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Clean Water Action Plan

The first year. *The future.*



February 1999

The Clean Water Action Plan is a far-reaching and innovative plan that unites the efforts of citizens, local, state, tribal, and federal governments and a wide array of other stakeholders in the business of protecting and restoring our water resources.

The Clean Water Action Plan is about action — cutting red tape, getting the right people with the right tools to the right place, stopping pollution that continues to degrade almost half of our waters. The Action Plan sets an ambitious agenda and we are pleased to share the highlights of the many first year accomplishments.

One of the most significant achievements of the Clean Water Action Plan is the way it has brought people together in a true spirit of cooperation to help restore and protect our nation's rivers, lakes, coastal waters, and wetlands. During this first year, an unprecedented commitment to cooperation has developed among federal agencies as they unite the missions of many departments and programs in the pursuit of clean water. There has also been a resurgence of local leadership that is guiding all of our efforts to protect our water resources. Undoubtedly, this will be the greatest legacy of the Clean Water Action Plan.

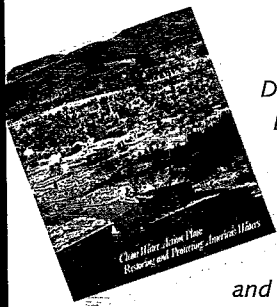
We are committed to continuing the work of the Clean Water Action Plan so that, as we approach the 21st century, we leave a legacy of environmental stewardship that is worthy of future generations.



To commemorate the 25th anniversary of the Clean Water Act, the Vice President asked the federal agencies to develop and implement a comprehensive plan that would help revitalize the nation's commitment to our valuable water resources. The result was the Clean Water Action Plan, which was released on February 19, 1998. Since that time the federal agencies have been working with tribal, state, and local partners to implement the more than 100 key actions in the Action Plan and build a new framework for watershed protection in the 21st century.

This report marks the first anniversary of the Clean Water Action Plan. It highlights the progress that has been made toward implementing this ambitious plan and outlines the agenda for the coming year.

The Clean Water Action Plan is about each of us working to protect the waters we love - the river that runs through town, the lake or beach we vacation at year after year, or the wetland we visit to enjoy the wide variety of birds, plants, and wildlife it supports. The goal of the Action Plan is to reinvigorate our efforts to protect these waters by strengthening leadership for those efforts at the local level.



Department of Agriculture
Department of the Interior
Department of the Army
Department of Commerce
Environmental
Protection Agency

and

Tennessee Valley Authority

Department of Energy
Department of Transportation
Department of Justice

The Action Plan itself contains 111 key actions designed to further this goal. More specifically, the Action Plan seeks to organize the efforts of citizens, business, and government, so that we more effectively respond to the unique needs of individual watersheds around the country. (An index of each action and its page number in the original Action Plan is on page 20.)

Introduction

"We're not only improving water quality in the Guest River; we're changing people's attitudes and behaviors. A lot of different government agencies are involved—and their support is important—but I'm convinced that our success is due to one key factor: dedicated local leadership."

Carol Green

Coordinator, Wise County Virginia Clean Team

The organizing principle behind the Clean Water Action Plan is:

- The Watershed Approach

The Action Plan has four major objectives:

- Improve Information and Citizens' Right to Know
- Address Polluted Runoff
- Enhance Natural Resources Stewardship
- Protect Public Health

KEY ACTIONS

Throughout this document you will find boxes like this one highlighting major accomplishments under the Clean Water Action Plan. Key actions are numbered in the order they appeared in the Action Plan and as they are listed on the web site. You can find out more about the Clean Water Action Plan at www.cleanwater.gov or by contacting one of the partner agencies listed on the inside back cover. To find out more about a particular key action or program, look up the Action Plan on the internet and click on the internet symbol.

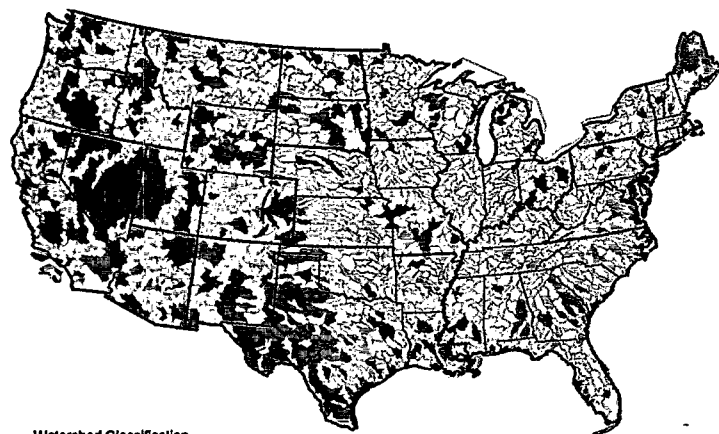


Protecting Our Nation's Watersheds

The Watershed Approach is the Key

The heart of the Clean Water Action Plan is the "watershed approach." The watershed approach represents a new paradigm for protecting and restoring our water resources (rivers, lakes, coastal waters, and wetlands) for future generations. The key to this approach is tailoring efforts to the particular needs of individual watersheds. Because the problems affecting our waters vary greatly from watershed to watershed and from region to region, a "one-size-fits-all" approach will not effectively address today's water resource problems.

National Watershed Characterization

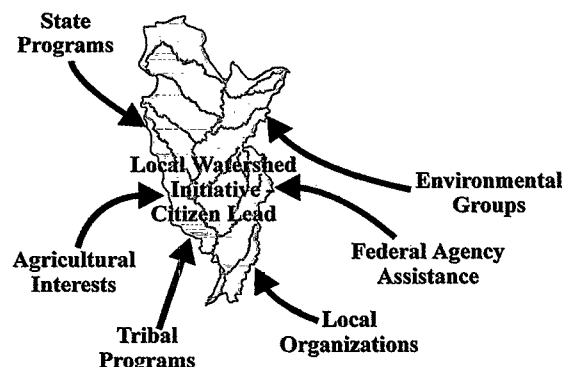


Watershed Classification

- Better Water Quality - Low Vulnerability
- Better Water Quality - High Vulnerability
- Less Serious Water Quality Problems - Low Vulnerability
- Less Serious Water Quality Problems - High Vulnerability

- More Serious Water Quality Problems - Low Vulnerability
- More Serious Water Quality Problems - High Vulnerability
- Data Sufficiency Threshold Not Met

Watershed Coordination



What is the Condition of our Watersheds?

Before the Clean Water Act of 1972, Lake Erie was dying. The Potomac River was clogged with blue-green algae blooms that were both a nuisance and a threat to public health. Many of our rivers were overwhelmed with discharges of sewage and industrial waste. The Clean Water Act brought strong regulatory and financial tools to bear to clean up discharges from municipal sewage systems and industries. By 1987, significant progress had been made in curbing the

WATERSHED HEALTH KEY ACTION #94

The Index of Watershed Indicators is a collection of information on many aspects of watershed health. You can use the Index and many other sources of information on the internet to find out more about your watershed.

