United States
Environmental Protection Agency

Office of Enforcement and
Compliance Assurance (2248A)
http://www.epa.gov/oeca/sep

EPA 325-R-01-001
January 2001

Beyond Compliance:
Supplemental Environmental Projects

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Provide credible deterrent to pollution and greater compliance with the law.

INTRODUCTION

Americans have the right to air that is clean, water that is safe to drink, food that is free from dangerous pesticide residues, and communities that are free of hazardous wastes. The United States Environmental Protection Agency (EPA) helps protect these rights through fair, effective enforcement of federal environmental laws, such as the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Federal Insecticide, Fungicide and Rodenticide Act, Toxic Substances Control Act, and Resource Conservation and Recovery Act.

If the Agency believes that an individual or company has failed to comply with Federal environmental laws, it may initiate an enforcement action. Enforcement actions are taken in order to compel the individual or company to return to compliance, and deter others from violating these laws. In settling an enforcement action, EPA usually requires individuals or companies to pay cash penalties and to take injunctive relief - actions needed to eliminate noncompliance, correct environmental damage, and restore the environment.

In addition, enforcement settlements may also include Supplemental Environmental Projects (SEPs). SEPs are actions taken by an individual or company that are in addition to what is required to return to compliance with environmental laws. SEPs benefit public health or the environment. They offer a unique opportunity to further our Nation's goals of ensuring clean air and water, safe food, better waste management, and expanding the public's right to know about their environment.

EPA's Mission

EPA's mission is to protect public health and the environment. This mission is accomplished by:

1. Protecting and enhancing the quality of the Nation's air resources;
2. Maintaining the chemical, physical, and biological integrity of the Nation's waters;
3. Protecting the Nation's food supply from pesticide residues;
4. Preventing or reducing pollution at the source whenever possible;
5. Reducing or eliminating the generation of hazardous waste;
6. Reducing global and cross-border environmental risks;
7. Expanding American's right to know about their environment;
8. Promoting sound science and improved understanding of environmental risk;
9. Providing a credible deterrent to pollution and greater compliance with the law; and
10. Implementing the highest quality standards for management and fiscal responsibility.

SEP projects have existed since the early 1980s, and their use has increased steadily through the 1990s. For instance, while more than 200 SEPs were approved in 1992, a total of 336 SEPs were agreed to as part of 197 case settlements in fiscal year 1999. The total monetary value of these SEPs was over $230 million. Approximately one half of these projects were classified as pollution prevention or pollution reduction activities.

This booklet offers a description of SEPs, highlights a number of SEPs that have either been completed or are currently in progress, and discusses the benefits to public health and the environment that can be achieved through these projects.

What is a SEP?

Through its SEP policy, EPA allows a violator of environmental laws to do more than simply correct its violation(s). A SEP is an environmentally beneficial project that a violator voluntarily agrees to perform, in addition to actions required to correct the violation(s), as part of an enforcement settlement. When volunteering to perform a SEP, a company must show that it can and will complete the project, and must provide all funds used to finance the project. EPA provides oversight to ensure that the company does what it promises to do. EPA, however, does not manage or control the funds.

How do SEPs benefit the public?

SEPs are designed to protect and improve the environment and public health, beyond that achieved by compliance with applicable laws. SEPs may directly or indirectly benefit the public by preventing pollution or addressing environmental justice concerns. Finding more effective ways to address community environmental concerns that result from a company's violations is a major objective of EPA's SEP policy. Not only can community involvement assure greater consideration of community needs in specific SEPs, but it can lead to increased communication and trust between all concerned parties—a foundation for long-term environmental improvement.

Who may do a SEP, and what is the benefit for the violating company?

In addition to correcting the violation(s), a violating company may propose one or more SEPs as part of a settlement. As the examples in this report demonstrate, SEPs have been implemented by large and small companies, hospitals, federal facilities, and state and local governments. To gain approval for conducting a SEP, a company must identify and demonstrate a willingness and ability to implement an appropriate project that primarily benefits public health or the environment. These projects must provide benefits beyond what compliance with the law requires.

If a company performs a SEP, EPA may reduce the penalty assessed. In addition to this economic incentive, a company may improve the quality of life for the surrounding community and as a result, build a better relationship with the community.

What are the categories of acceptable SEPs?

As described below, EPA has seven specific categories of projects that can be acceptable SEPs. In addition to these SEPs, EPA allows companies to perform other types of projects that have environmental or public health benefits.

Pollution Prevention: These SEPs involve changes that reduce or eliminate some form of pollution, or that reduce a pollutant's toxicity prior to recycling, treatment, or disposal. Examples include use of less toxic materials to make products, modifications in the production process to reduce material losses, changes in product design which require less polluting processes, or improved housekeeping. EPA places a high priority on pollution prevention approaches, since these reduce the potential for future pollution, and may lead to more widespread, environmentally-beneficial changes in their business or industry activities. As a result, EPA may allow greater

mitigation in penalties for pollution prevention projects than for other SEPs.

***Pollution Reduction**:* These SEPs are similar to pollution prevention SEPs in terms of outcome. But instead of eliminating a source of pollution, they reduce the amount or danger of the pollution which reaches the environment. Examples include improved treatment or control of pollutants and recycling and reuse of chemicals or materials.

***Public Health**:* Such SEPs may include examining residents in the community put at risk by the violations to determine if anyone has experienced health problems related to the violation, as well as related medical treatment or rehabilitation therapy.

***Environmental Restoration and Protection**:* These SEPs improve the condition of the land, air, or water in the area damaged by the violation. For example, by purchasing land or developing conservation programs for the land, a company could protect a natural habitat for wildlife or a source of drinking water. Beyond preservation, such a SEP might involve restoring natural areas that are vital to long-term protection of the environment or public health.

***Assessments and Audits**:* Any violating company may agree to examine its operations for pollution prevention opportunities, and determine if it can reduce the use, production, or generation of hazardous materials and other wastes. These audits go well beyond standard business practices. In addition, small businesses (with less than 100 employees) or small communities (less than 2,500 residents) can receive credit for agreeing to conduct audits to determine their compliance with environmental laws in order to avoid future violations.

***Environmental Compliance Promotion**:* These are SEPs in which the violator helps other companies achieve compliance and reduce pollution related to the type of violation. For example, a company which violated the Clean Air Act may train other companies on how to comply with the Act.

