

**COMPENDIUM OF STATE LANDOWNER INCENTIVE PROGRAMS
FOR THE CONSERVATION OF BIOLOGICAL DIVERSITY**

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**for Michael Bean
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INTRODUCTION

Project Goals

Private lands remain at the center of conservation concerns because of their value as vital habitat and because of the alarming rate at which they continue to be developed. Regulatory measures, such as the Endangered Species Act, have improved conditions for endangered wildlife on public lands but have had limited success on private lands. Private landowners, especially individual (non-corporate) landowners with smaller holdings, have generally been reluctant to actively participate in the conservation of endangered species (and wildlife species overall) because the law can impose a heavy financial and bureaucratic burden once the presence of a listed species is discovered (Polasky and Doremus, 1998). Furthermore, private landowners have suffered financial losses from damages caused by wildlife to their ranching and farming operations. In particular, recent incidents involving predator species, such as wolves that have been released on public lands crossing onto private property, have caused resentment amongst private landowners. In fact, it is arguable that little benefit accrues to many private landowners who conserve wildlife on their land. Some of these landowners might be better off opposing habitat conservation altogether and instead developing their land or simply using it for agricultural purposes.

Both increasing criticism of stringent regulatory controls and lessons gained from nearly three decades of Endangered Species Act implementation have driven concerned groups and individuals to seek alternative approaches to further conservation on private lands. One of the more popular strategies is to advocate the implementation of incentive-based mechanisms in place of regulatory measures. Federal and state governments, non-governmental organizations, and others have made concerted efforts to initiate and promote economic incentive programs to encourage conservation of endangered species and overall biodiversity on private properties.

Theoretically, providing incentives to landowners for conservation has both political and economic appeal. How such policies fare on the ground, however, depends on many variables. Greater empirical evidence is necessary in order to refine current thinking on this topic and to identify the kinds of incentive programs that are most effective in achieving conservation improvements. This report seeks to serve as a reference for resource managers, environmental professionals, concerned citizens, and others involved in biodiversity conservation. It provides a

review and analysis of many of the incentive programs that have been initiated at the state level to encourage private landowners to create, enhance, or restore wildlife habitat and to increase biodiversity.

The focus on state level programs in this compendium is based on a number of factors. First, a comprehensive description and analysis of the different statewide programs currently does not exist within one resource. Second, as a testing ground for policy innovations, states are implementing many of the newest and most innovative kinds of incentives being explored today. In addition, because state governments tend to be more attuned to the particular needs of landowners, as well as of the wildlife, in their own states, they tend to design more targeted programs. The result is a diversity of policy approaches. By examining both variations and common trends among state programs, we hope to add to the knowledge base of factors for incentive policy success in biodiversity conservation. Accordingly, we also seek to provide insights on how to improve existing programs and design more effective new programs.

Report Overview

Through a review of available information on the Internet and in published sources and interviews with state agency staff, we have compiled a compendium of state-initiated incentive programs designed to encourage private landowners to manage their land for biodiversity. This report communicates our findings within four main sections:

1. An overview of incentive programs, including a brief background on the history, rationale, context, and criticism of relevant incentive policies;
2. A review of state incentive programs for biodiversity conservation, including a description of the overall program universe and of each state program that we have researched;
3. An overall evaluation of incentive programs incorporating aggregate analysis and interpretation of important trends; and
4. A final section devoted to conclusions from our research, including recommendations for future implementation of incentive-based programs.

OVERVIEW OF INCENTIVE PROGRAMS

A Brief History of the Private Landowner Incentive Approach

The use of economic incentives for conservation on U.S. private lands has its roots in a federal program designed to address another environmental issue that is relevant to biodiversity protection but which originally had a very different focus. In 1956, Congress enacted the Soil Bank Act, aiming to prevent another cropland erosion disaster like that of the Dust Bowl during the 1930s. The Soil Bank program authorized the U.S. Department of Agriculture (USDA) to enter into long-term conservation contracts with farmers to share the cost of converting cropland from production to protective vegetative cover (USDA, 2000).

After several decades in which this original contract program diverted millions of farmland acres from production and was reenacted in the form of similar programs, the focus of USDA's conservation programs began to broaden to address other increasingly troubling environmental problems, such as water quality degradation and habitat destruction. In 1985, Congress enacted the Food Security Act, which authorized the Conservation Reserve Program (CRP), another long-term cropland retirement program that was designed to curb erosion but which also recognized habitat protection as a secondary objective. Subsequent CRP reauthorization through the early 1990s continued to raise the prominence of habitat, water quality, and other environmental goals within the program (USDA, 1997).

Today, as the largest federal program for conservation improvements, CRP has established new wildlife habitat twice the size of the National Wildlife Refuge System and all state-owned wildlife areas in the contiguous U.S. combined (USDA, 2000). The program covers native grasses and other plantings that provide shelter and food for diverse species of wildlife. Several other federal programs that feature land conservation and wildlife habitat goals join CRP. The programs include the Conservation Reserve Enhancement Program (CREP), the Environmental Quality Incentive Program (EQIP), the Wetlands Reserve Program (WRP), the Wildlife Habitat Incentives Program (WHIP), and Partners for Wildlife. These programs partner with state agency counterparts and others to provide cash payments, cost-sharing, and other incentives for the restoration and protection of habitat and for other conservation measures. A good deal of documentation exists on these federal programs, providing another reason for the state program focus of this compendium.

Rationale for Conservation Incentive Policies for Private Lands

The importance of private land as habitat for endangered, threatened, and wildlife species overall is well known. For example, 75 percent of the potential habitat for the endangered red-cockaded woodpecker is now in the private pine forests of the Southeast. In fact, more than half of federally listed endangered species have 80 percent or more of their habitat on private lands (Clark and Downes, 1995). Also, approximately 75 percent of the remaining wetlands in the continental U.S. are privately owned. With regard to state land totals overall, private acreage comprises a significant proportion. For instance, at least 95 percent of Oklahoma, Maine, and Texas is privately owned, as is more than 80 percent of New Hampshire.

Adding to the significance of private land for conservation purposes is a major U.S. trend toward land fragmentation. Economic pressures and inducement from development interests are causing family farmers, ranchers, and other owners of undeveloped acreage to sell portions or the entirety of their land. In addition, global competition and an eye toward increasing shareholder value are pushing large timber companies to divest land holdings at an increasing rate, threatening substantial non-fragmented parcels of forest in areas such as the Northeast. In Maine, for example, approximately one-third of the 15 million-acre North Woods have been put up for sale in the last two years, and almost six million forested acres in the state have changed hands since 1988 (Daley, 2000).

Obstacles to traditional means of land conservation are also driving the demand for private landowner incentive programs. The expense, potential political controversy, and other logistical difficulties associated with buying land (or development rights – i.e., easements) mean that environmental groups and others cannot rely exclusively on putting land aside for the protection of endangered species and biodiversity. Similarly, a continuing low level of both federal and state funding for biodiversity and endangered species programs provides another rationale for encouraging private landowners to take a more active role in conservation. State biodiversity and endangered species programs, for instance, receive a large share – if not the majority – of their funding not from budgetary allocations or through guaranteed funding sources but through tax check-off programs and other voluntary charitable contribution mechanisms.

Advocates of private landowner incentive programs suggest that such programs are a more cost-effective means for accomplishing biodiversity and conservation improvements.

Incentive program advocates also claim additional benefits from the private landowner programs. They consider them to be more proactive and integrated than traditional legal approaches and more politically viable. The programs are thought to improve relationships between stakeholders and conservation officials and enhance environmental awareness on the part of landowners and other involved citizens.

The Current Context of Incentive Programs and the Need for Further Analysis

Policymakers, many environmental groups, the business community, and others in the U.S. and worldwide increasingly advocate economic incentive policy approaches to address environmental issues. With regard to biodiversity conservation policy, the trend includes proposals to reform the Endangered Species Act in order to incorporate economic incentives or compensation approaches for private landowners. Agreement about the use of such incentive approaches is far from universal, however.

For instance, many stakeholders object on philosophical grounds to paying landowners for environmentally sound practices, especially those which may benefit the landowners' own interests (e.g., financial benefits from erosion prevention, wildlife habitat practices providing hunting lease opportunities for owners). Others take issue with the practicality of the approach, questioning government's ability to provide incentives that can truly compete with the market forces that affect landowner decisions. Still others are concerned with the legal precedent programs may create by compensating landowners for environmentally sound management practices.

Moreover, few aggregate data exist on the success of state conservation economic incentive policies. Lack of government funding for program evaluation, the nature of the programs (e.g., their newness), and inherent difficulties in measuring progress toward biodiversity conservation have all posed obstacles in judging the shortcomings and benefits of the incentive programs thus far. It is our hope that this compendium will help fill this information gap.

REVIEW OF STATE CONSERVATION INCENTIVE PROGRAMS

Description of Program Universe Covered

In constructing the universe of state programs to be covered by the compendium, we set out to cover as wide a range of relevant programs as possible. We used a broad definition of “biodiversity” in selecting the programs, including both those focused on a single species and those aimed at wildlife conservation overall. We also chose some water quality programs that included habitat protection as an objective.¹ We limited the universe of programs using the following criteria:

- No one-time expenditures (i.e., one-time legislative allocations for an isolated conservation effort);
- No programs only in the planning stages;
- No multi-state partnerships (e.g., Lesser Prairie Chicken Interstate Working Group);
- No programs with a federal role in implementation except where a unique state add-on effort exists;
- No conservation easements or wetland banking programs; and
- No wildlife damage control programs.

We omitted conservation easement and wetland banking programs because more is known about these established approaches and because the purpose of the compendium is to focus on programs in which landowners maintain all management control on the particular land in question.² Programs where compensation for wildlife damage is the sole focal point are not included because we wanted to concentrate on programs that cultivate a positive relationship between landowners and wildlife and that emphasize habitat improvements.

The final criterion used in selecting the programs concerns the type of incentive given to landowners. We decided to limit the compendium to only those programs with a fairly direct economic impact because of their obvious appeal to landowners. While there may be cases in which technical assistance or publicity for conservation measures provides economic benefit, we

¹ Water quality measures relevant to habitat improvement include vegetating streambanks and reducing sediment and nutrient pollution in water bodies.

² Under wetland banking, the landowner is paid to set aside land from active management for agriculture or other purposes. Under the conservation easement approach, the landowner sells the right to develop or otherwise

chose not to cover those programs for which technical assistance or publicity formed the main type of incentives. The economic incentives featured can be classified into several main categories: grants or direct payments, tax benefits -- including tax credits and reductions, cost-sharing for habitat improvements, and hunting-related benefits, such as the right to sell additional fee licenses.

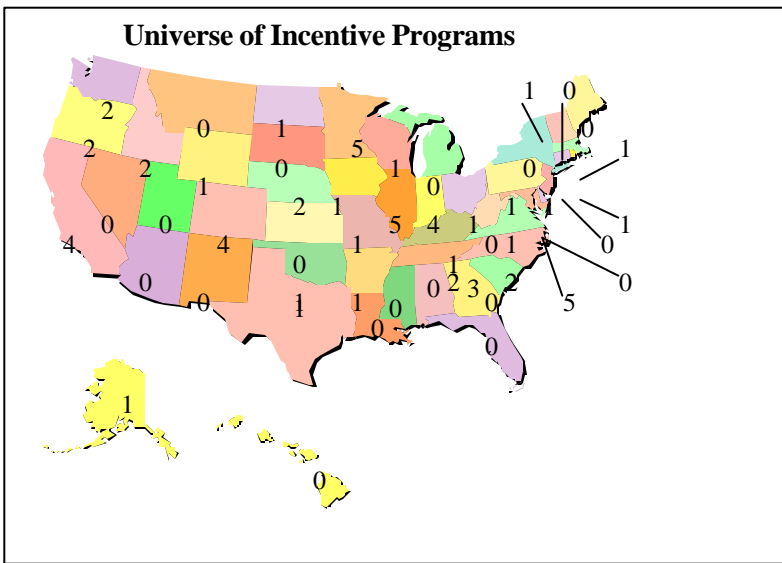
The habitat improvement measures qualifying for incentives under the state programs can also be broken down into several main types. These types include the following:

- Forest/habitat management plans
- Creation of buffer zones around water bodies
- Streambank fencing
- Other erosion control infrastructure
- Creation of wildlife clearings
- Enhancement of woodland edges and field border habitat
- Supplying of shelter or food and water sources.

