



GOAL 2: Clean and Safe Water

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GOAL 2: CLEAN AND SAFE WATER

All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve human health, enhance water quality, reduce flooding, and provide habitat for wildlife.

OVERVIEW

EPA strives to ensure that all Americans have access to water that is safe for drinking, fishing, and swimming and that all fresh and saltwater resources support healthy populations of fish and wildlife.

Safe drinking water is the first line of defense in protecting human health. The American public enjoys some of the safest drinking water in the world, yet illnesses due to contamination continue to occur. For example, in 1993, an outbreak of the contaminant *Cryptosporidium* in Milwaukee's drinking water supply caused over 400,000 illnesses and more than 100 deaths. More recently, in September 1999, two people died and more than 700 became ill after drinking water tainted by *E. coli* at an upstate New York county fair. Overall, in 1999, nine percent of Americans served by community water systems, or approximately 38 million people, received water that violated health standards at least once during the year.

Clean water and healthy aquatic ecosystems support all life, are vital to many sectors of the U.S. economy, and play an important role in Native American culture. U.S. manufacturers and the agricultural industry use vast quantities of clean water every year to manufacture products, irrigate crops, and raise animals. The nation's tourist industry relies heavily on ocean and fresh-water destinations. Native American cultures place great importance on clean water and invoke the spirit of water in cultural ceremonies for medicinal and purification purposes.

In its Strategic Plan, EPA established three objectives to guide its work to provide clean and safe water over the next five years: protect human health by ensuring safe drinking water and protection from contaminated fish and recreational waters; conserve

and enhance the ecological health of waterbodies; and reduce the impact of pollutants entering the nation's waters.

FY 1999 PERFORMANCE

Safe Drinking Water, Reduced Exposure to Contaminated Fish, and Healthy Recreational Waters

EPA, working with its partners, protects the public from exposure to contaminated water by addressing the three primary paths of exposure: drinking, eating fish and shellfish, and recreational contact. By 2005, EPA's objective is to protect human health so that 95 percent of people served by community water systems will receive water that meets the 1994 health-based drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbials (pathogenic viruses, bacteria, and parasites) and other forms of contamination in waters used for recreation will be reduced.

Improving Drinking Water Quality

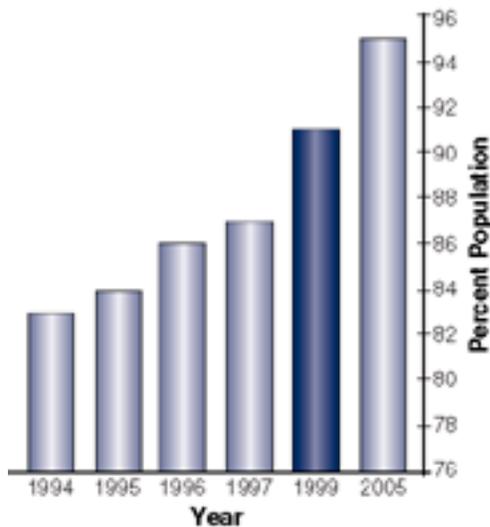
To ensure the delivery of safe drinking water, EPA works in partnership with the States, Tribes, and other interested parties to design and implement strong protective standards. *In FY 1999, EPA met its goal of promulgating two new health-based regulations. One addresses disinfection byproducts (DBPs—potentially harmful contaminants formed by the reaction of disinfectants, such as chlorine, with naturally occurring organic matter in water); the other addresses microbials (APG 8).* The DBP rule provides increased protection for as many as 140 million people. The microbial rule establishes controls for *Cryptosporidium* and other waterborne pathogens. The Agency estimates that this rule will reduce the number of cryptosporidiosis cases by between 110,000 and 463,000 per year.

PARTNERSHIP FOR SAFE WATER

The Partnership for Safe Water is a voluntary effort of the nation's drinking water utilities and their representative organizations, States, and EPA. The goal is to provide an additional measure of safety to millions of Americans by implementing prevention programs beyond regulatory requirements. The Partnership gives members specific tools they can use immediately to examine their operations and identify ways to improve performance. Plants that completed the self-assessment phase of the Partnership showed a 30 percent reduction in finished water turbidity levels. (Under normal conditions turbidity is an indicator of the effectiveness of filtration for pathogen removal). As of April 1999, membership includes 225 surface water utilities representing 330 water treatment plants, serving over 90 million people.