***Emergency Planning and Preparedness**:* These SEPs provide technical assistance and training to state or local emergency planning and response organizations to help them better respond to chemical emergencies. For example, a company may provide a local fire department with additional equipment to deal with a hazardous waste situation.

How can I participate in the SEP Process?

Your participation can have a beneficial impact in your community. SEPs proposed by communities have been adopted as part of final settlement agreements when they fall within the scope of the SEP policy. In other cases, SEP ideas have been modified to accommodate community priorities. If you are interested, you are strongly encouraged by EPA to participate in the SEP process. You can:

- Attend public meetings to suggest SEPs or comment on proposed SEPs.
- Provide comments on a proposed settlement published in the Federal Register.
- Learn more about SEPs by visiting EPA's SEP Webpage at http://www.epa.gov/oeca/sep.

***Other Types of Projects**:* Other acceptable SEPs would be those that have environmental merit but do not fit within the categories listed above. These types of projects must be fully consistent with all other provisions of the SEP Policy.

“Never doubt that a small group of thoughtful, committed citizens can change the world, indeed, it’s the only thing that ever has.”

Margaret Mead
Writer and Teacher (1901-1978)

Involving the Community in Puerto Rico Electric Power Authority SEPs

The Puerto Rico Electric Power Authority (PREPA) has several plants throughout Puerto Rico. In March of 1999, PREPA and EPA entered into an agreement that resolved a Complaint which was pending in Federal District Court against PREPA at five of its facilities. As part of the agreement, PREPA agreed to perform two SEPs. The concerns and interests of the communities in the areas around the facilities helped to select and shape the SEPs.

From the beginning, EPA felt that community involvement should be a key factor in resolving PREPA's enforcement action. EPA's Regional Administrator initiated community involvement with a letter to community groups that had expressed interest in the case or were located near one of the PREPA facilities. These groups were presented with the details of the enforcement action and were given general information about the status of settlement discussions. Through a process facilitated by EPA, the community groups suggested numerous potential projects and reached consensus on community priorities. Two of the highest priority proposals were included in the settlement.

Preserving a Natural Habitat

As its first project, PREPA has committed to acquire and preserve a natural habitat near the Palo Seco and San Juan power plants over the next five years. This area has been described as one of the last self-sufficient ecosystems in the area near these power plants. By completing this SEP, PREPA will ensure that the natural environment in this area will survive.

Hazardous Materials Training

The second SEP to which PREPA has committed involves the development of a 40-hour hazardous materials technician-level training program. This program will be designed as an addition to fire department training programs throughout the island of Puerto Rico. PREPA will fund and present this course so that there will be trained chemical spill response teams throughout the island.

Additional Measures to Improve Community-PREPA Communications

Because all parties recognized the importance of improving relationships and communication between PREPA and the communities, PREPA agreed to hire a contractor who will work on community environmental issues related to PREPA over the next five years. While not a SEP, this measure, taken to ensure improved long-term environmental cooperation between PREPA and the communities, was a significant outcome of the SEP negotiation process.

Returning an Abandoned Drive-In to its Natural State

In October 1997, EPA, the State of Rhode Island and the Potentially Responsible Parties (PRPs) at the Landfill & Resource Recovery Superfund site, entered into a settlement agreement which included a commitment to purchase conservation easements within the Blackstone River Valley National Heritage Corridor. This 380,000 acre corridor includes a string of parks, museums, historic buildings and conservation land along the Blackstone River covering 24 towns from Worcester, MA to Providence, RI.

This purchase will include 30 acres which contains the Lonsdale Twin Drive-In Theater in Lincoln, RI. This drive-in theater is located in part of one of the largest and most significant wildlife marshes in northern Rhode Island, and is a key stopover for migratory birds along the Atlantic flyway. The Army Corp of Engineers is in the process of preparing plans to demolish the movie screens, remove the asphalt parking lot, reconstruct wetlands and extend the Blackstone River Park Bikeway. Remaining funds will be used to purchase environmentally significant wetlands, or create conservation easements near the Superfund site.

Crozer Chester Medical Center Teams with Public Schools to Conquer Asthma

Within Pennsylvania's Chester-Upland Public Schools, children with asthma are receiving treatment and education about this devastating disease. These students were being diagnosed with asthma at an alarming rate, almost twice the national average. When the Crozer Chester Medical Center entered into a SEP agreement with EPA and the Chester-Upland School District to resolve Clean Air Act violations, the medical center agreed to implement a comprehensive asthma detection and treatment program in the Chester-Upland public schools. The primary goal of this program was to reduce the long term impact of asthmatic conditions in this student population.

Goals of the Asthma Management Program for children include:

- increased exercise capacity
- reduced time lost from school
- reduced nocturnal asthma
- reduced emergency room visits or hospitalizations
- reduced effects from medications.

Under this program, all students in two successive classes of grades 1, 6, and 11 are screened for asthma. Depending on the diagnosis, a student suffering from or at risk for asthma is placed in an appropriate asthma management program. As a direct result of these initiatives, diagnosed students are linked to medical care programs designed to enhance their asthma management. The students and their families are educated to improve daily asthma management and to reduce exposure to environmental irritants.

This SEP responds to a community-specific, environmentally-related need in this affected area. In addition, it also meets the primary purpose of the SEP policy—encouraging and obtaining environmental and public health protection and improvements.

SEPs for Multiple Facilities: United Technologies Corporation

As part of a consent decree to resolve environmental violations at all of its New England facilities, United Technologies Corporation (UTC) agreed to perform two SEPs. The first SEP involves research into the replacement of chromium in their plating operations at Pratt & Whitney (a part of UTC), and the second SEP provides environmental restoration at Lord Cove, a large wetland in Connecticut.

Preventing Pollution Using Innovative Technology

Hexavalent chromium is used extensively in industrial coatings to protect metals operating at extemely high temperatures in harsh, corrosive environments. When released as a waste into the environment, hexavalent chromium is known to cause cancer and damage to DNA. Not only does Pratt & Whitney generate more than 10 tons of waste containing hexavalent chromium each year, its plating process generates thousands of gallons of acid and alkali rinse solutions which require treatment and disposal. New research into possible chromium substitutes or replacements could have far-reaching effects, not only for UTC, but also for the entire aerospace industry.

UTC's first SEP allows for a systematic approach to developing and testing chromium substitutes. Pratt & Whitney, in conjunction with the University of Connecticut, has identified possible substitutes for chromium in various company operations. These include surface polymerized coatings, thin-film sulfuric acid anodized coatings, non-chromated conversion coatings, and nickel tungsten alloy electrodeposits. The testing and possible inclusion of these substitutes in manufacturing processes represent much needed change for the electroplating industry.