Under a large share of programs, most if not all of these practices qualify for the featured economic incentives.

Sixty state programs met the criteria for inclusion in the compendium. The geographic distribution of the programs is shown in the map below. The number 60 corresponds to the number of state programs that we were able to find through our research but may not represent an exhaustive listing of all relevant programs for two reasons. First, we discovered that programs often receive little publicity, sometimes even within the state agencies that sponsor them. Second, many programs stop operations and start up again intermittently depending on available funding. For these reasons, it is fairly likely that we missed some relevant programs. In addition, we have intentionally not included all relevant tax benefit programs. Nearly all states have some tax code that is applicable, and the programs generated tend to be relatively uniform and less innovative or far reaching with regard to conservation. Therefore, we emphasized those tax benefit programs that stand out with regard to conservation goals or practices or that represent one of the more significant economic incentive programs within a given state.

significantly alter the land in question. Some of the programs we covered included conservation easements as part of a suite of incentives, though we did not focus on the easement component.



Description of Methods

In researching the state programs, we relied on primary research supplemented by secondary sources where available. Overall, we found that not a great deal of written material – on the Internet or otherwise – exists on the programs, either from the sponsoring agencies themselves or from other sources. As a result, almost all of the information we gathered came through phone interviews with relevant state agencies. For each state, we contacted the following types of agencies in search of relevant programs:

- Department of Environmental Protection/Quality
- Bureau of Natural Resources
- Department of Agriculture
- Forest Service
- Fish, Game, and Wildlife Commission.

In the following section, we summarize the results of our research through use of a standard profile for each state program. The profiles are presented in alphabetical order by state and consist of the following information:

- Title of Program
- Implementing Agency (ies)
- Goals/Focus of the Program

- Incentive Categories
- Program Status – *e.g., operational since what year*
- Legislative Basis
- Eligibility Requirements
- Program Operational Structure and Characteristics
- Number of Participants – *if available*
- Resources Impacted by the Program – *if available*
- Other Measures of Program Success – *if available*
- Challenges Encountered
- Characteristics of Incentives – *if available*
- Staff Resources – *if available*
- Program Operational Costs – *if available*
- Miscellaneous Information
- Sources for Additional Information – *if available*
- Contact Information.

As indicated within the list of profile components, not all information is available for each program. In fact, one general finding from our research is that there is an overall lack of financial and results-oriented data. In addition, variability in available information means that data are often presented in different formats, making direct comparisons more difficult. For example, for some programs we are able to provide the number of full-time employees (or full-time employee equivalents if the work is spread amongst multiple personnel) administering the efforts, while for others, we are only able to report the number of personnel who contribute some amount of time to the program.

PROFILES OF STATE CONSERVATION INCENTIVE PROGRAMS

Alaska Kenai River 50/50 Cost Share Program

Key Implementing Agency(ies): Alaska Department of Fish and Game (DF&G)

Goals/Focus of the Program: To create, enhance, and restore riparian habitat for fish, especially Chinook salmon

Incentive Category(ies): Cost Share

Program Status: Operational since 1996; 2001 is last year of program (funds depleted)

Legislative Basis: None

Eligibility Requirements: Open to all landowners with riverfront property

Program Operational Structure and Characteristics: Landowners fill out an application. Landowners who receive approval work with DF&G to develop protection and rehabilitation projects. DF&G provides permits and usually recommends contractors for construction projects. After final inspection, US Fish and Wildlife administers reimbursement of funds to landowners through the Partners for Wildlife grant program. No monitoring is stipulated in the program procedures.

Number of Participants: 146

Resources Impacted by Program: 25,000 feet of riverbank have been protected or restored.

Other Measures of Program Success: Program considered successful by agency due to increasing public participation in the program each year and degree of satisfaction from participants. Other indicators of success are good personal relationships established between agency staff and landowners, and good “word of mouth” within the sport fishing community.

Challenges Encountered by Program: Distrust of government by landowners in the state; rent-seeking behavior of landowners (those who want the state to pay for more than what is required for good fish habitat); lack of funding (staff often worked overtime without pay).

Characteristics of Incentives: \$1.7 million spent on projects total

Staff Resources: 1 full-time staff member administers the program.

Program Operational Costs: N/A

Miscellaneous Information: Funding comes from state, federal, and non-governmental organization grants.

Source for Additional Information: Hughes, Dean. 2000. *Kenai River Rehabilitation and Program: Final Report*. Alaska Department of Fish and Game.

Contact Information:

Dean Hughes
Alaska Department of Fish and Game
Habitat and Restoration Division
222 Raspberry Road
Anchorage, AK 99518

Arkansas Wildlife Habitat Enhancement Program (AWHEP)

Key Implementing Agency(ies): Arkansas Game and Fish Commission (AGFC) with the Arkansas Association of Conservation Districts, the U.S. Natural Resources Conservation Service, the Farm Service Agency, the Arkansas Chapter of the National Wild Turkey Federation, and Ducks Unlimited

Goals/Focus of the Program: To build on the federal Wildlife Habitat Incentive Program (WHIP) to provide greater incentives for landowners to create, restore, and protect fish and wildlife habitat on their private properties

Incentive Category(ies): Cost Share

Program Status: Operational since 1998

Legislative Basis: N/A

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: Private and public partners work together to administer the program. AGFC reviews project applications and completes inspections of project sites. Ducks Unlimited and the Arkansas Chapter of the National Wild Turkey Federation assist with technical assistance and promotional activities. Participants must enter into 10-year contracts for habitat improvements.

Number of Participants: Approximately 250 applicants accepted from 1998 to 2001

Resources Impacted by Program: Partial analysis of started/completed projects shows: restoration of native grasses on more than 260 acres of former prairie land; restoration or protection of more than 2 miles of streambanks; restoration of more than 3 miles of riparian forest buffers; planting of approximately 1,230 acres of hardwood trees; winter water (waterfowl habitat) is to be provided on more than 6,000 acres of harvested croplands; enhancement and maintenance of more than 1,100 acres of wetland habitat; creation of more than 640 forest wildlife openings; creation of over 40 wildlife watering holes; enhancement and maintenance of more than 2,000 acres of timber for wildlife management; and enhancement of more than 18 miles of woodland edges and field borders for management of early successional wildlife.

Other Measures of Program Success: As a result of the AWHEP piggybacking, Arkansas received the third-highest WHIP allocation, which is based in part on the level of non-federal resources committed, for 1998. The fencing or gating of several caves has produced immediate habitat improvements for populations of threatened and endangered bats. Some projects have incorporated education, directly involving school children and others in the habitat enhancement work.

Challenges Encountered: Not enough funds to meet landowner demand and securing a consistent level of funding are challenges.

Characteristics of Incentives: No-cost incentives for habitat improvements enabled by the additional 25% cost-share on top of the federal 75% cost-share provided under WHIP. The approximate value of projects (incorporating both WHIP and AWHEP contributions) from those approved 1999 to 2001: \$402,000.

Staff Resources: Approximately 3.5 full-time employee equivalents administer the program.

Program Operational Costs: Approximately \$742,000 from 1998 to 2001 (including the value of matching funds and in-kind contributions).

Miscellaneous Information: AWHEP has focused on 6 fish and wildlife priority areas – riparian corridors, wetlands, prairies, early successional plant communities, native upland communities, and cave ecosystems.

Contact Information:

David Long
Agricultural Liaison to AGFC, Wildlife Management Division
#2 Natural Resources Drive
Little Rock, AR 72205
(870) 932-6888
dlong@agfc.state.ar.us

California Timber Tax Credit

Key Implementing Agency(ies): California Department of Fish and Game

Goals/Focus of the Program: To protect salmon and steelhead habitat through management practices

Incentive Category(ies): Tax Credit

Program Status: Operational 1996-1999 (not extended by legislature post-1999)

Legislative Basis: None

Eligibility Requirements: Open to all private landowners with timber on property

Program Operational Structure and Characteristics: Approved applicants received 10% tax credit for their labor and material up to \$50,000 per project. Participants were required to manage property and timber to reduce erosion and runoff in the upper part of drainage (e.g., upgrading roads) and to improve in-stream services, such as fish habitat, by increasing woody debris.

Number of Participants: 64

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Amount of tax credit provided too small to create great interest among small landowners. Mostly taken advantage of by big timber companies who received the majority of the money because their projects were more costly. Program was given \$500,000 a year but very little of it was used.

Characteristics of Incentives: \$542,178 paid in tax credits

Staff Resources: 1 full-time staff member administered the program.

Program Operational Costs: N/A

Miscellaneous Information: Funding came from general state funds allocation.

Contact Information:

Mark Zuspan
California Department of Fish and Game
Land and Facilities Branch
1419 9th Street, Room 1280
Sacramento, CA 95814

California Land Conservation Act

Key Implementing Agency(ies): California Department of Conservation, California Tax Assessors' Offices, California County Planning Departments

Goals/Focus of the Program: To protect agricultural resources and open space and promote efficient urban growth

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1965

Legislative Basis: CA Government Code Section 51200-51297.4; CA Open Space Subvention Act allocates state funding to local governments to cover lost tax revenues

Eligibility Requirements: Private land within locally designated agricultural preserve areas is eligible for enrollment.

Program Operational Structure and Characteristics: Landowners apply to county planning department or tax assessor's office. Once the application is approved, the land is assessed at the agricultural use value or Prop 13 value (reduced property tax value). The contract is for 10 years during which the landowner cannot develop the land. Penalty for early withdraw is 12% of the fair market price of the property.

Number of Participants: N/A

Resources Impacted by Program: 15,703,408 acres enrolled

Other Measures of Program Success: N/A

Challenges Encountered: Difficulty in preventing landowners from developing their land. Many see the program as a windfall opportunity where they can take advantage of the tax break and still develop their land.

Characteristics of Incentives: \$35 million in tax incentives annually

Staff Resources: 6 full-time employee equivalents at the Department of Conservation, supported by 52 county tax assessors

Program Operational Costs: N/A

Source for Additional Information: http://www.consrv.ca.gov/DLRP/lca/stats_reports/

Contact Information:

Denny O'Bryant
California Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

California Waterfowl Habitat Program (the Presley Program)

Key Implementing Agency(ies): California Department of Fish and Game (DF&G)

Goals/Focus of the Program: To protect waterfowl and their wetland habitats

Incentive Category(ies): Direct Payment

Program Status: Operational since 1992

Legislative Basis: California Waterfowl Habitat Preservation Act (Fish and Game Code 3460-3467)

Eligibility Requirements: Open to all landowners with suitable habitat on their property

Program Operational Structure and Characteristics: Landowners sign up for enrollment. Upon enrollment, DF&G staff write up a geographically generic management plan — a “framework” plan. Within the limits of the plan, the state can establish enforceable requirements for as much removal of exotic vegetation and irrigation of wetland and brood water (i.e., habitat for rearing young birds) as necessary to create ideal mix of habitats. DF&G staff monitor wetland conditions each spring and prescribe specific habitat management actions within the management plan. Landowners must implement all required items to receive payments. Contracts are for 10 years.

Number of Participants: 45

Resources Impacted by Program: 11,737 acres under contract

Other Measures of Program Success: Staff reports that program is very popular with landowners as there is tremendous competition for program enrollment. Also, no one has withdrawn from the program once they have signed up. Close relationships are developed between agency staff and landowners through annual consultations and the availability of staff for help and advice.

Challenges Encountered: Not enough money every year to meet landowner demand

Characteristics of Incentives: \$234,740 paid a year to participants (\$20/acre for 11,373 acres now under contract).

Staff Resources: 4 full-time employee equivalents

Program Operational Costs: N/A

Miscellaneous Information: Dedicated state funding exists for the program. The first appropriation for this bill is secured in an interest-bearing account. Those who enrolled in the first wave of signups are in the program permanently, since they are being paid by the interest and the principle is not touched.

