



Report on

**Pollution Prevention
Accomplishments in
Region 9**

Fiscal Year 1994

**U.S. Environmental Protection Agency
Region 9
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FOREWORD

I am pleased to share with you the Report on Pollution Prevention Accomplishments in Region 9 for Fiscal Year 1994.

EPA Region 9 is proud of the progress we have made in 1994. We are continuing to incorporate pollution prevention into all aspects of our regulatory and enforcement work, including innovative settlements of cases that result in creative pollution prevention approaches. We are providing the guidance and funding for states to develop ongoing pollution prevention programs, which will serve as incubators for innovative regional and national pollution prevention efforts. We are forming close working relationships with local governments and industry partners, where we are playing the role of facilitator, convenor, and partner to provide the most effective dissemination of new pollution prevention practices. With the new Environmental Justice through Pollution Prevention grant program, we are empowering communities hardest hit by environmental degradation to address their problems through pollution prevention. We also are working to reduce pollution in our own operations, to serve as a model for other government agencies and the private sector.

There is, of course, much progress to be made. But if this year's activities are any indication, Region 9 will continue to be a leader in promoting pollution prevention as the "principle of choice" for protecting the environment.



Felicia Marcus
Regional Administrator

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INTRODUCTION

Environmental management is at a crossroads. EPA has made significant progress in improving and protecting the environment by targeting the most blatant pollution sources with strict standards and pollution control requirements. The traditional approach stresses treatment and disposal after pollution has been created. But it has become increasingly clear that the nation's environmental goals will not be met by those means alone. The remaining environmental problems are compound and complex.

Pollution prevention seems a common-sense and logical way to meet those goals — reducing or eliminating pollution before it is created. Pollution prevention requires government agencies to move beyond end-of-the-pipe pollution control and promote new ideas and technologies to reduce pollution production. It requires industries to review how they do business, and to recognize the economic as well as the environmental benefits of preventing pollution before it is created. It requires consumers to be discerning in making product and service choices. It requires all parties to take a more holistic view of their activities, to break out of their program or media specific boundaries.

This report summarizes Region 9's progress toward integrating pollution prevention into its activities. Detailing regional accomplishments between July 1993 and October 1994, it builds on the accomplishments described in previous reports published in 1992 and 1993. The state and local programs described in this report have received funding from EPA, which complement the wide range of other state and local pollution prevention efforts. EPA is committed to encouraging new approaches through greater flexibility in its grants and program requirements.

What Is Pollution Prevention?

The EPA defines pollution prevention as:

The use of materials, processes, or practices that reduce or eliminate the creation of pollutants or wastes at the source. It includes practices that reduce or eliminate the use of hazardous materials, energy, water, or other resources and practices that protect natural resources through conservation or more efficient use.

In passing the Pollution Prevention Act of 1990, Congress established pollution prevention as the option of first choice for environmental protection. EPA has moved quickly to adopt and integrate this goal into its activities. EPA's 1991 Pollution Prevention Strategy provided guidance on incorporating pollution prevention into ongoing programs. These directives have been strengthened by Administrator Browner's 1993 policy statement on pollution prevention, and President Clinton's executive orders on pollution prevention in the federal government.

This report is organized under the seven themes articulated by Administrator Browner in a 1993

Earth Day speech. These reflect Region 9's commitment to incorporate pollution prevention into all activities and to break down traditional programmatic barriers. The themes are:

- Theme 1:** Incorporating multi-media prevention as the principle of first choice in all mainstream activities of EPA.
- Theme 2:** Building a national network of prevention programs among state, local, and tribal governments.
- Theme 3:** Expanding collaborative programs that emphasize cross-media prevention, reinforce the mutual goals of economic and environmental well-being, and represent new models for government/private sector interaction.
- Theme 4:** Increasing EPA's efforts to generate and share information to promote prevention and track progress through measurement systems such as the Toxic Release Inventory (TRI).
- Theme 5:** Developing partnerships in technological innovation with other agencies and the private sector to increase industrial competitiveness and enhance environmental stewardship.
- Theme 6:** Developing partnerships with other federal agencies to create major opportunities for pollution prevention through investments in new technologies, and through policies that shape decisions in agriculture, energy, transportation, and the management of natural resources.
- Theme 7:** "Leading by doing." Reducing or eliminating pollutants generated from EPA operations.

POLLUTION PREVENTION ACCOMPLISHMENTS

Theme 1: Incorporating multimedia prevention as the principle of first choice.

To promote the goal of this theme, the Pollution Prevention Team continues to offer a three hour "Pollution Prevention Orientation" training to Region 9 employees. In addition, each media Division in Region 9 now has a Pollution Prevention Coordinator, to provide information to Division staff and to help integrate pollution prevention into the Division's activities. As an example, the Hazardous Waste Management Division has formed three pollution prevention project teams composed of two waste minimization coordinators, seven staff and a student co-op.

A. Enforcement and Supplemental Enforcement Projects (SEPs)

EPA incorporates pollution prevention into compliance and enforcement activities as a principle of choice. EPA's program divisions and the Office of Regional Counsel may negotiate with companies in violation to include, as part of the payment of the penalty, part of the cost of a pollution prevention project. These projects are called Supplemental Environmental Projects (SEPs). Examples of FY94 enforcement actions with pollution prevention elements include:

1. U.S. Naval Air Facility

As part of a recent settlement under the Resource Conservation and Recovery Act (RCRA), the U.S. Naval Air Facility at El Centro, California, agreed to perform two SEPs that involve pollution prevention. The two projects are as follows:

a. Jets Parts Washers

This project involves the purchase and installation of six jet parts washers to clean and degrease airplane parts. The new equipment uses detergent and high-velocity water jets in lieu of solvents. The new equipment will achieve a 90 percent reduction in hazardous waste generated from cleaning and degreasing parts, and a 100 percent elimination of solvents used in degreasing.

b. Hazardous Waste Minimization Center

This project establishes a hazardous waste minimization center at the Naval Base. The program is based on the following waste minimization principles:

- Centralized ordering of hazardous material: Consolidating orders eliminates individual over-ordering and reduces the potential for hazardous material to expire on the shelf and become a hazardous waste.
- Centralized delivery and control: Warehouse employees deliver only the quantity of hazardous material needed by the customer for present use, retaining control of the container. This procedure reduces the volume of material at individual work sites and the likelihood of improper handling and disposal of a hazardous material container.
- Substitution and alternative use: Where possible, warehouse management provides acceptable alternative material, reducing the volume and variety of hazardous material purchased.

The goals of this hazardous waste minimization program are to reduce hazardous waste generated at the El Centro Naval facility by 25 percent and reduce hazardous material line item inventory at the facility by 40 percent. For more information, contact Lewis Maldonado at (415) 744-1392.

2. Municipal Wastewater Reclamation

Through its National Pollutant Discharge Elimination System (NPDES) enforcement settlements, Region 9 has developed SEPs that involve municipal wastewater reclamation with the City and County of Honolulu and with the County of Los Angeles. EPA and the Hawaii Department of Health (HDOH) reached a settlement with the City and County of Honolulu to improve its sewage collection system and industrial pretreatment program after the City and County allowed several hundred sewage spills over a five-year period and failed to regulate the discharges of toxics from industries. The City and County agreed to pay a \$1.2 million penalty, and have committed to implement projects valued at \$30 million to recycle 10 million gallons of treated wastewater per day and 10 tons of sludge per day. For more information, contact Steve Fuller at (415) 744-1887.

The County of Los Angeles will be required, as part of a consent decree, to prepare by December 1995 a plan that evaluates the potential for beneficial reuse of reclaimed water; the consent decree also sets a goal of 150 million gallons per day (MGD) of beneficial reuse by 2002. For more information, contact Nancy Yoshikawa at (415) 744-1161.

3. National Semiconductor Corporation

A Supplemental Environmental Project was developed for the National Semiconductor Corporation in San Jose, California. As part of their fine for violating Clean Water Act (CWA) standards for copper and silver, National Semiconductor redesigned its operations to reuse process wastewater in order to reduce the amount of water used, and ultimately treated and discharged, at the facility. In addition, an ion exchange system was put into the process as a way to recover silver in the waste stream. For more information, contact Greg Arthur at (415) 744-1900.

4. Preventing Erosion at Construction Sites in California

In 1994, EPA and the State Regional Water Quality Board - San Diego Region, inspected dozens of construction sites in rapidly growing Riverside County, CA. Inadequate erosion control at the sites contributed to significant sediment deposition in area waters. A State order and numerous inspections brought a significant improvement in the applications of best management practices (BMPs) throughout most of the sites. Silt fences, sandbag dikes, jute matting, sediment basins, sediment traps, seeding, and mulching are now more widely used. For more information, contact Juliet Hannafin at (415) 744-1902.

5. Sea Life Park

Under terms of an NPDES enforcement consent order with Sea Life Park in Hawaii, the Park is putting together an environmental education project for 5th and 6th graders in public schools. The project will be conducted in two phases: 1) *Wildlife, Marine Debris and You*; and 2) *Aquatic Pollution - Its Effects and How to Prevent and Correct It*.

B. NEPA Review

In keeping with the objective of preventing pollution, the Office of Federal Activities (OFA) provides pollution prevention guidance in the form of proactive cross-media recommendations to all agencies undertaking major federal actions pursuant to the National Environmental Policy Act (NEPA). For example, OFA comments ranged from providing guidance on reducing or eliminating PM-10 emissions from proposed construction activities to recommending the incorporation of EPA's Green Lights program and other conservation measures into project designs.

C. Permitting

The Clean Water Act Amendments of 1987 require EPA to establish an NPDES permit program for stormwater discharges. State water quality agencies in California, Hawaii and Nevada issue NPDES permits, and Region 9 issues permits in Arizona. As part of the permit process, certain industries and municipalities were required to develop and implement pollution prevention plans for stormwater discharges by October 1, 1993. Pollution prevention is one of the only ways to reduce pollutant levels in stormwater, which is responsible for approximately 30 percent of the nation's water quality impairments. In Arizona, Region 9 is working with several copper mines to implement their stormwater management plans, and has conducted several field inspections. The Region intends to conduct two to three audits of municipal permittees in FY95. Region 9 also is moving forward on audits and enforcement actions under the stormwater program.

Region 9's Water Management Division has requested that the U.S. Army Corps of Engineers develop a stormwater pollution prevention plan for the Clifton Flood Control Project along the San Francisco River in eastern Arizona, in order to comply with the general stormwater permit requirements for construction activities. Through the use of BMPs, the stormwater pollution prevention plan will minimize the amount of discharge into the river of pollutants from on-site abandoned mine tailings and sediments. Construction is expected to commence by January 1995. For more information, contact Juliet Hannafin at (415) 744-1902.

EPA Headquarters is developing new standards for metal products and machinery manufacturing. Region 9 is commenting on those standards as they are developed and is including pollution prevention recommendations in its comments. To date, Region 9 has recommended that rather than requiring mass based limits for the large-flow site, mandatory pollution prevention measures and BMPs should be included in the standards in order to address wastewater flow and pollutant mass. Region 9 will continue to incorporate pollution prevention recommendations into the Region's comments on the standards. For more information, contact Keith Silva at (415) 744-1907.

Theme 2: Building a national network of prevention programs among state, local, and tribal governments.

The Divisions and Offices in Region 9 have been instrumental in building a network of pollution prevention programs throughout the Region. We have organized these accomplishments for this theme according to geographic location.

