



Recognizing the Value of Cleaner Watersheds

Posted by [Jonas Epstein](#), National Forest System, U.S. Forest Service, on July 23, 2015 at 11:00 AM



A watershed in the Stanislaus National Forest, located in the Sierra Nevada region of California. Photo credit: US Forest Service

The mission of the Forest Service is to “sustain the health, diversity and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations.” The provisioning of water resources – notably clean drinking water and flood control – is central to this. Growing demand for our water resources, spurred by population growth, and the effects of climate change further challenge the Forest Service to successfully meet the needs of present and future generations.

In the western United States – where water flowing from national forests makes up nearly two-thirds of public and commercial water supplies – water scarcity and wildfire threats have galvanized diverse stakeholders to invest in healthy headwaters. Local communities, public utility companies, businesses, non-governmental organizations and state and local agencies are investing in watershed restoration to avoid catastrophic economic losses.

Catalyzed by the devastation resulting from the 2013 Sierra Nevada [Rim Fire](#), the Nature Conservancy and Forest Service co-sponsored an [economic analysis](#) of proactive fuel treatment and restoration in the Mokelumne watershed. The study found the benefits of management actions (valued between \$126 and \$224

million) to exceed cost of treatment (\$68 million) by a ratio of two to one, calculated conservatively over a 30-year time period. These benefits stem from saved structures and timber, avoided fire cleanup, road repairs, sediment treatment for utilities and carbon sequestered. These returns on investment do not even include the ancillary impacts of habitat loss or recreation expenditures foregone.

Bolstered by the results of this analysis and the devastating impacts of past wildfires, public and private-sector parties in Denver; Flagstaff, Arizona; Santa Fe, New Mexico; Eugene, Oregon; the Sierra Nevada Range in California and others have adopted investment strategies designed to support restoration of headwaters to increase resiliency and protect source water. While the financial mechanisms and oversight varies in each project, implicit in these partnerships is public consensus around the need for collective action and financial support in order to manage ecosystem threats before wildfires become a reality. In many instances, the public has even assumed the cost of paying for proactive source water protection – either through **higher water usage rates**, or through **voting for municipal bonds** towards headwaters-based restoration activities.

Like a number of forests in the West, national forests in the eastern United States are beginning to realize the potential to stimulate landscape-scale restoration by linking with downstream communities and businesses to protect water quality.

However, the context in the East is dramatically different from the West; with more concentrated population centers, different ecological regimes, and a varied patchwork of landownership, the restoration goals and value-added of forested headwaters differ greatly in the eastern United States.

In order to realize the full potential of watershed investment partnerships, the Forest Service is developing national-level guidance for strengthening current partnerships while providing the tools to connect with a more diverse array of stakeholders to help achieve regional objectives. This initiative emphasizes flexibility, allowing for sharing and collaboration with Federal agency counterparts while still leveraging local and regional finance options and building on existing relationships and networks. As the Forest Service seeks to better understand the connections between ecosystem function and social well-being, the agency is focusing on an ecosystem services approach to “all-lands” management and restoration.

The Forest Service is working to expand the use of investments in a way that allows stakeholders to identify shared interests around their water needs. This is part of a broad suite of work that the Forest Service is doing with partners around restoration for water resources across the country. This month, we will be continuing to highlight such projects to celebrate the important role that national forests play in providing clean water for the public.

The Sierra Nevada Range provides more than 60% of California's developed water supply. The Sierra Nevada Watershed Improvement Program and its restoration partnership is focused on maintaining ecosystem services critical to the region, including water quantity and quality improvement, reduced greenhouse gas emissions, improved socioeconomic and public health, improved fish & wildlife habitat, enhanced air quality and ultimately, reduced risk of damaging wildfire. After an initial \$7.5 billion water bond was passed last year, the Sierra Nevada Conservancy has been tasked with developing criteria to allocate funding. Additionally, USDA is providing \$130 million in federal agency watershed restoration projects in the region in response to drought.

This post is part of a series featuring the Forest Service's work on restoration across the country.

- See more at: <http://blogs.usda.gov/2015/07/23/recognizing-the-value-of-cleaner-watersheds/#sthash.G5bNr0Mb.dpuf>