The program usually does not cover all of the cost of implementing the management plans. One estimate of the total cost borne by participating landowners is \$70/acre.

Source for Additional Information: <http://ceres.ca.gov/cert/grants/waterf.html>

Contact Information:

Richard Shinn
Department of Fish and Game
Land and Facilities Branch
1419 9th Street, Room 1280
Sacramento, CA 95814

California Private Land Management Program

Key Implementing Agency(ies): California Department of Fish and Game (DF&G)

Goals/Focus of the Program: To protect and improve wildlife habitat with a focus on mule deer, elk, pronghorn antelope, wild pig, wild turkey, and quail

Incentive Category(ies): Hunting Privileges: Fee Licenses

Program Status: Operational since 1979

Legislative Basis: None

Eligibility Requirements: Open to all landowners

Program Operational Structure and Characteristics: Initial consultation with department field biologist is held to determine whether property and individual's goals are suited to the program. Once an agreement is reached between landowner and DF&G, landowner submits management plan, application, and application fee. Department determines harvest levels. Complete application is submitted to Fish and Game Commission for review. Accepted applications are issued appropriate hunting tags and seals (paid for by landowner) for upcoming hunting season. Private land management areas are licensed for five years, but licenses are subject to annual review and renewal process. Verification of habitat improvements is scheduled prior to renewal. Licensee must provide department with accurate accounting of all hunting tags and seals issued and management activities conducted during the year. Licensee must post boundaries.

Number of Participants: 64 (as of 1999)

Resources Impacted by Program: 834,620 acres of habitat affected by program. Increased deer populations have been observed.

Other Measures of Program Success: N/A

Challenges Encountered by Program: Public opposition to the fees charged by the licensees for hunting, the legitimacy of the Fish and Game Commission to authorize seasons, and limits which may differ from general public hunting seasons. There is also a misconception that public land may be leased and incorporated into the program, as well as low public awareness of the program due to poor publicity and advertising.

Characteristics of Incentives: From \$600 for a doe to \$2,500 for a premium buck. Depends on market price.

Staff Resources: 1 coordinator at headquarters; staff is also available at 5 regional offices

Program Operational Costs: N/A

Miscellaneous Information: Program is self-sustaining. Operating costs covered by program application fees and sale of hunting tags and seals.

Source for Additional Information: Mansfield, Terry, Kenneth Mayer, and Richard Callas. 1989. California private lands wildlife management area program. *Transactions of the Western Section of the Wildlife Society* 25: 45-48

Contact Information:

Alison J Torres
Department of Fish and Game
Wildlife Programs Branch
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Sacramento, CA 95814

Colorado Pheasant Habitat Improvement Program

Key Implementing Agency(ies): Colorado Division of Wildlife (DOW) and implementing partners, Pheasants Forever and Quail Unlimited

Goals/Focus of the Program: To increase pheasant populations

Incentive Category(ies): Cost Share

Program Status: Operational since 1992

Legislative Basis: None

Eligibility Requirements: Open to Pheasants Forever and Quail Unlimited chapters and the landowners they sponsor

Program Operational Structure and Characteristics: Agreements are entered between DOW and Pheasants Forever chapters. The chapters contact landowners and make arrangements to prepare sites for planting. Either chapter volunteers do the planting or it is contracted out (subcontractors include Future Farmers of America, Young Farmers, Boy Scouts, etc.). Each chapter receives some money in advance to purchase seedlings, weed barriers, and other materials, but bulk of reimbursements comes after the habitat has been measured and inspected by division field personnel. The cost share covers costs of planting and a small payment for labor. If chapters use volunteer labor, then they can use the extra money for equipment that can make future planting easier.

Number of Participants: 11 Pheasants Forever chapters, 1 Quail Unlimited chapter, over 800 landowners

Resources Impacted by Program: Planting of 1,154 shrub thickets, 1,504 acres of switchgrass, 222,511 feet of field windbreaks, 94,025 feet of two row shrub thickets, 23,692 acres of pheasant grass mix, and 8,133 acres of food/disturbance tillage plots.

Other Measures of Program Success: Annual growth in number of participating chapters and acres impacted

Challenges Encountered: Because the program is dependent on volunteer labor, the quality of habitat is not always ensured. Participants often concentrate on planting plum thickets and windbreaks where the chapters can use volunteer labor while accepting labor payments from the agency. While thickets and windbreaks are critical, more food plots and switchgrass plantings are needed. Program funding shortages are also encountered.

Characteristics of Incentives: \$350,000 annually

Staff Resources: 13 staff members work part-time on this program

Program Operational Costs: \$32,000 in operating expenses, not including administrative costs

Miscellaneous Information: Program is self-sustaining. Program application fees and sale of hunting tags and seals cover operating costs.

Contact Information:

Thomas Remington
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Colorado Habitat Partnership Program

Key Implementing Agency(ies): Colorado Division of Wildlife, Colorado Wildlife Commission

Goals/Focus of the Program: To ensure protection of big game animals (elk, deer, antelope, and moose) and resolve livestock/big game conflicts for forage and habitat

Incentive Category(ies): Cost Share, Direct Payment, Hunting Privileges: Off-Season Hunts

Program Status: Operational since 1990

Legislative Basis: CRS 33-1-110 and CRS 33-1-112

Eligibility Requirements: Program is open to anyone who has conflicts with big game on the land, whether it is private land or public land concessions

Program Operational Structure and Characteristics: A 7-member statewide council oversees the program, which is administered by local Habitat Partner Committees, made up of 3 members from the livestock community, 1 big game hunting public representative, 1 member from each land use agencies involved, and 1 member from the Division of Wildlife. The committees resolve conflicts, and management action is determined on a case-specific basis. The committees formulate a Big Game Distribution Management Plan (DMP) and Habitat Evaluation Plan and implement them in conjunction with the Division of Wildlife's Data Analysis Unit Plans that set big game population objectives. Strategies are used by the committees to meet the DMP's objectives and may include distribution management hunts allowed outside of regular season hunting; investment in range resources, such as artificial seeding of desirable forage plants; fertilization; weed control; brush manipulation; silvicultural treatments, etc.; building fences, gates, or permanent stockyard projects; and direct payments to landowners. The committees are responsible for monitoring their projects.

Number of Participants: Currently 17 committees covering about one-third of Colorado. Number of landowners unknown.

Resources Impacted by Program: Private lands: 119,378 acres have undergone habitat enhancement. Public lands: 193,424 acres have undergone habitat enhancement.

Other Measures of Program Success: A recent survey demonstrates that the committee members are satisfied with the ability of program to meet its goals. Program is expanding beyond resolution of conflicts to management of habitat at a landscape, ecosystem level.

Challenges Encountered: Lack of funding; DOW's Data Analysis Unit Plans do not always address private land issues and are not always on schedule, thus hindering the committee from creating DMPs

Characteristics of Incentives: Approximately \$10 million dollars spent on program since 1990

Staff Resources: Approximately 140 employees, both part-time and full, dedicate time to the program.

Program Operational Costs: N/A

Miscellaneous Information: Dedicated state funding exists for the program. 5% of the sale of big game licenses and matching funds from the federal and state government go toward program.

Sources for Additional Information: Colorado Division of Wildlife. *Habitat Partnership Program: Ten Year Analysis*. 2000. Available at <http://wildlife.state.co.us/HPP/HPPsec3.asp>

Contact Information:

Steve Porter
Colorado Division of Wildlife
Department of Natural Resources
317 West Prospect
Fort Collins, CO 80526

Colorado Ranching for Wildlife Program

Key Implementing Agency(ies): Colorado Division of Wildlife

Goals/Focus of the Program: To improve habitat conditions for game such as deer, elk, antelope, bear, and turkey

Incentive Category(ies): Hunting Privileges: Fee Licenses

Program Status: Operational since 1985

Legislative Basis: None

Eligibility Requirements: Open to private landowners with 12,000 contiguous acres with a significant number of species that they wish to manage for hunting

Program Operational Structure and Characteristics: Qualified landowners must create and apply management plans. Once enrolled, the landowner must write an annual performance report on harvest, hunt management issues, and habitat management efforts in the preceding year. The landowner must allow 10% of the hunts to be public access, while the remaining 90% can be sold at market price. The agency determines how many licenses a ranch receives each year. The standard contract is for 8 years, but all participants begin with an initial contract of 3 years to determine if landowner can meet standards. Halfway through the contract, the agency sends a review team to inspect property and conduct surveys of hunters.

Number of Participants: 27 ranches

Resources Impacted by Program: 1.1 million acres

Other Measures of Program Success: N/A

Challenges: Lack of political and public support due to the small percentage of licenses allotted for public hunts

Characteristics of Incentives: Landowners can charge \$5,000-\$6,000 for a bull.

Staff Resources: 1 full-time staff member and 4 others who join the project during inspection time

Program Operational Costs: \$110,000 annually

Miscellaneous Information: General state funds allocation supplies the funding. Although the project has a specific game focus, it does promote enhancing habitat for non-game, rare, and endangered species. About half of the participating ranches are corporate-owned.

Source for Additional Information: <http://wildlife.state.co.us/ranching/ranching.asp>

Contact Information:

Jerry A. Apker

Ranching for Wildlife Coordinator

10722 South Road 1 East

Monte Vista, CO 81144

Colorado Wetlands Initiative

Key Implementing Agency(ies): Colorado Division of Wildlife (DOW)

Goals/Focus of the Program: To create, enhance, and restore wetlands

Incentive Category(ies): Cost Share

Program Status: Operational since 1997

Legislative Basis: None

Eligibility Requirements: Open to all public agencies, non-governmental organizations, and private landowners

Program Operational Structure and Characteristics: A Focus Area Committee consisting of different interests, including agriculture, hunting, water, waterfowl protection, etc., must submit proposal to DOW. Once proposal is accepted, the DOW fosters it to completion. Program-wide, landowners often contribute cash and usually contribute labor or materials. Project costs are handled on a reimbursement basis such that the landowner constructs the project and receives payment following a successful inspection. The landowner is paid only for actual costs backed by invoices. Agreements are for no less than 10 years with efforts made to get 15 to 20-year commitments. The landowner is responsible for project maintenance.

Number of Participants: 3 projects on individually owned private property, 18 projects total

Resources Impacted by Program: Total of 99,255 acres of wetlands and uplands have been protected.

Other Measures of Program Success: Number of wetland acres protected exceeded projected goal.

Challenges Encountered by Program: Lack of funding

Characteristics of Incentives: \$17,395,300 spent so far

Staff Resources: N/A

Program Operational Costs: N/A

Source for Additional Information: <http://wildlife.state.co.us/habitat/wetlands/default.asp>

Contact Information:

Alex Chappell

Colorado Division of Wildlife

West Regional Service Center

711 Independent Avenue

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Georgia Reforestation to Enhance Environmental Needs

Key Implementing Agency(ies): Georgia Forestry Commission with the support of the Georgia Power Company

Goals/Focus of the Program: To encourage reforestation and carbon sequestration

Incentive Category(ies): Cost Share

Program Status: Operational 1996-2000

Legislative Basis: None

Eligibility Requirements: Anyone who owns at least 10 acres of productive row crop or pasture land is eligible.

Program Operational Structure and Characteristics: Landowners apply during a 30-day period and approved landowners create management plan with Division of Forestry. Management practices include weed control, controlled burning, and planting of mostly loblolly pine. Cost shares are 50%, up to \$40 per acre with a maximum of 50 acres allowed. The landowner must maintain trees for 10 years after which they can cut them. The landowner must notify the power company when they decide to cut the trees.

Number of Participants: 636

Resources Impacted by Program: 20,095.64 acres planted

Other Measures of Program Success: N/A

Challenges Encountered: Pine habitat is not most productive in terms of biodiversity.

Characteristics of Incentives: \$1,161,353.35 paid in cost share thus far

Staff Resources: 44 foresters throughout the state give time to the program.

Program Operational Costs: \$30,000 per year

Miscellaneous Information: The Georgia Power Company supplies funds for the program.