A. Regionwide

The Pollution Prevention Incentives for States (PPIS) grant program seeks to build and support state pollution prevention capabilities and to test, at the state level, innovative pollution prevention approaches and methods. A primary goal is to fund the institutionalization of multi-media prevention as an environmental management priority. In addition, PPIS grants fund other pollution prevention activities, such as providing direct technical assistance to businesses, collecting and analyzing data, conducting outreach, developing measures to determine progress in pollution prevention, and identifying regulatory and nonregulatory barriers and incentives to pollution prevention. In FY94, Region 9 awarded \$580,000 in PPIS grants.

In October, Region 9 held a Roundtable of Region 9 States in conjunction with the Annual Pollution Prevention Conference for California Local Governments. The Roundtable provided states with updates on new directions/programs for EPA. States provided the Region with information on their programs and exchanged information on common challenges and programs. Preceding the Conference and Roundtable was an EPA-sponsored class on Financial Analysis for Pollution Prevention which attendees found very useful. For more information, contact Eileen Sheehan at (415) 744-2190.

The Clean Air Act §105 grant program supports state and regional air quality management programs. Since 1993, EPA Region 9 grant guidance has included extensive information on pollution prevention, and has encouraged grantees to incorporate pollution prevention into their traditional air programs such as permitting, rulemakings, inspections, and enforcement. In FY94, Region 9 reiterated its commitment to provide grant flexibility to facilitate the development of innovative, effective multi-media pollution prevention programs that do not necessarily fit into the traditional grant objectives. In its FY95 guidance, Region 9 provided recipients with examples of innovative programs and activities negotiated and undertaken through the media grant program.

B. California

1. Pollution Prevention Assistance Programs and Activities

The California Department of Toxic Substances Control received a PPIS grant for \$200,000 to fund pollution prevention activities. The grant will support local government pollution prevention support projects, including assistance with regional pollution prevention roundtables, environmental group partnerships and the Los Angeles Targeted Opportunities for Pollution Prevention (TOPPs) program.

At the local level, EPA awarded \$60,000 in 2% Set Aside funds to the Marin County Office of Waste Management, as part of a Regional (Bay/Delta) pollution prevention project for marinas, boat yards, and recreational boaters. The project includes local inspector training, marina educational programs, and boater education.

Region 9 also awarded a \$76,694 PPIS grant to the Local Government Commission in Sacramento to provide assistance to local governments throughout California in implementing multi-media pollution prevention programs. For more information, contact Bill Wilson at (415) 744-2192.

Region 9 supported or funded a number of waste management projects in California that focus on pollution prevention. These included:

- a. California Composting Partnership:** Region 9 reached agreement with the California Integrated Waste Management Board (CIWMB) to co-sponsor workshops in the next calendar year that will promote compost use in the State's agricultural sector. The Region will take an active role in the planning process. In addition, the Region was invited to become a member of the CIWMB's Compost Advisory Task Force, opening up additional cooperative efforts to promote composting in California.
- b. MEGAMATCH:** MEGAMATCH is a state/federal partnership to promote unit pricing. The Region 9 Solid Waste Section, with the support of EPA Headquarters, the CIWMB and the International City/County Management Association (ICMA), coordinated a waste prevention workshop in September for 140 local government employees. Topics included composting, unit pricing, waste prevention programs for businesses, and materials exchange.
- c. Hazardous Waste Financial Assistance (RCRA §3011):** During 1994 the grant funded two Intergovernmental Personnel Act (IPA) positions. The IPA staff participated in a number of major pollution prevention activities, such as developing the "green" business program pilot in Santa Clara County; developing a legislative proposal for economic incentives for pollution prevention efforts; and participating in the TOPPs program in Stockton.

For more information on these activities, contact David Duncan at (415) 744-2106.

Finally, EPA's State Revolving Fund awarded Davis, California, a \$4.9 million loan for implementing waste minimization projects as part of its wastewater treatment process. The loan will fund, among other things, the development of a stormwater management program, which will identify sources of stormwater pollutants, assess stormwater quality, and screen for illicit connections; and the development of a waste minimization program for sanitary wastewater, which will identify sources of pollutants, conduct analyses for source reduction, and identify control options. It is expected that these projects will improve water quality by reducing the amount of pollutants flowing into the Willow Slough and Yolo Bypasses in Yolo County. For more information, contact Juanita Licata at (415) 744-1949.

2. Agriculture Initiative

Through the Agricultural Initiative, Region 9 seeks to reduce the negative environmental impacts of agriculture in California while maintaining the economic well-being of farming communities. In FY94, the Agriculture Initiative provided the primary funding for Biologically Integrated Orchard Systems (BIOS), an agricultural demonstration project in Merced and Stanislaus Counties. Participating almond farmers agree to employ "biologically intensive integrated pest management systems" to reduce their use of pesticides and chemical fertilizers. In return, EPA helps share the costs of installing and implementing the new systems. In its first year, the group of Merced farmers managed to eliminate the use of those pesticides most toxic to surface water. The initial successes of BIOS inspired Assembly Bill 3383, which will sponsor similar BIOS-modeled projects for five

other crops throughout California. The bill, signed by Governor Wilson in October, was supported by EPA, and will be implemented in large part with funding from EPA. Also, a CWA §319 Non Point Source pollution grant was awarded to continue providing BIOS funding in FY95.

In FY95, the Agriculture Initiative will help coordinate local efforts to establish a "systems approach" to farming that considers impacts to the air, surface water, ground water, and wildlife habitat. The focus will be on partnerships with the tomato, grape, and citrus industries, as well as continued coordination between the Water and Pesticides programs. For more information, contact Tim Hatten at (415) 744-1983 or Paul Feder at (415) 744-2010.

3. San Francisco Bay Delta

The San Francisco Estuary Program (SFEP) is a partnership between the EPA, state and local governments, and citizens groups to protect the San Francisco Bay and Sacramento/San Joaquin River delta. In 1993, the SFEP developed a Comprehensive Conservation and Management Plan (CCMP) for the Bay/Delta Estuary, which included pollution prevention as one of nine major program areas. The CCMP represented the first major attempt to manage the natural resources of the Bay/Delta Estuary for both economic and ecologic sustainability. In 1994, Region 9 distributed more than \$500,000 to state and local governments and local agencies to support and implement the CCMP. Activities included demonstrating and evaluating BMPs for pollution reduction, implementing stream and wetland restoration, and conducting education and outreach. For more information, contact Tim Vendlinski at (415) 744-1989.

Through a Municipal Wastewater Pollution Prevention Grant of \$50,000, EPA and the State Water Resources Control Board established an Intergovernmental Personnel Act (IPA) position at the San Francisco Area Regional Water Quality Control Board in Oakland. Although this is an ongoing grant, in 1994 the IPA was able to work successfully with Bay Area Publicly Owned Treatment Works (POTWs) and other interested parties to develop pollution prevention program guidance for these POTWs. The IPA position also provided hands on assistance to the Bay Area POTWs in order to meet their permitted effluent levels under the National Pollutant Discharge Elimination System. In 1995, with the remaining funds, the IPA will continue to develop the Regional Board's pollution prevention water programs.

C. Arizona

In FY94, Region 9 awarded Arizona a PPIS grant of \$180,000. The grant will help expand the Arizona Pollution Prevention Leadership Enhancement Program (APPLE), the state's multi-media pollution prevention program funded by an earlier PPIS grant. The FY94 grant will help fund a summer pollution prevention intern and a pollution prevention "Opportunities and Priorities" program. The program will expand current clearinghouse holdings; continue to provide pollution prevention curriculum; provide the *Arizona Pollution Prevention Newsletter* and other publications to more than 2,000 readers; coordinate and host workshops and conferences; provide speakers and other outreach activities; continue to train departmental staff; and continue funding innovative pollution prevention projects. For more information, contact Clint Seiter at (415) 744-2086.

With EPA's support, the Arizona Department of Environmental Quality (ADEQ) began the Pollution Prevention Partnership in summer, 1994. More than half of the 40 companies responsible

for generating 96 percent of Arizona's hazardous waste have teamed up with ADEQ to begin significant reductions in waste generation. This was not a grant funded activity in FY94, but will be partially funded in FY95.

More than 150 municipal and state employees attended the November 1993 Arizona Municipal Pollution Prevention Conference in Phoenix. The conference was funded in part through the "RCRA West" contract. Eight speakers provided information tailored to municipal employees.

D. Nevada

Region 9 continues to support the University of Nevada Small Business Development Center (SBDC). The SBDC collects and disseminates pollution prevention information. It also provides industry-specific seminars, develops fact sheets, visits sites to provide waste minimization suggestions, and trains business staff. It has developed a resource base that includes information on pollution prevention and waste management technologies, products, vendors, consultants, and waste management facilities.

In FY94, the SBDC answered more than 1,500 phone assistance calls, conducted 19 seminars attended by more than 900 people, completed 27 on-site compliance/pollution prevention consultations, and published three issues of their newsletter and five fact sheets. In October 1994, Region 9 awarded the SBDC an additional \$200,000 to continue and expand the program. The program has been well received by Nevada businesses and regulatory entities. EPA recently signed a Memorandum of Understanding with the Small Business Administration to utilize SBDCs to provide environmental and pollution prevention information based on the Nevada model.

E. Hawaii

Under a PPIS grant, the Hawaii Department of Health (HDOH) established a Pollution Prevention Working Group. Drawn from diverse HDOH offices, the Working Group focuses on pollution prevention issues of common concern such as waste minimization at construction sites and household hazardous waste. Region 9 established an IPA position with HDOH for a full-time pollution prevention coordinator, who co-facilitates the Working Group. Hawaii also is supporting a materials exchange program, conducting composting workshops, and exploring alternatives to agricultural burning. For more information, contact Eileen Sheehan at (415) 744-2190 or Sara Russell at (808) 586-4339.

In FY94, the State of Hawaii incorporated many pollution prevention activities into their stormwater and point source NPDES program. These activities included developing pollution prevention projects for enforcement settlements and incorporating waste minimization activities into inspections. Furthermore, the State included in their permit language source reduction and reclamation language in applicable permits as well as general pollution prevention language into all permits issued.

F. Tribes

The Navajo Nation is currently developing a pollution prevention program through a FY93 PPIS grant. The Navajo Nation has developed an institutional structure to promote pollution prevention, and is beginning to target priority areas for multi-media pollution prevention projects. Three

facilities were targeted for pilot projects: tribal fleet maintenance operations, a Packard Hughes Integrated Missiles facility, and Navajo Agricultural Products Industries. Navajo EPA has developed an integrated program to provide technical assistance and education, including a pollution prevention video course through the University of New Mexico. For more information, contact Eileen Sheehan at (415) 744-2190.

G. Pacific Islands

The Office of External Affairs Office of Pacific Island and Native American Programs (OPINAP) conducted several programs that promoted pollution prevention. Region 9 provided a \$13,500 PPIS grant to help the Commonwealth of Northern Marianas Islands (CNMI) develop a Waste Identification, Reduction and Prevention Project. The funding paid for a waste minimization expert to conduct waste audits of local industries. The project sought to develop local knowledge about pollution prevention, assist local industries in reducing waste, identify high-risk pollution areas, and build cooperation between industries and the Department of Environmental Quality (DEQ).

Under the work agreement, the EPA:

- prepared a pollution prevention library for the DEQ that includes information on a wide range of industries and activities;
- prepared a used-oil disposal strategy for CNMI and organized a Used-Oil Workgroup;
- conducted a used-oil workshop, training 75 industrial representative in disposal and recycling options;
- conducted pollution prevention audits in five industrial sectors; and
- developed a pollution prevention compliance inspection manual for CNMI environmental employees, and trained 13 CNMI inspectors in pollution prevention compliance inspection.

For more information on this work, contact Jim Branch at (415) 744-1601.

