



Select Ecosystem Services Projects

California

- 1. Sustainable Conservation** – Ecosystem services initiative to partner with other organizations and stakeholders to develop incentives for landowners to get paid for producing ecosystem services from implementing restoration practices, and develop both the tools to quantify environmental benefits and set up the arrangements needed to enable transactions:
<http://www.suscon.org/ecosystemservices/index.php>. Focused on services including water quality & quantity, native pollinator habitat, and riparian habitat, in three pilot areas:
 - Mokelumne River watershed,
 - Dry Creek – tributary to the Tuolumne River in Stanislaus County, and
 - Cuyama River Valley
- 2. Defenders of Wildlife** – Focusing on ecosystem services on rangelands and generating payments for landowners.
 - ‘Feasibility of Ecosystem Service Payments and Markets for California Rangeland Resource Enhancement’ a forthcoming report presenting results of survey of California Ranchers on their willingness to participate in a PES program.
 - Scoping analysis and feasibility study on implementing water quality/quantity trading markets.
Two projects:
 - Investigating potential viability of a water quality trading market within the Central Valley to improve water quality and wildlife habitat and potentially providing revenue for ranchers within the study area.
 - Defenders of Wildlife and the California Rangeland Trust are working together to prioritize acquisition of conservation easements while determining the potential viability of a water market for the Upper Alameda Creek Watershed and the San Francisco Bay Area that would improve water quantity, and wildlife habitat.
- 3. Environmental Defense Fund** –
 - Development of a framework for environmental markets within a watershed approach, enabling landowners to receive payments for quantified improvements in the provision of ecosystem services. Initially focused, with Suscon and others, on the Mokelumne. Currently exploring options for implementing a similar approach in the basin that includes the Stanislaus, Merced, Tuolumne and San Joaquin rivers.
 - Also involved in carbon market opportunities for ag, specifically developing quantification methodologies for: methane emission reductions from rice production, rangeland carbon sequestration; N₂O reductions through changes in fertilizer applications; and conversion to carbon capture managed wetlands in the Sac-San Joaquin Delta.
- 4. The Nature Conservancy** – mapping ecosystem services in California. Conducted study for CEC on the impacts of climate change on CA ecosystem services, which looked at carbon, water quantity, snow storage, and forage production.

5. **Natural Capital Project** – A joint effort among TNC, Woods Institute at Stanford, World Wildlife Fund, and the Institute on the Environment at University of Minnesota to develop tools, specifically InVEST, to quantify ecosystem services at the landscape/regional scale:
<http://www.naturalcapitalproject.org/home04.html>
6. **Sonoma County Agricultural Preservation and Open Space District** – Ecosystem services initiative.
7. **Land Trust of Santa Cruz County** – Conservation Blue Print calls for pilot projects to demonstrate an ecosystem services approach as one type of incentive for long-term working lands stewardship:
<http://www.landtrustsantacruz.org/>
8. **UC Davis** – California Rangeland Watershed Laboratory led by Dr. Tate is beginning a large, multi-year effort called Grazing Management and Ecosystem Services:
http://www.plantsciences.ucdavis.edu/plantsciences_faculty/tate/main/grazing_services.htm
9. **UC Davis** – New project conducted by Stephanie Larson and Valerie Eviner to develop and document opportunities and success stories for ecosystem services on California rangelands. The project implements an ecosystem service evaluation, working with University of California Cooperative Extension (UCCE) and UC Davis staff, along with key partners such as the California Rangeland Conservation Coalition (CRCC), to build coalitions to guide pertinent research questions and realistic expectations. This project develops educational materials and outreach efforts to better understand what types of streamlining efforts are needed to make decisions on best management practices for increasing ecosystem services on rangelands.
10. **UC Berkeley** – Whendee Silver lab carbon sequestration in rangeland soils, Claire Kremen lab – native pollinator service
11. **Klamath Environmental Tracking and Accounting System** – effort to use an ecosystem services approach to meet water quality TMDL requirements
12. **Delta wetland carbon farm pilot project** – TNC, EDF, USGS, UC – Davis, UC – Berkeley, DWR - very early stages of its pilot effort
13. **Sierra Nevada Conservancy** – partner on Mokelumne River watershed project, and effort to work on an ecosystem services approach for the Sierra Nevada range.
14. **Environmental Incentives, LLC** – Partner in creating the Lake Tahoe Clarity Trading Program, and now working on various efforts to set up environmental tracking and accounting systems and environmental markets: <http://www.enviroincentives.com/>
15. **NRCS** – State Office and various field offices.
16. **EBMUD** – Collaboration with EDF on project.
17. **City of Santa Rosa** – Exploring ag offsets for discharges into river.
18. **CALFED Working Lands Initiative** –
19. **Watershed Program** – John Lowrie.

