

FARM OF THE FUTURE

Working lands for ecosystem services

BIG RIVER and SALMON CREEK FORESTS | Northern California

The Big River and Salmon Creek Forests are located along the Northern Coast of California. The Conservation Fund purchased these properties to demonstrate how innovative financing opportunities can promote sustainable forestry that provides habitat restoration, water quality protection, climate change mitigation, and local jobs.



The Conservation Fund's 11,770-acre Big River property and 4,250-acre Salmon Creek property are part of a stretch of Redwood and Douglas fir forests that comprise one of the richest and rarest ecosystems in the world. The temperate rainforests in this region provide critical wildlife habitat and are highly productive economically, supporting nearly half of the state's annual timber revenues and 16 percent of the local jobs. Many of California's forest-based communities are at a crossroads: timberland divestitures and growing development pressures in the region threaten the long-term sustainability of these forests and the ecosystem services they provide. The Conservation Fund purchased the two forest properties to protect them from development and to maintain them as financially viable, working forests.

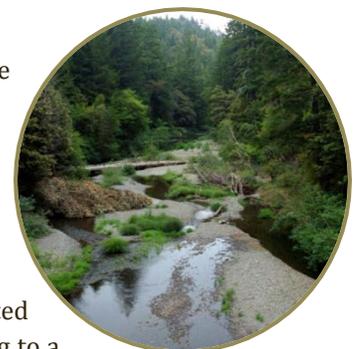
The new forests. The Conservation Fund's sustainable harvesting plan maintains productive timberland that generates carbon credits, improves water quality, and conserves habitat for coho salmon, steelhead trout, and spotted owl. The lands are now permanently protected under a conservation easement from subdivision, development, overharvesting, and conversion to non-forest uses. Land stewardship practices involve:

"Light-touch" timber harvests. Sustainable management practices include reduced harvests below historical levels and lengthened rotations. Light-touch harvests and restoration activities provide timber revenues, improve stand conditions, and generate employment for local foresters, loggers, and equipment operators. On average the forests produce nearly three million board-feet of high quality Redwood and Douglas fir saw timber per year, contributing to the local economies of Fort Bragg, Ukiah, and other communities in Mendocino County.

Carbon sales. The Conservation Fund diversifies forest revenues by selling carbon offsets through California's Climate Action Reserve. The Conservation Fund has contracted to sell 1,094,578 Climate Reserve Tonnes (CRT, a verified metric ton of sequestered carbon dioxide) expected to be produced by the forests between 2007 and 2016. Carbon offset buyers include Pacific Gas and Electric Company, the Disney Company, and United Parcel Service. The total value of the CRTs sold and contracted for sale exceeds \$7,000,000.

Riparian habitat restoration and preservation. New management practices have restored riparian habitat for coho salmon and other species. Sediment, nutrient, and temperature loading to the watershed are minimized by widening riparian buffers and keeping the land in forest cover. Using silvicultural techniques such as single-tree selection ensures functional buffers and promotes forest and aquatic diversity.

Wildlife protection. The parcels' proximity to other large forest tracts and protected lands allows for the creation of a landscape-scale preserve with connectivity, leading to a higher-functioning ecosystem. Twenty-two northern spotted owl activity centers are found within the two forest



parcels and so is habitat for nine other endangered or threatened species. The forests' Redwood habitat provides food, cover, and special habitat features for 193 wildlife species.

The business model. The Conservation Fund was able to purchase the Big River and Salmon Creek Forests through an innovative combination of state grants and a low-interest loan. Using the existing State Revolving Fund mechanism usually reserved for financing “grey” infrastructure projects like municipal wastewater plants, the Conservation Fund secured a below-market-rate loan from the State of California to finance a substantial portion of the land purchase and water restoration activities.

The lower debt-service payments represent a savings of almost \$500,000 a year, allowing the Conservation Fund to reduce the amount of timber sales needed for income and realize its “light-touch” harvest objective. As a supplementary income source, carbon sales have provided a substantial hedge against fluctuating and downward-trending timber prices. The new carbon income stream also makes standing timber more economically competitive.

Four-Year Average Revenue, 2007-2010

| Source | Revenue | Percent |
|------------------------------------------------------------------------------------------------------------|-------------|---------|
|  Delivered logs | \$1,509,404 | 53% |
|  Carbon offsets | \$1,029,688 | 36% |
|  Charitable contributions | \$285,391 | 10% |
|  Restoration grants | \$17,009 | 1% |

Revenue calculations and all financial information provided by the landowner.

LESSONS LEARNED

Creative financing is often needed. The use of the State Revolving Fund highlights the potential for leveraging existing public finance vehicles to bring ecosystem services projects to fruition. In addition to the low-interest loan, the purchase could not have moved forward without private support and dedicated funding from two other state agencies, the Coastal Conservancy and the Wildlife Conservation Board. The State grants provided nearly 30 percent of the funding, and public agency recognition of the value of forest ecosystem services was fundamental to preserving these working lands.

Diversify, diversify. With the dramatic decline in the price of delivered logs in 2009 and 2010, the revenue from the sale of carbon offsets enabled the Conservation Fund to break even on the land purchase and make loan payments. Payments for ecosystem services diversify income sources and alleviate financial risk, making sustainable management an attractive strategy.

Conservation takes teamwork. Involving stakeholders from all relevant sectors, including loggers, restoration contractors, state agencies, and conservationists, provides the strong foundation required for the long-term success of a multidisciplinary effort such as working forest conservation.



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