quality Improvement Fund Projects

CLEAN LAND

Mine Cleanups: A Toxic Legacy

Mining has historically pumped up the economy of western states, but left thousands of abandoned mines, some of them releasing toxics into the environment. EPA helps clean up the worst of them.

New Idria: Halting mercury, acid mine drainage

About 150 miles southeast of San Francisco, Calif., New Idria (pictured at left) was North America's second most productive mercury mine. Though out of sight and out of mind to Bay Area residents, its runoff polluted creeks, wetlands, and even San Francisco Bay.

New Idria's acidic water flowed over waste rock and tailings, picking up highly toxic, bioaccumulative mercury, and moving it into creeks and wetlands that are a magnet for wildlife in this arid region, including the California Condor and San Joaquin kit fox.

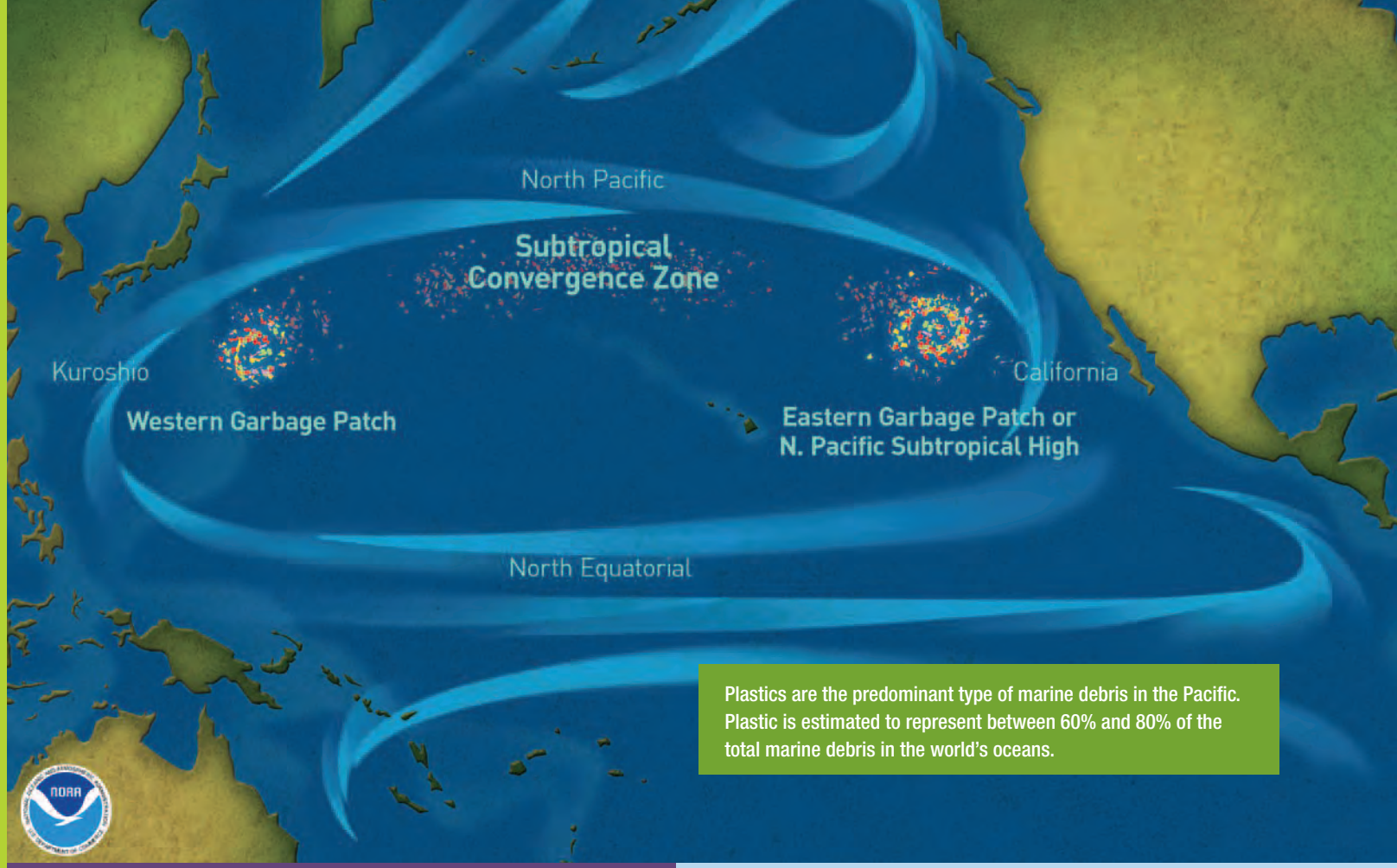
In 2011, EPA re-routed acid mine drainage around waste rock and tailings into a limestone splash pad and retention pond, removing contaminants and acidity. While additional work will be needed, EPA has reduced a dangerous source of mercury pollution in the San Joaquin River and San Francisco Bay.