Source for Additional Information:

<http://www.gohuntgeorgia.com/content/displaycontent.asp?txtDocument=128&txtPage=4>

Contact Information:

Steve Chapman

Georgia Forestry Commission

5645 Riggins Mill Road

Dry Branch, GA 31020

Georgia Current Use Valuation of Conservation Use Properties

Key Implementing Agency(ies): Georgia County Tax Assessors, Georgia Department of Natural Resources, Georgia Geologic Survey

Goals/Focus of the Program: To preserve open space, agricultural land, forests, and wildlife habitat

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1992

Legislative Basis: O.C.G.A. 48-5-2

Eligibility Requirements: Open to landowners with agricultural, forested, or environmentally sensitive properties
Program Operational Structure and Characteristics: Land is assessed for the value of current use under three categories: agriculture, forestry, and environmentally sensitive lands. For agriculture and forestry, the requirements are few, and landowners only need to have the county tax assessors evaluate their land according to productivity of the land. For the environmentally sensitive land, the process includes having property surveyed by a registered surveyor and inspected by Department of Natural Resources and Georgia Geologic Survey. Contract with tax assessor is for 10 years and up to 2,000 acres.

Number of Participants: 60,000

Resources Impacted by Program: 4.5 million acres

Other Measures of Program Success: N/A

Challenges Encountered: The environmentally sensitive land classification is too cumbersome for landowners, and there are currently only 7 properties classified as such. The program only includes federally listed species and not state listed. The tax assessors have great flexibility in terms of promoting the program. Some counties have many parcels in the program, while other have none.

Characteristics of Incentives: From 1992-1999, the program produced \$212 million in tax savings.

Staff Resources: 159 county tax assessors dedicate time to the program.

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation supplies the funding for the program.

Sources for Additional Information: <http://www.forestry.uga.edu/warnell/cfb/html/tax/html/valuation.html>
Property Tax Incentives for the Georgia Landowner, available at
http://www.forestry.uga.edu/warnell/pdf/cfb/CU_TT.pdf.

Contact Information:

Eric van der Genacht

Georgia Department of Natural Resources

Georgia Natural Heritage Program

2117 US Hwy 278, SE

Social Circle, GA 30025

Georgia Preferential Assessment for Agricultural and Forestry Property

Key Implementing Agency(ies): Georgia County Tax Assessors

Goals/Focus of the Program: To provide assistance to small family farmers and tree growers who plan to use their land for agricultural or forestry purposes in the long term

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1983

Legislative Basis: O.C.G.A. 48-5-7.1

Eligibility Requirements: Open to landowners with agricultural or forested lands. For agricultural lands, landowner must receive 80% of income from agriculture (which includes horticultural, floricultural, livestock, forestry, dairy, poultry, beekeeping, and all other forms of farm products).

Program Operational Structure and Characteristics: Landowners apply to county tax assessor and if approved land is valued at 75% of fair market value. Contracts are for 10 years and up to 2,000 acres. If the contract is broken, the landowner will pay penalties, determined by the year the land use changed.

Number of Participants: 23,000

Resources Impacted by Program: 3,300,000 acres

Other Measures of Program Success: N/A

Challenges Encountered: Increased tax values corresponding to certain land's higher development potential has effectively reduced the intended tax benefit for many landowners qualifying for the reduced property assessment. The general assembly has attempted to remedy this problem by introducing the current use valuation for conservation use.

Characteristics of Incentives: From 1983-1998, the program produced \$4.7 million in tax savings.

Staff Resources: N/A

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation supplies funding for the program.

Source for Additional Information: Property Tax Incentives for the Georgia Landowner, available at http://www.forestry.uga.edu/warnell/pdf/cfb/CU_TT.pdf.

Contact Information:

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Atlanta, GA 30334

Idaho Natural Resource Income Tax Credit

Key Implementing Agency(ies): Idaho Soil Conservation Commission, Idaho Department of Land, Idaho Department of Environmental Protection

Goals/Focus of the Program: To increase overall conservation efforts on private land

Incentive Category(ies): Tax Credit

Program Status: Operational since 1998

Legislative Basis: Idaho Code S63-112A

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: Landowners apply. Conservation plan is created by appropriate government agency and carried out by landowner. After staff inspection, the landowner is approved for a 50% tax deduction of costs up to \$2,000 for work that year. The final amount landowners receive depends upon their income tax returns, so that they may not get all the money that is approved by resource agencies.

Number of Participants: 50

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Lack of awareness about program among landowners. \$2,000 is a small amount to deduct. Also, participating farmers have to make enough to report income tax, and a lot of farmers do not make enough money to take advantage of the program.

Characteristics of Incentives: Program has approved approximately \$90,000 in tax credits (estimate for how much actually paid to landowners unknown).

Staff Resources: N/A

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation supplies the funding for the program.

Contact Information:

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Idaho Habitat Improvement Program

Key Implementing Agency(ies): Idaho Department of Fish and Game (DFG)

Goals/Focus of the Program: To create and maintain habitat for upland game birds and waterfowl

Incentive Category(ies): Cost Share

Program Status: Operational since 1987

Legislative Basis: None

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: Applicants apply and reach agreements with DFG. Once plan is implemented and inspected, the applicant is reimbursed for 75% of costs up to \$2,000, occasionally more, and up to 100% for waterfowl. Monitoring occurs on larger-scale projects.

Number of Participants: 4,100 agreements thus far

Resources Impacted by Program: Over 70,000 acres of land. Some flush counts have shown increased numbers of game birds.

Other Measures of Program Success: N/A

Challenges Encountered: Getting the word out. Also, the agency wants to focus on projects that are concentrated in a smaller area to be more effective on a landscape scale, but is experiencing difficulties finding enough willing partners in the same area.

Characteristics of Incentives: \$6 million spent on program in 12 years.

Staff Resources: Around 20 staff members contribute some time to the program.

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation supplies the funding for the program.

Source for Additional Information: <http://www2.state.id.us/fishgame/info/education/mknc/hip.htm>

Contact Information:

Jeff Gould

Idaho Department of Fish and Game

600 S. Walnut, P.O. Box 25

Boise, ID 83707

208-334-2920

Illinois Furbearer Fund Program

Key Implementing Agency(ies): Illinois Department of Natural Resources

Goals/Focus of the Program: To benefit the viability of populations of fur-bearing mammals in Illinois through habitat improvement and other management strategies

Incentive Category(ies): Cost Share

Program Status: Operational since 1992

Legislative Basis: The Illinois Habitat Endowment Act of 1992

Eligibility Requirements: Individual landowners must be sponsored by a local government, state agency, university, or non-governmental organization.

Program Operational Structure and Characteristics: Participants are required to complete a detailed application, which should include a plan for operating and maintaining the proposed habitat project, 2 quotes for the proposed purchases (if the total cost is over \$5,000), an estimate of future expenses, and a list of sources for future maintenance funding. Priority is given to projects that will be maintained for at least 5 years and that will provide habitat of sufficient size and quality to meet the biological needs of more than 1 species of fur-bearing mammal. The sponsoring agency or other group receives the money to be used on private property projects.

Number of Participants: 13 projects in 2001

Resources Impacted by Program: N/A

Other Measures of Program Success: Staff cite the increasing involvement of non-profit groups and schools with the program.

Challenges Encountered: Additionally, finding land for specialized furbearer habitat projects that can also meet the necessary criteria for possible hunting sites can pose a challenge.

Characteristics of Incentives: Approximately \$10,000 (from the sale of mandatory Habitat Stamps for hunting) is available each year for habitat development projects

Staff Resources: The program is administered by 1.5 full-time employee equivalents.

Program Operational Costs: N/A

Source for Additional Information: <http://dnr.state.il.us/grants/index.htm>

Contact Information:

Jennifer Aherin

Illinois Department of Natural Resources

Office of Resource Conservation – Federal Aid/Special Funds Section

524 S. Second Street

Springfield, IL 62701-1787

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Illinois Habitat Fund Program

Key Implementing Agency(ies): Illinois Department of Natural Resources

Goals/Focus of the Program: To enhance wetlands, woodlands, grasslands, and other types of habitat for wildlife populations in Illinois

Incentive Category(ies): Cost Share

Program Status: Operational since 1992

Legislative Basis: The Illinois Habitat Endowment Act of 1992

Eligibility Requirements: Individual landowners must be sponsored by a local government, state agency, university, or non-governmental organization.

Program Operational Structure and Characteristics: Participants are required to complete a detailed application, which should include a plan for operating and maintaining the proposed habitat project, 2 quotes for the proposed purchases (if the total cost is over \$5,000), an estimate of future expenses, and a list of sources for future maintenance funding. Priority is given to projects that will be maintained for at least 5 years and that will provide habitat of sufficient size and quality to meet the biological needs of more than 1 species of wildlife. The sponsoring agency or other group receives the money to be used on private property projects.

Number of Participants: 56 projects in 2001

Resources Impacted by Program: N/A

Other Measures of Program Success: Program staff cite the increasing involvement of non-profit groups, including schools and local chapters of Pheasants Forever and Quail Unlimited.

Challenges Encountered: Landowner demand far exceeds available funding. Additionally, finding the resources necessary to complete project inspections can pose a challenge.

Characteristics of Incentives: Approximately 64% of the funds provided by the sale of Habitat Stamps (mandatory for hunting) is set aside for the Habitat Fund Program. This equated to \$593,000 in 2001.

Staff Resources: The program is administered by 1.5 full-time employee equivalents.

Program Operational Costs: N/A

Source for Additional Information: <http://dnr.state.il.us/grants/index.htm>

Contact Information:

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Illinois Pheasant Fund Program

Key Implementing Agency(ies): Illinois Department of Natural Resources

Goals/Focus of the Program: To benefit the viability of pheasant populations in Illinois through habitat improvement and other management strategies

Incentive Category(ies): Cost Share

Program Status: Operational since 1992

Legislative Basis: The Illinois Habitat Endowment Act of 1992

Eligibility Requirements: Individual landowners must be sponsored by a local government, state agency, university, or non-governmental organization.

Program Operational Structure and Characteristics: Participants are required to complete a detailed application, which should include a plan for operating and maintaining the proposed habitat project, two quotes for the proposed purchases (if the total cost is over \$5,000), an estimate of future expenses, and a list of sources for future maintenance funding. Priority is given to projects that will be maintained for at least five years. In addition, the project must benefit pheasant hunting opportunities either directly or indirectly. The sponsoring agency or other group receives the money to be used on private property projects.

Number of Participants: 53 projects in 2001

Resources Impacted by Program: N/A

Other Measures of Program Success: Program staff cite the increasing involvement of non-profit groups, including schools and local chapters of Pheasants Forever and Quail Unlimited.

Challenges Encountered: Landowner demand far exceeds available funding. Additionally, finding land for possible habitat projects that can also meet the necessary criteria for possible hunting sites can pose a challenge.

Characteristics of Incentives: Approximately 30% of the funds (or \$500,000 annually, whichever is greater) provided by the sale of Habitat Stamps is set aside for the Pheasant Fund Program.

Staff Resources: The program is administered by 1.5 full-time employee equivalents.

Program Operational Costs: N/A

Source for Additional Information: <http://dnr.state.il.us/grants/index.htm>

Contact Information:

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Illinois Rural Forest Landowner Assistance Program

Key Implementing Agency(ies): Illinois Department of Natural Resources

Goals/Focus of the Program: To encourage the implementation of forest stewardship practices on private lands in order to achieve long-term land management objectives and maintain ecological processes

Incentive Category(ies): Cost Share, Property Tax Reduction

Program Status: Operational since 1985

Legislative Basis: Illinois Forestry Development Act

Eligibility Requirements: Open to all private landowners with forest land

Program Operational Structure and Characteristics: Landowners contact local foresters and complete an application. The application is sent to the District forester for approval. Eligible practices include preparation of a stewardship plan, tree planting, fencing woodlands to exclude livestock, soil and water protection projects, windbreak establishment, wetland and riparian vegetation protection and improvement, and other projects to improve wildlife or fisheries habitat. Funding source provided through the collection of a 4% harvest fee on all timber sales, mandated by the Forestry Development Act. Cost-share monies provide reimbursement of up to 75% of costs for conservation measures as well as opportunities for property tax reduction.