This SEP will allow Pratt & Whitney to conduct ground-breaking research which may greatly benefit the environment. Because of the potential economic benefit to the company of a successful technology breakthrough, UTC has agreed that any first-year profits will be used to fund additional SEPs.

Restoring Natural Environment on the Connecticut River

The second SEP involves restoring tidelands on the Connecticut River by removing 200 acres of the invasive reed known as *Phragmites australis*. This SEP

will help reverse the damage caused by this invasive plant which is harming the native ecosystem and habitat. Lord Cove, an 1,100-acre brackish tidal marsh, is one of the core sites within the tidelands. Since 1968, the reed has taken over approximately half of Lord Cove and is considered to be an immediate threat to the marsh's existence. UTC contracted with The Nature Conservancy to rehabilitate the marsh over a three-year period. The proposed completion date for this SEP is September 2001.

The Nature Conservancy describes the tidal region of the lower Connecticut River as ...

"one of the richest ecosystems in the northeast, providing habitat for hundreds of species, seven of them globally rare or endangered, and containing an extraordinarily unsullied wetland complex."

Protect and enhance the quality of the Nation's air resources.

Setting a Goal Beyond Compliance - U.S. Mint, Philadelphia

The first Clean Air Act penalty action EPA ever filed against a federal facility occurred on January 23, 1998 in an administrative complaint against the U.S. Mint in Philadelphia, PA. The U.S. Mint is the world's largest manufacturer of coins, medals, and coin-based consumer products. The Philadelphia Mint facility is just one of two Mint facilities that creates the coins circulated for daily use in commerce.

The administrative complaint was a result of a 1997 inspection. During the inspection, EPA discovered violations of testing, monitoring, and operation and maintenance requirements for chromium electroplating. An additional violation included the lack of a certified technician being present during the servicing of equipment containing chlorofluorocarbons (CFCs). In order to come into compliance, the U.S. Mint upgraded the pollution control equipment for its chromium electroplating operations. As a SEP, they also agreed to install and operate a more efficient emissions control system for two hard chromium electroplating tanks, as well as a chromium strip tank. This system will significantly reduce chromium emissions beyond that required for compliance.

Health risks associated with chromium compound air pollutants include lung cancer and other respiratory ailments. CFC emissions are believed to contribute to the depletion of the ozone layer which protects the Earth from harmful ultraviolet radiation. Loss of ozone may lead to an increase in skin cancer in humans, and cause damage to plant and animal life as well.

Protecting New York City's Croton Water Supply

The drinking water supply for New York City and its surrounding counties comes from a large watershed spanning southern New York State. Drinking water is supplied by two providers, one of which is the Croton water supply. The Croton water supply consists of 10 reservoirs and 3 controlled lakes which have the capacity to hold 95 billion gallons of water. Under normal conditions, this system provides 10% of the New York City water supply and up to 30% under drought conditions. Because of the dense population in this watershed, there is some concern about waterborne contaminants.

In 1998, New York City agreed to build a filtration plant for its Croton Drinking Water System to reduce the risk of contaminants for its nearly one million residents. This agreement is part of a settlement that resolves Safe Drinking Water Act violations for failure to filter the Croton water supply. In addition, the City agreed to perform four watershed protection SEPs.

The first SEP involves land acquisition in the Croton watershed area. The city has agreed to acquire fee title to or watershed conservation easements on vacant, undeveloped real property in the Croton watershed. This property will be kept in perpetuity in an undeveloped state to protect the Croton watershed and the New York City water supply.

A second SEP addresses storm water runoff. Two communities, the Town of Patterson and the Village of Brewster, were chosen to participate in the study and in the implementation of storm water management district plans and necessary retrofits.

The third SEP is the construction of a sewer line on the main street of the Village of Brewster which will connect to the wastewater treatment plant after it has been upgraded. The sewer line will make it possible to eliminate use of old, inadequate septic systems and eliminate potential contamination of leaks from those systems.

The final SEP is a community project which will potentially impact the Bronx River. The city is currently in the process of seeking community input, and obtaining assistance from the Army Corps of Engineers.

Reducing Water Pollution in the City of Baltimore

As part of a settlement of Clean Water Act violations by city-owned filtration and wastewater treatment plants, the City of Baltimore, Maryland agreed to perform three SEPs. These SEPs are designed to improve water quality above and beyond what would be achieved by measures required to return to compliance.

Controlling Pollution in Gwynns Run

This pollution control project involves the construction of a storm water treatment system. The system consists of an artificially created wetland to slow the flow of water and precipitate out pollutants. It is located at the confluence of Gwynns Run and Gwynns Falls.

Collecting Debris in Gwynns Falls

For its second SEP, the City of Baltimore committed to installing a debris collection system along Gwynn Falls. This system will collect trash and debris and prevent it from being washed into the stream.

Managing Storm Water in Brooklyn Park

The third SEP involves installing a storm water pond in the Brooklyn Park area near the City of Baltimore. This pond, designed and built with appropriate flora and fauna, will collect storm water runoff to allow pollutants to precipitate out of the water.

Delmarva Power and Light Restores a Wetland

Delmarva Power and Light (Delmarva P&L) is a large electric power company with 198 distribution stations in the states of Delaware, Maryland, and Virginia. Delmarva P&L faced penalties for the discharge of oil by several of its facilities into rivers and other waterbodies. As part of the settlement for these Clean Water Act violations, Delmarva P&L agreed to conduct a SEP to restore a wetland.