Source: Index of Watershed Indicators. This map is a composite illustration based on many sources of water quality information and is the best overall characterization of the condition of the 2000 watersheds in the U.S. It shows that approximately 50% or 1000 of these watersheds are experiencing a significant level of degradation.

impacts from these sources and awareness was growing regarding the threats posed by polluted runoff, especially from urban, agricultural, and forested lands. The 1987 Amendments to the Clean Water Act included new financial and technical tools to help address these emerging and complex sources of water pollution. The Clean Water Action Plan represents another major step forward as we strive to address these challenges.

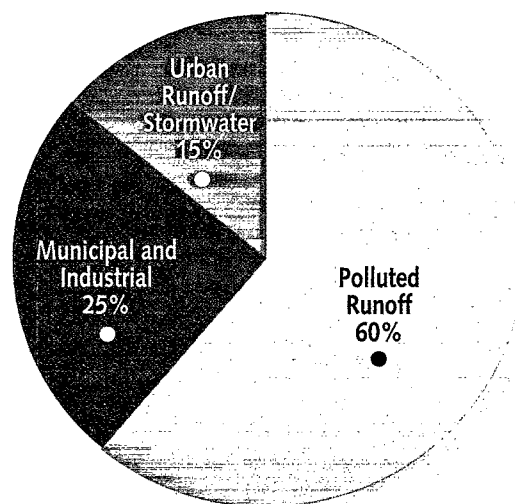
There are many methods of measuring the health of our nation's watersheds. Typically, these different systems tell us that approximately 40% to 50% of our watersheds are in need of restoration.

What Kind of Problems are Affecting Our Watersheds?

Today, the overwhelming majority of water quality problems are caused by literally millions of diffuse sources of polluted runoff¹ from agricultural lands, residential areas, city streets, forests, and even from pollutants settling out of the air.

States report that agricultural sources account for approximately 70% of the identified water quality problems in assessed rivers, 49% in lakes, and 27% in estuaries. In addition, sewage treatment systems, urban stormwater, and atmospheric sources are significant contributors of nutrients and other pollutants.

Sources of Water Quality Impairment, On Average



Source: Adapted from 1996 National Water Quality Inventory

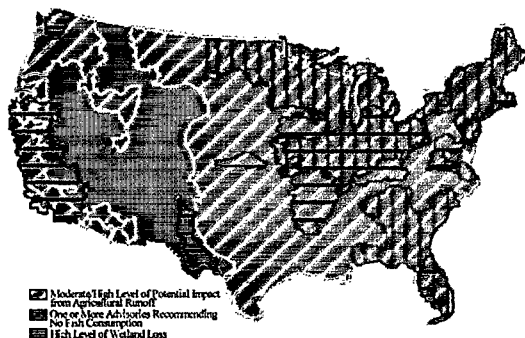
¹ The Clean Water Act refers to sources of polluted runoff as "nonpoint sources." Point sources include industries and sewage treatment facilities where pollution is discharged at a discrete point, usually through a pipe. Nonpoint sources contribute pollutants to waters via surface runoff, movement of water through the ground, or air deposition. In this document, we use the term polluted runoff to mean all nonpoint sources.

Five Leading Sources of Water Quality Impairment

Rank	Rivers	Lakes	Estuaries
1	Agriculture	Agriculture	Industrial Discharges
2	Municipal Point Sources	Unspecified Nonpoint Sources	Urban Runoff/Storm Sewers
3	Hydrologic Modification	Atmospheric Deposition	Municipal Point Sources
4	Habitat Modification	Urban Runoff/Storm Sewers	Upstream Sources
5	Resource Extraction	Municipal Point Sources	Agriculture

Source: 1996 National Water Quality Inventory

Geographic Distribution of Different Water Quality Impairment



Source: Adapted from Index of Watershed Indicators (for illustrative purposes only)

While we can make some generalizations about the nature of the problems facing our watersheds today, we need to keep in mind that each watershed faces a unique set of threats. The map above illustrates the geographic distribution of three different water quality problems. To find out about the water quality problems in your watershed, visit the internet site for the Index of Watershed Indicators.

The goal of the Action Plan is to use the watershed approach to guide all of our restoration and protection efforts. To do this we must adapt our programs, tools, and efforts to the unique challenges facing our watersheds.


Taking the Watershed Approach

In order to bring together different perspectives and different sets of information, states and tribes were asked to take the lead in developing Unified Watershed Assessments.

All 50 states, the District of Columbia, 5 territories, and 18 tribes completed these assessments in a very short period of time — just 7 months after the release of the Action Plan.²

² The timeframe for tribes to complete Unified Watershed Assessments has been extended. Federal partners continue to provide assistance to several hundred tribes around the country.

UNIFIED WATERSHED ASSESSMENTS KEY ACTION #94

Unified Watershed Assessments represent the first coordinated statement of water quality priorities in the history of our clean water programs. You can find out more about the Unified Watershed Assessments on the internet as part of the Index of Watershed Indicators. 

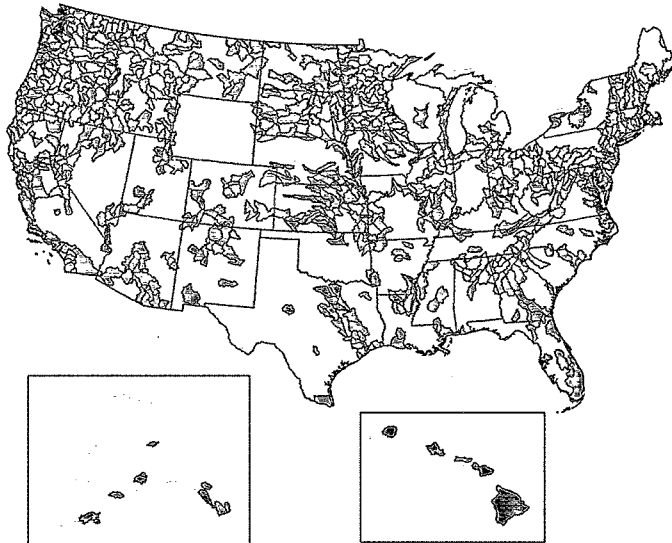
States and tribes were asked to coordinate with stakeholders at all levels and develop an overall statement of water quality. Specifically, Unified Watershed Assessments identify:

- Watersheds not meeting, or facing imminent threat of not meeting, clean water or other natural resource goals (Category I);
- Watersheds meeting goals but needing action to sustain water quality (Category II);
- Watersheds with pristine/sensitive aquatic system conditions on federal, state, or tribal lands (Category III); and
- Watersheds where more information is needed to assess conditions (Category IV).

