The farmer as conservationist is key to Audubon California program

Wildlife-friendly hedgerows between crop fields and progressive views of conservation-based agriculture are both taking root in Yolo and Solano Counties, where Audubon California’s Landowner Stewardship Program has partnered with farmers and ranchers on 26 projects in its first five years. In this Central Valley area where agriculture is often intensive and industrial, the program designs and implements a variety of conservation projects, including hedgerows of native plants that provide bird and mammal habitat as well as nectar and pollen for beneficial insects and pollinators.

The program’s projects have won the respect of the local agricultural community, national attention and a reputation for “getting things done.” “Audubon California has seen the light,” says farmer John Stephens. “They ask lots of questions up front to find out what works best for the farmer, and because of this their projects accomplish many things at the same time.”

Working with landowners to restore wildlife habitat and conserve natural resources in a manner compatible with existing agricultural operations, the program’s guiding principle is straightforward: the farmer as conservationist. That view is essential for conservation in Yolo County, which is 90% privately owned and where, as in most of the country, the majority of rare plants and animals occupy private land. Responsibility for protecting these resources typically falls on individual landowners, many of whom struggle to earn all or part of their living from agriculture and lack the time, money or technical expertise to restore and maintain wildlife habitat and natural resources. The Landowner Stewardship Program, together with its extensive network of partners, helps provide funding, labor and technical assistance. At the same time, landowners can shape projects to meet their own goals and keep their land in production. “The strong stewardship values of farmers and ranchers make them valuable project partners,” says Chris Rose, restoration ecologist for the program.

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Audubon California program

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Pursuing increasingly complex multi-year conservation projects, the Landowner Stewardship Program’s six-member staff and Yolo County farmers have built their scientific knowledge and technical skills. They use that expertise to connect wildlife corridors, restore riparian habitat, improve water quality, prevent flooding, control agricultural pests and boost agricultural production.

John Stephens, owner of the 550-acre Oakdale Ranch, originally approached Audubon California with the idea of restoring wildlife habitat on his land. Early on, all parties agreed that improving flood control and water conveyance along the one-mile stretch of Willow Slough where it crosses the ranch was also a priority. Each winter the incised slough flooded fields and a nearby highway and required reshaping with heavy machinery. The maintenance was costly for Stephens, the local water district and the neighboring town of Madison. Thus the project was designed to achieve multiple benefits: improving wildlife habitat and also minimizing harmful flooding. Now, in the project’s second year, Willow Slough’s banks have been sloped back and rise gently above the channel, mimicking a natural floodplain. They have been revegetated with native plants such as purple needlegrass, deer grass, creeping wild rye, meadow barley, rushes, cottonwoods, willows, elderberry bushes, coyote bushes, live oak, valley oak and gray pine.

“The grasses are growing well in the slough and on the lower benches, and Audubon California keeps tweaking the planting mix based on our observation and experience,” says Stephens. “This makes for a better project all around.”

Another Audubon California project encompasses about 7,000 acres on two adjacent properties, Blue Oak Ranch and Bobcat Ranch. Last spring Audubon California and its partners began restoring almost a mile of riparian habitat, building wildlife ponds, vegetating and maintaining existing stock ponds, implementing rotational grazing and conducting controlled burns to restore native perennial grassland and historic wetlands. The wildlife ponds include habitat for the tricolored blackbird (Agelaius tricolor), which is a California Species of Special Concern. As word of the project’s success spreads to neighboring landowners, there’s potential for more projects to restore and connect habitat.

Partners making important contributions to the Landowner Stewardship Program include the Center for Land-Based Learning, Yolo County Resource Conservation District, the USDA’s Natural Resources Conservation Service and the University of California Cooperative Extension. The program also draws upon organizations outside the area, such as San Francisco-based Sustainable Conservation. The two groups are pursuing a Safe Harbor Agreement for the federally threatened Valley elderberry longhorn beetle (Desmocerus californicus dimorphus). When the agreement is final, Audubon California will hold an umbrella Safe Harbor permit, under which any Yolo County landowner who volunteers to create and maintain beetle habitat will in return receive legal assurances that those efforts will not result in increased Endangered Species Act responsibilities.