EPA provided critical technical assistance for implementation of the Drinking Water State Revolving Fund (DWSRF). As of September 30, 1999, States entered into 792 assistance agreements with community and non-community drinking water systems. This program has contributed to greater compliance with health-based standards through improvements to pipes, treatment plants, and other components of drinking water infrastructure.

Population Served by Community Water Systems Meeting Drinking Water Standards



In FY 1999, 91 percent of the population served by community water systems received drinking water meeting all health-based standards, up from 83 percent in 1994, achieving FY 1999 targets (APG 9).

To provide a safer drinking water supply and reduce the costs of treating drinking water, EPA works with the States and Tribes to protect sources of drinking water. As a key component of the multi-agency Clean Water Action Plan (CWAP), EPA works with States, Tribes, other Federal agencies, and local communities to conduct source water assessments and implement source water protection programs. In FY 1999, 51 States/territories submitted source water assessment plans, 10 of which were approved, and the remaining 41 were in the review process and expected to be approved in FY 2000. *In addition, 11,011 community water systems (CWS) are implementing programs to protect their source water (exceeding the FY 1999 target by 6,611). Combined, these community water systems serve a population of almost 49 million people (APG 10).*

The wellhead protection program includes five steps as follows:

- Form a team.
- Delineate areas around the wellhead to be wellhead protection areas (WHPA).
- Take an inventory of actual or potential sources of contamination in or near the WHPA.
- Institute preventative/protective measures to manage WHPAs and ensure the groundwater resources will not be contaminated.
- Develop and implement contingency plans should the groundwater resources that serve as drinking water supplies inadvertently become contaminated.

In FY 1999, community water systems' efforts in implementing programs to protect their source water resources included not only steps four and/or five of the wellhead protection program, but also the completion of steps one through three that provide the basis for implementation activities. This resulted in a larger number of systems being counted than originally forecast. In FY 2000, CWS' efforts will be expanded to include both surface water and groundwater sources of drinking water supplies.

Reducing Exposure to Contaminated Fish

States and Tribes take primary responsibility for informing the public about risks of fish consumption. Approximately seven percent of river miles and 16 percent of lake acres have been assessed and found to have fish that should not be eaten or eaten in only limited quantities. To communicate this information to the public, EPA has improved its National Listing of Fish and Wildlife Advisories Internet site (<http://www.epa.gov/ost/fish>). States and Tribes can enter advisories directly on this site, allowing easy public access to timely information. In addition, EPA has distributed fact sheets to State and Tribal fish advisory programs that explain how to use technical information to develop fish consumption advisories. To help ensure consistency across the country, EPA has worked with government and private parties to establish a common standard for decision-making about fish consumption advisories. Currently, 25 States follow EPA's guidance for monitoring and evaluating fish.

As part of its efforts to better understand the contaminated fish problem, the Agency began a nationwide survey to learn about the presence of persistent bioaccumulative toxics (PBTs—pollutants that when eaten stay in fat and organs, passing along the food chain) in fish tissue. EPA also developed a draft water quality criterion for methyl mercury, a major contaminant of fish in lakes and rivers and a health risk to people, particularly children and pregnant women.

Getting to Healthy Recreational Waters

In FY 1999, EPA continued its efforts to make nationwide beach safety information available. The Agency gathered and provided to the public information from 26 States on the quality of beaches and how States assess and inform the public about them. EPA has major efforts underway to address wet weather discharges (sewage overflows and runoff from streets), a major cause of beach closures.