Number of Participants: 7,500 property stewardship plans currently under program

Resources Impacted by Program: 3,050 acres enrolled

Other Measures of Program Success: Staff report that the program is a good segue into building a relationship between landowners and Department foresters, who can provide technical assistance that leads to improved forest management.

Challenges Encountered: Lack of funding is a challenge. Also, competition exists with federal programs.

Characteristics of Incentives: Tax reduction aspect can translate into savings from \$3 to \$100 per acre.

Staff Resources: 40 staff members contribute time to the project.

Program Operational Costs: N/A

Source for Additional Information: <http://dnr.state.il.us/conservation/forestry/programs.htm>

Contact Information:

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Illinois Streambank Stabilization and Restoration Program

Key Implementing Agency(ies): Illinois Department of Agriculture, Illinois Soil and Water Conservation Districts (SWCD), and USDA Natural Resources Conservation Service

Goals/Focus of the Program: To protect water quality, fish and wildlife habitat, and other natural resources from sediment buildup from streambank erosion

Incentive Category(ies): Direct Payment and Cost Share

Program Status: Operational since 1995

Legislative Basis: Conservation 2000

Eligibility Requirements: Applicants must be sponsored by a local SWCD. Eligible properties must meet assessment and selection criteria (e.g., include severely eroding streambanks).

Program Operational Structure and Characteristics: Program awards two types of funding: 75% cost-share awards and 100% funding awards for high-visibility demonstration projects. Funding may be used toward labor, equipment, and materials for vegetative or other bio-engineering techniques for streambank stabilization. Reimbursements are distributed after project completion. Landowners agree to maintain practices for a minimum of 10 years.

Number of Participants: 114 projects in FY 2000

Resources Impacted by Program: Approximately 15 miles of streambank protected in FY 2000; 68,000 cubic yards of soil saved from erosion

Other Measures of Program Success: Program's bio-engineering techniques can stabilize a linear foot of soil for approximately \$9, whereas concrete or other manmade structures costs around \$100 per linear foot of soil.

Challenges Encountered: Early on, learning how to adopt engineering techniques used on larger rivers to smaller streams found on private land posed a challenge.

Characteristics of Incentives: \$800,000 was available for incentives in FY 2001; \$1.8 million was available for incentives in FY 2002

Staff Resources: 1 staff person at the Department of Agriculture administers the program.

Program Operational Costs: N/A

Source for Additional Information: <http://www.agr.state.il.us/Environment/conserv/index.html>

Contact Information:

Terry Donohue
Illinois Department of Agriculture
Bureau of Land and Water Resources
P.O. Box 19281
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217-785-7658

Indiana Wildlife Habitat Cost Share Program

Key Implementing Agency(ies): Indiana Division of Fish and Wildlife

Goals/Focus of the Program: To preserve wildlife habitat

Incentive Category(ies): Cost Share

Program Status: Operational since 1979

Legislative Basis: None

Eligibility Requirements: Landowner must own at least acres of land and enroll 5 in the program.

Program Operational Structure and Characteristics: Landowner and agency biologist draft management plan and landowner does initial work. The state biologists inspect work on property, and costs are reimbursed up to \$1,000. There are no subsequent inspections. The management plan pertain to any wildlife species. Contracts are for a minimum of 3 years.

Number of Participants: Approximately 65 per year

Resources Impacted by Program: Approximately 650 acres per year

Other Measures of Program Success: N/A

Challenges Encountered: None

Characteristics of Incentives: \$60,000 per year

Staff Resources: 22 private lands biologists contribute time to the program.

Program Operational Costs: N/A

Miscellaneous Information: Most of the wildlife management plans target small game such as quail, pheasant, or waterfowl. Funding for the program comes from dedicated state funding sources.

Contact Information:

Jeff Kiefer

Private Lands Program Coordinator

Division of Fish and Wildlife, Wildlife Section

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Bloomington, IN 47401

Indiana Classified Forest Program

Key Implementing Agency(ies): Indiana Division of Forestry

Goals/Focus of the Program: To conserve forest lands for multiple purposes, including wildlife habitat and watershed services

Incentive Category(ies): Property Tax Exemption

Program Status: Operational since 1921

Legislative Basis: Ind. Code 6-1.1-6-1

Eligibility Requirements: Open to all private landowners with 10 contiguous acres of forest land

Program Operational Structure and Characteristics: Landowners contact district forester and if the land qualifies, the county surveyor and tax assessors are contacted. Forested acres are charged \$1 per acre of property tax. Landowner must follow a management plan created by the forester. Enrollment in the program is permanent, and the forests are inspected every 5 years. In addition, the forested areas cannot be burned or pastured, the forest plan must be posted at all times, and landowners must fill out an annual report on their property.

Number of Participants: 8,300 participants

Resources Impacted by Program: 410,000 acres

Other Measures of Program Success: This program is very popular among landowners as there are more requests than can be met by the district foresters. There is an annual increase of 10,000 acres per year.

Challenges Encountered: Lack of personnel is a challenge. A lack of public awareness and promotion of the program also exists.

Characteristics of Incentives: N/A

Staff Resources: 22 foresters in the state work on this program.

Program Operational Costs: N/A

Miscellaneous Information: Commercial timber harvesting is permitted but harvesting practices must meet best management practices. This is the longest running forest stewardship program. Funding is supplied by general state funds allocation.

Source for Additional Information:

<http://www.in.gov/dnr/forestry/index.html?http://www.state.in.us/dnr/forestry/privateland/clasfor.htm&2>

Contact Information:

Natalie Hiebaugh

Indiana Division of Forestry

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Indianapolis, IN 46204

Indiana Game Bird Habitat Partnership/Development Program

Key Implementing Agency(ies): Indiana Division of Fish and Wildlife with the support of Quail Unlimited

Goals/Focus of the Program: To conserve game birds and their habitat

Incentive Category(ies): Cost Share

Program Status: Operational since 1979

Legislative Basis: I.S. 14.2-4.2

Eligibility Requirements: Landowner must own at least 10 acres of land and enroll 5 in the program.

Program Operational Structure and Characteristics: Landowner contacts district biologists to formulate management plan targeting game birds and habitat. The agency cost shares up to \$100 per acre not exceeding total cost. 50% of the cost is paid by Quail Unlimited. The minimum agreement term is for 3 years.

Number of Participants: Approximately 135 per year

Resources Impacted by Program: 1,900 acres/year

Other Measures of Program Success: N/A

Challenges Encountered: None

Characteristics of Incentives: \$75,000/year

Staff Resources: 22 private land biologists contribute time to the program.

Program Operational Costs: N/A

Miscellaneous Information: Dedicated state funding exists for the program.

Contact Information:

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Private Lands Program Coordinator

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Indiana Classified Wildlife Habitat Tax Incentive Program

Key Implementing Agency(ies): Indiana Division of Fish and Wildlife

Goals/Focus of the Program: To preserve wildlife habitat

Incentive Category(ies): Tax Credit

Program Status: Operational since 1979

Legislative Basis: I.S. 6-6.5

Eligibility Requirements: Landowners who own 15 acres, not more than 10 of which can be wetlands

Program Operational Structure and Characteristics: Landowner contacts agency biologist who inspects the property and decides if the property meets minimum requirements. A registered surveyor then surveys the land, and records are entered into the county court house. Qualified property is assessed at \$1 per acre. Mowing and grazing are forbidden on the properties. Every year the landowner must write a report, and every 5 years the parcels are reinspected. The landowner can withdraw from the program at any time.

Number of Participants: 1,832 wildlife habitat areas (does not necessarily mean the same number of landowners)

Resources Impacted by Program: 76,280 acres enrolled

Other Measures of Program Success: N/A

Challenges Encountered: The tax credit often does not seem significant enough to compete with development opportunities.

Characteristics of Incentives: N/A

Staff Resources: 22 private lands biologists take part in the program.

Program Operational Costs: N/A

Miscellaneous Information: The wildlife management plans depend on the goals of the landowner, and the agency staff do not feel they have the right to push an agenda regarding endangered or threatened species or any conservation measures beyond what the landowner would like to see happen on his/her property. Funding comes from general state funds allocation.

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Iowa Shelterbelt Program

Key Implementing Agency(ies): Iowa Department of Natural Resources (DNR)

Goals/Focus of the Program: To increase winter and nesting cover for wildlife

Incentive Category(ies): Cost Share

Program Status: Operational since 1985

Legislative Basis: State Code 483A.3

Eligibility Requirements: Open to all private landowners. Priority is given to applicants from northern part of the state where winters are more severe and agriculture more intense.

Program Operational Structure and Characteristics: Landowners apply. Projects are reviewed and recommended for agreements by the wildlife biologist and district conservationist, based on site suitability, location, and proximity to other wildlife habitat. If the shelterbelt is planted according to DNR planting specifications, a landowner will receive 75% of the cost of shelterbelt establishment, not to exceed \$1,600. Expansion of existing shelterbelts to at least 8 rows will be at 75% of the actual cost, not to exceed \$200 per row. A 14-row shelterbelt is the maximum size that can be cost-shared. The landowners are responsible for maintenance. Biologists from DNR checks on the plantings annually, and contracts are for 10 years.

Number of Participants: 734

Resources Impacted by Program: The average shelterbelt covers 1.5 to 2 acres.

Other Measures of Program Success: The landowners have observed wildlife using shelterbelts, especially during harsh winters.

Challenges Encountered: Competition exists with federal cost-share programs that require only 3 rows of shelterbelts. Also, it is difficult to persuade landowners to give up valuable farmland for shelterbelts.

Characteristics of Incentives: The program receives \$80,000 per year, while actual program expenditures depend on the number of applicants approved for the program that year.

Staff Resources: 1 part-time administrative person and a number of field biologists contribute time.

Program Operational Costs: N/A

Miscellaneous Information: Funding comes from the sale of wildlife habitat stamps, contributions through the Iowa "Chickadee Tax Check-Off," and other contributions from government and private conservation groups.

Other Source for Information: <http://www.state.ia.us/government/dnr/organiza/fwb/wildlife/pages/shelterbelt.htm>

Contact Information:

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Kentucky Habitat Improvement Program

Key Implementing Agency(ies): Kentucky Department of Fish and Wildlife Resources

Goals/Focus of the Program: To assist private landowners in improving wildlife habitat

Incentive Category(ies): Cost Share

Program Status: Operational since 1986

Legislative Basis: None

Eligibility Requirements: Open to all private landowners with more than 5 acres of land

Program Operational Structure and Characteristics: Landowners contact district wildlife biologists and create Habitat Improvement Plan. Wildlife biologists decide how much to cost share. Maximum cost share is \$500 per year, and landowner is reimbursed after biologists have inspected the land. Landowners can apply for cost share as many times as they wish, but according to agency staff, most landowners only apply once or twice. There is no scheduled inspection by agency staff. A survey is mailed out every 5 years.

Number of Participants: 7,500 landowners have Habitat Improvement Plans in place.

Resources Impacted by Program: 1,000,000 acres have Habitat Improvement Plans.

Other Measures of Program Success: N/A

Challenges Encountered: Funding has remained constant while landowner interest in the program has grown. Not enough money cost shared to motivate many landowners, however.

Characteristics of Incentives: Program receives \$100,000 per year for cost sharing.

Staff Resources: 13 wildlife biologists work part-time on this program.

Program Operational Costs: N/A

Miscellaneous Information: Endangered species issues are dealt with on a case-by-case basis. Program is advertised on Kentucky educational TV. Program funding comes from the sale of hunting licenses and tags.

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Maryland Agricultural Water Quality Cost-Share (MACS) Program

Key Implementing Agency(ies): Maryland Department of Agriculture, Maryland Soil Conservation District Offices

Goals/Focus of the Program: To encourage the implementation of erosion control best management practices on private property in order to protect water quality in MD

Incentive Category(ies): Cost Share

Program Status: Operational since 1983

Legislative Basis: 1984 Maryland Water Quality Act

Eligibility Requirements: Agricultural land is eligible if it is deemed to have a critical condition which causes soil, nutrients, or other pollutants to move off the land and enter state waters.