OPINAP also manages the EPA Headquarter's pollution prevention grant to American Samoa to develop waste oil management and recycling strategies. The grant was awarded in FY90. The construction of a waste oil storage facility, the last task, was completed in December 1994. As a result, most of the waste oil generated on the island is now collected and burned for heat recovery. The project included a marketing and educational component which developed three half-hour television programs, school curricula, and other informational material. As a result, 25 of 35 elementary schools on the island have adopted recycling programs. The Region also is funding a pollution prevention and waste minimization project that will reduce the amount of pollutants generated by facilities in Pago Pago Harbor. Finally, Region 9 worked with the Department of Energy to secure funding for a pilot project to explore the feasibility of a municipal waste and tuna cannery digester in Samoa. For more information, contact Pat Young at (415) 744-1594.

Each year, Region 9's Office of Pacific Islands and Native American Programs holds a week-long conference bringing the Region's Pacific constituency together with EPA and guest speakers. The 13th annual conference was held in Kihei, Hawaii, on June 13 through 17. Pollution prevention was the theme. Representatives from American Samoa, the CNMI, Guam, the Republic of Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands participated in wide-ranging discussions of pollution prevention in island environments. Felicia Marcus, Region 9

Regional Administrator, and Bill Wilson of the Region's Pollution Prevention Team provided pollution prevention information to the participants. The State of Hawaii, Department of Energy, Department of the Interior, and many other agencies also made valuable contributions.

Theme 3: Expanding collaborative programs that emphasize cross-media prevention, reinforce the mutual goals of economic and environmental well-being, and represent new models for government/private sector interaction.

Pollution prevention requires a collaborative approach. Government and industry must work together to develop new approaches to environmental management. Region 9 has had great success in developing public/private partnerships to promote pollution prevention.

A. Merit Partnership

The Merit program is a government-industry partnership to use pollution prevention methods to reduce toxic emissions in California. The Partnership is designed to gather and disseminate governmental and industry experience with successful pollution prevention techniques; assist with audits of companies to identify pollution prevention opportunities; expedite permitting of approved pollution prevention projects; and seek funding sources to provide low-interest loans for industrial process modification. Merit initially focused on the southwest portion of Los Angeles County, but has expanded throughout California.

Merit expands upon the 33/50 program, which seeks to reduce the use of 17 targeted chemicals by the year 2000, to include all Toxic Release Inventory (TRI) chemicals, to target geographical areas of highest emissions such as southern California, and to increase incentives for companies to adopt pollution prevention measures.

Initial industry partners include Dow North America, Northrop Corp., Xerox Corp., Wescam Industries, the Metal Finishers Association of Southern California, and the Western States Petroleum Association. Participating agencies include Cal/EPA's Department of Toxic Substances Control, the South Coast Air Quality Management District (SCAQMD), the Regional Water Quality Control Board, the Los Angeles Sanitation Districts and Fire Department, and the City of Los Angeles Environmental Affairs Department.

Merit projects include:

a. Alternative Fuel Vehicles (AFVs) at California Airports: This project seeks to advance innovation in Alternative Fuel Vehicle technology and application by providing reliable case study data on the suitability, acceptance, and economic feasibility of electric vehicles (EVs) and natural gas vehicles (NGVs) in diverse applications. EVs and NGVs will be tested in a number of airport applications. The project will identify effective ways to break barriers to implementation and develop market momentum.

Industry partners include Southern California Edison, San Diego Gas & Electric, Sacramento Municipal Utility District, Pacific Gas & Electric, Southern California Gas Company, California Natural Gas Vehicle Coalition, California Electric Vehicle Coalition, California Energy Commission, California Air Resources Board, Airport Authorities in San Diego, Sacramento, Los Angeles/Ontario, and Oakland/San Francisco, United Airlines, and other selected airlines and servicers.

The participants held two planning meetings in San Francisco and Los Angeles to share information regarding AFV's — such as maintenance procedures and emissions reductions — and agreed to form a statewide coalition to pursue additional funding opportunities.

In addition, the Merit Team and industry partners provided input to a funding proposal to EPA's Environmental Technology Initiative (ETI). The amount requested from ETI is \$1,860,000 supplemented by \$5,620,000 from the industry partners. The anticipated time frame is at least two years. Industry partners contributed \$15,000 to prepare the proposal.

b. Metal Finishing Project: The Merit Partnership Team submitted a funding proposal to the Environmental Technology Initiative (ETI) for FY94 to support the identification of pollution prevention opportunities and projects in the metal finishing industry in Southern California. The proposal received \$380,000 in FY94. The project participants are EPA, California Manufacturing Technology, the Metal Finishers Association of Southern California, Northrop/Grumman Corp., Hughes Aircraft Company, Southern California Edison Co., and National Laboratories. The money from ETI will not be available until 1995. The Merit Team submitted another proposal to ETI for \$480,000 to fund the second year of the metal finishing project.

c. Oil Refinery Roundtable: The Merit Partnership sponsored an Oil Refinery Roundtable in April to discuss pollution prevention opportunities in refinery wastewater sludges, hazardous air pollutants, and criteria air pollutants. The Roundtable was moderated by Professor David Allen from the Chemical Engineering Department at the University of California, Los Angeles. There were 67 participants at the Roundtable including 36 industry representatives; 22 representatives from federal, state, and regional agencies; 4 industry consultants; representatives from 3 national labs; and 2 academic researchers.

No specific pollution prevention projects were identified, but several subjects of interest to the industry were discussed, including a request to explore regulatory flexibility issues and a meeting with industry representatives and EPA personnel to discuss pollution prevention opportunities for reduction of RCRA "F listed" sludges in refinery wastewater. The project budget includes \$10,000 for a follow-up roundtable to continue the dialogue and interest in pollution prevention for this industry.

The Merit Partnership is currently planning to sponsor additional industry sector roundtables to facilitate pollution prevention dialogue within these industry sectors. A grant of \$100,000 from the Toxics Source Reduction Initiative is being proposed to support this effort. For more information, contact Dan Reich at (415) 744-1343.

B. Green Lights

The goal of the Green Lights program is to prevent pollution by encouraging major institutions — businesses, governments, and other organizations — to use energy-efficient lighting. Partners commit to install energy-efficient lighting in 90 percent of their space over a 5-year period, but only where it is profitable and feasible. In return, EPA offers program participants technical support in upgrading their buildings, lighting product information, and support in identifying financial resources for energy-efficient lighting.

In FY94, Region 9's Green Lights representative recruited a number of Partners, including the City of Phoenix, Arizona; Maricopa Community Colleges; the Purchase Connection in Los Angeles, California; Pajaro Valley Unified School District in Watsonville, California; City of Tucson and the Tucson Medical Center in Arizona; Kingman Medical Center in Kingman, Arizona; and the City of Santa Rosa, California. These Partners represent a total of 12.2 million square feet committed to energy conserving lights, which will prevent the release of 26,800 tons of carbon dioxide annually when the buildings are fully upgraded. For more information, contact Michael Stenborg at (415) 744-1102.

C. The Common Sense Initiative (CSI)

In July, 1994, EPA Administrator Carol Browner launched The Common Sense Initiative (CSI). The goal of CSI is characterized as finding "cleaner, cheaper, and smarter" approaches to environmental protection. EPA believes that although the nation must be uncompromising about its environmental goals, there must be greater flexibility and creativity brought to bear in achieving those goals. This initiative is ambitious and comprehensive; it is about fundamental change in the way we achieve environmental results.

Under this Initiative, EPA has brought together federal, state and local government representatives, environmental leaders, industry and other stakeholders (industry associations, consortiums, labor and environmental justice representatives) to examine the full range of environmental requirements impacting six pilot industries. These industries include: electronics and computers, metal finishing and plating, petroleum refining, printing, automobile assembly, and iron and steel. Region 9 is a co-lead along with Region I for the electronics and computers industry sector.

EPA launched the CSI to develop a more responsive system of environmental protection by investigating opportunities for improvement in the following six areas: regulation, pollution prevention, reporting, compliance, permitting, and environmental technology. For more information, contact Dave Jones at (415) 744-2266.

D. Recycling Market Development

In FY94, Region 9's Hazardous Waste Management Division (HWMD) worked extensively with state and local governments to promote reuse and recycling and to expand the market for recycled goods and material. The programs focused on developing both the economic and environmental benefits of increased material reuse.

The RCRA §8001 grant program provides funds to develop new markets for recycled material and to facilitate the exchange of reusable material. In response to its FY94 solicitation, Region 9

received 60 proposals requesting more than \$2.5 million in EPA funds. In August 1994, Region 9 selected and negotiated cooperative agreements with four organizations:

- City of Tucson, Office of Economic Development, for \$50,000 to educate entrepreneurs and manufacturers to convert recycled feedstock.
- L.A. Shares, for \$40,000 to expand its existing program which directs excess materials from the private sector to the non-profit sector. EPA funding will allow L.A. Shares to hire an additional operations manager, enabling them to involve an additional 250 businesses in the reuse program and distribute an estimated \$5 million worth of materials otherwise destined for the landfill.
- Nevada Recycling Coalition, for \$29,000 to develop a regional conference on jobs through recycling.
- Community Environmental Council (CEC), a nonprofit organization based in Santa Barbara, California, for \$50,000 to work with the Ventura and Long Beach Recycling Market Development Zones to identify manufacturers with high potential to convert to recycled feedstock. CEC will then combine, leverage, and focus available technical and financial resources to assist 2-4 selected manufacturers through the conversion process.

Working with the CIWMB, the Department of Conservation and several non-profit organizations, EPA held the first meeting of the Recycling Economic Development Network on September 1, 1994. About 60 people attended. The Network provides an informal setting to discuss cutting edge policies and programs related to economic development through recycling. Meetings will be held quarterly.

EPA's voluntary WasteWIS^E program encourages partnership companies to reduce their solid waste through source reduction, recycling, and increasing the recycled content of products they buy or manufacture. Region 9's Solid Waste Section entered into a cooperative agreement with the California State Chamber of Commerce to promote WasteWIS^E to California businesses. The agreement calls for a series of meetings to generate support for the program and solicit membership from the business community. A quarterly newsletter on WasteWIS^E for Region 9 member companies will also be developed.

Administrator Browner signed *Recycling Means Business: U.S. EPA's Market Development Strategy* on June 30, 1994. Region 9 led the Market Development Task Force, which developed the Strategy over the previous year and a half. The Task Force also began studying related issues, such as measurement of progress and reporting. For more information on all these activities, contact David Duncan at (415) 744-2106.

E. ASIAN, Inc.

Region 9 secured a \$20,000 grant for ASIAN Inc. through a Public-Private Partnership grant from EPA Headquarters. The funds will be used to help ASIAN Inc. develop a business plan for the establishment of a "Mercado" (market) to retail artistic pre-consumer recycled materials in a multi-cultural environment. The organization plans to find a location, anchor tenants and suitable retailers for a tourist-oriented multi-cultural mini-mall. For more information, contact Marsha G. Harris at (415) 744-1635.

F. Bay Area Pollution Prevention Group

Many Bay Area wastewater treatment dischargers have a difficult time meeting their permit requirements for copper. In an attempt to meet water quality standards, these dischargers have started the San Francisco Bay Area Pollution Prevention Group. EPA Region 9 was asked to participate in the Group's activities, specifically in assisting them in phasing out the use of copper sulfate, a commonly used algicide. Copper sulfate was targeted since it represents a significant contributor of copper into the Bay, and alternatives to it are available. For more information, contact Elizabeth Borowiec at (415) 744-1948. In addition, Region 9 staff are investigating the composition of brake pads, some of which discharge copper as they wear down. For more information, contact Niko Letunic at (415) 744-1941.