Research Contributions

EPA's drinking water research program provides the scientific and technical basis for improving drinking water quality and supporting the Agency's

BEACH ADVISORIES PROTECT HUNTINGTON BEACH BATHERS

EPA's Beach Protection Program focuses on assuring that the public is notified of risks at bathing beaches. In the summer of 1999, a major water safety effort contributed to developing an advisory for Huntington Beach for much of the summer. In keeping with EPA's Right-to-Know Initiative, Orange County provided critical information to the Southern California beach-going public. The county is leading an intensive effort to identify and reduce the sources of contamination and is committed to taking appropriate actions to return this recreational resource to unrestricted public use.

rulemaking activities under the Safe Drinking Water Act Amendments. *In FY 1999, EPA met its goal of developing dose-response information on disinfectant byproducts, waterborne pathogens, and arsenic for characterizing potential exposure risks from consuming drinking water (APG 11).* The results of this work include data on the first urban study on microbial gastrointestinal disease, as well as hazard identification and screening studies on the reproductive and developmental effects of selected DBPs. This research provides important information on possible community risks and on methodologies for future studies. With this information, the Agency develops critical health data on priority drinking water contaminants to better understand the nature and magnitude of the risks posed by these agents, leading to the development of more scientifically sound regulations.

Conserve and Enhance the Nation's Waters

Improving the overall health of the nation's waters is a core objective of each of EPA's water programs. By 2005, EPA, working closely with its partners, especially States and Tribes, has committed to conserve and enhance the ecological health of the nation's waters and aquatic ecosystems—rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and groundwater—so that 75 percent of waters will support healthy aquatic communities. Currently, 500 of the nation's 2,150 watersheds have

more than 80 percent of the assessed waters meeting water quality standards, an increase from 486 watersheds in 1996.

Strengthening Water Quality Standards

State and Tribal Water Quality Standards represent water quality goals for each water body and establish the regulatory groundwork for water quality-based controls (like National Pollutant Discharge Elimination System, or NPDES, permits) necessary to protect public and ecological health. EPA is responsible for approving the standards when submitted by a State or Tribe. In addition, EPA helps these entities strengthen existing standards and incorporate advancements in risk assessment and bio-accumulation analysis into water quality criteria. In FY 1999, the Agency issued guidance to assist States and Tribes in assessing the biological health of their lakes and reservoirs and recommended new criteria that States and Tribes can incorporate into existing standards to control disease-causing microorganisms. EPA is helping Tribes to adopt water quality standards for waters on Tribal lands. In FY 1999, EPA approved new water quality standards for one Tribe and standards revisions in 17 States. The Agency also helped 17 States take corrective actions to address deficiencies in their standards, and initiated rules to establish replacement Federal standards for three States.

Achieving Water Quality Standards

States and Tribes are primarily responsible for assessing and prioritizing problem waters and for devising and implementing strategies to achieve standards. As part of the Clean Water Action Plan (CWAP), *56 States and Territories (six more than the FY 1999 target of 50) and 84 Tribes worked with EPA, USDA, and other Federal agencies to develop Unified Watershed Assessments (UWAs) that identified the watersheds in greatest need of restoration and protection (APG 12)*. The UWAs mark the first comprehensive, nationwide assessment of watersheds using water quality data, habitat conditions, endangered species listings, and other environmental factors.

EPA, its Federal partners, and States and Tribes work together to develop Watershed Restoration

IOWA'S BEAR CREEK BENEFITS FROM STREAM CORRIDOR RESTORATION

Landowners, working with Iowa State University professors, developed a riparian buffer nearly five miles in length on Bear Creek in central Iowa. This stream corridor restoration project utilizes plantings of grasses, shrubs, and trees to intercept eroding soil and agricultural chemicals from fields, slow flood waters, stabilize streambanks, provide wildlife habitat, and allow for alternative marketable products. Constructed wetlands have been developed around tile outlets to act as a sink for drainage high in nutrients. In FY 1999, this project was selected as one of 21 CWAP national restoration demonstration projects and received funding from EPA's 319 Program and other sources, including Pheasants Forever and the Leopold Center.

Action Strategies to address those watersheds identified in the UWAs as most in need of restoration. These actions will coordinate the work of many partners to protect and restore the full physical, chemical, and biological integrity of these watersheds. EPA targeted \$100 million of FY 1999 funding for non-point source grants to support implementation activities in high-priority watersheds.