The Center for Land-Based Learning is an essential collaborator that provides high school students with hands-on learning opportunities in restoration and agriculture through its Student and Landowner Education and Watershed Stewardship program. On project sites, students participate in the...
Conservation Reserve Program at the crossroads: What’s next?

Nesting duck populations in the United States plunged to a 30-year low in the mid-1980s. In the prairie pothole region of the Upper Great Plains, an area dubbed “the nation’s duck factory,” breeding ducks declined along with the isolated wetlands and surrounding grasslands where they breed and find food and shelter. Much of this habitat vanished when high commodity prices encouraged farmers to expand their croplands.

Twenty years later, over 3 million more ducks populate the central flyway of the Great Plains. Their numbers rose after farmers enrolled about 8 million acres—an area roughly the size of Maryland—in the Conservation Reserve Program (CRP). The USDA program offers payments to landowners and producers who volunteer to take highly erodible or environmentally sensitive land out of crop production for a 10- or 15-year term and plant it with grasses or trees.

CRP was launched in 1985, but its roots are in the 1958 Soil Bank Act. Congress enacted that law to combat soil erosion and thus avoid repeating the disastrous 1930s Dust Bowl that robbed the Great Plains of billions of tons of topsoil and blackened skies as far east as Washington, D.C. Over two decades, CRP has evolved into a program that also improves water quality and restores wildlife habitat. It is the nation’s largest federal program for private lands conservation, with an annual budget of roughly $2 billion and a current enrollment of approximately 34.7 million acres, twice the combined acreage of the National Wildlife Refuge system and all state-owned wildlife areas in the lower 48 states.

Unfortunately, the program’s success in the Great Plains hasn’t been replicated elsewhere. Although USDA has focused some CRP enrollments on environmentally sensitive lands and important wildlife areas—such as grasslands where songbird populations are declining—the program can accomplish far more.

Over half the threatened and endangered species in the United States are affected by agriculture, yet significant discrepancies exist between areas needed by these species and CRP acreage. Furthermore, in most of the nation CRP lands are highly scattered, making it more difficult to restore wildlife populations and improve water quality in important watersheds. Many enrolled lands are planted to inappropriate cover types with limited wildlife benefits such as dense pine plantations or fescue grasses. Other CRP plantings fragment surrounding wildlife habitat and, in some cases, include invasive species that spread to nearby wildlands.

The time is right for change. CRP is at a crossroads, with contracts covering more than 28 million acres set to expire in FY2007-FY2010. How those lands are treated, and, in particular, whether they are automatically re-enrolled will have an enormous impact on private lands conservation. Thus conservationists were pleased when USDA opened a public comment period for CRP last fall.

Environmental Defense’s Center for Conservation Incentives and The Nature Conservancy submitted joint comments advising USDA on how to address this massive turnover in CRP acreage. It is vitally important not only to retain the significant benefits for wildlife and other environmental concerns in existing CRP contracts, but also to extend enrollment to other critical lands. The two organizations advocated that USDA increase CRP’s environmental benefits, particularly for wildlife, in several ways:

• Re-enroll the expiring acres with the highest environmental value;

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Where the White Mountains rise above arid eastern Arizona, three miles outside the tiny town of Nutrioso and 15 miles from New Mexico, lies the EC Bar Ranch. And where conservation practices and ranching economics intersect, stands the ranch’s owner, Jim Crosswhite. His goal is not only to restore an impaired creek and degraded pastures, but also to show that water quality and wildlife habitat improvement practices can boost income.