Program Operational Structure and Characteristics: Proposed projects must be designed to improve water quality and meet eligibility criteria and cost-effectiveness requirements. Eligible best management practices include the planting of field windbreaks, riparian buffers, and other kinds of conservation cover and the installation of stream crossings and fencing. Applications are submitted to the Department of Agriculture through local soil conservation district offices, which assist landowners in selecting the proposed best management practices and in completing the application paperwork. Landowners must maintain the improvements for 5, 10, or 15 years, depending on the contract. MACS provides funding of up to 87.5% of the materials and other kinds of costs for installing eligible practices. In general, the maximum level of funding allowed is \$20,000 per project and \$50,000 per farm. A maximum funding level of \$40,000 per project is allowed if implemented under a pooling agreement to address a pollution problem on two or more farms. Spot checks are conducted among the projects.

Number of Participants: 20,000 since the beginning of the program

Resources Impacted by Program: Projects implemented in 1999 prevented approximately 35,000 tons of soil from reaching Maryland's waterways.

Other Measures of Program Success: Over 900 projects were implemented in 1999. The program has been successful in gaining support from different constituencies, including farmers, the governor, the legislature, and others.

Challenges Encountered: Winning support for the funding is always a challenge, especially when the program was first getting started.

Characteristics of Incentives: In 1999, MACS grant payments totaled more than \$4.6 million.

Staff Resources: 9 staff members administer the program.

Program Operational Costs: N/A

Source for Additional Information: Maryland Department of Agriculture, Maryland Agricultural Water Quality Cost-Share Program: Helping Farmers Install Best Management Practices to Protect Waterways and Keep Farms Productive, available at <http://www.mda.state.md.us/resource/mawqcs10.htm>

Contact Information:

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Maryland Buffer Incentive Program

Key Implementing Agency(ies): Maryland Department of Natural Resources

Goals/Focus of the Program: To encourage the planting and maintenance of forested buffers around the Chesapeake Bay and its tributaries

Incentive Category(ies): Direct Payment

Program Status: Operational since 1987

Legislative Basis: None

Eligibility Requirements: Land is eligible if it is privately owned, at least 1 acre but not more than 50, and is crop land, pasture land, other open or bare ground, or early successional vegetation. The land must also be within 300 feet of a stream, pond, river, or non-tidal wetland or other open water, within 300 feet plus 4 feet for every one percent slope for slopes averaging greater than 6 percent, or within the 100 year floodplain.

Program Operational Structure and Characteristics: Landowners apply through their county foresters and if accepted, sign an agreement with the Department of Natural Resources. A one-time payment of \$300 per acre (\$30 per one-tenth acre) is made upon verification of at least 65% seedling survival after one growing season. A reduced payment of 50% is payable for survival of 50-65% of seedlings. Landowners agree to maintain the forest buffers for a minimum of 10 years.

Number of Participants: 30-35 landowners annually

Resources Impacted by Program: Approximately 250-300 acres of buffer are planted annually.

Other Measures of Program Success: The program has succeeded in raising awareness about the environmental importance of buffers.

Challenges Encountered: Competition exists with federal programs, which often offer a larger incentive.

Characteristics of Incentives: N/A

Staff Resources: 32 county foresters and headquarters contribute time to the program (two-thirds are foresters).

Program Operational Costs: N/A

Source for Additional Information: <http://www.dnr.state.md.us/forests/programapps/green.html>

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Maryland Forest Conservation and Management Program

Key Implementing Agency(ies): Maryland Department of Natural Resources

Goals/Focus of the Program: To encourage better, long-term management of Maryland forest land

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since the late 1950s

Legislative Basis: Maryland Statutes, Article 8, Section 211

Eligibility Requirements: Land of 5 or more contiguous acres of forest is eligible. House sites, crop land, or other non-forest open space is not eligible. Open space that was recently planted with forest tree seedlings can be included in the program after one growing season.

Program Operational Structure and Characteristics: Landowners must complete an application and an approved management plan and agree to manage the land according to the plan for at least 15 years.

Number of Participants: Approximately 1,250 agreements are in effect.

Resources Impacted by Program: Approximately 145,000 acres are enrolled in the program.

Other Measures of Program Success: Staff characterize the program as popular among landowners.

Challenges Encountered: The rate at which land is changing hands in Maryland can make it difficult to keep the forested buffers in place.

Characteristics of Incentives: N/A

Staff Resources: 32 county foresters and headquarters contribute time to the program (two-thirds are foresters).

Program Operational Costs: N/A

Source for Additional Information: <http://www.dnr.state.md.us/forests/programapps/fcmp.html>

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Maryland Income Tax Modification Program

Key Implementing Agency(ies): Maryland Department of Natural Resources

Goals/Focus of the Program: To encourage better, long-term management of MD forest land

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1984

Legislative Basis: Maryland Statutes, Article 5, Section 219

Eligibility Requirements: Participants must own or lease between 10 to 500 acres of forest land capable of growing more than 20 cubic feet of wood per acre per year, which is available for the primary purpose of growing and harvesting trees. Christmas tree and ornamental tree operations are not eligible.

Program Operational Structure and Characteristics: Landowners apply through their county foresters. Participants are allowed to deduct double the cost of reforestation and timber stand improvement practices, less any cost-share assistance received through other programs. Only forest management practices installed on 10 to 100 acres may receive the tax modification in any one year. Practices receiving the modification must remain in effect for at least 15 years, and participants are subject to inspections every 5 years.

Number of Participants: Approximately 30-50 landowners participate annually.

Resources Impacted by Program: 800 to 1200 acres enrolled in any given year.

Other Measures of Program Success: N/A

Challenges Encountered: A limited number of landowners can participate in the program since two-thirds of landowners own less than 10 acres of forest land. Lack of publicity is also a challenge.

Characteristics of Incentives: N/A

Staff Resources: 32 county foresters and headquarters contribute time to the program (2/3 are foresters).

Program Operational Costs: N/A

Source for Additional Information: <http://www.dnr.state.md.us/forests/programapps/tax.html>

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Maryland Waterfowl Restoration Program

Key Implementing Agency(ies): Maryland Department of Natural Resources (DNR)

Goals/Focus of the Program: To offer support to landowners in the development and management of waterfowl habitats in order to increase and improve wetland habitats and ensure a diverse wetland plant community that will meet the biological requirements of a variety of wetland-dependent wildlife species

Incentive Category(ies): Tax Credit

Program Status: Operational since 1981

Legislative Basis: Section 10-3018.1(e)(3) of the Natural Resources Article of the Annotated Code of Maryland

Eligibility Requirements: Land must encompass a minimum of 10 contiguous acres with the potential to provide food and/or cover for ducks. Land must also include at least 1 acre of semi-permanent water with nesting and resting habitat within or near the semi-permanent water and must not be used for commercial hunting enterprises. Private lands used for commercial hunting enterprises are not eligible.

Program Operational Structure and Characteristics: Landowners must complete an application and a Waterfowl Habitat Management Plan that meets approved standards. The DNR undertakes license agreements with participating landowners and approves the Waterfowl Habitat Management Plans and habitat projects included within the agreements. The license agreement remains in effect for a period of 10 years and is renewable. The proposed project area is inspected for eligibility upon application to the program, and the DNR annually documents the status of the approved projects/measures. The DNR is not responsible for regulating or documenting project expenditures made by landowners; rather it is the responsibility of participants to substantiate the expenditures if requested by the State Comptroller. There is no limit on the amount of expenditures that may be deducted. The governor-appointed Waterfowl Advisory Committee advises DNR on project approval and various other matters pertaining to the program.

Number of Participants: Approximately 130

Resources Impacted by Program: Thousands of acres enrolled

Other Measures of Program Success: N/A

Challenges Encountered: Lack of publicity for the program is an obstacle.

Characteristics of Incentives: N/A

Staff Resources: The program is administered with less than 1 full-time employee equivalent.

Program Operational Costs: N/A

Sources for Additional Information: <http://www.dnr.state.md.us/wildlife/mwrp.html> and <http://www.dnr.state.md.us/wildlife/mwrpapp.html>

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Massachusetts Agricultural Environmental Enhancement Program (AEEP)

Key Implementing Agency(ies): Massachusetts Department of Food and Agriculture, U.S. Natural Resources Conservation Service

Goals/Focus of the Program: To facilitate proactive approaches to addressing farm-based water quality concerns affecting habitat and other natural resources.

Incentive Category(ies): Cost Share

Program Status: Operational since 1999

Legislative Basis: Massachusetts Rivers Protection Act

Eligibility Requirements: Farmers who actively farm 5 acres (or 3 acres of cranberry bogs) or more of land which could potentially impact a water resource are eligible.

Program Operational Structure and Characteristics: Participants must complete an application form and have an updated USDA Conservation Plan or a comparable Conservation Plan approved by the MA Department of Food and Agriculture. Practices eligible for funding include the installation of buffers, animal waste systems, pesticide storage facilities, fencing, and culverts. The maximum award per farm is \$20,000. The participating farmer is responsible for the cost of maintaining the project. Projects must be completed within a certain amount of time after the application is approved. Prior to full reimbursement, projects will be checked for completion and compliance with USDA or other applicable standards. Staff from U.S. Natural Resources Conservation Service offices or the MA Department of Food and Agriculture conduct annual inspections on all projects.

Number of Participants: Over 80 farmers since 1999

Resources Impacted by Program: Over 5,000 acres better protected in 1999 alone

Other Measures of Program Success: Projects have taken place in 11 counties, affecting 23 different watersheds.

Challenges Encountered: Requests for financial assistance consistently exceed available funds by approximately 50 percent.

Characteristics of Incentives: \$900,000 awarded since 1999

Staff Resources: N/A

Program Operational Costs: N/A

Sources for Additional Information: <http://www.state.ma.us/dfa/funding/aEEP/index.htm>

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Minnesota Native Prairie Tax Exemption Program

Key Implementing Agency(ies): Minnesota Department of Natural Resources (DNR)

Goals/Focus of the Program: To conserve native prairies

Incentive Category(ies): Property Tax Exemption

Program Status: Operational since 1980

Legislative Basis: MS 272.02 [Sub. 12]

Eligibility Requirements: Open to all private landowners in eligible counties with prairie land.

Program Operational Structure and Characteristics: Landowners contact county tax assessor and the assessor contacts DNR to certify area as prairie. The certified prairies are taxed between \$2-\$5 an acre. The program rolls over automatically each year and also continues under new ownership unless the prairie is converted. The prairies receiving the tax exemption can be used for hay once a year, but since 1987, no grazing has been allowed on the prairie areas. Periodic checking by biologists occurs to ensure areas are still native prairies.

Number of Participants: 440 landowners (approximately 35% of landowners with native prairies)

Resources Impacted by Program: 12,000 acres are enrolled in this program.

Other Measures of Program Success: N/A.

Challenges Encountered: The department is currently unable to deliver all the services necessary for landowners, for example technical advice regarding burns and exotic weed control, because of a lack of personnel. Most of the field biologists have numerous other duties. Other challenges include lack of promotion, and private landowners expecting cost share for their conservation services instead of simply receiving the tax break. Before 1987, the program was a tax credit in which the counties were reimbursed for credits paid to landowners. Since it has turned into an exemption, the counties no longer receive reimbursement and record the exemption as a tax loss. In addition, the grazing ban on the prairies has deterred many landowners from entering the program.

Characteristics of Incentives: The average amount of tax exempted is between \$2,000 and \$3,000.

Staff Resources: 1 full-time staff person and 40 part-time field biologists contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: Program funding comes from general state funds allocation. Endangered and threatened species do not receive special treatment. The program is trying to come up with a more systematic way of monitoring prairie conditions. A new Prairie Stewardship Program has begun where landowners receiving tax exemptions can obtain free technical assistance on how to manage their prairies.

