



# Guidelines for Creating Effective Ecosystem Services Incentive Programs and Policy

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The California Roundtable on Agriculture and the Environment (CRAE) is an alliance of agricultural, environmental, regulatory, and social justice leaders seeking to promote an agriculture and food sector that is economically viable, environmentally sound and socially responsible. As members of CRAE, we believe that society should value (monetarily and otherwise) the benefits that farmland contributes to a healthy environment, feeding people, and providing additional social and economic outcomes. We support the cultivation of environmental management and regulatory systems that take a systemic approach rather than focus on single media or narrow outcomes, and that encourage growers and ranchers to effectively steward our natural resources. The principal objective of the CRAE working group on ecosystem services is to foster policy and planning frameworks to incentivize and deliver practices that lead to strong agricultural, environmental, and societal outcomes.

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## These Guidelines are Endorsed by the Following CRAE Member Organizations:

Agricultural Council of California, American Farmland Trust, California Association of Resource Conservation Districts, California Association of Winegrape Growers, California Farm Bureau Federation, California Grape and Tree Fruit League, California Rice Commission, Community Alliance with Family Farmers, Defenders of Wildlife, Environmental Defense Fund, King and Gardiner Farms, Markon Cooperative, California Chapter of The Nature Conservancy, Roots of Change, Sustainable Conservation, San Joaquin Resource Conservation District, Western United Dairymen; and the following individual members: Cornelius Gallagher, Bank of America Merrill Lynch; Robert Gore, Silent Partner Strategies; Richard Rominger.

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Buffers along artichoke fields in Monterey County, CA

Photos courtesy of USDA Natural Resources Conservation Service

## The Opportunity to Build Incentives for Ecosystem Services in California

There is a growing recognition of the role that environmental markets and other incentive mechanisms could play in serving a variety of needs in California. Landowners and the agricultural community are facing increased pressure to demonstrate measurable gains in environmental quality, while at the same time working to replace income lost from cuts in conservation and Williamson Act funding. Conservation groups and the agriculture sector are increasingly seeing opportunities to supply public benefits through incentive-based approaches to environmental restoration, and agencies are seeking ways to spend their limited funding more effectively. Ecosystem services programs can help target conservation investments for more strategic outcomes where financial support for general conservation outcomes is dwindling.

Meaningful efforts to address these needs are being explored through a variety of pilot projects throughout the state, yet a more comprehensive political and economic framework has yet to be established. The emerging field of environmental markets and other mechanisms for valuing and rewarding the provision of environmental services in California would greatly benefit from a unified collaborative framework, a more supportive regulatory and policy environment, and broader market development efforts. The time is ripe for decisive action to raise the visibility of ecosystem services opportunities and to build a more enabling policy environment for ecosystem services programs that address California's unique challenges.



Restored wetland in Yolo County

Seasonal wetlands



## Ecosystem Values and Valuation Mechanisms

A broad range of public benefits, both tangible and intangible, are supplied by farmland and rangeland, as well as specific agricultural conservation activities. These can include, for example, safe, reliable food supplies, protection of endangered species, water quality improvements, climate stabilization, flood attenuation, economic development opportunities, strong rural communities, open space, scenic beauty, and recreational opportunities. Existing mechanisms that offer compensation or incentives to farmers and ranchers for their social and environmental contributions include markets for ecosystem services, voluntary private payments for ecosystem services, government grants and loans, the Williamson Act, conservation easements, mitigation banks, and reduced regulatory costs (see definitions on page 5).

Californians have an opportunity to more appropriately recognize and reward farmers and ranchers for delivering benefits to society. Some valuation mechanisms exist today, but those available can be too difficult for producers to access because of high transaction costs or regulatory barriers. It is desirable that these tools are conceived of and developed in collaboration with agriculturists, environmentalists, government, private entities, and other parties with a stake in the future of American farmland and rangelands. The field of ecosystem services is rapidly evolving and close collaboration of these stakeholders will help to ensure effective outcomes.

# Guidelines for Ecosystem Services Incentive Programs and Policy

The following guidelines are intended to assist in the effective development of new programmatic and policy efforts to build incentives to value and encourage the provision of ecosystem services on farmland and rangeland. These guidelines are preliminary, serving as a first attempt to align a wide range of interests behind a common set of approaches, and we anticipate their evolution as the field develops. As always, CRAE guidelines assume an open and transparent process of implementation.