G. Reducing Runoff from Pineapple Fields, West Maui

Region 9 awarded a \$100,000 CWA §319(h) Non Point Source grant to the West Maui Soil and Water Conservation District to implement BMPs to reduce pineapple field runoff. The Maui Pineapple Company, Ltd. is also an active participant in the project, and will provide in-kind services as match for the grant. The West Maui Watershed has been listed as a priority watershed by EPA and the HDOH. It has received special funding from a Congressional appropriation to perform research on the Maui algal bloom problem, along with soil erosion control efforts. This grant complements ongoing efforts in the watershed. For more information, contact Jovita Parjarillo at (415) 744-2011.

H. Industry Challenge Project

This project is coordinated by Region 9's Hazardous Waste Management Division. It will support voluntary efforts by Region 9 businesses to reduce hazardous waste generation. The target goal is a 25 percent reduction by 2000 and a 50 percent reduction by 2005 of the most persistent, bioaccumulative, and toxic constituents, as appropriate for each of the Region 9 states. The EPA team members will partner with state and local regulatory agencies, businesses, citizens, and environmental groups to carry out these challenges and reductions. For more information, contact Leif Magnuson at (415) 744-2153.

I. Small Business Assistance

Technical Enforcement Support 11 (TES 11) was a contract, negotiated in FY93 by EPA Headquarters, to support the implementation of hazardous waste enforcement. One component was the Small Business Technical Assistance project, which sought to develop informational materials (fact sheets, instructor's manual, and slides) for use by state, local, and federal agencies; businesses; and educational groups. Three small business groups were individually addressed — automotive maintenance, print shops, and printed circuit board fabricators.

The RCRA Enforcement and Permitting Assistance (REPA) contract replaced TES 11 in FY94, and will continue to develop pollution prevention training materials for the small business sector, especially in auto repair, construction, lithographic printing, and printed circuit board industries. In FY94, materials were refined and presented to industry and government focus groups in California.

One other component of TES 11 sought to design and assess a model lithographic print shop that minimizes emissions to all media and conserves water and energy. The manual *Practical Pollution*

Prevention Techniques for Lithographic Printers was prepared in 1994 and is being distributed by the Printing Industry of Northern California. For more information, contact Bill Wilson at (415) 744-2192.

Theme 4: Increasing EPA's efforts to generate and share information to promote prevention and track progress through measurement systems such as the Toxics Release Inventory (TRI).

Information and outreach are crucial to advancing pollution prevention. New ideas and approaches need to be disseminated, discussed, and evaluated. Region 9 is continuing its efforts to provide information, facilitate information exchange, and develop solid measurement tools to track pollution prevention success.

A. Information Generation and Exchange

1. Navajo Language Videos

Region 9 awarded the Navajo Nation a \$30,000 Public-Private Partnership demonstration grant to create, produce and distribute educational videos on how to handle household hazardous waste and small business commercial waste. The videos, produced in cooperation with the National Environmental Training Association, are in the Navajo language, by native speakers of the Navajo language, with English subtitles. They emphasize pollution prevention techniques and philosophies that are in harmony with the Navajo culture. They will be distributed free to health clinics, tribal chapter houses, elementary and secondary schools, and other suitable locations. For more information, contact Marsha G. Harris at (415) 744-1635.

2. The Pollution Prevention Resource Center

The Pollution Prevention Resource Center (PPRC) serves as a clearinghouse for information and publications about source reduction, waste minimization, recycling, reuse and recovery for EPA and other federal agency staff, state and local government agencies, industry, academic institutions, and the public. The PPRC is managed by the Pollution Prevention Librarian and is located in the Region 9 Library. In FY94, the PPRC staff responded to nearly 1,000 reference questions on pollution prevention, performed approximately 300 database searches, and distributed close to 3,000 publications upon request.

In addition to providing reference services, PPRC staff issues a quarterly bibliography of new resource material, a monthly update of pollution prevention contacts regionally and nationally, a list of funding sources available (updated 2 or 3 times per year), and a current list of technical resources. PPRC staff also provides trainings to EPA staff on how to use online systems and other research tools, maintains a calendar of waste minimization events, and expands and organizes the pollution prevention collection. For more information, contact Karen Sondheim at (415) 744-1508.

3. Informational Guides and Factsheets

Region 9's Water Management Division produced its first issue of *H₂O News*, the newsletter of water-related pollution prevention issues in Region 9. The newsletter is designed to be a forum and clearinghouse for all pollution prevention information that affects the Division, and, more importantly, to highlight the pollution prevention work conducted by Region 9 staff. The initial issue was printed on hemp paper, which is a low-environmental-impact crop since it is drought- and pest-resistant, and is an easily renewable resource due to its quick growth. The first issue contained articles on the Agriculture Initiative, Pollution Prevention Week in California, and the Region's water reclamation efforts. For more information, contact Niko Letunic at (415) 744-1941.

Notes from the Underground, the Regional newsletter of the Source Water Protection Section, included an article on the Pollution Prevention Resource Center in its January 1994 issue. Section staff filled multiple requests from local regulators and the regulated community for industry-specific shallow injection well BMPs and the Region 9 Shallow Injection Well Closure document.

4. Federal Facilities Conference

The Region 9 Office of Federal Activities sponsored its annual Federal Facilities Conference in September 1994. More than 400 federal agency representatives attended the conference. Several sessions included pollution prevention topics, such as implementation of Executive Order 12856 *Federal Compliance with Right-to-Know laws and Pollution Prevention Requirements*. A number of video presentations on pollution prevention were also offered at the conference.

5. Toll Free Recycling Hotline

Region 9 is helping to support a toll-free voicemail hotline for recycling information as part of a Public/Private Partnership demonstration grant. The hotline seeks to promote recycling and waste reduction at the local level. For only the cost of the 800 number, states can present their own tailor-made messages, keyed to the ZIP code of the caller. All operating costs of maintaining current information and advertising the service are born by private sector firms, and the software is applicable nationwide.

The number is currently active in eight states. In 1994, the project continued to expand the service area of the toll-free number to call for recycling and other environmental information. A second grant of \$19,000 has been negotiated to expand the program to all states, with the approval of EPA's Office of Administration and Resources Management and Office of Solid Waste and Emergency Response. In addition, Region 9 is proposing to partner the Hotline in an ETI grant for FY95 to speed expansion nationwide and start expansion into Mexico and Canada. For more information, contact Marsha G. Harris at (415) 744-1635.

6. Wastewater Symposium

The annual West Coast Wastewater Pollution Prevention Symposium, which brings together Western state and local wastewater officials, took place in San Francisco on October 3-4. Harry Seraydarian, Water Management Division Director, gave the keynote address, Liz Borowiec co-led a workshop on funding sources for pollution prevention projects, and Niko Letunic set up an informational table. For more information, contact Niko Letunic, at (415) 744-1941.

B. Measurement Project

This project will measure the actual waste reductions achieved through the Hazardous Waste Management Division's Industry Challenge Project and Federal Facilities Project. These two projects seek to reduce the hazardous waste generation in the targeted industries by 50 percent. Region 9 will prepare periodic reports summarizing the success in meeting the reduction goals.

C. Tracking Progress through Toxics Release Inventory

In 1994, Region 9 conducted more than 25 workshops to inform industries of their potential obligations under the Emergency Planning and Community Right-to-Know Act. The workshops provided instructions on reporting to the Toxic Release Inventory System (TRIS), a national database of chemical releases. TRIS can be used to measure progress in pollution prevention. In 1994, thirty-two chemicals were added to the list of chemicals subject to reporting.

Theme 5: Developing partnerships in technological innovation with other agencies and the private sector to increase industrial competitiveness and enhance environmental stewardship.

The federal government has a large role in promoting new technologies that have both environmental and economic benefits. Region 9 has worked extensively with the states, industry, and local agencies to develop new ways of doing business that protect and enhance human health and the environment.

A. Environmental Technology Initiative (ETI)

The Environmental Technology Initiative was announced by President Clinton in 1993, and was funded at \$36 million nationwide in FY94. By promoting the development, commercialization, and use of environmental technology, ETI seeks to improve environmental quality while fostering the creation of jobs and business. A major component of ETI is to foster products, services, and innovative technologies that prevent pollution. ETI projects within the Region include low-VOC coating research in conjunction with the South Coast Air Quality Management District and the Metal Finishing Project of the MERIT Partnership. A number of Region 9 public and private partners are seeking FY95 ETI funds for pollution prevention initiatives. For more information, contact Winona Victory at (415) 744-1021.

B. Jobs through Recycling Initiative

The Jobs through Recycling Initiative is a national effort to boost employment growth and economic development by supporting recycling industries. Under the Initiative, Region 9 and the National Market Development Task Force reviewed more than forty applications from across the nation for Recycling Business Assistance Centers (RBAC) and Recycling Economic Development Advocates (REDA). All four Region 9 states and the Campo Band of Mission Indians submitted applications. The Task Force awarded California \$500,000 for a RBAC, and Arizona received \$74,000 for a REDA. California and Arizona will both work to provide a variety of educational and direct technical assistance to recycling processors and manufacturers. For more information, contact David Duncan at (415) 744-2106.

C. Industrial Laundries

As EPA Headquarters develops effluent guidelines for industrial laundries, Region 9 is coordinating and funding a project that will showcase new processes, BMPs and technologies for small industrial laundries. One of the goals of the project is to provide information to both EPA and industry about the best means to reduce waste and prevent pollution at the source. A laundry in Long Beach, CA, Best Washington Uniform Supply, has volunteered its facility to showcase new waste minimization approaches. The project also includes outreach on pollution prevention, BMPs, solvent reduction, and source reduction to the clients of the industrial laundries. For more information, contact Bonnie Barkett at (415) 744-1911.

D. Water Reuse in California

California's Statement of Support for Water Reclamation was signed in June 1994 by EPA's Regional Administrator and the heads of other Federal and State agencies with authority over water issues, and the WaterReuse Association of California. The Statement commits the signatory agencies to promote water reclamation in the State in order to meet reclamation goals and to help satisfy overall water needs in California. In FY95, Region 9 will be actively involved in developing an Action Plan to implement the Statement of Support. For more information, contact Nancy Yoshikawa at (415) 744-1161.

E. Integration of Aquaculture with Taro Production in Hawaii

The Hawaii Department of Land and Natural Resources, the University of Hawaii, the U.S. Fish and Wildlife Service and the Mauna Loa Research Institute, Inc. have received \$84,000 in grant funds to provide a commercial demonstration of pollution abatement, soil and water conservation, eutrophication control, and waste recovery in taro farms. Taro farmers use more chemical fertilizer per acre than farmers of any other crop in Hawaii and are highly dependent upon mechanical tillage cultivation. Taro is grown in pond fields which require a constant flow of water, contributing large amounts of dissolved fertilizers and silt into receiving waters. This project will implement BMPs to reduce nutrient and sedimentation levels into receiving waters. For more information, contact Jovita Parjarillo at (415) 744-2011.

F. Dairy Waste Treatment and Reclamation Using an Advanced Integrated Ponding System (AIPS)

The University of California, Berkeley was awarded a \$120,000 CWA FY95 §319(h) Non Point Source pollution grant to demonstrate a reliable and economical method of dairy waste treatment and reclamation that will eliminate nonpoint source water pollution while providing economic incentives to dairy operators through the recovery of energy, feed and fertilizer. Applying the principles of the AIPS, a demonstration will be designed, constructed, operated, and evaluated over a two-year period. AIPS designs will be prepared for an additional six dairies. Educational activities including AIPS design and operational training will be offered in cooperation with dairy operators, resource conservation districts, and other governmental agencies. For more information, contact Sam Ziegler at (415) 744-1990.