Identifying Priorities

States and tribes identified those watersheds they believe are most in need of restoration efforts during 1999 and 2000. The map to the right shows these watersheds. This information will be used in two ways. First, additional federal funds received in 1999 and 2000 will be directed to these watersheds. Second, this information can help target the broader efforts, programs, and resources of all stakeholders including local, tribal, state, and federal governments, citizens, interest groups, and businesses.

Highest Priority Watersheds for Restoration
During 1999 and 2000 (As Identified by States and Tribes)



Improving Information and Citizens' Right to Know

Today, the dramatic advances in information technology have created a new opportunity to provide people with significantly improved information about the quality of waters where they live.

Getting Involved

Public involvement is essential to the successful protection and restoration of our valuable water resources. In fact, watershed management works best when local citizens and organizations help guide and enhance public sector programs.



WATER INFORMATION NETWORK KEY ACTIONS #92, 93

The internet-based Watershed Information Network (WIN) is a roadmap to consolidated watershed information and services to help communities protect and restore water quality. It is now operational and accessible to the public as a prototype. Full implementation of this project is expected over the next few years. **i**

SUPPORT LOCAL WATERSHED ORGANIZATIONS—KEY ACTION #104

The "Adopt Your Watershed" campaign challenges thousands of citizens and organizations to join federal agencies and others who are working to protect and restore our valuable rivers, streams, wetlands, lakes, ground water, and estuaries. To encourage stewardship of the nation's water resources, EPA is building a voluntary, national catalog of organizations involved in protecting local water bodies, including formal watershed alliances, local groups, and schools that conduct activities such as volunteer monitoring, cleanups, and restoration projects. The 4,300 groups are listed watershed-by-watershed to make it easy for anyone to find out how to get involved. **i**

Assisting Local Watershed Groups

The Clean Water Action Plan supports community involvement through the creation of a new Watershed Assistance Grants program. In September 1998, the River Network, with funding from EPA, began the process of making funds available to local watershed partnerships to support their organizational development and long-term effectiveness. Through this grant program, local watershed groups can receive up to \$30,000. Grants will be distributed to applicants which are diverse in terms of geography, watershed issues, the type of partnership, and approaches.

WATERSHED ASSISTANCE GRANTS KEY ACTION #103

Action Plan funding has supported the River Network's new Watershed Assistance Grants program that will help local organizations build the capacity to protect their local watersheds.

WATERSHED FORUM KEY ACTION #108

The Watershed Forum was established to enhance interaction, coordination, and information exchange among stakeholders at all levels. Regional fora will meet periodically over the next two years and, in 2001, representatives from these groups will convene in a national watershed forum. The Southeast Watershed Forum and Northeast Watershed Roundtable are already up and running. Federal agencies plan to help sponsor or collaborate with up to 12 regional fora around the country.



Addressing Polluted Runoff

Polluted runoff from a wide variety of sources is today's leading cause of water pollution. Addressing the impacts of polluted runoff is a major goal of the Clean Water Action Plan.

Polluted runoff comes from many sources, including urban streets and lawns, highways, forests, and agricultural lands. The Clean Water Action Plan contains a number of key actions to address many of these important sources over the next several years. This section highlights key actions that focus primarily on agriculture. Other sections of this report discuss polluted runoff from federal lands, mining operations, and urban sources.

Five Leading Causes of Water Quality Impairment

Rank	Rivers	Lakes	Estuaries
1	Siltation	Nutrients	Nutrients
2	Nutrients	Metals	Bacteria
3	Bacteria	Siltation	Priority Toxic Organic Chemicals
4	Oxygen-Depleting Substances	Oxygen-Depleting Substances	Oxygen-Depleting Substances
5	Pesticides	Noxious Aquatic Plants	Oil and Grease

Source: 1996 National Water Quality Inventory

NUTRIENT STANDARDS STRATEGY

KEY ACTION #74

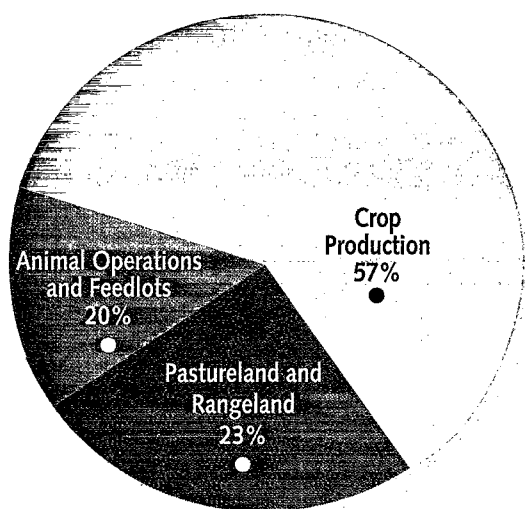
EPA has developed a multi-year strategy for the development and implementation of nutrient criteria and standards tailored to specific needs of different types of water bodies and different natural conditions found around the country. The Action Plan sets an ambitious goal that would have standards in place across the country by 2003.

Nutrients

Nutrients (particularly nitrogen and phosphorous) are among the most common and most difficult pollutants to address. In excessive amounts, nutrients cause algal blooms which can quickly rob oxygen from the surrounding waters. These algal blooms themselves can also be toxic to aquatic and marine life and pose health risks to humans, as in the case of Pfiesteria (see page 16). Nutrients react in a wide variety of ways depending on the type of water body and the local characteristics.



Agricultural Sources: Rivers and Streams



Source: Adapted from 1996 National Water Quality Inventory

Agriculture

Agriculture is recognized as a significant source of nutrient pollution. Addressing problems caused by various agricultural activities while maintaining the overall, long-term sustainability of the industry presents special challenges. Key actions under the Clean Water Action Plan were designed to address these challenges by combining voluntary, incentive-based approaches (such as financial and technical assistance) with back-up regulatory approaches where needed.

CONSERVATION RESERVE ENHANCEMENT PROGRAM—KEY ACTIONS #65, 66

Approximately \$976,000,000 in federal funds have been committed to 6 states that have signed up to participate in the Conservation Reserve Enhancement Program (CREP). This program uses financial incentives to encourage farmers and ranchers to voluntarily remove sensitive land from agricultural use. The CREP program will continue to expand to other states in 1999 and beyond.

One of the key features of the Unified Watershed Assessment process is the identification of high priority watersheds in need of restoration in 1999 and 2000 (see page 5). States and tribes are now developing Watershed Restoration Action Strategies to guide restoration activities. In the 1999 budget, the Administration requested and received an additional \$100 million to fund polluted runoff projects in these high priority waters. Additionally, these assessments and strategies are intended to serve as a guide for targeting a much broader array of efforts, programs, and financial resources at the local, state, tribal, and federal levels.