1. **Eligible Activities:** Ecosystem services may be provided both as co-benefits from agricultural activities and from on-farm activities not directly related to the production of food and fiber.
2. **Reward Levels:** Ecosystem services providers may be compensated for actions that do not necessarily have permanent or long-term impacts, provided that outcomes that garner ecosystem benefits can be demonstrated. Generally speaking, longer periods of service provision and greater ecosystem services benefits should be linked with higher rewards.
3. **Stacking Credits:** Practices generating multiple environmental benefits should not be precluded from qualifying for multiple streams of compensation, sometimes referred to as the stacking of credits.
4. **Minimum Bar:** Ecosystem services programs should reward provision of services that are above and beyond an established baseline or regulation (or meet certain criteria) and provide mechanisms that recognize early adopters.
5. **Value of Transaction:** Ecosystem services must have at least one identified buyer or beneficiary to have value, either monetary or other. Ecosystem service programs should link beneficiaries to producers individually or in pooled or aggregated groups that minimize risk.
6. **Tailored Local Approach:** Different benefits in different locations deserve tailored approaches rather than a one-size-fits-all framework. Connect site-level efforts with landscape- or regional-scale conservation strategies.
7. **Scientific Basis:** Credits should be supported by science to allow quantification with appropriate and current metrics and achieve a balance between accuracy and practicality.
8. **Oversight:** Where appropriate, there should be rules established and overseen by a neutral third party. Monitoring, reporting, and verification systems, as well as a methodology for maintaining an inventory, must be developed as integral components of any ecosystem services program. These systems should strive to ensure environmental outcomes while balancing precision with costs of implementation.
9. **Regulatory Alignment:** Programs must not create additional burden or transaction costs through conflict with other regulatory requirements. Furthermore, relevant regulatory entities should be engaged in developing the program in order to anticipate and overcome barriers upfront.



Northern California rangeland



Tri-colored blackbird in Yolo County



Apple orchard in California

## Avoiding Unintended Consequences: Ecosystem Services Considerations

CRAE selected ecosystem services as a key focus because of the potential of conservation incentives to deliver benefits to both farming operations and the environment. In the course of the CRAE dialogue on ecosystem services, a number of critiques about the emerging field were raised by one or more CRAE member organizations. These are captured here to reflect the concerns of select members of the CRAE community. These stakeholders encourage designers of ecosystem services programs and policy to be mindful of not only the guiding principles forwarded in this document, but of the range of concerns at play as they develop markets, protocols, and other incentive mechanisms.

- 1. Environmental markets:** There is concern that environmental markets may fail in meeting ecosystem services targets. Environmental valuation may not adequately capture the full significance of ecosystem services.
- 2. “Fair trade” in mitigation programs:** Mitigation programs have the potential to be applied in a manner that would lead to the destruction of highly valued ecosystems in exchange for ecosystem services that may or may not have sufficient value to make up for the damaged ecosystem. This risk exists for all varieties of mitigation programs.
- 3. Replacing regulations:** Programs must not be used to undermine existing environmental regulations. A high standard of protection must be ensured.
- 4. Burden of cost:** There is a range of perspectives regarding whether or not entities should be rewarded for avoiding harms or reducing impact. Some stakeholders are uncomfortable with the idea that the burden of reducing pollution would fall on society rather than on the polluter, and believe that approaches that give some players a pass on past failures to do the right thing may be problematic.
- 5. Fairness:** There are challenges of fairness presented by implementing incentives for ecosystem service provision when some entities are already providing these benefits. Should producers be rewarded for existing service provision? Rewarding new adopters only may provide disproportionate business advantages for these entities and inadvertently penalize early adopters.

# Definitions—Ecosystem Services Compensation and Incentive Mechanisms

**Ecosystem services:**<sup>1</sup> In agriculture, ecosystem services are defined as the multiple benefits we gain from farming and ranching including crop and livestock production. In addition to valuable open space and wildlife habitat, the management decisions and conservation practices of farmers and ranchers also enhance environmental quality, provide recreational opportunities and offer social benefits. Examples of important benefits provided by ecosystem services include: provision of wildlife habitats; nutrient cycling; production of food, fiber and fuel; recreation; soil structure, formation and fertility; biodiversity conservation, water cycling, atmospheric gas/climate regulation; pest control, and pollination services.