Skyline Mine: Removing radioactive dirt

At Oljato Mesa, near Monument Valley on the Arizona-Utah border, EPA contractors toiled for 200 days in 2011 to move 25,000 cubic yards of radioactive mine waste to a repository near the abandoned Skyline Mine.

The site was one of more than 500 abandoned uranium mines investigated by EPA and the Navajo Nation in the

Story continues, p. 14



Plastics are the predominant type of marine debris in the Pacific. Plastic is estimated to represent between 60% and 80% of the total marine debris in the world's oceans.

As much as 80% of marine debris is from land-based sources

Starting as litter, it gets washed into storm drains and streams, enters the ocean, and breaks down into smaller pieces that are mistaken for food and eaten by fish and wildlife, often killing them. Some of it washes up on beaches; the rest drifts endlessly as tiny particles in the ocean gyres.

EPA's Pacific Southwest Region has developed a Marine Debris Strategy, using existing EPA resources and working with an array of partners to address the problem – both on land and in the open ocean. The strategy includes waste minimization and trash reduction from stormwater discharges, as well as investigating potential cleanup approaches in the ocean. EPA is also working collaboratively to monitor migration of debris from the 2011 tsunami in Japan.

Image credits / This page: NOAA Facing page, top left: © Mike Kahn/Green Stock Media top right: EPA bottom left: NOAA bottom right: © Chris Jordan, courtesy of Kopeikin Gallery p.16-17: Heather Heinks, City of Fresno / p.19, top right: Veronica Weber/*Palo Alto Weekly*

NO DUMPING!
FLOWS TO BAY

past decade. The Navajo Nation made Skyline Mine a priority, since there are homes close by.

Bulldozers scraped radioactive soil into a pile at the bottom of the mesa. A cable yarder – an aerial cable car – moved the waste to the top, conserving energy and preventing air pollution. The repository, a shallow pit, was sealed with high-density polyethylene (HDPE), then covered with local soil and rock.

EPA spotlight

JASON MUSANTE

Jason Musante is one of four Superfund On-Scene Coordinators based in Long Beach, Calif. He has 12 years experience in toxic cleanups, from the Westly (Calif.) Tire Fire in 2001 to last year's Kalamazoo River oil spill.

Jason was on the Navajo Nation for five months overseeing removal of uranium mine waste (see story). But first, he worked with the Navajo EPA and local residents to find a safer place for it.

Island Landfills Meet Disposal Challenges

Trash disposal on islands poses special challenges. EPA oversaw emergency repairs to Oahu's only municipal landfill, and Guam opened its long-awaited, environmentally protective landfill.

Oahu trash spill closed beaches

Honolulu has only one municipal solid waste landfill – Waimanalo Gulch. On January 12, 2011, the gulch was pounded by 11 inches of rain, and a temporary storm drain system overflowed, washing trash and medical waste downstream. Some of it turned up on nearby beaches. Local officials closed beaches, as well as the saturated landfill.

At the Hawaii Department of Health's request, EPA worked with landfill managers right away to clean up the waste, make short-term repairs, and complete a larger, permanent storm drain system. EPA ordered landfill operators to functionally complete the storm-water drainage system and repair the landfill liners before reopening.

Oahu's trash had nowhere to go, and began piling up. A team of EPA scientists and engineers examined the work at the landfill, and allowed it to reopen on January 28. Heavy rainfall resumed, but there were no more overflows. In November, EPA ordered Honolulu and landfill operators to increase Waimanalo's capacity to divert stormwater.