NATIONAL CONSERVATION BUFFER INITIATIVE KEY ACTIONS #62, 63, 64

Conservation buffers are relatively small areas of land planted with permanent vegetation; they include filter strips, field borders, and forest buffers. Buffers are designed to intercept pollutants before they reach rivers, lakes, and streams. The National Conservation Buffer Initiative is a cooperative venture that relies heavily on the active participation of major agribusiness firms and most of the nation's conservation and agricultural organizations.

Since the initiative was started in 1997, conservation programs have resulted in the installation of nearly 800,000 acres or about 220,000 miles of buffers along rivers, streams, and field borders.

Clean Water Action Plan Goal

Establish 2 million miles of conservation buffers by 2002.

Watershed Success Stories : The S

PACIFIC NORTHWEST

The Northwest Forest Plan, initiated by President Clinton, was established to manage federal forest land, help people and communities, and improve ecosystem health. The Plan sets out to manage 25 million acres and improve water quality on public lands in Oregon, Washington, and Northern California. The holistic nature of the tasks laid out in the Plan is leading to more effective interagency work and decision-making that brings federal, state, and local partners together. The Plan gave \$1.2 billion in economic assistance to communities during its first five years.

WASHINGTON

The Spencer Island Wetland Restoration Project and Nature Park in Snohomish County recently restored a 50-acre tidal marsh and mudflats to provide food and refuge for juvenile salmon and other fish species as well as habitat for shorebirds with Clean Water Act funding.

FEDERAL LANDS AND NATIONAL PARKS

Federal land managers are working to protect watersheds in our national parks and other valuable federal lands. Under the Action Plan, more than \$30 million has been targeted toward improving water quality in watersheds on federal lands and national parks.

CALIFORNIA

The San Francisco Bay/Sacramento-San Joaquin Delta estuary provides drinking water to 20 million people, irrigation water for seven million acres of farm land, and critical habitat for more than 120 fish and wildlife species. Due to these sometimes conflicting demands, habitats are in decline and fish populations are decreasing. Key state and federal agencies formed CALFED to reduce conflicts in the Bay-Delta system by solving problems in ecosystem quality, water quality, water supply reliability, and levee and channel integrity. In 1998, CALFED proposed a long-term plan to address all these problems and directed approximately \$100 million towards ecosystem restoration activities.

NORTH DAKOTA

The Bowman/Hayley Watershed Project has become a model for improving the quality of North Dakota's waters. Project efforts have focused on controlling the flow of nutrients and sediments from agricultural lands. Work with local farmers and other stakeholders to increase awareness of the impacts of polluted runoff on water quality has led to conservation plans for over 50 percent of the watershed.

KANSAS

Some of the best bass fishing in Kansas can be found along Hillsdale Lake. So, local residents formed the Hillsdale Lake Water Quality Protection Project to reduce the runoff from farms and wastewater treatment plants entering the lake. Today, \$1,016,423 in pollution control practices have been installed in the watershed along 113 acres of waterways, 336,240 linear feet of terraces, 10 acres of grassed buffer strips, five livestock waste systems, and three constructed wetlands.

COLORADO

The Animas River Stakeholders Group developed a model to improve aquatic habitat in southwestern Colorado. Local citizens have joined with federal scientists, state and university biologists, students, and land managers to evaluate how to improve water quality while preserving the historical heritage of this area. Clean Water Action Plan funding and private companies and citizens have dedicated over \$15 million in reclamation and water treatment efforts.

PROTECTING WATERSHEDS ON TRIBAL LANDS

The lands of the 556 tribal nations encompass large portions of key watersheds in the U.S. Inadequate wastewater treatment and polluted runoff from tribal lands continue to impact watersheds on tribal lands and their downstream neighbors. Clean water and healthy watersheds are vital to the creation and maintenance of vibrant and stable tribal communities.

The Clean Water Action Plan seeks to provide assistance to tribal nations to begin the process of addressing these problems.

- Watershed restoration activities are underway in a number of tribal watersheds, including the Confederated Salish and Kootenai Tribes in Montana, the Umatilla in Oregon, the Seminole in Florida, and the Colville Confederated Tribes in Washington.
- Approximately \$18 million in Clean Water Action Plan funds are being provided to tribes to assist them in two ways—to complete Unified Watershed Assessments and build expertise in water quality management and to address high priority sources of polluted runoff. (Additional funds are provided to address high priority wastewater treatment projects.)
- 32 tribes submitted draft Unified Watershed Assessments and 18 have completed the process.
- Federal agencies have sponsored 5 workshops on the Clean Water Action Plan, Unified Watershed Assessments, Watershed Restoration Action Plans and will conduct additional workshops in February and March, 1999.
- Approximately 200 Tribes are expected to complete Unified Watershed Assessments in 1999.

t of the Clean Water Action Plan

OHIO

Thanks to the Indian Lake Watershed Project, the lake is 400 percent clearer than it was in 1990. One observer attributes its success to the Project's ability to bring together "all possible private and public interests to develop and implement the watershed management plan." In a watershed that is 79 percent cropland, the lake had lost 35 percent of its original capacity—filling with almost 80 tons of sediment annually. As a result of the Project, no-till farming in the area increased from 6 percent to 79 percent and 264 acres of filter strips have been established and 1,600 feet of eroding streambank stabilized.

MISSISSIPPI RIVER

There are many efforts to clean up pollution in the Mississippi River watershed to restore it to its historic grandeur. The Mississippi River Initiative is a coordinated federal effort to keep illegal pollution such as raw sewage and industrial waste out of the River. Many other efforts are underway throughout the watershed to stop agricultural runoff from polluting the river.

TENNESSEE VALLEY

Over 50 grassroots coalitions in communities across the Tennessee Valley are working with local, state, and federal governmental partners to improve local watersheds. The Guest River Restoration Project in southwest Virginia is one example. More than 15 agencies and organizations are working with local citizen groups to protect and restore the scenic and historic Guest River watershed. Since March 1998, project partners have reduced bacterial levels in the Guest River through an innovative subsidy program for septic tank pumpouts, removed a total of 43,130 pounds of heavy metals from illegal dumpsites, and restored over two miles of eroding streambanks in the watershed.

LOUISIANA

The Tensas River Basin Project in Louisiana demonstrates an effective partnership of landowners, private groups, and state and federal agencies in restoring bottomland hardwoods in the Lower Mississippi Delta. The Tensas River Basin comprises 718,000 acres, 90% of which was forested at one time. Due to the efforts of local farmers, nonprofit groups, and state, local, and federal government, thousands of acres have been restored, with 8,000 additional acres targeted for 1999.

GULF OF MEXICO

The Gulf of Mexico Program activities focus on reducing excessive nutrient enrichment, protecting public health, restoring habitat, and reducing risks associated with harmful nonindigenous species. Local, federal, and state stakeholders have focused more than \$2 million on these issues. In particular, excess nutrients has gained national focus because the "Dead Zone," an annually recurring area of hypoxia (oxygen-deficient water) off the coast of Louisiana, has doubled over ten years.