Rural Arizona needs success stories. Statewide, cattle inventory and sales declined between 1992 and 2002, and the drop was steeper in Apache County, where EC Bar Ranch is located. With less public land acreage available for grazing leases, ranchers crowd more cattle onto their own land, trying to eke out a profit. Meanwhile, drought bakes the land year after year and invasive species push out native plants, making water and forage even scarcer for both livestock and wildlife.

In 1996 Jim Crosswhite purchased 275 acres in Nutrioso Valley and named his new ranch for his parents, Eula and Ernest. The former international financier, commodity trader and adventure tour operator who had traveled to 70 countries was now a rancher, focusing on a smaller landscape, but bigger challenges.

Running through his new ranch was a two-mile stretch of Nutrioso Creek, part of seven stream miles that the Arizona Department of Environmental Quality (ADEQ) classified as “impaired” due to turbidity. Most of the stream channel was rated “non-functional.” Because the riparian vegetation had been eaten or trampled during decades of heavy use by livestock, elk and other wildlife desperate for food and water, most riparian wildlife was long gone, including the beavers that gave the creek its Indian name (“nutri”-beaver, “oso”-bear). Accelerated erosion, rising water temperatures and plunging aquatic oxygen levels imperiled its three species of native fish, including the federally threatened Little Colorado River spineyback (Lepidomeda vittata), a rare minnow.

Every year, the 100-year-old earthen irrigation ditches lost up to 100 million gallons of water to seepage and evaporation during the five-month irrigation period.

Upland, the situation was worse. Forage quantity and plant composition declined during more than a century of unrestricted grazing. Invasive rabbitbrush, worthless as forage, dominated the pastures, which could, at best, support only about 50 head of cattle on 200 acres. Migrating elk herds from nearby Apache-Sitgreaves National Forest competed with livestock for scarce forage and water.

To deal with these problems, Crosswhite initiated several separate projects, supplementing his own financial outlay with grants and technical assistance from several state and federal agencies. He juggled projects, but remained focused on one overarching goal: restoring two interrelated components of the landscape, the impaired waters of Nutrioso Creek and the degraded upland pastures.

Eight years and an alphabet soup of agency acronyms later, Crosswhite has changed the landscape. A partial list of his achievements includes:

- With funding from several sources, including the Arizona Fish & Wildlife’s (FWS) Environmental Quality Improvement Grant Program, technical assistance from USDA’s Natural Resources Conservation Service (NRCS) and seed and fertilizer supplied in part by the state Game and Fish Department, Crosswhite controlled and eradicated invasive rabbitbrush and re-seeded upland pastures with native grasses. The more substantial root mass of the grasses further slowed erosion.
- He then re-vegetated the stream corridor by planting native grasses, 100 cottonwoods and 25,000 willows to reduce further the streambank erosion. The sprinkler system helps maintain riparian vegetation and livestock forage.
- With matching funds from USDA’s Environmental Quality Incentives Program, technical assistance from USDA’s Natural Resources Conservation Service (NRCS) and seed and fertilizer supplied in part by the state Game and Fish Department, Crosswhite controlled and eradicated invasive rabbitbrush and re-seeded upland pastures with native grasses. The more substantial root mass of the grasses further slowed erosion.
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- Using cost-share funds from Arizona’s Stewardship Incentive Program, he installed riparian fencing to control livestock grazing at Nutrioso Creek. The fencing allowed continued access to the creek by wild antelope.
- With partial funding from the Arizona Water Protection Fund and advice from Arizona Fish and Game on travel routes of area elk herds, he installed alternative water sources for wildlife and livestock.
- To replace the inefficient, wasteful earthen ditch irrigation system, he installed conveyance pipe, a 250,000-gallon water storage tank, a diesel-powered water pump and a more efficient sprinkler irrigation system. By relying more on groundwater than surface water, he increased in-stream flows.