To focus attention on entire water bodies instead of individual discharges, States, working with EPA, develop Total Maximum Daily Loads (TMDLs). A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive from all sources of pollution and still meet water quality standards. TMDLs are part of a strategy to implement the water pollution controls and management measures necessary to reduce these pollutants. Over the next 15 years, almost 40,000 TMDLs need to be established; in FY 1999, States developed and submitted approximately 500 TMDLs to EPA for approval. EPA has developed better models to allow for the consideration of more factors, like runoff and air deposition, in TMDL calculations and has proposed stronger TMDL regulations to better identify impaired waters and develop and implement TMDLs for them.

Supporting Water Quality Work in Specific Places

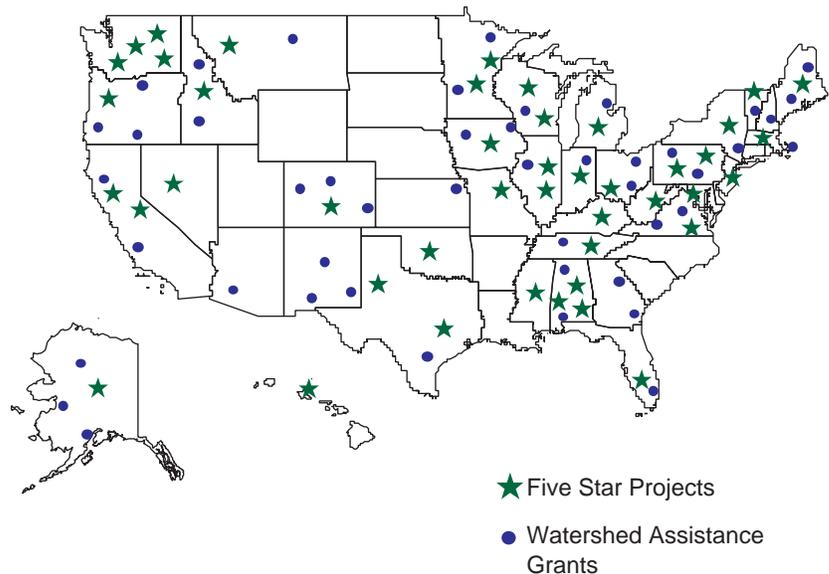
EPA actively supports State and local initiatives in specific high-priority areas throughout the country:

- The National Estuary Program (NEP) supports inclusive, community-based planning and action to restore and protect 28 of America's nationally significant estuaries. In FY 1999, EPA approved four Comprehensive Conservation and Management Plans (CCMPs), blueprints that NEPs develop and use to improve, restore, and protect their estuaries, for a cumulative total of 21 CCMPs.
- EPA's Gulf of Mexico Program, in partnership with the National Fish and Wildlife Foundation, launched the Gulf of Mexico Challenge Fund. This fund leverages voluntary contributions from the private sector to support projects identified by Gulf States and local coastal communities, protecting and restoring important habitats for recreational and commercial fisheries of the Gulf.
- From 1985 to 1999, the Chesapeake Bay Program Partners restored over 26,000 acres of Bay grass beds, contributing significantly to the current total level of 63,500 acres of submerged aquatic vegetation. Bay grasses provide food and habitat for waterfowl, fish, shellfish, and invertebrates. The grasses serve as a nursery habitat for many species of fish, such as young spot and striped bass, which seek refuge from predators in the grass beds.

To foster local partnerships, EPA supported the development of the Watershed Assistance Grants Program at River Network, a national nonprofit organization. Every dollar applied to the Watershed Assistance Grants program has leveraged an additional two dollars in matching funds and has assisted 46 local efforts across the country to start up new watershed partnerships and build outreach, educa-

tion, monitoring, and planning capabilities. *In FY 1999, to support local partnerships that restore wetlands and river corridors, EPA initiated the Five Star Partnership Program, under which EPA grantees funded 46 community projects, exceeding the Agency's FY 1999 goal by 16 projects (APG 13).* Five Star Partnerships involve student groups, conservation corps, corporations, watershed groups, and government agencies in demonstration projects, training, and other educational activities related to stabilizing stream banks, eliminating harmful non-native vegetation, replanting wetlands and riverside areas, and restoring natural water flows.