Quick action had avoided a potentially catastrophic release of trash-contaminated water. Improved stormwater controls now protect the health of Oahu's residents, visitors and shoreline environment.

Guam's new Layon Landfill opens

On August 31, 2011, Guam residents celebrated the long-awaited closure of the Ordot dump Superfund site, and the opening of the new, environmentally protective Layon Landfill to receive the island's municipal solid waste that is not recycled.

The Ordot dump had continually discharged leachate into the nearby Lonfit River and sometimes polluted the air when it caught fire. The new landfill meets or exceeds federal and Guam requirements for protecting the island's environment.

Sun Powers Groundwater Cleanups

Cleanups of toxic sites should not add to other environmental problems, like air pollution. EPA's latest examples of "greener cleanups" are two sites run by solar power near Sacramento, Calif.

Frontier Fertilizer site goes solar

For the first time, the sun is providing 100% of the power for a Superfund groundwater cleanup. By installing solar panels on half an acre, the Frontier Fertilizer site in Davis, Calif., reduced energy costs by $15,000 a year and CO_2 emissions by more than 54 metric tons a year.

In addition to using solar panels, the site is using an innovative in-place electrical heating system to extract pesticides and fertilizers from the soil and groundwater. This 1-1/2-year treatment will reduce the time for groundwater cleanup by about 150 years. Extraction wells collect gas and liquids generated by the heat, which are then treated with granular activated carbon.

These improvements were funded by more than $2.5 million from the American Recovery and Reinvestment Act.

www.epa.gov/region9/mediacenter/solarpanels

Aerojet cleanup expands

The largest photovoltaic solar power system at a Superfund site is at the 13-square-mile Aerojet site near Rancho Cordova in Sacramento County, one California's largest groundwater cleanups.

The latest phase started in September 2011, when EPA ordered a $60 million cleanup of groundwater polluted with rocket fuel. A 27-square-mile swath of groundwater beneath the former aerospace facility is polluted with very high levels of perchlorate – a main component of rocket fuel and a known developmental toxin.

Aerojet, under the direction of EPA, will contain the underground plume to prevent it from spreading into nearby rivers and streams, and purify 25 million gallons of groundwater daily to prevent the loss of additional drinking water supplies.

www.epa.gov/region9/aerojet

RESTORING GROUNDWATER IN THE SAN GABRIEL VALLEY

Over the course of decades, the huge aquifer underlying southern California's San Gabriel Valley was contaminated by the activities of hundreds of industrial facilities, resulting in several Superfund cleanup sites. The South El Monte Operating Unit is just one of many areas requiring cleanup.

EPA's team of technical experts and attorneys have recovered $23 million from more than 60 parties at South El Monte over the past 10 years to help pay for cleanup of the three-trillion-gallon San Gabriel Basin groundwater aquifer, which serves as the primary source of water for most of the San Gabriel Valley's one million residents. Through their determined efforts, more than $6 million was recovered from 18 companies in the past year alone.

A A cable yarder at the abandoned Skyline Uranium Mine on the Navajo Nation removes radioactive mine waste to a safe repository. B EPA helps repair Honolulu's Waimanalo Gulch Landfill after a heavy storm washed medical waste onto beaches. C EPA's Greg Nagle with water monitoring data transmitter at New Idria Mercury Mine Superfund site, San Benito County, Calif. D EPA and Guam EPA staff join with other key contributors to celebrate the permanent closure of the polluting Ordot Dump on Guam.

COMMUNITIES & ECOSYSTEMS

Strengthening Urban Communities

Cities deal with myriad issues, including economic development, pollution and infrastructure. EPA and other federal programs help bring jobs and lasting improvements.

Feds support Fresno's revitalization efforts

Fresno, Calif., was selected as one of six pilot cities nationwide for the federal Strong Cities, Strong Communities (SC2) initiative. EPA is leading a team of federal agencies to assist city officials in efforts to revitalize Fresno's downtown area and grow the local economy.

EPA Community Planner Suzanne Hague, based at Fresno's City Hall, is integrating the planning for a future high-speed rail station with the city's downtown revitalization plans. She is part of the Fresno Community Solutions Team, which includes people from 12 federal agencies, including Housing and Urban Development, Transportation, Agriculture, and Commerce.