Contact Information:

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Minnesota Deer Habitat Improvement Program

Key Implementing Agency(ies): Minnesota Department of Natural Resources

Goals/Focus of the Program: To encourage the development, restoration, and maintenance of deer habitat

Incentive Category(ies): Cost Share, Direct Payment

Program Status: Operational since 1971

Legislative Basis: M.S. 97A.075 (Subd. 1)

Eligibility Requirements: Open to both private and public lands

Program Operational Structure and Characteristics: Landowners call wildlife manager, who then chooses a management action such as purchase of food plots, silvicultural treatments, or creation of openings in forested areas. The program is very decentralized, and decisions for cost share or payment are made by the local wildlife managers. Contracts are usually for 1 year and are renewable.

Number of Participants: N/A

Resources Impacted by Program: N/A

Other Measures of Program Success: Agency staff members report that deer populations cannot be maintained, especially in the agricultural areas, without this program.

Challenges Encountered: Every year there are more applicants than available funding.

Characteristics of Incentives: For FY 2000, \$1,203,000 was spent on deer and habitat management.

Staff Resources: Between 12-14 part-time field biologists contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: Program funding comes from a \$2 surcharge on the sale of deer hunting licenses.

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Minnesota Pheasant Habitat Improvement Program

Key Implementing Agency(ies): Minnesota Department of Natural Resources (DNR)

Goals/Focus of the Program: To improve pheasant habitat

Incentive Category(ies): Cost Share

Program Status: Operational since 1983

Legislative Basis: M.S. 97A.075 (Subd. 4)

Eligibility Requirements: Open to both public and private landowners in 64 counties in southern, western, and central Minnesota

Program Operational Structure and Characteristics: Landowners apply to area wildlife managers, and managers decide how much of the cost of the proposed project the agency will contribute. Approved landowners are to develop, restore, and maintain suitable habitat for ring-necked pheasants. Management practices include the establishment of food plots (primarily corn or sorghum), nesting cover, woody cover, and wetland restoration. Contract terms vary depending on management practices. Food plots are renewed each year, whereas other practices need longer-term contracts.

Number of Participants: N/A

Resources Impacted by Program: Total acreage impacted by the program in 1999 was 7,953.

Other Measures of Program Success: N/A

Challenges Encountered: Trying to maximize the benefits of limited funds

Characteristics of Incentives: The appropriations for the program averaged \$450,000 per year since 1983, with annual fluctuations depending on pheasant population levels and hunter interest.

Staff Resources: 1 coordinator at headquarters and 12-15 area wildlife managers work part-time on projects.

Program Operational Costs: By statute, only 10% of revenue may be used for overhead costs.

Miscellaneous Information: Program funding supplied by \$5 contribution per hunting stamp sold. The DNR partners with Pheasants Forever and the Wildlife Management Institute.

Contact Information:

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Minnesota Wetland Exemption Program

Key Implementing Agency(ies): Minnesota Department of Revenue

Goals/Focus of the Program: To provide a financial incentive to maintain wetlands in their natural state and to promote an awareness of wetland values

Incentive Category(ies): Property Tax Exemption

Program Status: Operational since 1979

Legislative Basis: M.S 272.02

Eligibility Requirements: Open to all private landowners with qualified wetlands on their property

Program Operational Structure and Characteristics: Landowners contact county tax assessor's office to determine whether land qualifies. There is no other application process.

Number of Participants: N/A

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Landowners do not know about this program and whether any acreage they have would qualify for the program by reading the tax statement they receive. There is no incentive for the counties to be "expansive" in their interpretation of the statutory language, in that tax revenue eliminated on wetland acreage in their jurisdiction must be made up by taxing upland acreage in the jurisdiction. The program does not include a penalty for withdrawing acreage (i.e., converting wetlands).

Characteristics of Incentives: N/A

Staff Resources: 87 county tax assessors contribute time to the program.

Program Operational Costs: N/A

Miscellaneous Information: Program funding supplied by general state funds allocation. The program was a tax credit program until 1989 whereupon it became a tax exemption program.

Contact Information:

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Minnesota Sustainable Woodlands Program

Key Implementing Agency(ies): Minnesota Department of Natural Resources (DNR)

Goals/Focus of the Program: To assist private forest landowners with the development and enhancement of the diversity of their forest land benefits

Incentive Category(ies): Cost Share

Program Status: Operational since 1997

Legislative Basis: MS Law 1999 Chap. 232 Section 16 [Sub. 13]

Eligibility Requirements: Open to all private forest landowners that own from 20-1,000 acres of qualifying land and have an approved Forest Stewardship Plan

Program Operational Structure and Characteristics: Landowners with Forest Stewardship Plans apply. The Forest Stewardship Plans are paid for by DNR. After enrollment in the cost-share program, up to 50% of actual management costs -- with a maximum grant of \$10,000 per year -- are cost shared. Acceptable management practices include tree plantings, nest boxes, and clearings. Reimbursements are distributed after a final inspection. Contracts are for 10 years.

Number of Participants: 1,280

Resources Impacted by Program: 6,847 acres

Other Measures of Program Success: N/A

Challenges Encountered: Not enough funding

Characteristics of Incentives: \$1,325,000 has been appropriated to the program since 1997.

Staff Resources: 1 full-time employee at state headquarters and many regional foresters contribute time toward the program.

Program Operational Costs: N/A

Miscellaneous Information: The program must apply to the state for funding every 2 years. Funds are supplied by a portion of state liquor, cigarette, and gambling taxes. Focus has been mostly on game species such as deer and grouse. The Nature Conservancy and Global Relief of American Forests are partners.

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Missouri Private Lands Incentives Program

Key Implementing Agency(ies): Missouri Private Land Division

Goals/Focus of the Program: To improve habitat on private lands

Incentive Category(ies): Cost Share

Program Status: Operational since 2000

Legislative Basis: None

Eligibility Requirements: Open to all landowners

Program Operational Structure and Characteristics: Landowners contact agency staff. Biologists and landowner come up with management plan. Cost-share rates are based on practices, with each management practice having a different rate. The 12 to 15 different management practices are derived from the USDA Natural Resources Conservation Service technical guide. Minimum term of agreement is for 10 years.

Number of Participants: N/A

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Limited funding

Characteristics of Incentives: \$1,000,000 per year

Staff Resources: N/A

Program Operational Costs: N/A

Miscellaneous Information: The division was formed in 2000, and none of the data from previous private land incentive programs has been consolidated into 1 source. Program funding comes from a portion of the state sales tax, general state funds allocation, and private and non-profit sources.

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WILD Nebraska Program

Key Implementing Agency(ies): Nebraska Game and Parks Commission, Nebraska Natural Resources Districts

Goals/Focus of the Program: To increase overall conservation efforts on private land

Incentive Category(ies): Cost Share

Program Status: Operational since 2000

Legislative Basis: None

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: Landowners contact local Natural Resources Districts or district Game and Parks offices. Projects are reviewed, and cost shares and terms of contract are determined by individual biologists. There are about 30 partners, government and private, who jointly implement the projects with the landowners.

Number of Participants: Over 1000

Resources Impacted by Program: N/A

Other Measures of Program Success: The agency staff interviewed reported that 1 of the main measures of success for this program is how many landowners are reached and whether the outreach efforts of the program affect landowners' attitudes regarding conservation.

Challenges Encountered: The values of many private landowners contradict the conservation goals of the program. Public apathy to conservation on private lands is also an obstacle.

Characteristics of Incentives: The program has received \$1.5 million in funding since beginning in 2000.

Staff Resources: 20 staff biologists plus 1 full-time administrator contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: This program is the newest version of Nebraska's private lands program, which began in 1977. The program has had many incarnations, as the Wildlife Shelterbelt Program, the Wetland Initiative Program, and the Roadside Seeding Program, which often overlapped with one another and resulted in confusion among landowners and agency staff. WILD Nebraska is an umbrella program that consolidates all private land assistance programs. Since it just began in 2000, landowners enrolled in previous programs are now in transition, and not all have continued with this program, as it requires greater landowner participation and responsibility in habitat management.

Program funding comes through the sale of wildlife habitat stamps. Since this program is funded by game dollars, it has not had the opportunity to focus on endangered species issues. Currently the program is targeting overall ecosystem benefits and needs.

Source for Additional Information: <http://www.ngpc.state.ne.us/wildnebraska/PDF/summary.pdf>
http://www.mrnrd.org/wild_nebraska.htm; http://www.lpnrd.org/forestry/wild_neb.html
<http://www.littlebluenrd.org/page30.html>

Contact Information:

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Nebraska Rainwater Basin Joint Venture

Key Implementing Agency(ies): Nebraska Game and Park Commission

Goals/Focus of the Program: To conserve and restore wetlands for migratory birds

Incentive Category(ies): Cost Share

Program Status: Operational since 1992

Legislative Basis: None

Eligibility Requirements: Landowner must own at least 10 acres of wetlands.

Program Operational Structure and Characteristics: This program functions with a partnership of several agencies and non-profits. Interested landowners are usually approached by a team of staff from different agencies who together develop a plan to manage the wetlands. The landowner is usually guided by agency staff to participate in an array of cost-share opportunities, including both federal and state programs. The terms of contract with the Joint Venture is usually for 10 years.

Number of Participants: 141 projects in 11 of the 17 counties participating (information only available for 11 counties)

Resources Impacted by Program: 8,086 acres

Other Measures of Program Success: Anecdotal stories of increased migratory birds and discovery of whooping cranes in restored wetlands

Challenges Encountered: Lack of appropriate personnel, especially engineers. Lack of monitoring of projects. Landowners may prefer to drain wetlands for agriculture than conserve them for wildlife.

Characteristics of Incentives: FY 2000 budget of \$109,000, but not all of this amount went into cost share.

Staff Resources: Around 27 staff members from various agencies and non-profits contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: This is the only joint venture of the North America Waterfowl Management Plan that takes place within a single state. Program funding supplied by state, federal, and non-profit sources.

Source of Additional Information: <http://www.rwbjv.org/>

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New Jersey Farmland Assessment Act Program

Key Implementing Agency(ies): New Jersey Department of Environmental Protection (DEP), New Jersey Department of Agriculture, and the New Jersey Division of Taxation

Goals/Focus of the Program: To encourage better, long-term management of New Jersey's private woodlands in order to conserve timber resources and to provide for enhanced benefits in the form of improved air and water quality and wildlife habitat.

Incentive Category(ies): Property Tax Reduction

Program Status: Program operational in some form since 1964

Legislative Basis: Farmland Assessment Act of 1964, as amended 1986 and 1997 (N.J.S.A. 54:4-23.1, et seq.)

Eligibility Requirements: Landowners must own at least 5 acres that have been actively devoted to agricultural or horticultural use for 2 successive years and average at least \$500 plus \$5 per acre of cropland/\$0.50 per acre of woodland in gross annual revenue.

Program Operational Structure and Characteristics: Participating forest landowners must prepare a forest management plan to be approved by the DEP's Forest Service and undergo inspections for compliance with the plan every three years. In addition, forest landowners must submit an application and woodland data form annually. The Forest Service reviews the annually submitted application and woodland data forms, and reports the findings to local tax assessors.

Number of Participants: Approximately 4,000 participants (in tax year 2000)

Resources Impacted by Program: Approximately 300,000 acres addressed in forest management plans (2000)

Other Measures of Program Success: The number of applications to the program has steadily increased over the past decade.

Challenges Encountered: Low funding and staffing resources make completing required inspections difficult.

Characteristics of Incentive s: N/A

Staff Resources: N/A

Program Operational Costs: N/A

Sources for Additional Information: New Jersey Department of Agriculture and the New Jersey Division of Taxation, New Jersey's Farmland Assessment Act: A Primer On How It Works, 1999; (available at <http://www.state.nj.us/agriculture/rural/primerfarm.pdf>); New Jersey DEP Forest Service, The Farmland Assessment Act: As It Pertains to Woodlands; New Jersey DEP Forest Service, Farmland/Woodland Assessment Report Tax Year 2000, April 2000.