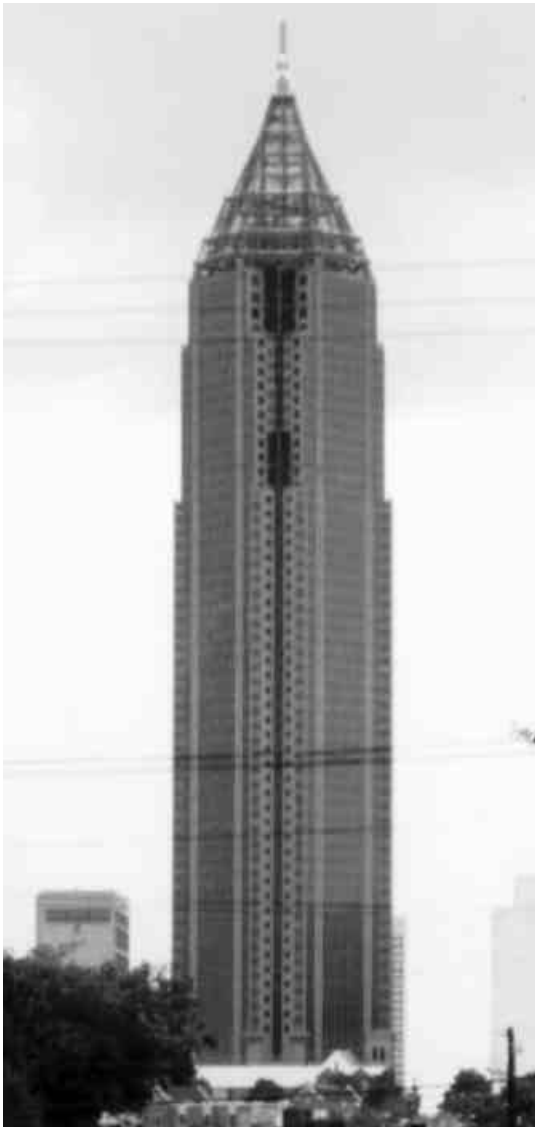
Delmarva P&L will restore approximately twelve acres of wetland in the Longfield area at the Blackwater National Wildlife Refuge in Cambridge, Maryland. The project involves excavating and grading the existing soil, and providing water control structures (i.e., pipes). When the project is completed, Delmarva P&L must provide expert documentation that the project has resulted in a functional wetland. This project is consistent with the Clinton Administration's Clean Water Action Plan, which has proposed a goal of no net loss of wetlands and, beginning in 2005, a net increase of 100,000 acres of wetlands per year.

Town of Luray Restores Stream Quality

As part of its settlement for Clean Water Act violations, the Town of Luray, Virginia, agreed to perform a SEP which involved, among other actions, the restoration of a streambank in the town. Overall, the project consisted of the demolition and removal of the wastewater treatment facility and associated debris, the construction of a pond which is designed to collect runoff from a nearby parking lot, and the restoration of the native flora on the banks of Hawksbill Creek. The project will reduce erosion by stablilizing the streambank and help to improve the ecosystem affected by the violations. It will also enhance an open space area for the local community.

Improving Water Quality in the City of Atlanta

On September 24, 1998, the City of Atlanta, Georgia entered into an agreement that resolved Clean Water Act and Georgia Water Quality Control Act violations at all nine of its combined sewer overflow (CSO) facilities. CSO facilities discharge untreated wastewater directly to rivers, lakes, and estuaries during periods of heavy rainfall or snowmelt. These CSOs typically reduce water quality because they contain not only storm water but also untreated human and industrial waste, toxic materials, and floating debris. Because of this potential damage to water quality, the City of Atlanta agreed to perform two SEPs to cleanup and protect streams affected by CSOs as part of the settlement.



Protecting Streams Through the Greenway Acquisition Project

For this SEP, the City of Atlanta will acquire and maintain protected areas, called Greenway Properties, along selected portions of streams originating in or flowing through the City of Atlanta. The completion date for this project is March 31, 2007.

Removing Debris Through the Stream Cleanup Project

For this SEP, the City of Atlanta provided a one-time cleanup of trash and debris from the banks of selected streams affected by CSOs.

Concerns Regarding Environmental Justice

These SEPs also included an environmental justice (EJ) component. Based on a preliminary analysis conducted in September 1998, EPA was concerned about the impact of CSOs on Atlanta's minority and/or low income neighborhoods. The analysis demonstrated that two-thirds of the locations where CSOs occurred were in areas with minority populations exceeding 50%. In addition, seven of the nine CSO facilities were located in densely populated communities with minority populations ranging from 82-100%.

This EJ component of each SEP provided for the establishment of a SEP Advisory Committee (SAC). The City of Atlanta has selected a SAC from a broad cross-section of community stakeholders that includes minority representatives from neighborhoods impacted by the CSOs, community leaders, neighborhood planning units, business community leaders, and other interested community members. Under the terms of the consent decree, the SAC provides advice and recommendations to the City regarding suggestions from minority neighborhood groups in the development, management, and implementation of the Greenway Acquisition Project and the Stream Cleanup Project. Particular emphasis is placed on input from minority communities adjacent to designated streams and other streams affected by the discharges from the City's CSO facilities.

Sewerage and Water Board of New Orleans Works to Revitalize Lake Pontchartrain

Through the 1970s, the Lincoln Beach area of Lake Pontchartrain was known as a popular and safe recreation spot. Families from the surrounding neighborhoods used the beach and lake as a safe, healthy place for swimming and other recreational activities, such as fishing. By the early 1980s, however, the lake became badly contaminated and could no longer serve either purpose. Major sources of contamination included both urban runoff from surrounding areas, and overflows from New Orleans' combined sanitary and storm sewer system. The overflows occurred during storms which overwhelmed the old system's capacity.

Prior to EPA's involvement, local environmental organizations such as Save Our Beach and the Lake Pontchartrain Basin Foundation went to great lengths to establish conservation guidelines for the neighboring communities. While water quality gradually improved, bold efforts were necessary to make greater improvements.

In 1998, as part of the settlement for Clean Water Act violations due to the old sewage system, the Sewerage and Water Board of New Orleans proposed a SEP that would lead to the restoration of a viable fishery habitat and eventual re-opening of the Lincoln Beach recreation area.

The Sewerage and Water Board's specific goals for the Lincoln Beach SEP project include:

- Water quality improvement and public health protection.
- Public access and use for education, recreation, swimming, and fishing.
- Restoration, enhancement, and creation of wetlands and vegetative upland buffers and submerged aquatic beds.
- Reduced runoff and erosion.

To enhance the progress of water quality improvement in Lake Ponchartrain, the SEP included several measures: (1) planting submerged aquatic vegetation to serve as a habitat for native aquatic organisms and to enhance natural water quality; (2) constructing vegetative buffer zones on the lake shore to improve the quality of non-point source storm water runoff; and (3) enhancing wetlands through planting native wetland species. With their native indigenous ecosystems, these restored areas will also serve as an educational resource.

In addition to these measures, the SEP includes the establishment of a unique continuous water quality monitoring system to track changes in the lake's water quality. After years of a community joining together to improve its environment, Lake Pontchartrain is on its way to again becoming a valuable recreational resource.