Jim Crosswhite’s relentless hard work and passion for restoration have not only restored an impaired creek and upland pastures, but also created a beautiful landscape. The above native vegetation, including young willows that he planted, is part of his work.
Some of the benefits include:

- Crosswhite purchased more Nutrioso Creek and buffer areas downstream, bringing a total of three stream miles under his conservation plan.
- In 2003, he entered a Safe Harbor Agreement with FWS to benefit the Little Colorado River spinedace and the endangered southwestern willow flycatcher (*Empidonax traillii extimus*). With several agency grants, Crosswhite is planting thousands of riparian trees and shrubs, as well as native grasses. The Safe Harbor Agreement provides legal assurances that these habitat improvements will not increase his Endangered Species Act responsibilities. Although he has no plans to alter his use of the land, he can return to the 2003 baseline for woody plants if unforeseen circumstances arise.

Conservation has improved Crosswhite’s bottom line in several ways. Some of the benefits include:

- EC Bar Ranch’s forage production in upland pastures has soared from 300 pounds an acre in 1996 to 3,000 pounds in irrigated upland pastures and 5,000 pounds in riparian pastures. Crosswhite uses an NRCS-recommended livestock management plan with rotational grazing of all pastures and dormant season-only use of riparian pastures.
- By following an NRCS-recommended irrigation and nutrient management plan, he saves millions of gallons of water each year, much of which remains in the creek.
- Rapidly growing willow pole cuttings can be sustainably harvested and sold to federal and state agencies for replanting in other riparian areas, the restoration of which Crosswhite sees as inevitable to ensure water quality for humans and protect wildlife.
- Healthier wildlife populations offer other potential income sources, such as eco-tourism aimed at the growing numbers of birdwatchers.

Not all the payoff is economic. Crosswhite recounts a rewarding moment in 2003, when the ADEQ relocated the “reference reach” for Nutrioso Creek—the stream section that the state uses as a model for desirable water quality—to Reach 3 on his ranch. Transforming a hydrologically non-functional stream section into the designated water quality example reaffirmed for Crosswhite the need to restore and protect it for the well-being of both humans and wildlife. Once again, Nutrioso Creek is a perennial stream on the ranch, even in recent drought years when it’s dry upstream and downstream.

Crosswhite says that successful use of grant programs has been key to his achievements. Estimating that he’s worked with 50 agency staff to date, he avows that he’s never met one not “dedicated to their job—helpful, cooperative and supportive.” He says technical assistance was “critical,” and what he learned from NRCS, consultants, contractors and writing grants has been “similar to receiving a Ph.D in conservation practice.”

Crosswhite’s restoration work doesn’t stop at his ranch boundaries. Outreach is one of 14 conservation practices detailed on his extensive web site. He encourages other landowners to use state and federal programs to help conserve natural resources, leads group tours of his ranch, talks extensively with media and participates in a local watershed group.

And Jim Crosswhite isn’t done yet. His response to a life-threatening blood clot Thanksgiving 2003 was to resume work at a harder, faster pace. He’s eying USDA’s new Conservation Security Program, under which he expects to someday qualify for Tier III payments—the highest level—which reward longterm conservation practices. He is working on a conservation easement that will permanently protect Nutrioso Creek from real estate development, as he continues to restore even more riparian areas.

To learn more about Jim Crosswhite’s conservation work, see his web site at www.ecbarranch.com.

-Margaret McMillan
endangered species specialist
Center for Conservation Incentives
Environmental Defense

www.environmentaldefense.org/go/conservationincentives
Conservation Reserve Program

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- Bring in new enrollments that significantly benefit wildlife;
- Manage all CRP acres to maximize wildlife benefits and to control invasive species; and
- Stop inappropriate CRP plantings.

Most landowners enroll in CRP through a competitive general sign-up. USDA ranks applications based on benefits to wildlife, water quality, erosion control, air quality and cost. This process needs to be overhauled to better select enrollments important for wildlife, particularly at-risk species.