Community-Based Projects Supported in FY 1999 by the Five Star Restoration Program and Watershed Assistance Grants



Research Contributions

In FY 1999, EPA met its goal to provide data and information for use by States and EPA Regional Offices in assessing and managing aquatic stressors in watersheds to reduce toxic loadings and improve ecological risk assessment (APG 14). Specifically, EPA developed and disseminated a research strategy, completed in September 1999, for integrating economic assessments with ecological risk assessments of multiple aquatic stressors. This strategy will help environmental managers determine risks more accurately and more explicitly weigh manage-

ment options to choose those that provide the greatest degree of ecological protection. EPA also produced three publications on “knowledge-based approaches” to watershed assessments and a fourth on ecosystem classification and mapping.

Reduce Loadings and Air Deposition

To better protect aquatic ecosystems and public health, EPA works to reduce the pollution entering surface waters from discrete point sources (e.g., discharge pipes) and diffuse non-point sources (e.g., agricultural runoff). EPA has set an objective of reducing pollutant discharges from key point sources and non-point source runoff by at least 20 percent from 1992 levels by 2005. Air deposition of key pollutants impacting water bodies also will be reduced.

Reducing Point Source Pollution

To reduce point source pollution, it is critical to maintain and upgrade the nation’s municipal wastewater treatment facilities. In most cases, secondary treatment is the minimum level of treatment required for discharges from publicly owned treatment works. *In FY 1999, an additional 3.4 million people (for a cumulative total of 179 million) received the benefits of secondary treatment, meeting the Agency’s goal (APG 15).* Through the Clean Water State Revolving Fund (CWSRF) program, Congress

continues to provide funds to States for the construction and maintenance of wastewater treatment facilities. Since 1988, the CWSRF has financed 5,200 infrastructure projects across the country, with 859 of those funded in FY 1999. In addition, approximately \$400 million was provided for other infrastructure projects, including projects addressing the needs of the colonias (Hispanic rural communities) along the U.S.-Mexico boundary and Alaskan Native Villages.

Through the National Pollutant Discharge Elimination System (NPDES) permitting program, EPA and States are ensuring that all facilities requiring a permit have one that includes all conditions necessary to assure water quality protection. EPA, working closely with the States, regulates industrial point sources by developing effluent guidelines implemented through NPDES permits. In FY 1999, EPA proposed two new effluent limitation guidelines. The proposal for the Centralized Waste Treatment Industry will, if promulgated as proposed, prevent 18.8 million pounds of pollutants from entering the nation’s waters each year. The proposal for Synthetic-based Drilling Fluids, if promulgated as proposed, will reduce air emissions of the criteria air pollutants by 450 tons per year, decrease fuel use by 29,000 barrels per year of oil equivalent, and reduce the disposal of oily drilling wastes by 212 million pounds per year.

In addition to routine discharges from point sources, EPA and its municipal partners must also control episodic releases associated with wet weather sources of pollution from Combined Sewer Overflows (CSO), Sanitary Sewer Overflows, and storm water. *Five hundred thirteen communities implemented requirements in Storm Water Phase I permits and/or CSO Long Term control plans that are anticipated to contribute to improvements in their local watersheds (APG 16).* EPA is not yet able to measure actual improvement in watersheds; therefore, this goal has been dropped after FY 1999. Communities that implemented requirements in Storm Water Phase I permits and/or CSO Long-Term Control Plans were used as surrogate indicators of progress, which resulted in a significantly larger number of communities meeting the goal than originally forecast. EPA and States work with

TRIBAL DRINKING WATER AND SEWAGE DISPOSAL IMPROVED

With funding provided in FY 1999, 2,500 homes among 28 Tribes in Indian country with inadequate sewage disposal systems were connected to new or upgraded facilities. Over 300 homes using pit privies were placed on septic systems or connected to treatment works for the first time. Hundreds of failing septic or other wastewater treatment systems were repaired. Other homes were taken off septic systems and connected to community treatment works. In addition, with special funds earmarked for Alaskan Native Villages, the public health and sanitation systems of over 40 Alaska Native Villages were improved through the construction of drinking water and sewage disposal systems.