Protect the Nation's food supply from pesticide residues.

Treating Baltimore's Inner City Children with Asthma

S.C. Johnson & Son resolved violations of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) by paying a penalty and agreeing to assist the Asthma and Allergy Foundation of America (AAFA) with the purchase and staffing of a mobile asthma clinic (a Breathmobile®). Staffed by a physician, a nurse, and a respiratory therapist, the Breathmobile® will provide preventative health care as well as specialized asthma treatment to high-risk, inner-city children. The great advantage to this mobile asthma clinic is that it brings consistent state-of-the-art medical care to inner-city, underprivileged children right at their elementary school. These children would otherwise not have routine access to effective asthma care.

Studies suggest that children who remain in the program for three visits experience improvement in their asthma health, therefore, the mobile asthma clinic will provide each child with at least three visits. This settlement resolves violations of FIFRA for allegedly selling and distributing an unregistered pesticide, which was marketed to allergy sufferers, and addresses both environmental justice and children's health concerns involving allergies. The settlement supports the mobile asthma clinic for a full year of diagnosis and treatment. After one year of treating children, the S.C. Johnson & Son settlement anticipates that the mobile asthma clinic will be continued through the University of Maryland.


“Citizens now have more information about releases of toxic emissions in their communities, which provides incentives for facilities to drive emissions down.”

Innovation at the Environmental Protection Agency: A Decade of Progress, U.S. EPA, April 2000

Ashland Oil Company SEPs Reduce Pollution, Educate, and Preserve Nature

Through combined efforts involving EPA, Ashland Oil Company (Ashland), and state and local agencies, Ashland agreed to perform six SEPs to settle an enforcement action for environmental violations. These SEPs involve pollution reduction, environmental restoration, assessments and audits, and environmental compliance promotion. The SEPs are part of an unusual 1999 settlement which involved three of Ashland's geographically-dispersed petroleum refineries located in St. Paul Park, Minnesota; Canton, Ohio; and Catlettsburg, Kentucky.

Reducing Local Environmental Impacts

In two separate SEPs, Ashland agreed to provide for the installation of hydrofluoric acid detection and mitigation systems. Ashland agreed to these additional pollution reduction measures at both the St. Paul Park, Minnesota and Canton, Ohio facilities. Hydrofluoric acid is an extremely toxic compound that can cause severe burns of human tissue. The detection and mitigation devices provide additional protection for the surrounding communities, and go far beyond what is currently required by law.

In a separate SEP, Ashland agreed to install upgrades on its Canton Refinery oil/water separator tanks. This will substantially reduce emissions of volatile organic hydrocarbons to the atmosphere, and thus reduce the smog in the area.

Restoring Minnesota Prairie Lands

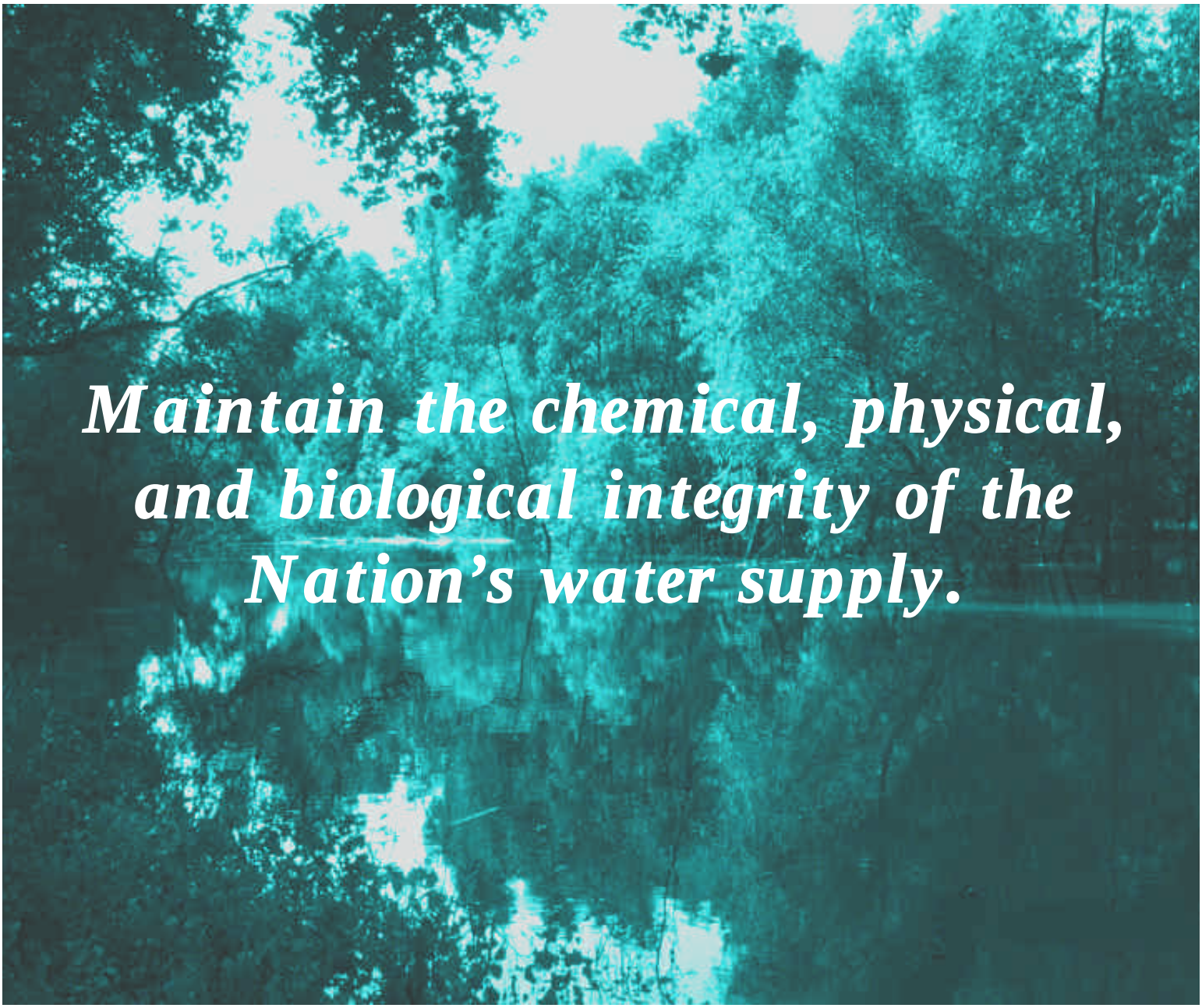
The Grey Cloud Dunes area incorporates high terraces, sandy soil, prairie grasslands, and distinct species of plants growing on dunes on high banks above the Mississippi River. Ashland held ownership of 274 acres of this prairie, and local groups were concerned about the potential for industrial development which could destroy this unique ecosystem. As one of its SEPs, Ashland renovated the Grey Cloud Dune Prairie and donated it to the State of Minnesota. The state has dedicated the land, located near Cottage Grove, Minnesota, as a permanent scientific and natural preservation and study area.