G. Subsurface Drip Irrigation of Alfalfa in Nevada

A CWA §319(h) grant in the amount of \$48,000 was awarded to Nevada's Cooperative Extension to demonstrate technology to reduce the amount of water used for irrigation, thereby reducing

surface runoff and irrigation return flows laden with salts, nutrients and agri-chemicals and ultimately increasing the amount of fresh water available for other purposes. Local farmers will be involved throughout the course of the project. For more information, contact Lisa Nelson at (415) 744-1966.

Theme 6: Developing partnerships with other federal agencies to create major opportunities for pollution prevention through investments in new technologies, and through policies that shape decisions in agriculture, energy, transportation, and the management of natural resources.

A. Federal Agency Executive Order Training

Region 9's Solid Waste Section and the General Services Administration (GSA) coordinated a training on June 10 in San Francisco. The training addressed implementation of Executive Order 12873 on waste reduction. Speakers included John Stanberry, GSA's Federal Environmental Executive; Michael O'Reilly, EPA's Waste Reduction Coordinator; and Solid Waste Program staff. More than 140 federal and state employees attended, receiving information on federal waste prevention programs, guidelines for procuring recycled products, and resources available to assist in these efforts. Vendors displayed a variety of products from recycled plastic floor mats to recovered rubber writing pens. A video outlining implementation of the order was developed and is available upon request. For more information, contact Dave Duncan at (415) 744-2106.

B. Federal Facilities Project

This project will assist and oversee the 50 percent reduction in the off-site transfer and on-site emissions of hazardous constituents mandated by Executive Order 12856. Federal facilities will be assisted primarily by Region 9's participation in quarterly roundtables and workgroups with the Department of Defense and Department of Energy facilities in Region 9. These forums will help identify resource needs and exchange information. EPA Region 9 will oversee the 50 percent reduction through verification of facility compliance with pollution prevention strategies and plans developed by the agencies. The project may publish an annual summary and ranking of Department of Defense and Department of Energy facilities. For more information, contact Leif Magnuson at (415) 744-2153.

Theme 7: "Leading by doing." Reducing or eliminating pollutants generated from EPA operations.

The federal government is one of the largest purchasers of goods and services. EPA Region 9 has worked hard to set a good example for both the public and private sector.

A. The Paperless Office Campaign

The Closed Loop Project seeks to reduce solid waste generation, promote recycling, and increase purchases of recycled products in the Region 9 office. In 1994, the Closed Loop Team completed quarterly updates informing the Regional office on how Campaign goals were being met. The updates were shared through the LAN and on posters in each copy room. More than 783 Regional employees signed onto the electronic pledge to reduce paper waste and support the Campaign. Paper use has not decreased significantly in 1994.

B. Region 9 Labs

The EPA Region 9 Laboratory officially opened for business on January 6, 1994. During this calendar year, the EPA Region 9 Laboratory began three pollution prevention projects.

- At the beginning of 1994, the Laboratory made arrangements with West County Recycling to have white and colored paper, glass, plastic, and aluminum food and beverage containers recycled.
- In March 1994, the Laboratory experimented with recycling several solvents used at the lab. Since July 1994, the Laboratory has successfully recycled methylene chloride, the primary extraction solvent used at the Laboratory. Approximately 667 liters of waste methylene chloride (DCM) were recycled, resulting in approximately 518 liters of usable recycled solvent. This represents a 78 percent regeneration rate.
- In December 1994, the Laboratory began rinsing glass and plastic hazardous material containers for recycling. To date, we have recycled approximately 70 amber and 20 clear glass bottles. For more information, contact Pierre Belanger, Lab Safety, Health and Environmental Manager at (510) 412-2313.

C. Supporting Bicycle Commuting at Region 9

An ad hoc Bicycle Commuting Committee seeks to promote and support bike commuting as a transportation alternative for Region 9 employees. The group educates employees on the environmental and health benefits of bicycle commuting, provides safety tips, works to improve bicycle facilities at the Regional office, and coordinates a network of interested employees in the Region. In 1994, the group sponsored several events, including a Bike to Work Day for Regional employees. The group has worked closely with the Office of Personnel Management to obtain seven new bicycle racks, and is seeking to expand bicycle parking further. For more information, contact Niko Letunic at (415) 744-1941.

FUTURE DIRECTIONS

EPA Region 9 will continue to incorporate pollution prevention into its ongoing activities, building on the accomplishments described above. The future is bright for pollution prevention. Many new approaches have moved beyond the testing phase into full scale implementation. State and local governments, businesses and citizen organizations are continually testing new ideas and learning from past efforts. Each of the Region's Offices and Divisions will continue to nurture nascent efforts and capitalize on past accomplishments to further push the pollution prevention envelope.

In FY95, the pollution prevention coordinators in Water Management Division will cosponsor the annual West Coast Wastewater Symposium, to be held in San Francisco. The Division will continue to support an EPA employee on an IPA to the San Francisco Regional Water Quality Control Board to assist POTWs in their pollution prevention efforts. The Division's pollution prevention newsletter, *H₂O Notes* will be published quarterly. Pollution prevention staff will assist local efforts in the lower South San Francisco Bay to reduce copper loadings by targeting copper-containing automotive brake pads, and staff will monitor the implementation of a household hazardous waste collection program by L.A. County that is part of its consent decree with EPA.

During 1995, the Office of External Affairs (OEA) intends to implement pollution prevention themes through the work of the Office of Public Affairs (OPA), Office of Federal Activities (OFA) and the Office of Pacific Islands and Native American Programs (OPINAP). OEA will continue to publicize the Region's pollution prevention efforts through press releases, publications, and day-to-day communications with the press, public, environmental organizations, and Members of Congress. In addition, OFA continues to provide pollution prevention guidance in the form of cross-program recommendations to all agencies that are taking major federal actions under NEPA. This year, OFA will host another Federal Facilities conference with presentations on pollution prevention. Keeping the Region's federal facilities' staff and managers informed on ways to prevent pollution is an important aspect of OFA's program. OPINAP will continue to manage the ongoing pollution prevention grants in American Samoa and CNMI, and will continue to work with the Tribes and islands to develop and submit pollution prevention proposals.

The Office of the Regional Counsel will continue to support pollution prevention efforts through Supplemental Environmental Projects (SEPs), and support enforcement actions that include pollution prevention. The Office of Regional Enforcement Coordination (OREC), established in 1994, oversees multi-media inspections and enforcement actions, which often incorporate pollution prevention themes. In 1995, OREC will be tracking, through Case Completion Data sheets, pollution prevention activities that were included in multi-media enforcement actions.

The Hazardous Waste Management Division will continue to support and expand its pollution prevention activities. Efforts in the Division include supporting the Waste Minimization Team, promoting source reduction of solid waste, providing pollution prevention funding to states, and encouraging the development of markets for reused and recycled material. The Division also will continue to use data systems such as TRI to track pollution prevention achievements.

In FY95, the Air and Toxics Division is convening a Pollution Prevention Workgroup to help

incorporate pollution prevention concepts into the Division's activities. In addition, some additional, one-time funds may be available in FY95 for Clean Air Act §105 grant recipients for use on projects related to pollution prevention.

Region 9's Pollution Prevention Team will play a key role in promoting pollution prevention throughout the Region. In the past, the Team has worked closely with state and local governments to promote pollution prevention. While this will continue, the Team will increasingly use these organizations as an avenue to influence business decision-makers, the primary audience for the pollution prevention message. The Team will evaluate each potential pollution prevention effort against this simple criteria — does it impact people whose actions create pollution and does it result in behavior changes that prevent or reduce pollution?

In FY95 the Team will increase its outreach to local communities, industry, and business organizations. It will continue its work on the Merit Partnership metal finishing project, pollution prevention opportunities in the semiconductor industry, and with several small business sectors. The Team also manages the new Environmental Justice through Pollution Prevention grant program, which helps disadvantaged communities solve environmental problems through pollution prevention. The Team also will explore the need for a pollution prevention center in the Region in response to requests from various organizations. Finally, the Team will emphasize greater involvement of the Region's media programs in pollution prevention and better integration across media, both inside EPA and within the states.

CONCLUSION

Region 9 is once again in the forefront of promoting pollution prevention. This report highlights the wide range of pollution prevention activities in the Region. The activities cut across all Divisions and Offices, and more and more represent the first choice for addressing environmental challenges. The Region continues to build state and local pollution prevention efforts through the PPIS and media grant programs, and is increasingly working with the private sector to encourage pollution prevention processes and technologies. Through training, technical assistance, outreach, and funding, Region 9 is furthering pollution prevention on many fronts.

There is, of course, plenty of room for improvement. At its core, pollution prevention is an important means for better protecting human health and the environment. Region 9 must continually evaluate its pollution prevention activities, and explore new ways to meet its mission. The Region and its state, local, and private partners must commit themselves to this process of ongoing evaluation. This report, while highlighting past accomplishments, hopefully also will inspire new ideas and identify opportunities for even greater application of pollution prevention.

Appendix A: Pollution Prevention Grants and Other Projects in Region 9

NATIONALLY AWARDED GRANTS AND CONTRACTS

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	POLLUTION PREVENTION INCENTIVES FOR STATES GRANTS (PPIS)				
	Pollution Prevention Incentives for States (PPIS) Grant	To help build and support state pollution prevention programs and to test, at the state level, innovative pollution prevention approaches and methodologies.	Hawaii Dept. of Health Services: Federal award: \$185,316 (State match: \$187,212; total program: \$372,528)	There are 4 elements: 1. Establish multi-media P2 Work Group with DOH and other state agencies; 2. Greenwaste Diversion Project: tech. assistance, education and training for greenwaste composting for soil amendments; 3. Minimizing Hazardous Waste: P2 training and outreach to Cond. Exempt Small Quantity Generators: and, 4. Hawaii Materials Exchange (HIMEX): create inter-island hazardous and non-hazardous materials exchange system.	Awarded FY92 Scheduled: 10/01/92 - 9/30/95 Contact: Eileen Sheehan H-W-2 744-2190
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	Arizona Department of Environmental Quality: Federal Award: \$200,000 State Match: \$200,000	1. Establish multi-media P2 task force within ADEQ and with other agencies 2. P2 demonstration grants 3. Education, outreach and technical assistance to businesses 4. P2 awards program	Awarded FY92 Scheduled: 10/1/92 - 9/30/95 Contact: Clint Seiter H-2-2 744-2086
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	Arizona Department of Environmental Quality: \$180,000	The Arizona Pollution Prevention Leadership Enhancement Program will fund seminars, conferences, a summer intern program, and a targeted reduction program.	Awarded FY94 Duration: 10/1/94 - 9/30/96 Contact: Clint Seiter H-2-2 744-2086

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	University of Nevada-Reno Small Business Development Center: \$200,000	Operate a multi-media pollution prevention program for small businesses, including workshops, individual and on-site assistance, and a newsletter.	Duration: 10/1/94 - 9/30/97 Contact: Tony Terrell H-2-2 744-2029
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	California Dept. of Toxic Substances Control: \$200,000	Local government pollution prevention support projects, including assistance with Regional pollution prevention roundtables, environmental group partnership and the Los Angeles TOPPs program.	Duration: 7/1/94 - 6/30/96 Contact: Bill Wilson H-W-2 744-2192
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	The Navajo Nation Federal Award: \$182,000	1. Develop an institutional structure within the tribe to promote P2 2. Target priority areas for multi-media P2 projects (fleet maintenance, Packard-Hughes facility and agriculture) 3. Conduct outreach, education and technology transfer, including a technical clearinghouse.	Awarded FY93 Scheduled Completion: 9/96 Contact: Eileen Sheehan H-W-2 744-2190
	Pollution Prevention Incentives for States (PPIS) Grant	Same as above	American Samoa Federal Award: \$177,000	1. Developed extensive community outreach program on waste reduction and recycling, targeting aluminum cans, waste oil and bulky metals 2. Established waste oil recycling program	Awarded FY90 Completed: 6/94 Contact: Pat Young E-4 744-1594
	Pollution Prevention Incentives for States (PPIS) Grants	Same as above	American Samoa Federal Award: \$50,000	1. Assess toxic loading on Pago Pago Bay 2. Target the highest emitting facilities for P2 audits 3. Implement P2 on a voluntary basis and through enforcement/permitting	Awarded FY93 Scheduled Completion: 6/95 Contact: Pat Young E-4 744-1594
	Pollution Prevention Incentives for States (PPIS) Grants	Same as above	Commonwealth of Northern Marianas Islands Federal Award: \$13,300	Hire a waste minimization consultant for one month to visit the Islands and conduct waste audits of local facilities	Awarded FY93 Completed: 9/30/94 Contact: Jim Branch E-4 744-1601