NEW HAMPSHIRE

In July 1998, Vice President Gore announced \$1.6 million in federal resources to help speed the restoration of New Hampshire's Seacoast Estuaries and reopen shellfish beds four years earlier than originally planned.

WEST VIRGINIA

Acid Mine Drainage was polluting the Lower Cheat River in West Virginia until a working group of local, state, and federal partners stepped in to coordinate mitigation activities. The Friends of the Cheat, Trout Unlimited, and Anker Energy worked together with state and federal governments to share information and resources in the region. The group, called the River of Promise, has coordinated eight major interagency watershed improvement projects with a value of \$30 million in the last three years.

CHESAPEAKE BAY

On November 5, 1998, the new Federal Agencies' Chesapeake Ecosystem Unified Plan was announced. It expands current restoration efforts by adding 50 new commitments aimed at protecting the Chesapeake Bay region. The Chesapeake Plan will help the living resources of the Bay by targeting specific habitat restoration projects on federal lands, and assisting state and local governments and private landowners in similar efforts. The Action Plan also addressed a number of other issues, such as nutrient and toxic pollution prevention and reduction; smart growth policies for federal projects; protecting priority watersheds and increasing public access to federal lands.

NORTH CAROLINA

In August 1998, the Clinton Administration announced that North Carolina received \$221 million in federal aid to help farmers reduce water pollution and the threat of fish kills in the Neuse River. The package—spread over 10 to 15 years—pays for 100,000 acres in agricultural buffer strips and other measures to reduce runoff and prevent outbreaks of harmful marine organisms.

EVERGLADES

Numerous activities are underway to restore the Everglades watershed system. Among these, the purchase of additional lands to expand the Everglades National Park, the creation of 30,000 acres of wetlands and the removal of canals will help to restore the healthy functioning of this national treasure.

AMERICAN HERITAGE RIVERS INITIATIVE

This new program to assist communities as they restore and revitalize their waters and waterfronts, was announced by the President last February. Since that time, 14 rivers of national significance have been nominated and chosen. This program seeks to cut red tape and focus federal programs to support community-based plans which integrate economic, environmental, and historic preservation goals.

There are two main categories of agricultural pollution.

- Crop production can contribute significant amounts of nutrients due to the runoff of fertilizers. Soil erosion and contamination from pesticides and herbicides are also of concern.
- Animal production can contribute bacteriological contamination to our waters as well as high levels of nutrient pollution, especially where animals are raised in strictly confined areas. As of 1992, there were approximately 450,000 animal feeding operations in the U.S.

Resources

The Clean Water Action Plan and federal agencies provide a number of financial incentives to assist farmers, local governments, citizens groups, environmental groups, and others as they work to address water quality problems in local watersheds. A detailed listing of funding sources for clean water projects is available on the Clean Water Action Plan home page.

STATE REVOLVING LOAN FUNDS KEY ACTION #73

Billions of dollars are available each year to fund virtually any important water quality project. EPA has completed a nation-wide training program to expand the use of these funds for important polluted runoff and habitat projects. Currently, 27 states are collaborating with state conservation offices, other state organizations, and local soil and water conservation districts to target SRF funds to high priority polluted runoff and habitat projects. As of June 1998, these states had funded over 4000 projects worth nearly \$900 million.

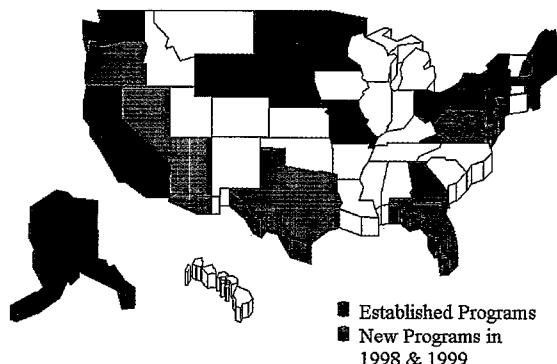
PROMOTING CONSERVATION THROUGH CROP INSURANCE—KEY ACTION #68

USDA is working with private insurance companies and foundations to develop insurance programs that will enable farmers and ranchers to offset risks associated with new practices and technologies aimed at reducing or preventing pollution. Two insurance products are already available to help farmers reduce fertilizer applications and pesticide usage. Other policies are in the final stages of development and are designed to reduce the use of fungicides and promote the use of no-till farming methods.

REDUCE POLLUTION FROM ANIMAL FEEDING OPERATIONS KEY ACTIONS #81, 82

USDA and EPA have cooperated in the development of a national strategy aimed at addressing these impacts while ensuring the long-term sustainability of livestock production. This strategy's primary goal is to implement comprehensive nutrient management plans at all animal feeding operations by 2008.

27 State Revolving Loan Funds are Financing Polluted Runoff and Habitat Projects

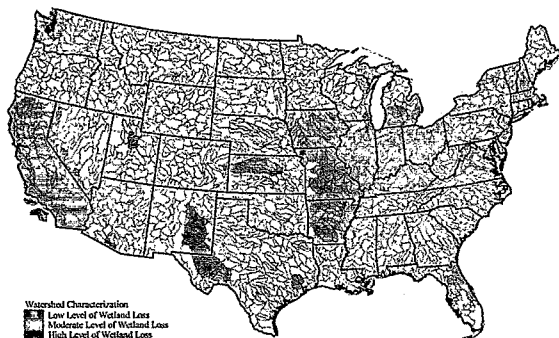


This section discusses three major aspects of protecting natural resources: wetlands, federal lands, and coasts.

What are Wetlands? Why Are They Important?

Wetlands are the link between the land and the water. They are areas where the flow of water, the cycling of nutrients, and the energy of the sun produce a rich variety of plant and animal life. Over 50% of the wetlands in the contiguous United States have been lost since the time of European settlement. Wetlands provide values that no other ecosystem can. These benefits include natural water quality improvement, flood protection, shoreline erosion control, and habitat for unique plants and animals. Thus, protecting wetlands can, in turn, provide a range of benefits from safety to sustenance.

Historic and Recent Trends in Wetlands Loss



Source: *Index of Watershed Indicators*

Enhancing Natural Resource Stewardship

Wetlands Provide Critical Habitat for Healthy Ecosystems

Wetlands can be thought of as "biological supermarkets." They are among the most productive ecosystems in the world, comparable to rain forests and coral reefs. The combination of shallow water and high levels of nutrients is ideal for the development of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish, and insects. Many species of birds and mammals rely on wetlands for food, water, and shelter, especially during migration and breeding.