The team works with the city to leverage funds and support local projects to encourage economic growth and community development. SC2 also aims to encourage partnerships among community organizations, anchor institutions, businesses, foundations and government agencies.

"The SC2 team has been a terrific partner in contributing to the development of 'ground-up' solutions tailored to our needs, refining lasting partnerships with key local and regional stakeholders, and working to remove roadblocks accompanying federal programs that directly affect our city," says Mayor Ashley Swearingen.

The SC2 intiative is strengthening local capacity and economic growth in five additional cities: Chester, Pa.;

Cleveland, Ohio; Detroit, Mich.; Memphis, Tenn.; and New Orleans, La.

By integrating government investments and partnering with local communities, SC2 helps empower cities as they implement their visions for economic growth.

Bay Area communities leverage cleanups

In **East Palo Alto**, Calif., EPA's Brownfields program provided funding and worked with city officials to clean up toxic contaminants at **Cooley Landing**, a former dump on San Francisco Bay where trash had been burned more than half a century ago.

Today, the city is transforming the 15-acre peninsula into its first bayside park and a valuable community resource.

In **San Jose**, the largest city in Silicon Valley, EPA funding helped restore fish and wildlife habitat along **Coyote Creek**, a perennial stream which runs through the city.

The creek had been plagued with trash coming from stormwater outfalls, as well as homeless encampments. The city's four-year pilot program is built on engaging neighbors as creek stewards and deterring dumping and litter.

www.epa.gov/region9/superfund/cooley
www.epa.gov/region9/mediacenter/cleancreeks

Green jobs funding aids South Tucson

EPA awarded a $300,000 grant to the city of South Tucson, Ariz., to recruit, train and place unemployed, low-income residents in jobs to clean up polluted sites for reuse.

The program will put 39 trainees through a 28-week training cycle with courses on hazardous waste operations, asbestos and lead inspections, underground storage tank operation and cleanup, and green and alternative cleanup practices.

"Our residents, community organizations, and employers look forward to working with the EPA to change lives and substantially improve our city," said South Tucson Mayor Jennifer Eckstrom.

Since 1998, EPA has awarded more than $35 million under the Environmental Workforce Development and Job Training Program. By the end of 2011, more than 6,700 people had been trained, and more than 4,400 placed in full-time jobs in the environmental field.

www.epa.gov/brownfields/job.htm

A Hard Look at Bay-Delta Progress

EPA is collaborating with other agencies to revitalize efforts to balance California's water supply needs with those of fish and wildlife in the San Francisco Bay-Delta Estuary.

Agencies examine estuary stressors

With California's water resources facing ever-increasing demands, state and federal agencies are bringing a new level of attention to the state of the West's largest estuary. As part of this effort, EPA is reviewing its water quality programs to gauge their success and identify actions needed.

EPA's review, which was triggered by the plummeting numbers of salmon and other fish species over the last 10 years, has shown that state and federal programs under the Clean Water Act have not stemmed the decline of the estuary's aquatic resources. One species, the Delta smelt, had declined to such low levels in 2010 that fishery scientists feared it could become extinct at any time.

Seven stressors affecting fish were considered in EPA's review: ammonia, selenium, pesticides, emerging contaminants, declining estuarine habitat, fragmented migratory corridors for fish, and wetlands loss.

EPA spotlight

SUZANNE HAGUE

Suzanne Hague is EPA's Community Planner in Fresno, Calif., supporting the White House's Strong Cities, Strong Communities Initiative. Suzanne's expertise is in urban planning and community revitalization.

In Fresno, she is providing technical assistance to several city planning and development projects and helping coordinate city plans with regional and state initiatives such as high speed rail.

Before joining EPA, Suzanne was Deputy Project Manager for the New Orleans Master Plan.

