

Did You Know?

Many of us don't think about the "science" of water. We know we need it to survive. In the United States, we have access to clean drinking water and plenty of recreational bodies of water to boot. Even our fish and wildlife enjoy the benefits of a healthy, vibrant water supply. Researchers at the **ARS Southwest Watershed Research Center** think about water in a different way. Their job is to make sure we continue to find ways to protect our water. To do that, ARS scientists, U.S. Environmental Protection Agency (EPA), and University of Arizona partners developed an award-winning tool that helps keep our nation's watersheds cleaner.

More than 80 percent of our fresh water comes from watersheds. Watersheds collect water from various sources—like rain, snow, or runoff—which drains into nearby waterways such as lakes, streams, and rivers.

The Automated Geospatial Watershed Assessment (AGWA) Tool is a multipurpose computer software designed for managing and analyzing water quantity and quality. Prior to AGWA, no such tool existed. Today, there are more than 2,000 registered users in 146 countries.

The team designed AGWA to assess land use and climate change impacts on water yield and quality. AGWA enables the user to visually compare simulation results under alternative future scenarios. With GIS (geographic information system), a user can link AGWA to other information, which permits the user to understand the impact of a certain practice on a given landscape.

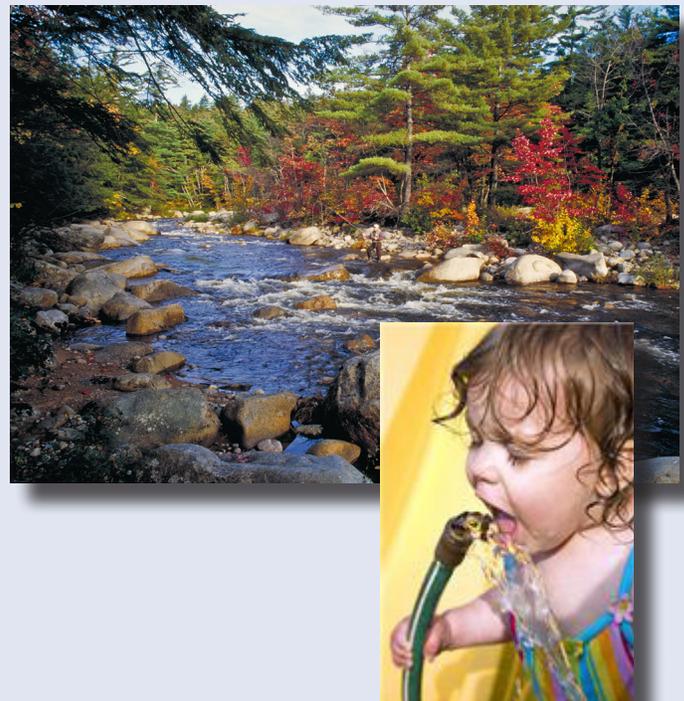
AGWA can be used to predict the effects of land management practices on water. For example, AGWA can estimate the trends and magnitude of runoff, erosion, and sediment yields. Sediment consists of soil particles, debris, and rock fragments of various sizes that commonly build up in lakes, reservoirs, stream beds, and river valleys. Land use in our na-

tion's watersheds is complex and varied—ranging from crop production areas to rangelands, pastures, forests, meadows, and urban areas. How we manage activities that take place on watersheds influences the quantity and quality of water available for domestic, industrial, agricultural, and ecological uses.

For the first time, decisionmakers, land managers, farmers, environmentalists, and others have a single, comprehensive tool that can provide a long-range model to evaluate large, complex watersheds with varying soils, land uses, and management conditions—and their related environmental impact. AGWA is available free of charge at: www.tucson.ars.ag.gov/agwa.

EPA and USDA Natural Resources Conservation Service specialists use AGWA to develop sound policies for managing water.

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Please submit story ideas and national award items to Tara T. Weaver-Missick, tara.weavermissick@ars.usda.gov or call 301-504-1663.