EXPAND THE WETLANDS RESERVE PROGRAM KEY ACTION #38

The Wetlands Reserve Program is a voluntary program which offers financial support to landowners for wetlands restoration projects. During 1998, roughly 212,000 acres were enrolled in this program. The Administration is requesting additional authority so that as many as 250,000 acres can be enrolled each year.

Clean Water Action Plan Goal

Reverse historic pattern of wetland losses in the U.S. and achieve a net increase of 100,000 acres of wetlands each year by 2005.

What Does the Clean Water Action Plan Do to Address Wetland Loss?

The Action Plan contains a large number of key actions aimed at halting wetlands loss and beginning the difficult process of gaining acres of wetlands each year. There are a number of regulatory, financial incentive, and voluntary programs to protect and improve wetlands. The Action Plan seeks to strengthen and improve each of these programs as we work toward the goal of gaining 100,000 acres of wetlands each year.

SUPPORT WETLAND PROJECTS IN 500 WATERSHEDS KEY ACTION #41

Achieving a net increase in wetlands will require working cooperatively with landowners and communities to encourage and support the restoration and enhancement of wetlands while ensuring that regulatory programs result in no overall net losses. Announced in 1998, the Five-Star Restoration Challenge Grant is open to any public or private entity and provides modest financial assistance to support community-based wetland/riparian restoration projects and locally-based, natural resource stewardship.

50% NET INCREASE OF HIGHWAY WETLANDS KEY ACTION #44

Highways are a key part of America's transportation system, but they can have negative impacts on wetlands through draining, filling, and runoff of contaminants and eroded soil. Through the Clean Water Action Plan, the Department of Transportation will continue to monitor wetland losses and gains and minimize negative impacts with the goal of replacing 1.5 acres for every 1 acre affected within 10 years. The federal highway program has already achieved a 120% gain in wetlands acres restored in 1998.

STREAM CORRIDOR RESTORATION KEY ACTION #61

15 agencies collaborated on the *Stream Corridor Restoration: Principles, Processes, and Practices* (October 1998). The manual provides a sound basis for restoring the natural ecology of streams and rivers.

12 watersheds in need of restoration will be chosen to demonstrate these techniques in 1999.

PROTECTING FEDERAL LANDS KEY ACTION #19

The Action Plan asks the federal community, in cooperation with states, tribes, and other stakeholders, to develop a Unified Federal Policy to improve watershed management on federal lands. Federal land and resource management agencies will release a draft "starting point" in early 1999 to initiate public dialogue. Federal agencies will sponsor "listening sessions" around the country to facilitate this dialogue.

Federal Lands

There are 800 million acres of land, including some of our most valued water resources, being managed by the federal government. Preserving and protecting these natural resources in a sustainable manner is a key challenge for the 21st century. The Clean Water Action Plan seeks to build connections between federal land and resource managers and the greater water quality community, especially state, tribal, and local partners. Federal land and resource managers have already utilized the watershed approach and built partnerships to protect valuable land and water resources in several major watersheds across the country: these include the Northwest Forest Plan, Columbia River Ecosystem Assessment, Puget Sound, San Francisco Bay-Delta, Florida Everglades, Tennessee Valley, and Lake Tahoe protection efforts.

CLEAN UP ABANDONED HARDROCK MINES—KEY ACTION #29

The Action Plan calls for the addition of 3-5 abandoned hardrock mines to the clean up program each year beginning in 1999. Federal land managers have worked with state, tribal, and local partners to initiate clean ups ahead of schedule. In 1998, 3 cooperative projects were initiated in Colorado, Montana, and Utah.

**COAL MINING POLLUTION
KEY ACTION #31**

The Clean Streams Initiative is a cooperative venture between states, local watershed groups, environmental groups, and the coal mining industry that has resulted in 4 clean up projects in Indiana and Alabama. Under the Action Plan, an additional \$7 million in federal funds has been appropriated and will allow a significant expansion to occur in 1999.



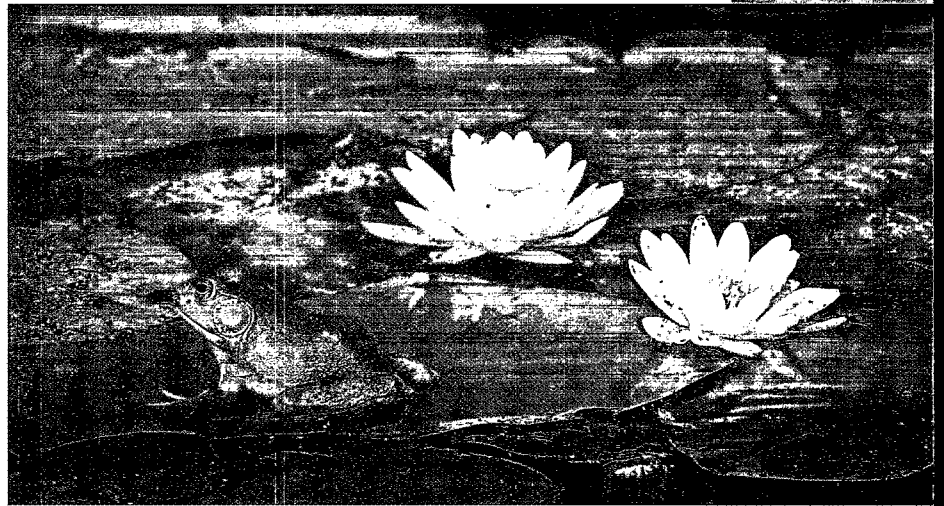
**ASSESS RESERVOIRS AND STREAMS
KEY ACTION #35**

The Action Plan asks the Bureau of Reclamation and U.S. Geological Survey to assess the quality of reservoirs and streams affected by the Bureau's operations. Assessments have begun in 3 areas, Upper Klamath Lake, OR; Rio Grande/Elephant Butte and Caballo Reservoirs, NM & TX; and Grand Coulee Dam, WA.



**RESTORING WATERSHEDS ON FEDERAL
LANDS—KEY ACTIONS #20, 23**

Federal land managers have restored over 3200 miles of stream corridors, 68,000 acres of wetlands, 38,000 acres of forests, and decommissioned 2099 miles of forest roads and restored 1400 additional miles.



Coastal Waters

Americans are deeply connected to the coasts. In fact, over 50% of the population lives in coastal watersheds. Travel and tourism is the nation's largest industry, employer, and foreign revenue earner and 85% of all U.S. tourist revenues are earned by coastal states. In addition, coastal areas support major commercial and recreational fisheries, ports, and a wide variety of industries.

From an ecological perspective, coastal areas, particularly estuaries and coastal wetlands, are necessary to the healthy functioning of most of our ecosystems. The Clean Water Action Plan seeks to address two important factors affecting our coastal waters. First, polluted runoff and nutrient enrichment affect nearly all of our coastal waters.

