USGS and the Clean Water Action Plan

Clean Water Action Plan Background

The Clean Water Action Plan, announced by President Clinton and Vice President Gore on February 19, 1998, protects public health and restores our nation's precious waterways by setting strong goals and providing states, communities, farmers, and landowners with the tools and resources to meet them. The Action Plan charts a new course emphasizing collaborative strategies built around watersheds and the communities they sustain.

U.S. Geological Survey Background

As the nation's largest water, earth and biological science and civilian mapping agency, the U.S. Geological Survey (USGS) works in cooperation with more than 2,000 organizations across the country to provide reliable, impartial scientific information to resource managers, planners and other users. This information is gathered in every state by USGS scientists to help minimize the loss of life and property from natural disasters; contribute to the sound conservation, economic and physical development of the nation's natural resources; and enhance the quality of life by monitoring water, biological, energy, and mineral resources. The USGS is a bureau of the Department of the Interior.

USGS Roles in the Action Plan

➢ Provide information and technical assistance to federal, state, tribal and local agencies to help meet watershed priorities and restoration goals on federal and non-federal lands.

➢ Estimate and model the sources of nutrients, including point sources, applied fertilizer, livestock wastes and atmospheric deposition, and their transport in large watersheds, such as in the Mississippi River drainage area and Chesapeake Bay.

➢ Participate in multi-agency efforts to address the effects of non-point pollution on coastal watersheds and, specifically, the relations among nutrients, land use, environmental factors, toxic algal blooms, fish health and hypoxia.

USGS Highlights Related to Action Plan Goals

Nationwide
As states and water suppliers work to assess the vulnerability of their public water supplies to contamination, they need to know the approximate travel time from potential contaminant sources to public-supply intakes. The USGS, in cooperation with EPA, has developed an internet-based query system to provide this information. The travel times are estimated using the USGS national water-quality model, which incorporates water-quality data from over 400 stations as well as hydrologic characteristics of 65,000 stream reaches and 2,100 reservoirs.

Arkansas
The USGS is working with the Arkansas Department of Health to develop source-water protection plans for drinking water. Similar efforts are beginning or ongoing in at least 14 additional states.

Colorado
Information on trace elements in streams in a heavily mined area near Breckenridge, Colorado has helped a local group of concerned agencies and the public determine realistic options for remediation, and prioritize the monitoring of fish and water quality.

Delaware, DC, Maryland and Virginia

The USGS is participating in a coordinated multi-agency restoration effort to reduce the amount of nutrients entering Chesapeake Bay by 40 percent between 1985 and 2000. Half of the water and nutrients that enter Chesapeake Bay first travel through the ground-water system. USGS research has found that nutrients may take up to 20 years to move through the ground-water system before reaching the Bay. This means any reduction in the amount of nutrients released onto the land may not have an impact on water quality in the Bay for many years. The USGS has also provided information related to the fish disease, Pfiesteria. Preliminary USGS data suggest that lesions on some fish could be due to several types of bacteria and fungi that weaken a fish's immune system, making it even more susceptible to Pfiesteria-like organisms.

Hawaii
The Hawaii State Department of Agriculture is incorporating USGS data-collection protocols in its statewide ground-water pesticides monitoring program.

Idaho
USGS ground-water data, statistical analyses and maps showing the vulnerability of ground water to contamination by the major herbicide, atra-zine, are being used by the Idaho State Department of Agriculture to develop their State Pesticide Management Plan.

Maine
The USGS is working with the National Park Service to understand nutrients in forested watersheds and estuarine environments in Acadia National Park. Such work is part of a nationwide collaborative monitoring and assessment effort with the national park service to help meet critical water-quality protection and management goals in about 30 parks.

Minnesota
The State of Minnesota is using USGS chloride information to help establish total maximum daily loads (TMDL) for water in urban areas.

Mississippi River
In the Mississippi River watershed, the USGS is modeling the sources and transport of the nutrients, nitrogen and phosphorus. Model results can be used to determine the sources of these nutrients and the nutrients' final destinations.

Missouri
The Missouri Department of Natural Resources has incorporated USGS surface-water quality data to assist in natural resource management, including the development of TMDL.

New York
The USGS is working with the New York State Department of Environmental Conservation on statewide pesticide monitoring using USGS data-collection protocols. The effort was sparked by public concerns over pesticides in New York State waters and their possible relation to an increase in breast cancer cases in the State. The USGS is also providing technical assistance to improve management decisions and increase the understanding of any possible links of pesticide exposure to human health. These efforts include educating the public about any chemicals found in their public water supply.

Oregon, Washington
In the Pacific Northwest, 130 freshwater fish species were classified with the help of USGS data. These data included a summary of fish origins, pollution tolerance, adult habitat, adult feeding and temperature preferences. The classification data can be used to help quantify water quality as well as the health of the fish themselves.

Western U.S.
The USGS is working with the Bureau of Reclamation to prioritize 20 "high-priority" watersheds where Reclamation operations affect water quality and ecosystem health. These watersheds include the San Pedro River in Arizona; the Rio Grande/Elephant Butte and Caballo Reservoirs in New Mexico and Texas; the Upper Klamath Lake in Oregon; the Angostura Reservoir and Cheyenne River in South Dakota; and the Grand Coulee Dam in Washington State.

> **For more information call:**
> 703.648.4460/4466 (Fax)
> **Or visit our Web sites at:**
> http://www.usgs.gov
> http://cleanwater.gov