**Ecosystem services markets:**<sup>2</sup> Ecosystem services markets include the full spectrum of regulatory, quasi-regulatory (cap-and-trade) and voluntary markets, such as wetland mitigation banking, habitat/conservation banking, water quality trading, environmental water transactions and carbon markets.

**Williamson Act:**<sup>3</sup> The California Land Conservation Act of 1965—commonly referred to as the Williamson Act—enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agriculture or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments historically received an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971. However, today most counties have kept the program in place and have absorbed the costs of the program locally. Due to local economic constraints it is unclear how long this will continue in the future, and some counties have already taken steps to eliminate or modify the Williamson Act program at the local level.

**Conservation Easements:**<sup>4</sup> An “agricultural conservation easement” is a less than fee simple interest in land. It includes the right to prevent forever the development or improvement of the land, as specified in Public Resources Code Section 10211 and Civil Code Section 815.1 for any purpose other than agricultural production. The easement is granted by the landowner to the local government or a qualified nonprofit organization that has conservation of agricultural land as one of its primary purposes. The land restricted by the easement remains in private ownership. Aside from the separation of specified development rights, the landowner retains all other rights to the land, including the right to deny public access and to manage the land for agricultural uses.

**Voluntary private payments:**<sup>5</sup> Businesses, nongovernmental organizations, and conservation groups may provide payments to landowners for philanthropic, public relations, or ethical reasons or to protect investments. For example, a developer may pay a forest landowner to maintain an attractive view. An interest group may pay for hunting leases on private land. A bottled water company may protect its water source by paying upstream landowners to implement good management practices.

**Government grants and loans:** Federal, state and local governments allocate public revenues to stimulate or reward land management or conservation activities by individuals or groups that voluntarily produce beneficial environmental outcomes on their land. Funding can occur through direct grants (e.g., California Carl Moyer Air Quality Program), cost-share payments (e.g., NRCS Environmental Quality Incentives Program), ‘rental’ rates (e.g., USDA Conservation Reserve Program), or loans (e.g. FSA Conservation Loans). Specific guidelines and selection criteria exist for each type of program but funds are typically awarded based on an estimate of expected public benefit and rates are usually set to partially, but sometimes fully, compensate the land manager for the cost of implementing management change or for the foregone income when productive land is taken out of use. Accountability for the use of funds is typically based on verification that the proposed action was completed and maintained as planned. Government grant payments are NOT typically based on measurable site-specific performance outcomes but on accomplishing an agreed on land use, practice, or management activity that has an expected benefit based on prior studies.

**Regulatory cost reduction:** Regulatory agencies at the local, state and federal level may create incentives for provision of ecosystem services by (1) offering opportunities to reduce those costs associated with the process of regulation (e.g., reports and monitoring), and (2) shifting the focus of regulatory requirements to measurable environmental outcomes as opposed to prescriptive practice.

<sup>1</sup>California Department of Food and Agriculture, Environmental Farming Act Science Advisory Panel (2012, March). Retrieved September 10, 2012, from <http://www.cdfa.ca.gov/EnvironmentalStewardship/EcosystemServices.html>

<sup>2</sup>Oregon Sustainability Board (2010, December). Senate Bill 513 Ecosystem Services and Markets. Report to the 2011 Oregon Legislative Assembly.

<sup>3</sup>Modified from California Department of Conservation, Division of Land Resource Protection. Williamson Act. Retrieved May 1, 2012, from <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>

<sup>4</sup>California Department of Conservation, Division of Land Resource Protection. Williamson Act Program—Easement Exchanges. Retrieved May 1, 2012, from [http://www.conservation.ca.gov/dlrp/lca/easement\\_exchanges/Pages/index.aspx](http://www.conservation.ca.gov/dlrp/lca/easement_exchanges/Pages/index.aspx)

<sup>5</sup>USDA Forest Service. Valuing Ecosystem Services. [http://www.fs.fed.us/ecosystemservices/About\\_ES/faq.shtml#payments](http://www.fs.fed.us/ecosystemservices/About_ES/faq.shtml#payments)



For more information: <http://aginnovations.org/roundtables/crae/>

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