IMPROVING THE CHARLES RIVER WATERSHED

The lower Charles River (Boston, Massachusetts) is one of the busiest recreational rivers in the world. Yet, in 1995, swimming standards were met only 19 percent of the time, and boating standards only 39 percent. The “Clean Charles 2005” initiative aims to make the Charles River swimmable and fishable by Earth Day 2005. In April 1999, EPA issued its report card on the river’s health giving it a B-, an improvement from a D in 1995. Achieving a swimmable, fishable Charles River means integrating permitting, enforcement, and voluntary programs on a watershed basis. For example, through the work of Federal, State, and local partnerships, inspections for illegal storm water connections are resulting in the elimination of roughly one million gallons of contaminated flow.

over 900 communities to promote compliance with the CSO requirements. Approximately 800 of these communities now have permits or other enforceable mechanisms that will minimize the amount of direct sewage discharges from CSOs into local waters and avoid major impacts such as shellfish bed and beach closures. The overwhelming majority—96 percent of municipal separate storm sewer systems serving populations greater than 100,000—are covered by permits requiring practices to minimize discharges of pollutants into aquatic habitat. EPA also issued a number of storm water general permits that will help reduce and prevent pollutant loadings from thousands of industrial and construction activities.

As part of the Clean Water Action Plan, EPA and the U.S. Department of Agriculture, in partnership with many others, released a final strategy to minimize impacts to water quality and public health from animal feeding operations and from application of animal waste to agricultural lands. This strategy is based on the expectation that owners and operators will adopt sound and economically feasible site-specific Comprehensive Nutrient Management Plans that will identify actions to meet clearly defined nutrient management goals.

Strengthening State Non-Point Source (NPS) Programs

EPA is working with States to upgrade their non-point source pollution control programs. *In FY 1999, 11 States submitted upgraded NPS programs for a cumulative total of 13, meeting EPA’s goal. EPA approved all of these programs (APG 17).* The Agency expects virtually all States will complete this work by the end of FY 2000.

In FY 1999, Congress provided \$200 million for non-point source grants to States to upgrade existing non-point source programs and to support implementation of watershed restoration action strategies in priority watersheds. Through the CWSRF program, 25 States funded non-point source and estuarine projects valued at \$169 million dollars in FY 1999. EPA, in partnership with the U.S. Department of Agriculture, also has begun work with stakeholders to develop voluntary national standards for managing onsite/decentralized septic systems. The failure of these systems due to improper siting, design, installation, or maintenance is a major source of NPS pollution.

Reducing Atmospheric Deposition Loads

EPA initiated a pilot project in FY 1999 to explore inclusion of atmospheric sources of pollution in TMDLs. States will use the TMDL allocation process as a new tool to reduce pollution from these sources. Additionally, EPA added coastal atmospheric deposition monitoring sites for mercury and nitrogen to the nationwide network to improve the understanding of deposition on water quality; supported monitoring efforts, including the Great Lakes Integrated Atmospheric Deposition Network, which monitors deposition of toxic pollutants in the Great Lakes Region; and began a national modeling effort to collect and distribute high-quality deposition data for six pollutants.

Research Contributions

In FY 1999, EPA continued efforts to deliver support tools such as watershed models, which enable resource planners to select consistent and appropriate watershed management solutions and alternatives as well as less costly wet weather flow technologies. EPA is making progress toward this

goal, which it expects to reach in 2003 (APG 18).

Specifically, EPA is working to integrate its Storm Water Management Model (SWMM) with the geographic information system compatible with the Better Assessment Science Integrating Point and Non-Point Sources (BASINS) model. EPA's SWMM has become the fundamental program for estimating urban storm water and sewer design. EPA uses BASINS to develop TMDL estimates; this integration will allow the Agency to factor urban geographic information into watershed management decisions. These decision support tools will enable community-based water resource planners to select consistent, appropriate watershed management solutions to reduce the cost and increase the effectiveness of wet weather flow abatement facilities.