EPA's review highlighted the following priority activities to work on in partnership with California water quality agencies:

- update the state's water quality standards that protect the Bay-Delta Estuary habitat, consistent with recent science
- advance regional water quality monitoring in the Central Valley
- improve implementation of watershed plans, including Total Maximum Daily Loads
- provide relevant water quality data for EPA's pesticide registration reviews
- develop methylmercury controls in wetlands

EPA has launched a new website on Bay-Delta issues that includes extensive public comment that was received as part of its review.

www.epa.gov/sfbaydelta

A Garden at Lincoln School in Richmond is part of a project to reduce polluted runoff going into San Francisco Bay. B East Palo Alto officials break ground at Cooley Landing, where a former dump site has been cleaned up and is being redeveloped into a bayside park. C EPA Administrator Lisa Jackson talks in San Francisco with Luminalt workers, who installed a solar array on this rooftop. D Tidal wetlands in the San Francisco Bay National Wildlife Refuge benefit from projects in map on p. 9.

A

B

C

D

COMPLIANCE & STEWARDSHIP

Enforcement Efforts Span Region

Every year, EPA takes hundreds of enforcement actions against violators of federal environmental laws. Beyond exacting a price for wrongdoing and requiring investment in solutions, these actions serve as a strong incentive for compliance everywhere.

Actions gain air, land, groundwater cleanups

States and some tribes are delegated authority to enforce federal environmental laws, extending EPA's enforcement reach much further. This means EPA's enforcement actions are just a fraction of the enforcement picture. Some of 2011's most significant EPA cases included:

- **CalPortland Company,** a cement and building materials manufacturer, is paying a $1.425 million penalty to resolve alleged violations of the Clean Air Act at its cement plant in Mojave (Kern County), Calif. The facility must also spend an estimated $1.3 million on air pollution controls.
- A $1 million settlement with **Chemical Waste Management's** Kettleman City, Calif., hazardous waste landfill requires the facility to use an outside lab to accurately analyze the waste being deposited in the landfill. The facility had disposed of liquid leachate from the landfill without assuring that it met treatment standards.
- **Tronox**, a Henderson, Nev., rocket fuel manufacturer, released approximately 40 million pounds of perchlorate into soil and groundwater. Some of it reached Lake Mead, Las Vegas' main drinking water source. As part of a nationwide bankruptcy settlement, Tronox allocated $81 million for cleanup. Currently, a

treatment system removes 1,900 pounds of perchlorate daily from the groundwater.

- **Columbus Foods**, a food processor in South San Francisco, Calif., will spend about $6 million converting to a safer technology after it leaked poisonous ammonia gas into the air twice in a single year. In the second instance, 17 people were hospitalized. EPA's enforcement action also requires Columbus to pay a penalty of $685,000 and improve its alarm and ammonia release notification procedures.
- Ventura County, Calif., contractor **Thomas Staben** will pay a $225,000 penalty for dumping 40,000 cubic yards of material into five acres of Calleguas Creek, the main fresh water source for the coastal Mugu Lagoon Estuary. As part of the settlement, Staben will also spend at least $500,000 removing the fill and restoring the creek's natural functions.

Federal Green Challenge Takes Off

The federal government, as the nation's largest landlord and biggest buyer of goods, services and energy, has huge environmental impacts. EPA's Federal Green Challenge seeks to reduce those impacts and lead by example.

Federal agencies reduce environmental impact

EPA launched the West Coast Federal Green Challenge in April 2011 with commitments from 34 federal facilities to reduce their environmental impacts by at least 5% annually in at least two of six areas: waste, water, energy, transportation, electronics and purchasing.

Due to the success of the West Coast initiative, the Federal Green Challenge launched nationally in late 2011 and the Pacific Southwest now has 61 partners, employing over 243,000 people. Participants include the Navy, Forest Service, several national parks, and Postal Service.

Participants undertake various projects to reduce their impact, including environmentally preferable purchasing, when agencies buy less or choose "green" products. One participant, the Lawrence Livermore National Laboratory in California, has already phased out the use of polystyrene foam in cafeterias, reduced landfill waste by 26%, reduced paper purchases by 21%, and recycled 100% of old electronic equipment. As a result, the reductions in greenhouse gases from the lab are equivalent to removing 125 cars from the road.

The federal government buys $425 billion of goods and services annually, including 7% of the entire world's IT purchases. Its real estate portfolio includes 550,000 buildings.

www.epa.gov/fgc

A

B

Art Contest Targets Trash in Oceans

Earth Week at EPA's Pacific Southwest Regional Office in 2011 included an art exhibit and awards event for 25 student finalists in an art contest.