**YEAR OF THE OCEAN
KEY ACTION #58**

1998 was the "International Year of the Ocean." The year provided many opportunities to increase the public's awareness of issues affecting our marine environment. Federal agencies sponsored numerous events, conferences, and developed many educational materials. The President and Vice President hosted an international oceans conference in Monterey, CA last June.



The second major area concerns outbreaks of harmful algal blooms such as red tides and toxic *Pfiesteria* which affect many of our coastal and estuarine waters. Harmful algal blooms contribute to or cause thousands of fish kills involving millions of fish each year, and some harmful algal blooms can cause health problems in people.

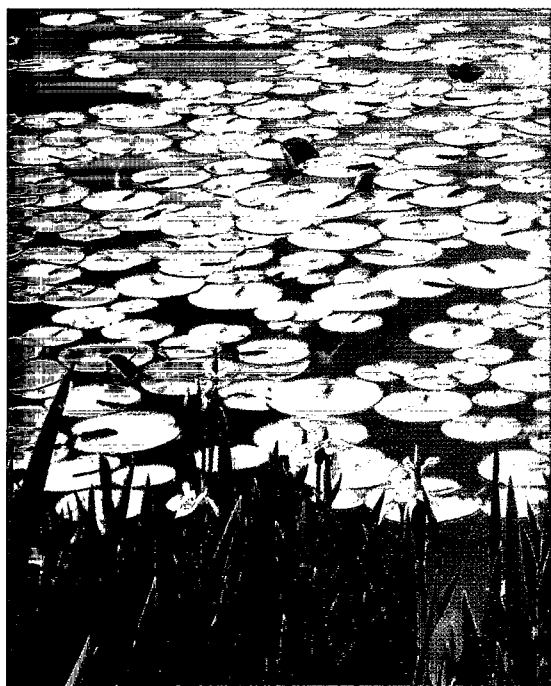
Because of the increasing pressure we place on our coastal waters and ecosystems, we need to place special emphasis on building partnerships among governments, citizens, businesses, and other stakeholders. Programs like the National Estuary Program (29 estuaries currently enrolled) and the National Estuarine Research Reserve Program (22 estuaries designated) provide opportunities to organize efforts on a watershed basis.

REDUCING POLLUTED RUNOFF IN COASTAL AREAS KEY ACTION #56

Under the Coastal Zone Management Act, coastal states and territories are called upon to develop programs to preserve and protect their coastal resources. The Act specifically asks states and territories to develop programs to reduce the impacts of polluted runoff. All 29 participating state and territorial programs have been conditionally approved. EPA and NOAA are working with the states and territories to fully approve these important programs.

EMERGENCY RESPONSE SYSTEM FOR PFIESTERIA AND MAJOR ALGAL BLOOMS—KEY ACTION #51

Recent attention to outbreaks of *Pfiesteria* along the east coast has highlighted the need for a coordinated federal response system to assist state and local governments during major outbreaks. This interagency Emergency Response plan was distributed on August 18, 1998 and will continue to be refined and expanded.



Protecting Our Drinking Water

The United States enjoys one of the best supplies of drinking water in the world. Nevertheless, many of us who once gave little or no thought to the water that comes from our taps are increasingly asking the question: "Is my water safe to drink?" While tap water that meets federal and state standards generally is safe to drink, threats to drinking water quality and quantity are increasing.

The water that we drink comes from streams, rivers, lakes, or from ground water wells that tap underground aquifers. The costs of treatment can be reduced or avoided by ensuring that the sources of drinking water are safe from contamination.

The 1996 Safe Drinking Water Act Amendments placed a new focus on protecting the sources of drinking water (rivers, lakes, and ground water). States and tribes, in cooperation with local governments, are to develop assessments and protection plans for the sources that communities use for drinking water. These assessments will become available over the next four years.

Ensuring that Fish are Safe to Eat

Americans are also increasingly concerned about the quality of the fish and shellfish we eat. This is an issue that affects us all, and poses increased risk to the health of women of child-bearing age, children, and people who for economic or cultural reasons rely on locally caught fish. The issues are complex - mercury and other long-lasting pollutants such as dioxin and PCBs stay in the environment and accumulate in the flesh and organs of fish and shellfish. Bacteria and other microbiological contaminants caused the closing of 31% of the nation's shellfish beds, according to the 1995 National Shellfish Register.



Protecting Public Health

PROTECTING SOURCES OF DRINKING WATER KEY ACTION #15

Ten federal agencies signed an agreement to provide assistance to state, tribal, and local governments as they work to assess and protect the nation's sources of drinking water. Regional meetings are now being conducted to define the needs of states, tribes and local governments as they complete these assessments and protection programs and to specifically define how federal agencies can support their efforts.

SEAFOOD SAFETY KEY ACTIONS #7, 8, 9

Brochures highlighting the risks associated with consuming large amounts of fish were developed in English, Spanish and Asian languages and distributed in areas where locally caught fish pose health risks. More detailed information has been developed and distributed to health care professionals. The National Shellfish Register has been released outlining the health of the nation's shellfisheries.

Ensuring that Beaches are Safe for Swimming

Americans want better information on the safety of the rivers, lakes, and coastal waters where they swim. In the past information was relatively difficult to find. Further, the standards and procedures used to monitor water quality and make decisions on closings and warnings varied from place to place.

BEACH WATER QUALITY KEY ACTIONS #11, 12

The Beach Watch Web Site came online in May 1998 and provides the first national listing of water quality conditions at beaches and other popular swimming locations (where that information is available). EPA has developed and will soon release a Beach Action Plan to help guide local, state, tribal, and federal efforts to improve beach monitoring and notification programs.

Next Steps— 1999 and Beyond

The Clean Water Action Plan is a multi-year effort with major actions continuing through 2008. During the first year, we made important progress in laying the foundation for future implementation activities and in implementing solutions in many watersheds around the country.

The second year, 1999, is an important year for everyone involved as we make the transition toward full, on-the-ground implementation. Below are highlights of activities scheduled to occur in 1999.

Protecting Watersheds

- **Watershed Restoration Action Strategies - Key Action #98.** States and tribes will be developing Watershed Restoration Action Strategies in 1999. Action Strategies are intended to guide restoration efforts in those watersheds that were identified by the states and tribes as most in need of restoration during 1999 and 2000. Action Strategies will be used to target the additional funding, including \$100 million appropriated for polluted runoff controls. Additionally, these Action Strategies are intended to help guide the efforts, programs, and financial resources of all levels of government in cooperation with other stakeholders including agriculture, citizen watershed groups, businesses, and environmental interests.
- **Financial Assistance for Watersheds - Key Actions # 73, 95, 98, 99.** Financial assistance programs play a major role in addressing today's water quality problems. The federal partners will expand and improve information available on federal financial assistance programs available to help restore and protect watersheds.
- **Watershed Assistance Grants - Key Action #103.** Additional funding will be provided to expand the Watershed Assistance Grants program. This program makes financial assistance available to local communities to build capacity for watershed improvement.
- **Assistance to Tribal Nations - Key Action #101.** The federal partners will continue to work together to provide tribal nations with technical and financial assistance to improve water quality on tribal lands. Tribes will continue to develop Unified Watershed Assessments, Watershed Restoration Action Strategies, and will begin implementing solutions to water quality problems. The President's FY 2000 Budget proposal asks Congress to remove limits on the amount of Clean Water Act polluted runoff funding available to tribes.