Promoting Environmental Compliance and Education

Ashland teamed with the Salato Center in Frankfort, Kentucky, for an environmental compliance promotion and education program that provides training and technical support to small businesses, developers, industry, and the agricultural community. The program is designed to provide education on how to achieve and maintain compliance with the Clean Water Act and Clean Air Act, and about the potential benefits of pollution prevention or other measures which enable businesses to exceed environmental compliance requirements.

Air Monitoring and Assessment

In conjunction with the Commonwealth of Kentucky, Ashland agreed to conduct ambient air monitoring and analysis as part of a tri-state geographic environmental initiative involving Kentucky, Ohio, and West Virginia.


Maintain the chemical, physical, and biological integrity of the Nation's water supply.

ASARCO's SEPs Protect Public Health and Restore Wetlands

ASARCO's lead refinery in Omaha, Nebraska, began operations during the end of the 19th century. Although this facility is now closed, over a century of operations resulted in contamination of the surrounding area by airborne lead particulates. As part of a settlement agreement for Clean Water Act violations, ASARCO agreed to implement SEPs to: (1) create, restore, or improve the ecosystem of the Missouri River into which the plant discharged; and (2) explore and mitigate potential public health problems related to its past operations.

Improving the Ecosystem of the Missouri River Watershed

The first SEP focused on reversing wetland losses in the Missouri River corridor. Protecting and restoring the nation's wetlands have been a major EPA goal during the last decade. Because the Missouri River corridor had substantial wetland losses which afflicted many river basins, this SEP contributed to the on-going effort to reverse those losses, partially through the development and implementation of a wetland restoration plan for sites along the river corridor.

To implement this SEP, ASARCO assisted the Papio-Missouri Natural Resources District (District) with the purchase of approximately 475 acres adjacent to property the District already owned. The new land was used to restore, enhance, or create wetlands in the river corridor, and to expand an existing protected wildlife area. The District carried out restoration and sampling activities to assess the effectiveness of restoration efforts at four sites along the Missouri River.

Assessing and Protecting Public Health

ASARCO's second SEP focused on assessing public health risks due to the long-term airborne lead contamination problem. The Omaha/Douglas County Health Department was selected to measure both current blood lead levels in children and evaluate possible health impacts. The blood level sampling was

completed, and the results led to further sampling. The additional sampling included both blood levels in vulnerable children and measures of lead levels in soils, homes, and at daycare facilities. Superfund cleanup actions have been initiated to remove contaminated soils from the yards at some daycare facilities that were particularly impacted.

Brownfields Cleanup by Sherwin-Williams

As part of its 1997 consent decree to resolve environmental violations, the Sherwin-Williams resin and paint facility in southeast Chicago agreed to perform two SEPs to improve the environment in the surrounding community. Sherwin-Williams chose to clean up a Brownfields site on Chicago's southeast side and to restore a wetland in the southeast area near Lake Calumet. The combined environmental benefits to the community came from not only the SEPs but also from the changes in facility operations (e.g., reduced VOC emissions due to changes in the paint production process) required to ensure future environmental compliance.

Cleaning Up a Brownfields Site

Sherwin-Williams contracted with the City of Chicago to redevelop a Brownfields site in the Victory Heights/West Pullman section of the city. The 130-acre site, which is about a mile from the Sherwin-Williams plant, contains vacant, partially demolished factories and is crisscrossed with active and inactive railroad tracks. The surrounding neighborhoods are primarily minority. There are community groups dedicated to the restoration of this area. Of particular interest in this case is that the SEP addresses improving the quality of life for people who have been and will be affected by any pollution generated by the Sherwin-Williams facility.

Using SEPs at Brownfields:

"SEPs are an innovative way of leveraging a community's resources to successfully address environmental issues by complementing their Brownfields program." Dave Reynolds, City of Chicago Department of Environment.

"We believe such projects can be effective tools in addressing issues of environmental justice in low-income and minority communities." Stefan Noe, attorney for Citizens for a Better Environment.

Wetlands Restoration

The second SEP involves wetlands restoration in the Indian Creek marsh near Lake Calumet, which is also near the Sherwin-Williams facility. The company contracted with Open Lands, a local environmental group completing the marsh restoration. The project includes cleanup and protection of the existing habitat, planting, maintenance, and upkeep.

Simpson Paper Company Restores Salmon Habitat

After declining for many years, the salmon population in three creeks in Humboldt County, California, is recovering due to the positive results of SEPs performed by the Simpson Paper Company. On January 6, 1995, EPA and Simpson entered into an Administrative Order which ended an EPA enforcement action for Clean Water Act violations at Simpson's Humboldt pulp mill located on the Pacific Ocean in Humboldt Bay, California. As part of the settlement, Simpson agreed to perform three SEPs to restore the salmon spawning habitat in three creeks: Salmon Creek, Long Prairie Creek, and Terwer Creek. With mutual interest in restoring the migratory fish habitat, EPA and Simpson easily agreed to use the SEP policy, making the negotiation process relatively simple and straightforward. These SEPs complemented EPA's ongoing efforts to protect water quality and habitat of northern California watersheds.

Enhancing Salmon Creek's Riparian Corridor

To enhance the survivability of salmonids in Salmon Creek, Simpson successfully planted an estimated 500 conifers in riparian zones along the stream. It is anticipated that as the cover matures, branches and trees will eventually fall into the stream providing good salmon recruitment areas and hiding areas as pools with adequate cover are formed.

Creating Quality Spawning Habitat in Long Prairie Creek

Once suffering from limited pool depth and a lack of escape cover, the Long Prairie Creek is again becoming quality spawning habitat. By implementing this SEP, Simpson increased pool depth and the rearing habitat in existing pools by appropriately placing large logs or rootwads within the channel. Where possible, only natural anchoring techniques were used to place the logs.