PROGRAM EVALUATION

EPA completed a program evaluation of the National Estuary Programs (NEPs) in FY 1999. The key objective was to assess the effectiveness of the NEP approach in managing the nation's estuaries and to identify program elements that could serve as successful management tools for other community-based environmental protection efforts. Major findings include the following: (a) the NEP approach improves the management of estuaries and their resources by integrating Federal, State, and local management efforts, enabling citizen participation and public involvement; and (b) EPA can improve program success by encouraging more local funding for implementation and by improving the structure for measuring environmental progress. In addition, EPA conducts a biennial review of each NEP implementing an approved plan to ensure adequate progress and to identify valuable information to be shared with other watersheds.

CONCLUSIONS AND CHALLENGES

EPA, States, Tribes, and local providers will strive to address the burden of implementing new drinking water regulations and guidance, including those focusing on microbials, DBPs, arsenic, radon, monitoring for unregulated contaminants, consumer confidence reports, small systems, and operator certification. The sheer number of requirements

strains State capacity, meaning a redoubled effort is key to the achievement of the goal of safe drinking water.

The Agency is concerned about long-standing impairments to aquatic systems (such as damage to fish habitat, loss of wetlands that are nurseries of aquatic life, and stream corridor degradation) that have become more apparent as the Agency and its partners move to address problems on a watershed basis. Management actions and investments targeted at in-stream and watershed-scale restoration are required to solve these types of impairments. As States develop implementation plans for their impaired waters over the next 15 years, many will need to include watershed restoration activities in order to meet Clean Water Act goals.

EPA will work to foster a national commitment to preventing non-point source pollution. Often the governmental entity responsible for preventing NPS pollution is not the traditional water quality agency, but rather a natural resource agency with a mission broader than pollution control. In many cases, the responsibility for preventing and abating NPS pollution falls to individual citizens. EPA, in partnership with other Federal and State agencies and Tribes, needs to intensify efforts to reduce NPS pollution and provide the information and financial incentives citizens need.

As EPA continues its progress toward the goal of clean and safe water, the Agency faces the key challenges of improving performance measurement to reflect outcomes and improving the ability to link annual program actions to long-term environmental outcomes. EPA will strive to increase the proportion of annual performance goals and measures that support environmental outcomes to make the connection between EPA's efforts and the environmental results achieved. The Agency will work to improve environmental information through existing and new monitoring and assessment strategies designed to fill data gaps and increase the understanding of watershed health. EPA also will strive to improve its efforts to provide sound data on the quality of the drinking water supply and to modernize the Safe Drinking Water Information System.

Every year different organizations and consumer-oriented journals conduct studies of what Americans rank as high priority items for ensuring a good quality of life. Clean and safe water has consistently placed in the top five areas of greatest importance. EPA, the principal Federal agency for regulating and protecting the waters of the United States, will continually strive to design, develop, and carry out programs to strengthen Americans' confidence in their water resources. Success depends on concentration, commitment, and cooperation toward finding the best solutions to ensure clean and safe water for the nation.

KEY MILESTONES FOR THE FUTURE

To accomplish the goal of Clean and Safe Water, EPA will continue to develop protective standards on a strong scientific foundation. The following will form the basis for updated point source permits and prevent increased pollutant loadings to America's rivers:

- By the close of 2002, EPA will issue effluent guidelines and nutrient criteria and will partner with States and Tribes to set water quality standards.
- By FY 2002, EPA and its partners will complete the establishment of a significant number of TMDLs for the most at-risk waters.

To further reduce wet weather pollution, EPA will:

- Work with States to issue additional guidance and ensure effective implementation of the CSO Policy, existing Storm Water rules, and new Storm Water Phase II rules so that by the end of FY 2002, Sanitary Sewer Overflow regulations will be in place.
- Review the effectiveness of States' revised non-point source plans and through the NEP, preserve, restore, and/or create 50,000 acres of habitat nationwide.

Public health protection is the cornerstone of the drinking water and fish and beach advisory programs. The Agency will support States and

Tribes in ensuring timely implementation of the following requirements:

- By 2001, EPA will issue drinking water regulations to limit arsenic and radionuclides in drinking water and to further improve treatment of surface waters and groundwater that face risk of microbial contamination.
- Through authorities under the Clean Air Act and Clean Water Act, EPA also will propose to strengthen controls on sources of mercury and other toxics impacting fish.
- Finally, by 2003, EPA will work with all States to adopt beach water quality standards.

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