CRP enrollments can also be better directed by increasing acreage enrolled in the Conservation Reserve Enhancement Program (CREP) and through the continuous enrollment program. Under CREP, states develop geographically focused programs that address water quality, erosion and wildlife habitat issues of state and national concern. USDA provides 80% of the funding, and a non-federal entity (typically the state) contributes the remainder. States may automatically enroll up to 100,000 acres, thereby avoiding the need for landowners to compete in the general sign-up. Unlike the general sign-up, CREP both encourages landscape-scale conservation efforts and offers the flexibility to address local needs such as wider buffers for wildlife corridors in Minnesota and incentives to create wetlands to improve drinking water quality in Iowa.

Similarly, CRP’s continuous enrollment program offers increased environmental benefits by allowing automatic enrollment of lands that perform important environmental functions, such as riparian buffers, filter strips, floodplain wetlands and bottomland hardwood forest. As with CREP, eligible landowners do not need to compete in the general sign-up. In addition to cost-share and rental payments, landowners can receive enhanced incentive payments for enrolling land and carrying out conservation practices that produce significant environmental benefits. For example, in 2004 the Bush Administration announced a continuous enrollment initiative of 250,000 acres to benefit the declining northern bobwhite quail (Colinus virginianus) and other upland wildlife.

Encouraging appropriate management of CRP lands is also critical. Although CRP has helped restore nearly 200,000 acres of longleaf pine in the southern coastal plain, this ecosystem is fire-dependent and CRP longleaf acres would benefit from periodic prescribed fire. The program can do a better, more consistent job of providing financial and technical assistance to implement such management.

Realizing the enormous potential of CRP depends upon carefully choosing lands to be enrolled, using appropriate cover plantings and improving land management. If USDA refocuses the program as recommended, the success story of ducks in the Great Plains may no longer be the exception but the rule.

- Robert Bonnie, managing director, Center for Conservation Incentives, Environmental Defense

Audubon California

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Conservation Incentives thanks
Susan Kester, Project Manager, Sustainable Conservation in San Francisco, and Vance Russell, Program Manager, Audubon California’s Landowner Stewardship Program, for this article.

The Valley elderberry longhorn beetle is one of Environmental Defense’s Back from the Brink species. Learn more about this rare and colorful beetle at www.backfromthebrink.org.
Late last year, USDA Utah State Conservationist Sylvia Gillen announced that $1.4 million of the state’s FY2005 Environmental Quality Incentives Program (EQIP) funding will be awarded to at-risk species projects. Three other states with similar established programs—North Carolina, Idaho and Montana—are expanding their set-aside scope and funding in FY2005.

The 2003 EQIP final rule established at-risk species as one of the program’s four national priorities. “At-risk” is broadly defined in the rule as “any plant or animal species as determined by the State Technical Committee to need direct intervention to halt its population decline.” Yet conservationists are challenged to ensure that program dollars actually benefit threatened, endangered, sensitive and other species of concern. Budgetary set-asides are proving an effective and increasingly popular way to get funding to landowners helping the species that need it most.

Last year, North Carolina Natural Resources Conservation Service (NRCS) took a lead role nationwide by setting aside up to $200,000 at-risk funding, with the support of conservationists including Environmental Defense and Southern Environmental Law Center. The funding was directed to two declining habitats, Piedmont Prairies and freshwater aquatic systems. The prairies harbor declining plants and birds, and in the state’s freshwater habitat, more than a quarter of the fish species and three-quarters of the mussel species are imperiled.

For FY2005, North Carolina NRCS is expanding both the funding and its potential use: up to $300,000 will be available and can be used to benefit any at-risk species. Applications are evaluated on a “program-neutral” basis; thus at-risk funds may be allocated not only through EQIP, but also other conservation programs, such as the Wildlife Habitat Incentives Program. That program’s Restoration of Declining Habitats practice will now be available for EQIP as well. NRCS added a new component to that practice—forest stand management, which is available only for projects that benefit at-risk species, not for commercial pre-thinning. The practice can be used to restore the open canopy favored by declining Piedmont Prairie plants and birds.