Improving Rearing Habitat in Terwer Creek

After witnessing little spawning and a lack of riparian vegetation, edgewater cover, and stream channel stability within the Terwer Creek canyon, Simpson used this project to improve the juvenile rearing habitat in this stream. The project involved placing logs in areas that would provide ideal spawning habitats for the salmon. Habitat restoration projects along these streams are expected to yield immediate short term and long term improvements in habitat for relatively small capital outlays.


Reduce global and cross-border environmental risks.

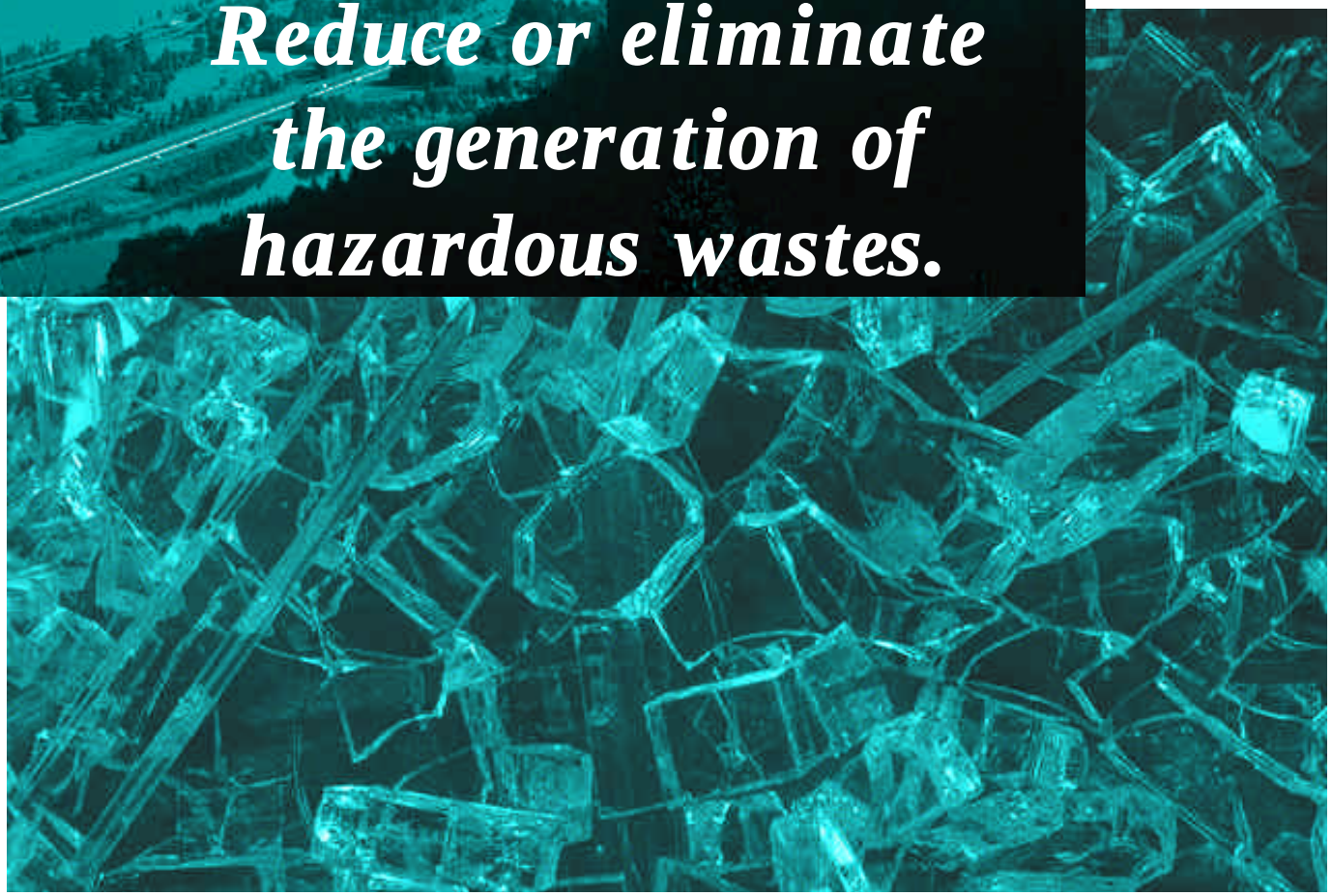
International Cooperation on a Pollution Prevention SEP

This SEP, involving General Instruments' facility in El Paso, Texas, and Transportation Electronics' facility in Juarez, Mexico, is the first example of a cooperative effort between EPA and PROFEPA, the enforcement arm of Mexico's environmental protection agency. Wastes from the Mexican maquiladora plant were shipped to the staging facility in El Paso, Texas. From there, wastes were shipped to treatment, storage, and disposal facilities in the United States. General Instruments and Transportation Electronics violated the Resource Conservation and Recovery Act by using an unlicensed transporter to take wastes from Juarez to El Paso. When EPA took enforcement action against both General Instruments and Transportation Electronics, the companies agreed to perform a pollution prevention SEP at the Juarez facility.

The SEP addresses a manufacturing process at the maquiladora plant where the facility purchased and placed into operation three Inert Gas (Nitrogen) Wave Solder machines to replace the existing solvent-based machines. By using solvent-free flux, no process water is necessary, resulting in a 100% reduction of the plant's wastewater discharge from solder operations. Use of the new machinery and the solvent-free flux greatly reduces the risk of employee exposure during solder operations, as well as optimizing the use of the solder, and reduces the by-product solder dross, which is a hazardous waste.

Because the Juarez facility was not in violation of any Mexican law, the SEP provided a means of bringing about a significant voluntary environmental improvement.

Reduce or eliminate the generation of hazardous wastes.



Safe Drinking Water for the City of Sandpoint, Idaho

After two years of work, the City of Sandpoint, Idaho can now offer its residents clean, safe drinking water. Prompted by EPA in 1998, Sandpoint began to take appropriate actions to address public concerns about unsafe water quality caused by the city's ineffective water pretreatment program. In the same year, Sandpoint proposed an environmental restoration and protection SEP as part of resolving an EPA enforcement action for SDWA violations. The SEP would protect and improve the quality of Sandpoint's public drinking water supply.

