

Building Livable Communities Starts with A Watershed Address

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Children learn about their place in the world — their street address, city, and zip code at a very early age. But there is another important dimension to our lives that is also important to our sense of place — our watershed or ecological address. The future of the planet and the protection of the nation's water resources depend on a universal understanding and appreciation of watersheds.

A watershed is the land area that drains to a common body of water such as a lake, river or ocean. Everyone—whether we live on a farm, in a city, or on the coast—lives in a watershed, and we all have an impact on its health. Some watersheds are small and drain just a few acres of land. Others, such as the Chesapeake Bay, are expansive estuaries where the rivers meet the sea. And then there's the Mississippi River watershed which feeds the nation's fertile cropland and drains two-thirds of the United States before emptying into the Gulf of Mexico. Watersheds supply drinking water, provide recreation and respite, and sustain life.

Thanks to federal and state laws regulating pollution from sewage plants and factory pipes, many rivers and waterways are much cleaner than they were 20 years ago. But serious challenges remain. Many pollution issues today are created by human activities. The leading culprits are pollutants running off highways, farms, golf courses, lawns, and other areas. These problems are not easily solved by the old command-and-control, discharge-by-discharge approach. That's why the Environmental Protection Agency (EPA) and many federal, state, tribal, and local agencies are promoting watersheds as the best framework to manage and protect the nation's water resources. A watershed approach is hydrologically focused; involves all stakeholders; and strategically addresses priority water resource goals.

However, federal scientists and agency officials cannot do it alone. Much depends on land-use decisions made by local officials and the actions of millions of individuals, which, when taken together, make enormous impacts. But there's good reason to be optimistic. There's a powerful movement focused on watersheds. An estimated 4,000 locally based organizations are involved in community-based watershed protection efforts.

All this activity is paying off. A watershed project in Utah's American Fork Canyon is an example of cooperation conservation at work. Trout Unlimited volunteered to help restore this watershed, which has been polluted for well over a century from abandoned mine drainage, to improve the water quality and the habitat of a rare cutthroat trout species.

In the North Fork of the South Branch, a scenic trout stream in the headwaters of the Potomac River, a million-dollar EPA nonpoint-source grant was the starting point for

almost a million dollars in additional funding from the U.S. Department of Agriculture, the governor's office, the private sector, and others. More than 85 percent of the farmers in this West Virginia watershed constructed animal-waste lagoons and installed buffers and other management practices such as roofs over feeding areas, streambank fencing, and alternative livestock watering facilities to make dramatic improvements to water quality. In addition to supporting the implementation of these activities, EPA grant monies funded a project coordinator for the West Virginia Conservation Agency, who conducted outreach activities and leveraged support from partners, which was critical to the overall success of the project.

In the Tar Pamlico Basin in North Carolina, environmental groups, municipalities, developers, businesses, and the public are working together to address excessive nutrients, which have caused fish kills and harmful algal blooms in this highly productive, economically valuable estuary. Almost \$50 million dollars are supporting projects to reduce runoff from farms and other sources, which have degraded water quality. Innovative "cap and trade" programs provide incentives to wastewater plants and industrial facilities to reduce nutrients at affordable cost.

In the Lower Columbia River Estuary, which traverses Washington and Oregon, partners have spent more than \$3.8 million in cost-share funds to carry out on-the-ground restoration projects, which are bringing back native fish species and restoring habitats.

EPA supports these efforts through Clean Water Act funding, technical assistance, and scientific expertise and tools. For example, the agency developed state-of-the-art mapping programs and water quality models, published planning handbooks, and offered training programs and guidance on best practices to manage runoff. EPA also supports organizations like The River Network, the Center for Watershed Protection and the Southeast Watershed Forum—umbrella groups that specialize in education and training for local watershed organizations.

The "human dimension" to environmental protection cannot be underestimated. Clean water matters to everyone. It's the white carpet of sandhill cranes on the Platte River in Nebraska. It's the striking pink roseate spoonbills in the Gulf of Mexico. It's the fascinating upstream struggle of the salmon in the Pacific Northwest. It's the knobby trunks of the cypress trees in the Everglades. It's the shiny green leaves and creamy soft petals of a flowering magnolia tree in Louisiana.

The first step to creating and sustaining healthy and livable communities is understanding one's place in the big global picture. Kids can grasp this simple, powerful concept at an early age, but it needs to be universally embraced by all citizens to make a lasting change in our world and our environment for today's and future generations.