Utah established its new set-aside to better address rare wildlife and to avoid future Endangered Species Act listings. One million dollars is reserved for a request for proposals for partnership work in large-scale habitats, and an additional $400,000 will fund individual projects. Projects may benefit any of over 100 at-risk species, including federally listed, proposed and candidate species, state species of concern and species under state-U.S. Fish and Wildlife Service (FWS) conservation agreements.

Montana and Idaho also have established set-aside funding. This year, Montana reserved $1.4 million for at-risk species, including a third year of funding for farmers affected by conservation work for the endangered pallid sturgeon (Scaphirhynchus albus). When water levels are raised to benefit the sturgeon, irrigation equipment on downstream farms can be submerged. By converting to floating pumps, the farmers ensure that the aquatic habitat will not be contaminated by the irrigation equipment’s fuel tanks. Other Montana set-aside dollars will go for cost-share funding for ranchers participating in a Candidate Conservation Agreement with Assurances under development by FWS for the Arctic grayling and expected to be final later this year. The grayling (Thymallus arcticus) is a candidate for federal listing. For the first year, set-aside funds will benefit the piping plover (Charadrius melodus) in Sheridan County, where the state’s densest population of the federally threatened bird lives, and two fish: the federally threatened bull trout (Salvelinus confluentus) and the Westslope cutthroat trout (Oncorhynchus clarki lewisi), a state species of special concern.

In Idaho, NRCS allocated $1.1 million of its FY2004 EQIP funding for two special projects, air quality and rare wildlife. Eligible projects could benefit any of 27 federally listed, proposed for listing, or candidate species, as well as other sensitive species needing conservation to reduce the likelihood of listing. On short notice, the state dispersed $200,000, and requests exceeded allocated funds. This year, Idaho set aside $1 million for any of...
Funding fix restores conservation dollars for landowners

Shortly after enactment of the 2002 Farm Bill, Environmental Defense began lobbying Congress to resolve a funding problem that has diverted more than $100 million annually from four working lands conservation programs to pay for technical assistance for two other programs. In the waning days of the 108th Congress, Environmental Defense and its conservation and farm group allies finally succeeded. Now, thanks to the dogged efforts of U.S. Representative Frank Lucas of Oklahoma and other lawmakers, technical assistance for the Conservation Reserve Program and the Wetlands Reserve Program will be funded directly from the Commodity Credit Corporation, as the 2002 Farm Bill intended, rather than by other conservation programs.

In the Senate, a bipartisan push led by Senators Thad Cochran of Mississippi, Tom Harkin of Iowa and Patrick Leahy of Vermont helped pass the bill, S. 2856, in October. The House passed the bill in early December, and President Bush signed it into law shortly before the end of the year.

Lucas, who chairs the conservation subcommittee of the House Committee on Agriculture, said that it “was robbing Peter to pay Paul,” to divert monies from the working land programs to pay for technical assistance for the Conservation Reserve Program and the Wetlands Reserve Program. His successful effort in the House means that more farmers and ranchers will be able to enroll in the Environmental Quality Incentives Program, the Farm and Ranchland Protection Program, the Grassland Reserve Program and the Wildlife Habitat Incentives Program. Each year these programs must turn away applicants because funding requests exceed available monies.

Set-aside funds

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46 at-risk species. Farmers and ranchers must work directly with state or federal staff who monitor the species benefiting from the project.

By reserving funds for at-risk species, Utah, North Carolina and other states are bridging the gap between national priorities and state implementation. These models can, and should be, replicated nationwide.

More set-aside information is on these web sites:

Idaho: www.id.nrcs.usda.gov/programs/eqip/eqip_sp_proj_05.html
Montana: www.mt.nrcs.usda.gov/programs/eqip/

-Margaret McMillan endangered species specialist
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