More than 200 students submit creative works

EPA challenged K-12 students in San Francisco Bay Area schools to use art to communicate the pressing issue of marine debris. More than 200 students submitted highly creative works. Their drawings, paintings, posters and 3D works used various media, including found or recycled materials. Many of the winning artworks used actual debris found on beaches.

"Every work was beautiful and inspiring," said Bill Glenn of EPA's Office of Public Affairs, who helped organize the contest. Regional Administrator Jared Blumenfeld presented awards to all 25 finalists, their teachers, and grand prize winners. Other guests included family members and noted local artists Judith Selby Lang and Eli Noyes.

Ms. Lang used flotsam she picks up every day from Kehoe Beach in Point Reyes National Seashore to create a marine debris installation at San Francisco's Museum of Modern Art. Mr. Noyes created the U.S. Postal Service's "Go Green" stamps, illustrating 15 ways people can protect the environment in everyday actions.

Marine debris is a global concern, and the students' art works highlight the environmental problems caused by waste in our oceans. The trash threatens seabirds, turtles and other wildlife, who mistake tiny bits of plastic for food (see the centerfold, p. 12-13, to learn more).

www.epa.gov/region9/artcontest

EPA spotlight

MARTHA VEGA

Martha Vega serves as Administrative Officer for EPA's Pacific Southwest Waste Division. She processes, disburses, and meticulously tracks the division's entire $24 million budget.

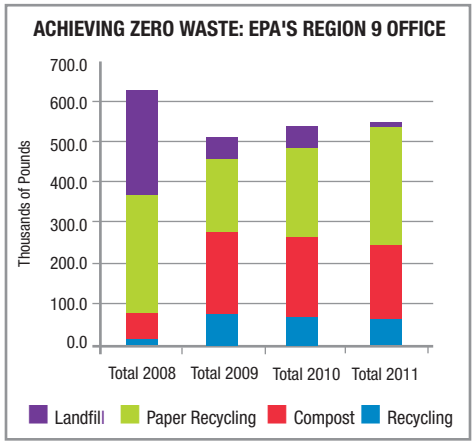
This includes grants to states for salaries of hazardous waste inspectors, salaries for her own division's 80 staff and managers, travel reimbursements, even hiring translators for public meetings in neighborhoods where most residents speak Spanish.

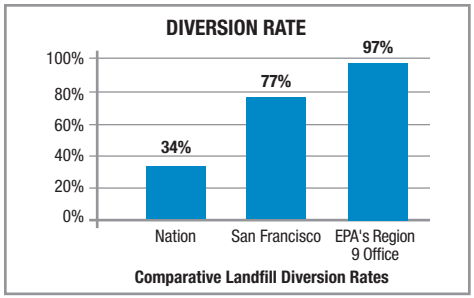
"I make sure the funding is there to get the environmental work done," she says.

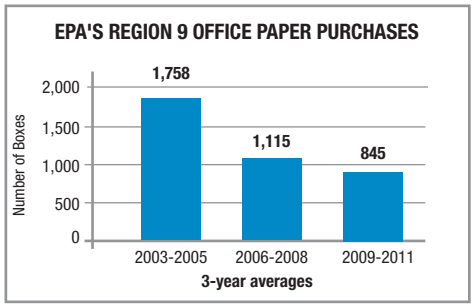
A The Federal Green Challenge involves 61 partners with 243,000 employees in reducing environmental impacts of their facilities in the Pacific Southwest. B The National Park Service has installed solar panels on the roof of the Alcatraz Island cell block. C EPA Regional Administrator Jared Blumenfeld presents awards to winners in 2011 Earth Day Art Contest. D This work by a second-grade class at San Francisco's Children's Day School was one of five grand prize winners in the Earth Day Art Contest.

Shrinking Our Footprint

We at EPA's regional office for the Pacific Southwest are striving to REDUCE our footprint. In 2011, we met our ZERO WASTE goal – by keeping 97% of our waste out of landfills.







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Look inside this back cover to learn more about our shrinking footprint.

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