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	Pollution Prevention Incentives for States (PPIS) Grants	Same as above	The California Trade and Commerce Agency Federal Award: \$204,000	<ol style="list-style-type: none"> 1. Establish P2 assistance programs within three Small Business Development Centers in Merced, Solano, and Riverside Counties 2. These programs will deliver P2 information, training, and on-site assessments of small businesses 	<p>Awarded FY93 Scheduled Completion: 9/96</p> <p>Contact: Leif Magnuson, H-4-3 744-2153</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	OTHER NATIONAL POLLUTION PREVENTION GRANTS				
	National Industrial Competitiveness through Efficiency: Energy, Environment, Economics (NICE3); jointly administered by EPA and DOE	The goal of this grant is to improve industrial energy efficiency and reduce costs and emissions to the environment.	California Integrated Waste Management Board: NICE3 grant = \$100,000 Match = \$210,000 Total project = \$310,000	"Increasing Paper Industry Competitiveness Through Mixed Paper Recycling": The State teams up with the paper industry to "demonstrate how a typical paper product facility can substitute up to 40% of its raw material fiber production requirements with post consumer waste."	Duration: 1/93 - 1/31/96 This is a grant funded by EPA Headquarters, not the Regions. Contact: Eileen Sheehan H-W-2 744-2190
	Regional FY93 2% Funds from EPA Headquarters	These funds are intended to enhance the ability of Regional offices to use pollution prevention approaches to address high risk environmental problems and to help institutionalize pollution prevention into regulatory and non-regulatory programs.	1) EPA Region 9 Agriculture Initiative Project in the Water Management Division received \$80,000. 2) Marin County Office of Waste Management, Marin, CA, received \$47,384.	1) The Agriculture Initiative currently is working with the Dixon Resource Conservation District to reduce pesticide use. These funds will build upon these efforts and address pesticide use in tomatoes, California's highest value vegetable crop. 2) Marin County developed a hazardous waste minimization program for marinas and boat yards in Marin County, and conducted an educational outreach program for boat owners.	1) Duration: 10/92 - 9/94 Contact: Palma Risler W-3-1 744-2017 2) Completed 10/94 Contact: Bill Wilson H-W-2 744-2192
	Municipal Water Pollution Prevention (MWPP)	Preventive action through states: <ul style="list-style-type: none">Publicly Owned Treatment Works (POTW) facility maintenance & extension of useful lifePOTW compliance with NPDES PermitsPOTW financial management	<ul style="list-style-type: none">\$500,000 nationwide\$50,000 in Region 9 in 1994	<ul style="list-style-type: none">Operation and Maintenance (O & M) auditsIn FY94, Region 9 supported the development of a POTW self-auditing program through Hawaii's Department of Health. In addition, these funds will be used to develop and conduct workshops to educate the public about pollution prevention.Funds from FY93 continue to support an Interagency Personnel Agreement (IPA) to Regional Quality Control Board to work on source reduction with Bay Area municipalities	Scheduled Completion of IPA: 11/94 <ul style="list-style-type: none">No matching of funds required Contact: Elizabeth Boroweic W-2-2 744-1950

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	<p>Agriculture in Concert with the Environment (ACE)</p> <p>EPA Office of Pollution Prevention and Toxics & USDA</p>	<ul style="list-style-type: none"> • Adoption of sustainable agriculture/farming practices • Study of agricultural impact on habitats, wildlife protection • Education and training 	<p>\$1 million available nationwide in FY94, plus supplementary awards by EPA</p> <ul style="list-style-type: none"> • U.C. Santa Cruz: \$55,224 • U.C. Davis: \$259,633 • Cooperative Extension, U.C. Glenn County: \$26,400 • U. Nevada-Reno: \$33,333 	<ul style="list-style-type: none"> • U.C. Santa Cruz <ul style="list-style-type: none"> • Apple production systems • U.C. Davis <ul style="list-style-type: none"> • Pilot studies to examine feasibility of cropland/wetland rotation • Coop. Extension <ul style="list-style-type: none"> • Document effect of grazing management practices on rangeland ecology • Univ. of Nevada - Reno <ul style="list-style-type: none"> • Evaluate the effect of varying grazing systems on water bird populations • Evaluate compatibility of livestock grazing with water bird enhancement efforts 	<p>U.C. Santa Cruz Completion: 12/95 U.C. Davis Completion: 12/97 Coop. Extension Completion: 12/96 Univ. of Nevada Completion: 12/97</p> <ul style="list-style-type: none"> • Eligible: <ul style="list-style-type: none"> • farmers • non-profit organizations • land grant institutions • Matching funds required <p>Contact: Rhonda Miller (Utah St. Univ.) (801) 797-0351</p>
	Small Business Innovation and Research Grants (SBIR)	To fund risk-risk research by qualified small businesses in the EPA program areas, including pollution prevention.	<p>Funding supplied by a 2% set-aside from the total extramural research budget. \$7 million awarded nationally in FY95.</p> <p>Available Grants:</p> <ul style="list-style-type: none"> • Phase I grants provide up to \$50,000 for concept feasibility (6 months) • Phase II provides up to \$220,000 for continued development of the most promising Phase I projects. 	<p>SBIR projects in Region 9:</p> <p>California: Altex Technologies Corp., Santa Clara, \$49,941: Low NO_x Multiple Flame Burner</p> <p>Membrane Technology and Research Inc., Menlo Park, \$50,000: Recycle and Reuse of VOCs from Fugitive Emissions and Small Vent Streams</p> <p>Membrane Technology and Research Inc. Menlo Park, \$50,000: In-Process Recycling of Acetic Acid from Aqueous Waste Streams</p> <p>Membrane Technology and Research Inc. Menlo Park: \$150,000 Carbon Adsorption /Membrane Regeneration Hybrid System</p> <p>XXsys Technologies, San Diego, \$150,000: Development of an Ultrasonic Prototype Instrument to Replace and Environment-Polluting Measurement Practice in the Composite Materials Industry</p>	<p>This is funded by EPA headquarters. Ten other federal agencies also finance research through SBIR, including pollution control and prevention.</p> <p>EPA Contact: Donald Carey, EPA Office of Exploratory Research, 202-260-7899.</p> <p>Region 9 Contact: Marsha Harris P-2-1 744-1635</p> <p>For information on other agencies: Office of Technology, U.S. Small Business Administration, 202-205-7777</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	Environmental Technology Initiative Grants (ETI)	Promotes the development, commercialization, and use of environmental technology to improve environmental quality while fostering the creation of jobs and business.	Funded at \$36 million nationwide in FY94.	ETI projects within Region 9 include: 1) low-VOC coating research in conjunction with the South Coast Air Quality Management District 2) Metal Finishing Project of the Merit Partnership	Distributed by EPA HQ. Region 9 Contact: Winona Victory P-2-1 744-1021

REGIONALLY SELECTED MULTI-MEDIA POLLUTION PREVENTION GRANTS AND CONTRACTS

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	ENVIRONMENTAL EDUCATION GRANTS				
1	Environmental Education Grants Office of Environmental Education	To stimulate environmental education by supporting projects to design, demonstrate, or disseminate practices, methods, or techniques related to environmental education or training.	<p>\$180,000 awarded in FY94</p> <p>Arizona</p> <ol style="list-style-type: none"> 1. Hualapai Tribe, Peach Springs: \$5,000 2. Rough Rock School, Chinle: \$5,000 <p>California</p> <ol style="list-style-type: none"> 1. Calaveras Unified School District, San Andreas: \$5,000 2. Daedalus Education Foundation, Del Mar: \$4,840 3. Napa Valley Unified School Dist., Napa: \$5,000 4. Outward Bound Adventure, Pasadena: \$4,948 	<p>Arizona</p> <ol style="list-style-type: none"> 1. Environmental education program for community members and high school youth, including recycling workshops. 2. Staff training in environmental science curriculum and hands-on projects involving waste management and water pollution on Navajo reservation. <p>California</p> <ol style="list-style-type: none"> 1. Interdisciplinary program for K-6 students, with the goal of encouraging environmentally-responsible lifestyles. 2. Teacher Training Institute to focus on water, health, solid waste and resource management. 3. Waste reduction curriculum called "The New 3 R's: Reduce, Reuse, Recycle". 4. Curriculum and field trips to promote water conservation for inner-city students. 	<p>Scheduled Completion: 6/95</p> <p>• Matching funds required</p> <p>Contact: Ida Tolliver E-2 744-1581</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	Environmental Education Grants (continued)	Same as above.	5. Rising Sun Energy Center, Santa Cruz: \$5,000 6. Sacramento Science Center, Sacramento: \$5,000 7. San Bernadino County, San Bernadino: \$5,000 8. TreePeople, Beverly Hills: \$10,000 Hawaii 1. American Lung Assoc. of Hawaii, Honolulu: \$4,860 2. County of Maui, Wailuku: \$5,000	5. Train interns at U.C. Santa Cruz to develop lessons in solar energy and energy conservation for presentation at area elementary schools 6. Workshops for elementary school teachers to emphasize stewardship of water resources. 7. Video/lecture presentation for public and private schools on use, disposal and alternatives for hazardous household waste. 8. Teacher training in curriculum linking environmental systems with student's lives and behavior. Hawaii 1. Cooperative project promoting awareness of indoor air pollution and ways to reduce it. 2. Educational partnership with Wastewater Reclamation District to teach about waste water cycles and reuse.	Scheduled Completion: 6/95 • Matching funds required Contact: Ida Tolliver E-2 744-1581

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	PUBLIC-PRIVATE PARTNERSHIPS AND OTHER OPM GRANTS				
	Public-Private Partnership demonstration grant	Demonstrate alternative financing possibilities for environmental projects.	City of Petaluma (wastewater treatment plant): \$35,000 (FY93)	Provide legal and financial advice on privatizing Petaluma's 54 year old wastewater treatment plant. This project has been extended in time with no additional funds. City Council negotiations caused some delay; project is proceeding successfully.	Scheduled Completion: 9/95 Contact: Marsha G. Harris P-2-1 744-1635
	Public/Private Partnership demonstration grant (EPA HQ)	<i>Corporate Greening Guide</i> , manuals on waste management for small-to-medium corporations, to be distributed widely.	EcoSource International: \$25,000 (FY93)	Project conducted a survey of literature and practices, in conjunction with UCLA, for small-to-medium corporations' waste minimization techniques. Produced a booklet used by community groups in Southern California to encourage mid-sized corporations to reduce the wastestream. The City of Los Angeles is considering adding it to its distribution lists.	Completed in 10/94 Contact: Marsha G. Harris P-2-1 744-1635
	Public-Private Partnership HQs grant	Writing a business plan for the establishment of a "Mercado" (market) to retail "artistic" pre-consumer recycled materials in a multi-cultural environment.	ASIAN, Inc, \$20,000	Find location, anchor tenants and suitable retailers for a tourist-oriented multi-cultural mini-mall.	Scheduled Completion: 2-26-95 Regional Contact: Marsha G. Harris P-2-1 744-1635 HQs Contact George Ames, OARM 202-260-8227
	Public-Private Partnership demonstration grant (EPA HQ)	Navajo Language Videos	National Environmental Training Association, \$30,000	Create, produce and distribute educational videos on how to handle household hazardous waste and small business commercial waste. Videos are in the Navajo language with English subtitles, and emphasize pollution prevention techniques and philosophies that are in harmony with the Navajo way. They will be distributed free to health clinics, tribal chapter houses, elementary and secondary schools, and other suitable locations.	Scheduled Completion 7-30-95 Contact: Marsha G. Harris P-2-1 744-1635