Nationwide

1. **The Willamette Partnership** – Willamette River Valley, Oregon – big group of Oregon stakeholders who have developed an environmental marketplace with four credits: salmon habitat, water quality – temperature, wetlands, upland prairie habitat: <http://willamettepartnership.org/>
2. **The Chesapeake Bay Bank** – conservation marketplace that has created the tools for landowners to participate in ecosystem markets and conservation programs. Initial focus has been on reducing nitrogen and phosphorus runoff from working lands: <http://www.thebaybank.org/>

3. **Florida Ranchlands Environmental Services Project** – focuses on working with ranchers to modify existing water management systems to hold water longer and decrease phosphorus runoff in order to help improve water management for Lake Okeechobee and the Everglades: <http://www.fresp.org/>
4. **Source water protection programs** – More and more payment for source water protection programs are being created where the water users contribute to upper watershed restoration and protection in order to support the long-term use of their drinking water supply. Examples include: New York City/Catskill mountains, City of Denver, City of Santa Fe, Portland, Maine/Crooked River watershed
5. **Conservation Marketplace of Minnesota** – Connects and oversees ecosystem market transactions resulting from voluntary restoration actions focused on pollinator habitat, source water protection for nitrogen reduction, multiple buffer functions: <http://www.conservationmarketsofmn.org/>
6. **USDA Office of Environmental Markets** – <http://www.fs.fed.us/ecosystems/services/OEM/index.shtml>
7. **American Farmland Trust** – Helping to develop ecosystem service markets, focused on carbon sequestration and water quality in three regions: Ohio River Basin, Pacific Northwest, Sauk River Watershed – Minnesota; working on federal carbon trading: <http://www.farmland.org/programs/environment/issues/ecosystems-services.asp>
8. **Ducks Unlimited** – helps to lead The Plains CO₂ Reduction Partnership, which covers the Prairie Pothole Region (North Dakota, South Dakota, Iowa, Minnesota, Montana), is a large effort including 80 organizations to develop the science on carbon sequestration in restored wetlands and grasslands, and start buying carbon credits generated: <http://www.ducks.org/conservation/ecoassets/pcor-partnership?poe=wr>
9. **US Geological Survey** – Ecosystem Services Program, Center for Science, Decisions, and Resource Management

Quantification and valuation tools

1. **Counting on the Environment**, Willamette Partnership: <http://willamettepartnership.org/ecosystem-credit-accounting/the-willamette-ecosystem-marketplace>
2. **InVEST**, Natural Capital Project: <http://www.naturalcapitalproject.org/InVEST.html>
3. **Business and Biodiversity Offset Program (BBOP)**: <http://bbop.forest-trends.org/>
4. **Habitat Equivalency Analysis (HEA)**: <http://www.darrp.noaa.gov/economics/pdf/heagenl.pdf>
5. **ARIES**: http://www.uvm.edu/giee/events/aries_workshop/
6. **EcoMetrix**, Parametrix, Inc.: http://www.parametrix.com/cap/nat/_ecosystems_ecometrix.html
7. **Agricultural Policy Environmental Extender (APEX) Model**: <http://www.card.iastate.edu/publications/dbs/pdffiles/09tr49.pdf>