

# U.S. Forest Service Research and Development Agency Update: From the Forest to the Faucet

Kelly Elder, Deborah Hayes

## Abstract

The U.S. Forest Service Research and Development (FS R&D) Mission is to develop and deliver knowledge and innovative technology to improve the health and use of forests and Rangelands. Watershed research is a pivotal part of that mission. To accomplish this mission, the Forest Service currently has more than 500 scientists working in 77 field laboratories. Research is conducted on 80 Experimental Forests and Ranges (EFRs) and 370 Research Natural Areas. Research is also conducted on non-FS sites through over 1,000 cooperative research agreements with partners.

In 2005, FS R&D remodeled its structure into Strategic Program Areas (SPAs). The purpose was to integrate the major research programs by developing a matrix organization which increased accountability and provided tracking of significant accomplishments. This new model will provide an organizational structure responsive to current and anticipated demands for research and will cover a broad range of current and future issues. The interdisciplinary areas created as SPAs are: (1) Resource Management and Use, (2) Wildland Fire, (3) Resource Data and Analysis, (4) Invasive Species, (5) Outdoor Recreation, (6) Water, Air, and Soil, and (7) Wildlife and Fish.

The Water, Air, and Soil Strategic Program Area includes four portfolios: emerging threats to ecosystem sustainability; understanding ecosystem processes; climate variability affects on watersheds; and the delivery and application of research outcomes. The SPA will build on the established core strengths of a high integration among water, air, and soil research and will assist with integration of the biophysical and social sciences by emphasizing spatial patterns and ecological processes, linking freshwater and marine systems, evaluating the effects of climate variability, and using the power of a network of experimental lands to address important research questions. Another new aspect of research being integrated into the SPA is that of social sciences, including the assessment of the public's value systems and research-management policy linkages.

Within the SPA, FS R&D created an EFR Synthesis Network in 2007. The Network includes 18 established sites within the continental United States and Hawaii, Alaska, and Puerto Rico. The purpose of the Synthesis Network is to assemble long-term data sets and evaluate the state of knowledge across a number of different gradients to address current and future driving forces in the watershed. The Network participants are currently collaborating on the assembly of intersite long-term data sets for a number of areas, including water availability and chemistry, biofuels assessment, and vegetation dynamics with a changing climate. A detailed site description of each network participant is being developed to assist other researchers in utilizing long-term data from the Network sites.

---

*Hayes is the National Program Leader for Watershed and Soil Research in Washington, DC. Elder is a research hydrologist at the U.S. Forest Service, Rocky Mountain Research Station, Fort Collins, CO, and the Scientist in Charge (SIC) at the Fraser Experimental Forest, Fraser, CO. Email: [deborahhayes@fs.fed.us](mailto:deborahhayes@fs.fed.us); [kelder@fs.fed.us](mailto:kelder@fs.fed.us).*