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	<p>Electronic "Voice-mail" Hotline for recycling information toll free 800 #</p> <p>Public/Private Partnership demonstration grant (EPA HQ)</p>	Promote recycling and waste reduction at local level, with financing provided mostly by private sector. Software applicable nationwide. No cost to caller.	Recycling Hotline: \$19,000 in FY94 to supplement \$37,000 FY93 grant.	Toll free 800 number gives access to a national voice-mail system keyed to postal ZIP codes which provides information on local recycling centers. The service is paid for by private sector advertising and media contributions. A second grant has been negotiated to expand the program nationwide to all states, with HQs OARM and OSWER approval. Region 9 is proposing to partner the Hotline in an ETI grant for FY95 to speed expansion nationwide and start expansion into Mexico and Canada. Currently active in 8 states.	<p>Scheduled Completion: 7/30/95</p> <p>Contact: Marsha G. Harris P-1 744-1635</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	2% SET-ASIDE FUNDS				
	2% Pollution Prevention Set-Aside Funds (FY94)	This money was part of the FY94 national 2% allocation for pollution prevention activities.	Marin County Office of Waste Management: \$60,000	Regional (Bay/Delta) pollution prevention project for marinas, boat yards, and recreational boaters. Project includes local inspector training, marina educational programs, and boater education.	Contact: Bill Wilson H-W-2 744-2192
	2% Pollution Prevention Set-Aside Funds (FY94)	Same as above	Local Government Commission (Sacramento): \$76, 694	Assistance to local governments in implementing multi-media pollution prevention programs.	Contact: Bill Wilson H-W-2 744-2192
	2% Pollution Prevention Set-Aside Funds (FY94)	Same as above	Commonwealth of Northern Marianas Islands Federal Award (FY94): \$18,306	Regulatory compliance workshops for local industry (Saipan, Tinian, and Rota).	Scheduled Completion: 9/95 Contact: Jim Branch E-4 744-1601
	2% Pollution Prevention Set-Aside Funds (FY93) TrADEX Project	Project to provide transborder assistance for developing environmental excellence.	San Diego County Department of Health Services: \$44,100	<ul style="list-style-type: none"> Identify U.S. companies with operations in Mexico and work with them on pollution prevention opportunities Provide targeted assistance (training, materials) to these companies 	Funded through 2% set-aside program for FY93 Contact: Eileen Sheehan H-W-2 744-2190
	FY90 2% set-aside from ORD	This money was part of the FY90 national 2% allocation which went to ORD. ORD selected several projects at SCAQMD to fund.	R9 recipient: South Coast AQMD EPA funding: \$31,000 FY-91 funds. South Coast AQMD funding: \$56,000	Evaluated low-VOC coating technology opportunities in printing, graphic arts, adhesives, etc through the Center for Emissions Research and Analysis (CERA). Final report completed in 1994.	Final Report available. ORD Contact: Mike Kususko (919) 541-2734.
	FY90 2% set-aside from ORD	Same as above.	R9 recipient: South Coast AQMD EPA funding: \$100,000 SCAQMD funding: \$100,000 Lilly (paint company) funding \$50,000	CERA/South Coast Cooperative Agreement. Low-VOC or no-VOC coating demonstration project for wood furniture. Developed two top coats that met all performance criteria, and conducted market study.	Final Report due early 1995 ORD contact: Bob McCrillis (919) 541-2733.

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	FY90 2% set-aside from ORD	Same as above.	R9 recipient: South Coast AQMD EPA funding: \$160,000 FY93, \$350,000 total	Test methods to identify how much VOCs are in consumer products.	Work completed in fall 1994. Research currently undergoing peer review. ORD contact: Jamie Whitfield (919) 541-2509.
	National FY90 2% set-aside funds	This was a project selected by HQ for funding through the FY90 competition for 2% set-aside funds.	California Air Resources Board (ARB), Sacramento, CA, received \$197,000	Demonstrate use of low chrome and lead based paints for use on highways. The ARB has signed a Memorandum of Understanding with the CA Dept. of Transportation to field test the paints on highways. The ARB also is designing field studies to test low chrome/lead paints in the aerospace industry.	Duration: 6/91 - 9/94 EPA Contact: Mike Stenborg A-1 744-1102 ARB Contact: Mark Watkins 916-327-5623

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	OTHER REGIONAL AC&C CONTRACT FUNDS FOR MULTI-MEDIA PROJECTS				
	Pollution Prevention Library Resource Center	<ul style="list-style-type: none"> Continues pollution prevention center in R9 library 	<ul style="list-style-type: none"> \$55,000 per year 	<ul style="list-style-type: none"> Funds pollution prevention librarian and purchase of pollution prevention resources 	Funding through: <ul style="list-style-type: none"> Region 9 allocation of the regional support account Contact: Eileen Sheehan H-W-2 744-2190

WATER PROGRAM GRANTS

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	BASE WATER PROGRAM GRANTS				
	Non-Point Source Grants 319(h)	<ul style="list-style-type: none"> • State Non-Point Source (NPS) Program implementation • Surface and groundwater protection 	<ul style="list-style-type: none"> • Approx. \$4.2 million for R9 annually • 50 % of funds awarded to State to support base program. • Allocation to each State based on a national formula 	Projects support: <ul style="list-style-type: none"> • Pollutant source reduction and abatement through demonstration of management practices that prevent pollution, and protect/enhance water quality • Public education and outreach to promote pollution prevention and heighten awareness on NPS pollution. 	Grants 5-20 % match Contact: Jovita Pajarillo W-3 744-2011
	Construction Grant Administration Funds	<ul style="list-style-type: none"> • Administration of the Construction Grants Program • Funds may also be applied towards: <ul style="list-style-type: none"> • POTW compliance maintenance • promotion of pollution prevention practices • permits • monitoring • water quality planning 	<ul style="list-style-type: none"> • States • De-obligated funds, variable 	Pollution prevention components in Hawaii: <ul style="list-style-type: none"> • wastewater and sludge reuse • wastewater minimization through water conservation • cesspool phase-out 	<ul style="list-style-type: none"> • No match requirement • Requires adequate state strategy to wind down construction grants program Contact: Elizabeth Borowiec W-2-2 744-1948
	State Revolving Loan Program	\$ is applied towards: <ul style="list-style-type: none"> • POTW construction, compliance and maintenance • nonpoint source projects, including pollution prevention 	This program is administered by the states for a loan program to local communities	Loan projects in FY94 included: <ul style="list-style-type: none"> • City of Davis for a constructed wetland • Panoche Water District to replace outdated irrigation equipment with more efficient, water conserving devices 	Contact: Elizabeth Borowiec W-2-2 744-1948

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	State Wetlands Protection Development Grants 104 (b)(3)	To support State wetlands protection programs, either by • developing new programs, or • refining existing ones	<ul style="list-style-type: none"> • Funding for FY95: \$15 million nationwide • FY94 funding: \$960,000 for Region 9 • 13 projects, 4 with pollution prevention elements • 22.9% of funds went to pollution prevention activities 	4 Projects w/ pollution prevention elements <ul style="list-style-type: none"> • California: \$82,000 Planning/Policy Development for Impact Avoidance to Long Valley/June Lake • Republic of Palau: \$17,000 training in wetland delineation and functions • CNMI: \$7,000 for training in wetland delineation and functions • California: \$150,000 for statewide analysis of wetland resources 	<ul style="list-style-type: none"> • Funding for State agencies and Indian Tribes only • 25% match required • Applications due 1/2/95 Contact: Stephanie Wilson W-7-4 744-1968
	Underground Injection Control (UIC) Grant Program SDWA 1443(b)	Establishment/Implementation of UIC programs by states	<ul style="list-style-type: none"> • \$ to states w/ primacy for implementation of UIC programs • No new grants awarded in FY94 • In FY95, \$100,000 will be available for developing local capacity for wellhead protection/UIC enforcement (see pilot projects below). 	Pollution prevention incorporated in elements of enforcement action: some wells out of compliance required to develop pollution prevention implementation plan	Ongoing Grants Contact: Liz Janes W-6-3 744-1833
	Local Government Groundwater Protection Pilot Project	• To fund UIC and wellhead protection programs at the local level	<ul style="list-style-type: none"> • From FY91-93, nearly \$900,000 awarded to local communities for pilot projects • No new grants awarded in FY94 • \$100,000 will be available in FY95 under the UIC program. 	Project activities included: <ul style="list-style-type: none"> • delineating wellhead protection areas • conducting inspection of shallow inspection wells and other potential sources of groundwater contamination • developing educational materials highlighting waste minimization 	Grants restricted to local government agencies in California Contact: Liz Janes W-6-3 744-1833

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	National Estuary Program	<ul style="list-style-type: none"> To maintain and restore the integrity of the nation's 17 estuaries through sound management practices Region 9 estuaries include San Francisco Bay (SFEP) and Santa Monica Bay (SMEP) 	<p>SFEP funding: \$460,000</p> <ul style="list-style-type: none"> NEP 104 (b)(3): \$310,000 104 (b)(3) Congressional Add-on: \$150,000 <p>SMEP</p> <ul style="list-style-type: none"> NEP (320(g)) planning funds: \$370,000 	<p>Both programs have a large pollution prevention component, including:</p> <ul style="list-style-type: none"> waste minimization implementation of BMPs for agricultural and urban run-off recycling education and public outreach 	<p>Contacts:</p> <p>Santa Monica Bay: Cheryl McGovern, W-3 744-2013</p> <p>San Francisco Bay: Tim Vendlinski, W-3 744-1989</p>
	Section 106 Water Pollution Control	<ul style="list-style-type: none"> Administer programs for the prevention, reduction & elimination of water pollution Recipients include States, Interstate agencies, Indian tribes 	<p>Pollution prevention is gradually being integrated into States' workplans. Overall 106 funding for FY93 & FY94:</p> <ul style="list-style-type: none"> AZ \$555,000 CA \$3,500,000 HI \$469,000 NV \$222,000 	<p>Incorporation of pollution prevention into wastewater permitting inspection & enforcement, sludge and wastewater reclamation programs</p>	<p>Completion 9/93 for FY93 grants Completion 9/94 for FY94 grants</p> <p>Contacts: Cheryl McGovern W-3-1 744-2013</p> <p>Nancy Yoshikawa W-2-2 744-1939</p>
	104(b)(3) Water Quality Grants - Watershed Protection	Watershed development projects	<ul style="list-style-type: none"> Santa Monica Bay and Calleguas-Conego: \$200,000 Heal the Bay in the Santa Monica Bay: \$42,000 Environmental Health Coalition in San Diego: \$25,000 Sacramento Area Flood Control Agency in Sacramento: \$41,400 	<p>Watershed development projects seek to improve water quality through implementation of urban BMPs, pollution prevention, outreach and education.</p>	<p>Contact: Mark Flachsbart W-5-1 744-1890</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	104(b)(3) Water Quality Cooperative Agreements- (Stormwater sludge & pretreatment)	Unique investigations, pilots/demonstrations to implement NPDES related activities	FY94: • \$773,892 awarded to R9 for stormwater, sludge & pretreatment	<p>Arizona</p> <ol style="list-style-type: none"> 1. \$138,974 awarded to ADEQ for the development of their stormwater program. 2. \$116,974 grant for the development of a sludge program which promotes its beneficial reuse. <p>California</p> <ol style="list-style-type: none"> 1. \$200,000 to SWRB to bring all stormwater non-filers into compliance with the general stormwater permit. 2. \$85,000 to the SWRCB to study non-stormwater discharges and provide recommendations on how to address them. 3. \$60,000 to produce a handbook for implementing stormwater compliance programs by municipalities. <p>Nevada</p> <p>\$172,944 for the development of a stormwater program.</p>	<p>Arizona</p> <ol style="list-style-type: none"> 1. Contact: Eugene Bromley W-5-1 744-1906 2. Contact: Lauren Fondahl W-5-2 744-1909 <p>California</p> <ol style="list-style-type: none"> 1. Contact: Bruce Fujimoto, SWRCB 916-657-0908 2. Contact: Mark Flachsbart W-5-1 744-1890 3. Contact: Tom Mumley 510-286-1255 <p>Nevada</p> <p>Contact: Eugene Bromley W-5-1 744-1906</p>

