

California Dream 2.0

Sustaining Environmental Capital in the Mokelumne River Watershed

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In July 2011, the President's Council of Advisors on Science and Technology issued a report to President Obama on [Sustaining Environmental Capital: Protecting Society and the Economy](#) that called for a national inventory on the services that ecosystems provide and a better valuation of those services. The report recognized that environmental capital is a key underpinning of public health and economic recovery. Natural systems provide a wealth of services including clean water and air, productive soils and protection from floods and fires, among many others.



Mokelumne River (Mathew Grimm)

We are happy [to announce](#) that in late August, [Sustainable Conservation](#), in partnership with [Environmental Defense Fund](#), [Environmental Incentives](#), [Protected Harvest](#) and the [Sierra Nevada Conservancy](#) was awarded a \$372,000 Conservation Innovation Grant (CIG) from the U.S. Department of Agriculture (USDA) to develop a pilot program to measure environmental benefits in California's Mokelumne River Watershed. Once developed, the program will attract funding to pay farmers, ranchers and foresters to enhance nature's benefits, including water purification, erosion control and wildlife habitat. In addition, the program could potentially help establish better tools for valuing ecosystem services in watersheds throughout the country as called for in the report to President Obama. To read more about it please visit the [Western Farm Press](#).



The Mokelumne Program will provide economic



Solar panels power Vino Farms (Mathew Grimm)

The Mokelumne River, which originates in the Sierra Nevada Mountains and crosses the Central Valley before joining the Sacramento-San Joaquin River Delta, provides significant environmental and economic benefits to California and the region. The Mokelumne watershed produces hydro-electric energy, high value crops, timber, important habitat for wildlife, and recreational benefits like whitewater rafting and popular trout fishing. Notably, the Mokelumne delivers water to 1.4 million people in San Francisco's East Bay and provides agricultural water supply and storage within the watershed to irrigate over 800,000 acres of vineyards and other crops.

In recent years, however, the Mokelumne watershed has faced an increased risk of catastrophic fire, significant development pressures, a lack of economic

incentives to landowners in the region (Mathew Grimm)

vitality and diversity in its communities, and high unemployment. In addition, development and poor vegetation management have contributed to fire, habitat degradation, diminished species populations and impaired water quality.

Climate change is predicted to decrease the amount of water retained in the snowpack and will require dams to be operated differently to protect communities from increased risk of flooding. To address these threats holistically, EDF, in collaboration with other NGO's, state and federal agencies, and a broad array of watershed stakeholders, is developing a watershed management approach that focuses on community participation. Specifically, the management approach focuses on compensating landowners for resource stewardship and habitat restoration.

The Mokelumne Watershed Environmental Benefits Program will create a performance-based environmental accounting system so that public and private land managers can consistently pay for and track environmental improvements, and create a meaningful understanding of how conservation efforts in the upper and lower watershed benefit local communities, water users, hydroelectric power generators, and the California economy. Ultimately, this will raise investor confidence in restoration by showing the "bang for the buck" of each investment. Investors in restoration, such as the [USDA](#), the State of California and the private sector are particularly interested in improving how they target their limited resources so that there is greater accountability, efficiency and effectiveness.



EDF's Belinda Morris gets a tour of Vino Farms from viticulturist Chris Storm (Mathew Grimm)

The next stage of the Program will focus on developing metrics to better quantify the environmental outcomes associated with restoration activities that provide environmental benefits, such as improved water quality and increased water storage. We will build on current efforts underway in other regions where tools have been developed to measure improvements in habitat, water quality and instream flows, which are critical resource needs of the watershed. This information will help us target those restoration activities (e.g., riparian vegetation restoration, instream channel stabilization, water conservation, etc.) that can result in the greatest environmental outcomes. We will partner with agricultural landowners to test the quantification tools and to measure the environmental outcomes from restoration activities. In addition, we will aim to demonstrate a watershed-wide approach to achieve conservation actions that will support local communities and other beneficiaries of the services that the watershed provides. Most exciting is the fact that the diverse ecosystems and valuable land uses across the Mokelumne Watershed are representative of many

California watersheds, therefore by developing and proving out this innovative model in the Mokelumne, we believe there is huge potential to replicate it throughout California and possibly beyond.