

management. The Initiative will support studies of coalition-based strategies for activities, such as attaining water quality standards, protecting and restoring the natural and beneficial uses of floodplains, and, in general, improving water resources on a watershed level. Water quality standards establish water quality goals for specific water bodies and play an important role in watershed management. Coalition-based strategies that focus on addressing designated uses in watershed initiatives can help build support for control actions at the watershed level.

The goal of the Watershed Initiative is to study practical and efficient models that can be adapted to local circumstances across the country. The cornerstone of the Initiative is to provide study results that will help advance the successes of partnerships and coalitions that have completed the necessary watershed assessments and have a technically sound watershed plan ready to carry out. EPA believes the Watershed Initiative will help document the kind of pro-active, incentive-based protection and restoration measures that will ultimately yield cleaner water.

In 2004, the Agency plans to continue its focus on studies of approaches aimed to provide quick, measurable results; partnerships; innovation; and integration (formerly called program compatibility). More emphasis, however, will be placed on studies of (1) market-based approaches and other socio-economic strategies, and (2) the serious and growing hypoxia problem facing the Gulf of Mexico. A portion of the appropriation will be devoted to study projects in the Mississippi River basin that address nutrient loadings related to hypoxia. EPA hopes that this targeted approach to the problem of hypoxia will help promote needed changes that are essential to attaining and maintaining clean water and that can be adapted to other areas throughout the country.

#### 1. Studies of Market-Based Approaches

Finding solutions to complex water quality problems requires innovative approaches that can be aligned with core water programs. Market-based approaches create social and economic incentives for the implementation of creative pollution reduction strategies, emerging technologies, and watershed protection measures. Properly designed programs can improve water quality at substantially lower costs and provide incentives for voluntary reductions from all sources, point and nonpoint.

Water quality trading is one important approach that offers flexibility and efficiency in achieving water quality goals on a watershed basis. Trading allows a source with relatively higher pollution control costs to meet a water quality goal or requirement by using pollution reduction credits created by another source with lower costs. This approach enables sources in the same watershed to work together to meet a common goal. EPA considers trading to be an important component of the Watershed Initiative. Properly designed trading programs can improve water quality at substantially lower costs and provide incentives for voluntary reductions from all sources, especially sources that are not regulated under the Clean Water Act (CWA).

One example is a nonpoint source selenium load trading program in the Grassland's Drainage Area in California's San Joaquin Valley. The selenium load trading program is a cap-and-trade environmental program. A regulatory agency sets the cap on the selenium that the Grassland Area Farmers, a group of irrigation and drainage districts, administer through an internal selenium load trading program. Pursuant to the trading program, the total allowable selenium load is allocated among the member irrigation and drainage districts. The districts can either meet their load allocation or buy selenium load allocations from other districts. The tradeable loads program has assisted Grassland Area Farmers in meeting environmental goals in a cost-effective manner.

To promote the concept of trading in relation to fostering environmental progress, EPA has developed a new Water Quality Trading Policy, published in the **Federal Register** on January 13, 2003 (68 FR 1608) and posted on the Web site <http://www.epa.gov/owow/watershed/trading/>. The purpose of this policy is to encourage States, interstate agencies, and Tribes to develop and implement water quality trading programs for nutrients, sediments, and other pollutants where opportunities exist to achieve water quality improvements at reduced costs. More specifically, the policy is intended to encourage voluntary trading programs that facilitate the implementation of Total Maximum Daily Loads (TMDL), reduce the costs of compliance with CWA regulations, establish incentives for voluntary reductions and promote watershed-based initiatives. Any trading nominations submitted in response to this solicitation must conform to this policy.

Some market-based programs already in progress blend regulatory components and nonregulatory components to achieve environmental improvements. Market-based approaches can include incentive programs to encourage conservation land use or management practices. For example, King County, Washington provides rebates and other tax breaks as an incentive for property owners to reduce impervious surfaces within the County. The money raised through this levy on impervious surfaces is used to provide myriad surface water management services for the County. Other examples of market-based approaches include flood insurance programs that insure against loss through investment in the creation or restoration of wetlands and floodplains, or programs that insure against agricultural crop loss where management practices to reduce pollution have been implemented. Still other examples of market-based approaches involve state-private partnership programs to reduce regulatory compliance costs, implement pollution controls, or institute operational changes that benefit water quality.

Market-based approaches have tremendous potential to instigate change. Trading programs and other market-based approaches can be powerful tools to encourage innovative pollution control technologies and land management practices. EPA wants to fund Watershed Initiative projects that utilize market-based approaches and other socio-economic strategies to determine if they produce real, measurable environmental results.

#### 2. Studies of Hypoxia in the Gulf of Mexico

By far, the largest watershed within the United States is the Mississippi River Basin. Draining all or parts of 31 States, it covers 1.2 million square miles (40% of the US) and travels over 2,300 miles before discharging 612,000 cubic feet of water per second into the Gulf of Mexico. On the Gulf's Texas-Louisiana continental shelf, an area of hypoxia forms during the summer months. This "dead zone," characterized by diminished sunlight and low oxygen levels, is an area virtually devoid of marine life. The hypoxic area has been growing significantly over the years and, at 7,000 square miles, it is double the size it was in 1993. While there are many factors contributing to the Gulf hypoxia, scientific evidence indicates that excess nutrients, particularly nitrogen and to a lesser extent phosphorus, from the Mississippi River