Improving Information and Citizens' Right-to-Know

- **Water Information Network - Key Actions #92, 93.** During 1999, the first version of the Water Information Network will be released to the public. Cooperating agencies and other stakeholders will continue this multi-year project to make a comprehensive set of information available to the public on the condition of each watershed in the U.S.
- **The National Watershed Forum - Key Action #108.** To support and help develop community-based watershed efforts, up to 12 regional watershed fora will be sponsored across the country. These regional fora will provide a mechanism for information exchange and collaboration on watershed protection and restoration issues among diverse stakeholders such as local watershed interests, tribes, and local, state and federal government agencies.
- **Blue Water Labeling - Key Action #69.** A task force, including agricultural producers, businesses, and interested constituencies, will make recommendations on a Blue Water marketing recognition program for agricultural products produced under sound environmental management guidelines.
- **Tax Incentives for Clean Water - Key Action #86.** The federal partners will report on tax proposals that would foster water pollution prevention and natural resource enhancement.
- **Smart Growth - Key Actions #83, 84, 85.** An Interagency Work Group on Sustainable Communities will conclude efforts to develop federal policies to strengthen America's communities in conjunction with efforts to protect watersheds.

Addressing Polluted Runoff

- **Agriculture - Multiple Key Actions.** Work will continue in 1999 to address polluted runoff from agricultural sources. Conservation programs, the National Buffer Initiative, and various funding programs (Environmental Quality Incentives Program, Nonpoint Source Grants Program, the State Revolving Fund Program, etc.) will address more sources of polluted runoff from agricultural lands.
- **State Polluted Runoff Programs - Key Action #70.** EPA, with the support of other federal agencies, will assist states, territories, and tribes to upgrade polluted runoff programs (nonpoint source management programs).
- **Air-borne Sources of Water Pollution - Key Actions #75-76.** The federal partners will complete an assessment of the risks associated with atmospheric deposition of nitrogen to watersheds and work with appropriate stakeholders to address major sources of this type of pollution.
- **Address Pollution from Septic Systems - Key Actions #77-78.** Septic systems and other decentralized systems serve approximately 25% of the U.S. population and are responsible for significant water quality problems around the country. EPA, in cooperation with other partners, will develop information on onsite sewage disposal technologies, performance standards, and innovative technologies and management solutions.
- **Stormwater Regulations - Key Action #79.** EPA will publish final regulations (stormwater phase II) and work with states, tribes, municipalities, and the regulated community to make sure that storm water control measures are implemented.

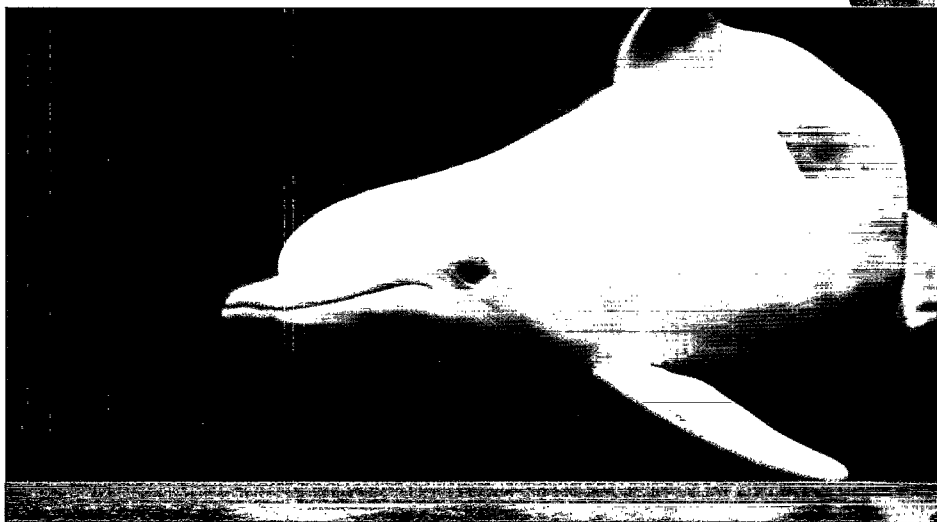
Enhancing Natural Resources Stewardship

- **Natural Resources - Multiple Key Actions.** Building on the successes of 1998, a wide variety of stakeholders will continue to restore wetlands, address the impacts of forest roads and mining operations, and improve coastal water quality.
- **Federal Lands - Key Action #19.** The federal partners will complete the Unified Federal Policy to improve watershed health on federal lands and begin implementation.

- **Stream Corridor Restoration Projects - Key Action #61.** Utilizing techniques contained in the new *Stream Corridor Restoration* document, the federal partners and other stakeholders will initiate stream restoration demonstration projects in 12 areas.
- **Identification of Essential Fish Habitat - Key Action #54.** All 39 Fisheries Management Plans will be updated and approved in 1999. Updated plans will include identification of habitat that is essential to fish and will include recommendations for conservation and enhancement measures.

Protecting Public Health

- **Public Health - Multiple Key Actions.** All of the public and private sector partners in the Clean Water Action Plan will continue to implement key actions to protect the sources of drinking water (rivers, lakes, and ground water), address sources of pollution that affect the quality of the fish and shellfish we eat, and protect our beaches from pollution.
- **Mercury Contamination - Key Action #2.** EPA and other partners will complete a multi-media strategy for addressing mercury and other bioaccumulative pollutants.
- **Contaminants in Fish - Key Action #5.** Guidelines will be completed to improve monitoring of fish tissues and improve decision making on fish consumption advisories.
- **Safety of Recreational Waters - Key Action #13.** EPA will initiate a multi-year effort with states and tribes to strengthen standards for microbiological contaminants to ensure that waters are safer for swimming.



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Lead Agencies



U.S. Department of Agriculture
(301) 504-2198



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
(301) 713-3086



U.S. Department of Defense
Army Corps of Engineers
(202) 761-1980



U.S. Department of Interior
(202) 208-6416



U.S. Environmental Protection Agency
(202) 260-5700

Supporting Agencies



Tennessee Valley Authority
(423) 751-8455



U.S. Department of Energy
(202) 586-8505



U.S. Department of Transportation
(202) 366-5004



U.S. Department of Justice
(202) 514-2701

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one of the deepest obligations
we have — to ourselves, to our
children, and to our future."*

Vice President Gore