RCRA PROGRAM GRANTS AND CONTRACTS

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	BASE SOLID AND HAZARDOUS WASTE PROGRAM GRANTS				
	Solid Waste Technical Assistance (RCRA §8001)	Hazardous and solid waste research, demonstrations, training, and other projects. Regional allocation may be used for contracts, grants, or cooperative agreements. May not be used for ongoing program implementation.	<ol style="list-style-type: none"> 1. CA Integrated Waste Management Board: \$500,000 2. Arizona Dept. of Commerce: \$74,000 3. California Chamber of Commerce: \$25,000 4. Arizona Dept. of Environmental Quality: \$5,000 5. Tucson Office of Economic Development: \$50,000 6. Community Environmental Council: \$50,000 7. NV Recycling Coalition (NVRC): \$29,000 8. LA Shares: \$40,000 9. Navajo-Zuni: \$30,000 	<ol style="list-style-type: none"> 1. Recycling/Reuse Business Assistance Center 2. Recycling Economic Development Advocate 3. WasteWi\$e Grant 4. WasteWi\$e Grant 5. Recycling Economic Development Project will provide direct technical assistance to recycling processors and manufacturers. 6. CEC will work with the Ventura and Long Beach Recycling Market Development Zones to identify manufacturers with high potential to convert to recycled feedstock. 7. NVRC will host an annual "Jobs Through Recycling" conference focused on recycling economic development in the Western States. 8. LA Shares is a clearinghouse which redirects excess materials back into reuse by matching private sector generators with non-profit users. 9. Develop waste reduction program for tribes. 	<ol style="list-style-type: none"> 1. Contact: Kivi Leroux-Duncan H-3-1 744-2080 2. Contact: Kivi Leroux-Duncan 3. Contact: David Duncan H-3-1 744-2106 4. Contact: Greg Wilmore H-3-1 744-2093 5. Contact: Kivi Leroux-Duncan 6. Contact: Rebecca Jamison H-3-1 744-2099 7. Contact: Rebecca Jamison 8. Contact: David Duncan 9. Contact: Donna Orebic H-3-1 744-2092

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
2	Hazardous Waste Financial Assistance (RCRA §3011)	Hazardous waste financial assistance to state programs. RCRA §3011 funds the development and implementation of state hazardous waste management programs.	<p>FY 94 Allocations:</p> <p>AZ DEQ, \$1,735,834 CA DTSC, \$7,434,000 HI DOH, \$441,292 NV DEP, \$803,460 GU EPA, \$205,000</p> <p>Approximately 7.5% of these funds went to pollution prevention activities.</p>	<p>All state agency grants include funding for waste minimization activities:</p> <p>AZ - Provides technical assistance and training for haz. waste generators.</p> <p>CA - Supports two IPA's in regional offices and headquarters of the Dept. of Toxic Substances Control, who perform technical assistance and coordination functions. Additional resources are devoted to various waste minimization projects, regulatory integration and waste minimization assistance.</p> <p>GU - Provided informational outreach and compliance assistance to generators, educational curriculum for school children K-12, and assistance to provide Guam's first household hazardous waste collection service.</p> <p>HI - Supported a full-time waste minimization coordinator who provided written technical information and assistance to generators.</p> <p>NV - Partially supports the Nevada Small Business Development Center's tech. assistance outreach to generators.</p>	<p>All state grants noted are for the Federal FY94, and expired 9/30/94, except for California's grant, which is on a state fiscal year basis and expires on 6/30/94, and Arizona, whose FY94 grants are 21 months in duration and expire 6/30/95.</p> <p>Project Officers:</p> <p>AZ & NV: Bridget Coyle H--2 744-2032 Waste Minimization liaison: Leif Magnuson, 744-2153</p> <p>CA: Fran Schultz H-3 744-2058 Waste Minimization liaison: Josephine Chien, 744-2045</p> <p>HI & GU: April Katsura H-2 744-2030 Waste Minimization liaison: Josephine Chien, 744-2045</p>

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	CONTRACTS				
	Regional solid waste contract funds (RCRA §8001)	Contract funds provided to support implementation of the solid waste program in the region.	1. \$35,000 2. Government Printing Office: \$1,000 3. \$55,000	1. Executive Order Implementation: Watching Your Waste II 2. Printing of the <i>Garbage Gazette</i> 3. Tijuana Landfill Training	1. Contact: David Duncan H-3-1 (415) 744-2096 2. Contact: David Duncan 3. Contact: Donna Orebic H-3-1 (415) 744-2092
	"RCRA West" Level of Effort Contract (Regional hazardous waste contract funds)	RCRA West is a contract, negotiated by EPA Headquarters, intended to support the implementation of the hazardous waste program in the western regions. The prime contractor is PRC.	1. Construction industry educational program, \$47,000. Replaced by REPA contract in FY94 2. Arizona municipalities pollution prevention conference, \$17,000.	1. Work assignment is designed to develop and test educational materials suitable for use in training contractors, architects, and others in the building trades regarding the principles of pollution prevention. Multi-media fact sheets and instructors guides were developed, and further work is taking place under the REPA contract. 3. More than 150 people attended the Arizona Municipal Pollution Prevention Conference, held in October 1993 in Phoenix. Eight speakers provided information tailored to municipal employees.	RCRA West expired 12/93. It was replaced with the REPA contract. (see below) Contact: Bill Wilson H-W-2 744-2192
	REPA Contract: Small Business Assistance	Under REPA (the RCRA level of effort contract), a work assignment was issued to develop pollution prevention training materials for the small business sector, especially in auto repair, construction, lithographic printing and printed circuit board industries.	\$50,000	In FY94, materials were refined and presented to industry and government focus groups in California.	Contact: Bill Wilson H-W-2 744-2192

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	<p>"TES 11" Technical Enforcement Support LOE contract (FY93)</p> <p>(Regional hazardous waste contract funds)</p>	<p>TES 11 is a contract, negotiated by EPA Headquarters, intended to support the implementation of the hazardous waste enforcement program. The prime contractor is SAIC.</p>	<p>1. Small Business Technical Assistance, \$47,000.</p> <p>2. Port of Los Angeles Technical Assistance, \$50,000.</p> <p>3. Model Print Shop, \$25,000.</p>	<p>1. Informational materials (fact sheets, instructor's manual, slides) are being developed for use by state, local, and federal agencies, business and educational groups. Three small business groups will be individually addressed--automotive maintenance, print shops, and printed circuit board fabricators.</p> <p>2. Tenants of the Port of Los Angeles were targeted for pollution prevention audits and educational outreach in this collaboration between the City, Port, State, and EPA. Contract and city personnel assessed and prepared reports on a ship repair facility, a container transport facility, and a fish cannery. The reports provided the foundation for a seminar for port tenants.</p> <p>3. The project sought to design and assess a model lithographic print shop that minimizes emissions to all media and conserves water and energy. The manual <i>Practical Pollution Prevention Techniques for Lithographic Printers</i> was prepared and is being distributed by the Printing Industry of Northern California.</p>	<p>1. Completed 4/94. Contact: Bill Wilson H-W-2 744-2192</p> <p>2. Completed 5/94. Contact: Bill Wilson</p> <p>3. Completed 4/94. Contact: Bill Wilson</p>

AIR AND TOXICS PROGRAMS GRANTS

	TITLE & FUNDING SOURCE	PURPOSE	R9 RECIPIENT & AMOUNT AWARDED	PROJECT DESCRIPTION	SCHEDULED COMPLETION, COMMENTS & REGION 9 CONTACT
	BASE AIR AND TOXICS PROGRAM GRANTS				
	\$105 Air Grant	To assist state and local air pollution control agencies carry-out federal Clean Air Act requirements.	Region 9 awarded more than \$25 million to state and local air pollution control agencies.	<p>Pollution prevention is increasingly being incorporated into All grant recipients are required to report on pollution prevention activities. R9 guidance provides Some activities include:</p> <ul style="list-style-type: none"> • Clark County is exploring energy conservation and renewable energy sources to reduce air pollution • Washoe County program promotes efficient woodstoves. • San Joaquin Valley Air Pollution District is developing a checklist for inspectors to use in assisting permittees to adopt pollution prevention measures. • San Diego Air Pollution Control District is working to promote alternative fuel vehicles 	For more information, contact: Melanie Gaier A-3-1 744-1205
	\$105 Air Grant	To assist state and local air pollution control agencies carry-out federal Clean Air Act requirements.	<p>R9 recipient: South Coast AQMD EPA funding: \$800,000 FY94 funds. Other funding sources include: DOE, California Energy Commission, California Air Resources Board, South Coast AQMD, as well as services in kind by fuel companies and car companies.</p>	<p>Alternative fuels Demonstration Project (Clean Fleet Project).</p> <p>This project started in 1992. The purpose is to evaluate the use of five alternative fuels in a fleet. Federal Express is participating as the fleet operator. The fuels being tested are: propane, natural gas, California phase 2 gasoline, methanol and electricity.</p>	<p>Final report due July 1995.</p> <p>Contact: Doug McDaniel A-2-3 744-1246</p>

Appendix B: Glossary

ADEQ	Arizona Department of Environmental Quality
BMP	Best Management Practices
CIWMB	California Integrated Waste Management Board
CNMI	Commonwealth of Northern Marianas Islands
CWA	Clean Water Act
ETI	Environmental Technology Initiative
EV	electric vehicle
HDOH	Hawaii Department of Health
HWMD	Hazardous Waste Management Division
IPA	Intergovernmental Personnel Act
NEPA	National Environmental Policy Act
NGV	natural gas vehicle
NPDES	National Pollutant Discharge Elimination System
OFA	Office of Federal Activities
OPINAP	Office of Pacific Island and Native American Programs
OREC	Office of Regional Enforcement Coordination
PM-10	Particulate matter less than 10 microns
POTW	Publicly Owned Treatment Works
PPIS	Pollution Prevention Incentives for States
PPRC	Pollution Prevention Resource Center
RBAC	Recycling Business Assistance Centers
RCRA	Resource Conservation and Recovery Act
REDA	Recycling Economic Development Advocates
REPA	RCRA Enforcement and Permitting Assistance
SBDC	Small Business Development Center
SCAQMD	South Coast Air Quality Management District
SEP	Supplemental Environmental Projects
TES	Technical Enforcement Support
TOPPs	Targeted Opportunities for Pollution Prevention
TRIS	Toxic Release Inventory System
VOC	Volatile Organic Compounds