Protecting Drinking Water Through Land Acquisition

To both improve the quality of its drinking water and help protect it from potential contamination, Sandpoint purchased 60 acres of land that lies within the city's watershed. Two sources of the city's drinking water, Little Sand Creek and Lake Pend Oreille, are located within this newly-acquired land. To preserve the land and protect these drinking water sources, Sandpoint put all the necessary easements and covenants in place. These actions and the continued success of this project will provide safe drinking water to the residents of Sandpoint for years to come.

Reducing Wastes at Spectrum Glass

On April 25, 2000, the Spectrum Glass company located in Woodinville, Washington, agreed to perform a pollution prevention/pollution reduction SEP as part of resolving an EPA enforcement action for environmental violations. This SEP requires Spectrum Glass to conduct a two-year pilot project to determine the feasability of directly reusing glass cullet, currently a waste product containing chromium, manganese, and zinc. The company intends to reuse approximately 986,000 pounds of cullet each year, which is at least 8% of the cullet currently generated. Thus, by reusing the cullet, less waste containing these metals will be disposed.

To evaluate the effectiveness of the SEP, Spectrum Glass will report on costs of the SEP and any lost profit margin; percent reduction in use of sodium bichromate, manganese dioxide, and zinc oxide; percent reduction in hazardous materials landfilled; and percent cullet reused each year.

While this project is expected to result in some lost profit margin for Spectrum Glass, the pollution reduction gains benefitting the environment and public health will be significant.

PSC Preserves an Ecosystem and Reduces Air Pollution

In 1992, Public Service Company (PSC) purchased the Hayden Station. This 440-megawatt power plant, which sits in the Yampa Valley of Colorado, is located 19 miles upwind of the Mount Zirkel Wilderness Area. At the time of the purchase, Hayden Station operated with no controls for nitrogen oxides or sulfur dioxide, and emitted extremely high levels of both pollutants. In 1993, the local Sierra Club sued PSC over opacity violations caused by the Hayden plant and the adverse effects of the plant's emissions on the wilderness area. EPA subsequently sued PSC for additional violations of the Clean Air Act at the Hayden Station.

In negotiations with EPA and the Sierra Club, PSC agreed that it would conduct two environmentally-beneficial projects in the Yampa Valley. While PSC suggested the idea of the SEPs, which all parties feel helped to resolve the litigation, the Sierra Club suggested the specific elements of the SEPs. The parties reached agreement on the SEPs in May 1996. PSC placed funds for the projects in escrow accounts managed by the Sierra Club. Both SEPs have now been completed.

Preventing Ecosystem Damage

This SEP focused on the preservation of the Yampa Valley ecosystem. The Sierra Club used the escrowed funds to purchase land in the Yampa Valley for conservation easements to prevent development which would damage the Valley ecosystem and the nearby wilderness area. Initially, the Sierra Club focused on the possibility of purchasing key parcels of land to prevent the development of a planned ski resort, which could have brought an additional 20,000 visitors to the Valley. However, this purchase was not necessary because, after extended negotiations, the developer chose to build 20-30 high-end private houses rather than the ski resort. This decision was spurred by local opposition in the Valley, the expiration of the developer's permits with the Forest Service, and tax incentives for the developer.

Consequently, the Sierra Club was able to use the escrowed funds to purchase a large ranch located next to the Yampa River. The land, approximately 1,000 acres, was deeded to the Yampa Valley Trust. Because this land is at the base of a national forest, its purchase is critical to preservation of the ecosystem.

This agreement makes sense because ...

"The parties saved themselves and taxpayers money by negotiating rather than continuing to litigate. All sides compromised and reached a settlement that ensures improved air quality in the Yampa Valley and nearby Mount Zirkel Wilderness Area." Patricia Hull, Former EPA Regional Administrator, May 22, 1996.

Reducing Air Pollution

Under the second SEP, PSC placed funds into an escrow fund to promote conversion of wood-burning stoves to natural gas or propane. In this case, the Sierra Club used the escrowed funds to assist the county health department, which administered the conversion of almost 400 wood-burning stoves to either propane or natural gas. For low-income families, the full cost of the conversion was covered; for others, there were subsidies. The SEP helped the county resolve the nonattainment problems for particulate matter, and it has recently been re-designated as attaining the air quality standard. The health department has been extremely pleased with the results. This SEP demonstrates that pollution prevention SEPs are not restricted to cutting edge technology.

Restoring Fish Habitat in Montana

In March of 1999, CONOCO Pipeline Company and the Yellowstone Pipeline System, which is operated by CONOCO, came to an agreement with EPA on penalties resulting from a 1992-93 oil spill into Camas Creek on the Flathead Indian Reservation in Montana. As a SEP, CONOCO agreed to construct fish passageways on the Jocko River, which is located within the same watershed as Camas Creek. The goal of the passageways is to enhance the growth of the threatened bull trout population and to preserve a genetically pure population of westslope cutthroat trout, which is Montana's state fish. When completed, the passageways will be owned and operated by the Confederated Salish and Kootenai Tribes.

This SEP involved several parties, including EPA, the Department of Justice, the companies, the Fish and Wildlife Service, and the Tribes. From discussions among the parties, one positive outcome was the groundbreaking progress made in Tribal relationships. The design of the SEP was largely due to input from the Tribes during the SEP negotiations. While others will also benefit from this SEP, the Tribes will receive substantial rewards from the fish passageways.

Protecting Alaskan Wetlands

As part of the settlement for violating the Clean Water Act, the Quality Asphalt Paving, Inc. will transfer affected wetland property to the state parks department for protection and management. Barriers will be built to limit access and promote natural restoration of the site.

CONCLUSION

The SEPs described in this booklet are but a small sampling of the projects undertaken as part of EPA's environmental enforcement settlements. While these projects have significant monetary value, the true value of these projects lies in the impacts that they have on public health and/or the environment actually or potentially affected by the violation. SEPs offer a unique opportunity to achieve additional environmental improvements that are in addition to what is required for violators to return to compliance with environmental regulations.

In going beyond what is required to settle an enforcement action, SEPs help the Agency meet its long-term, Congressionally-mandated goals. For example, projects that reduce emissions of pollutants or eliminate their production have a positive effect on the local community's air quality. SEPs that involve health screening and treatment for children affected by the pollution can improve public health dramatically. Restoration projects that return wetlands to their natural state not only provide habitat for endangered and other species, but allow for natural filtration of pollutants and flood control.

Because the benefits to the community and the environment that can be obtained through SEPs can be significant, the Agency encourages their use in settlement agreements. Additional information on SEPs and the SEP policy may be found at www.epa.gov/oeca/sep.

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