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North Carolina Agriculture Cost-Sharing Program

Key Implementing Agency(ies): North Carolina Division of Soil and Water Conservation

Goals/Focus of the Program: To improve water quality

Incentive Category(ies): Cost Share

Program Status: Operational since 1986

Legislative Basis: N.C.G.S. 143.215.74

Eligibility Requirements: Open to all agricultural land

Program Operational Structure and Characteristics: Landowners apply to the local soil conservation district office. The districts select the landowners. Landowners can cost share 75% of projects up to \$75,000 year. Management practices include minimum tillage and riparian buffers. Agreements are for 10 years, and the district staff spot checks 50% of projects in active management.

Number of Participants: 28,000

Resources Impacted by Program: 1,821,789 acres

Other Measures of Program Success: N/A (There is no direct monitoring of water quality.)

Challenges Encountered: Lack of funding and personnel. Requests for funds last year totaled \$23 million, which vastly exceeded the agency's budget.

Characteristics of Incentives: Annual budget of \$6.9 million for cost share

Staff Resources: There are staff in 95 conservation districts, in addition to 5 full-time state technicians who work on this program.

Program Operational Costs: \$1.87 million for technical staff

Miscellaneous Information: General state funds allocation provides the program funding

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North Carolina Present Use Valuation of Agricultural Lands

Key Implementing Agency(ies): North Carolina County Tax Assessors' Offices, North Carolina Division of Forestry

Goals/Focus of the Program: To preserve agricultural and forest lands

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1975

Legislative Basis: N.C.G.S. 105.277.2-277.7

Eligibility Requirements: Landowner must have owned the property for 4 years, and there are minimum acreage and income from land use, depending on types of economic activity carried out on the land. For horticulture, the landowner must own 5 acres and receive at least \$5,000 a year of income from horticulture. For agriculture, the landowner must own at least 10 acres and receive an annual income of \$1,000 from agriculture. For forestry, the property must be at least 20 acres, and the property owner must have a forest management plan prepared by the Division of Forestry.

Program Operational Structure and Characteristics: Landowners apply to county in January, and the land is assessed by a tax assessor for present use and productivity instead of market price. The landowner must reapply after 8 years. Tax assessors' offices are responsible for check-ups.

Number of Participants: N/A

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: The property tax relief does not amount to much in agricultural areas of the state. Many counties, especially poor ones, do not want the program due to the loss of tax revenue.

Characteristics of Incentives: N/A

Staff Resources: 40 district foresters and the staff of the tax assessors' offices contribute time to the program.

Program Operational Costs: N/A

Miscellaneous Information: Program funding supplied by general state funds allocation

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North Dakota Private Lands Initiative

Key Implementing Agency(ies): North Dakota Game and Fish Department

Goals/Focus of the Program: To conserve habitats for fish and wildlife populations on private lands

Incentive Category(ies): Cost Share, Direct Payment

Program Status: Operational since 1979

Legislative Basis: NDS Section 20.1/02/04-sect 18-19

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: There are 2 components of the program that facilitate habitat improvements:

(1) Habitat Establishment/Enhancement Cost-sharing Program -- Encourages grass plantings, wildlife tree/shrub plantings, aspen management, wildlife water developments, and the building of nesting structures.

The cost shares are usually administered in conjunction with the federal programs such as CRP. There are no limits to the cost share as agency staff make the decisions on an individual basis.

(2) Conservation Private Land Open To Sportsmen (PLOTS) Agreements --

Habitat PLOT Program -- 3 to 6 year rental contracts to create, protect, and enhance habitat, and to provide public access.

Food PLOT Program -- single year establishment and rental contracts to provide wildlife food and public access.

Private Forest Conservation Program -- multi-year rental contracts to protect and enhance unique forest tracts, and provide public access.

The rental agreements range from \$7 to \$30 an acre, depending on quality of habitat. Once the land has been rented to the agency, the public has unrestricted access to the land.

Number of Participants: 306 participants in FY 2000

Resources Impacted by Program: 119,229 acres

Other Measures of Program Success: N/A

Challenges Encountered: The program does not have enough staff, weakening the agency's outreach efforts. For now, it is the landowners who approach the agency and not the other way around.

Characteristics of Incentives: The program receives \$3,000,000 every two years. The money devoted to the 2 components of the program involving habitat enhancements receive a portion of this amount, and the budget was \$455,617 for FY 2000.

Staff Resources: 3 full-time employees in state headquarters and biologists in 6 districts who work part-time contribute to the program.

Program Operational Costs: 25% of total budget

Miscellaneous Information: Program funding supplied by the sale of habitat stamps and the interest accrued from the Department's general fund balance. Target species for this program are mainly game.

Source for Additional Information: <http://www.state.nd.us/gnf/info/pli-program.html>

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Ohio Wetland Restoration Program

Key Implementing Agency(ies): Ohio Division of Wildlife

Goals/Focus of the Program: To restore wetlands

Incentive Category(ies): Cost Share, Direct Payment

Program Status: Operational since 1991

Legislative Basis: None

Eligibility Requirements: Open to all private landowners with at least one acre of wetland

Program Operational Structure and Characteristics: Landowners contact local Division of Wildlife biologists, and a biologist inspects the site. Payment is made after landowner carries out activities detailed in the management plan. The cost share is for 50% of the costs, up to \$500 per acre if landowner signs a 10-year agreement. Payment is for 100% of cost up to \$1,000 per acre if landowner signs a 20-year agreement. An inspection by Division biologists is carried out every 5 years, and landowners also fill out periodic questionnaires.

Number of Participants: 401

Resources Impacted by Program: 3,089 acres

Other Measures of Program Success: Agency staff interviewed claimed that landowners are happy with the program, and only 1 person has dropped out to date. There is no monitoring of waterfowl populations or any other wildlife population.

Challenges Encountered: The greatest challenge is that the administrative process for the program can be quite long, and it can take a while before actual restoration work begins. The agency often has to hire contractors to carry out restoration activities, and the contractors get impatient when the administrative process takes too long.

Characteristics of Incentives: The program receives \$200,000 per year.

Staff Resources: 7 part-time field biologists and 1 full-time administrative staff person contribute to the program.

Program Operational Costs: N/A.

Miscellaneous Information: Program funding comes from the sale of state waterfowl stamps and from Ducks Unlimited grants. The focus of this program is waterfowl. The program does not create any ponds/wetlands deeper than 4 feet and looks for pre-existing native wetland vegetation so that other species benefit as well.

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Oklahoma Conservation Cost-Share Program

Key Implementing Agency(ies): Oklahoma Conservation Commission

Goals/Focus of the Program: To conserve soil and water resources through the cost-sharing of projects designed to reduce soil erosion and improve water quality

Incentive Category(ies): Cost Share

Program Status: Operational since 1998

Legislative Basis: 27A O.S. Supp. 1997, Section 3-2-106

Eligibility Requirements: Open to landowners with at least 20 acres of land and an annual income of at least \$1,000 from soil-dependent products

Program Operational Structure and Characteristics: Landowners must file a conservation plan with their local conservation district. Specific requirements do not exist for the plan except that it must include a description of the proposed use for the funds. In addition, participants must sign a maintenance agreement pledging to uphold the funded project or practices for a specified period of time (e.g., between 5 and 15 years). Landowners can renew participation after the end of the time period and also reapply for funding for additional projects at any time. Oklahoma district conservation commission officers complete initial site visits as part of the conservation plan and proposed project review. Following acceptance, the program relies on participant self-monitoring as pledged in the maintenance agreement. The program can award funds for up to 60% of the cost of the projects, or up to \$2,000 per participant per year.

Number of Participants: Approximately 2,500 landowners since the program began

Resources Impacted by Program: Example results include the establishment of 3 windbreaks/shelterbelts, the construction of 74 terraces, and the completion of 105 other grade stabilization structures (since the program began).

Other Measures of Program Success: N/A

Challenges Encountered: N/A

Characteristics of Incentives: Approximately \$1,400,000 of cost-share payments since the program began

Staff Resources: 1 full-time employee equivalent with additional support from Oklahoma Conservation Commission District Offices

Program Operational Costs: Approximately \$50,000 for operational expenses apart from the cost sharing

Miscellaneous Information: Commonly funded projects include construction of terraces and buffer strips and the planting of field borders.

Sources for Additional Information: Oklahoma Conservation Commission, State Guidelines for the Conservation Cost-Share Program: Policies and Approved Conservation Practices, November 2000 and Oklahoma Conservation Commission, Clean Water and a Healthy Land, December 1997, available at http://www.okcc.state.ok.us/Newsletter/costshare_pamphlet.pdf

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Oregon Riparian Tax Incentive Program

Key Implementing Agency(ies): Oregon Department of Fish and Wildlife, Oregon County Tax Assessors' Offices

Goals/Focus of the Program: To improve and maintain riparian lands

Incentive Category(ies): Property Tax Exemption

Program Status: Operational since 1981

Legislative Basis: ORS 308A.350—308A.383

Eligibility Requirements: Landowners with riparian land up to 100 feet from a stream are eligible. For riparian land to qualify for this program, it must be outside adopted urban growth boundaries and be planned and zoned as forest or agricultural lands (including rangeland), or it must have met these criteria as of July 1, 1997.

Program Operational Structure and Characteristics: Landowners with eligible land must develop a management plan in consultation with an agency biologist. The plan must detail measures the landowner will implement to preserve, enhance, or restore the riparian area. When both parties approve the plan, an agreement is signed and the county assessor is notified of the transaction. The landowner must also complete a county application form. The tax exemption takes effect at start of the next calendar year.

Number of Participants: 111

Resources Impacted by Program: 1,047 acres

Other Measures of Program Success: N/A

Challenges Encountered: This program has had limited participation largely because it only applies to agricultural and forest lands which already have low tax rates. The program has not created a great enough incentive to encourage participation by many landowners.

Characteristics of Incentives: N/A

Staff Resources: 25 part-time field and headquarters personnel contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation provides the program funding.

Source for Additional Information: <http://www.dfw.state.or.us/ODFWhtml/InfoCntrHbt/riparianbroch.pdf>

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Oregon Wildlife Habitat Conservation and Management Program

Key Implementing Agency(ies): Oregon Department of Fish and Wildlife (ODFW), Oregon Tax Assessors' Offices

Goals/Focus of the Program: To increase overall conservation efforts on private land

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1993

Legislative Basis: Oregon Revised Statutes 215.800-215.808.

Eligibility Requirements: Landowners with agriculturally zoned land

Program Operational Structure and Characteristics: A landowner with qualifying property must develop a wildlife habitat conservation and management plan in conjunction with a cooperating agency. Cooperating agencies include ODFW, the U.S. Fish & Wildlife Service, the Natural Resources Conservation Service, the Oregon State University Extension Service, or other persons with wildlife conservation and management training meeting the qualifications of administrative rules. After ODFW improves the plan and inspects its implementation, the landowner is provided a certified declaration to give to the county tax assessor. The assessor assesses the land at its value for farm use. ODFW reviews habitat conservation and management plans and inspects the property at least once every 2 years.

Number of Participants: 82

Resources Impacted by Program: 3,011,2.94 acres

Other Measures of Program Success: N/A

Challenges Encountered: This program is not mandatory for counties; many choose not to participate.

Characteristics of Incentives: N/A

Staff Resources: 25 part-time field and headquarters personnel contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation provides the program funding.

Source for Additional Information: <http://www.dfw.state.or.us/ODFWhtml/InfoCntrHbt/InfoCntrHbt.html>

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Pennsylvania Streambank Fencing Program

Key Implementing Agency(ies): Pennsylvania Department of Environmental Protection (DEP)

Goals/Focus of the Program: To improve water quality and reduce impacts on the Chesapeake Bay watershed and resources by reducing soil erosion and nutrient deposition caused by livestock

Incentive Category(ies): Direct Payment

Program Status: Operational since 1994

Legislative Basis: The Chesapeake Bay Program (authorized under the federal Clean Water Act, Section 117 (b))

Eligibility Requirements: Landowners with existing livestock operations along streams in the Susquehanna or Potomac River Basins are eligible.

Program Operational Structure and Characteristics: Program covers all costs associated with the materials for and installation of high tensile fence and one crossing or ramp. There is no limit on the amount of 1- or 2-strand fencing a landowner may receive. Participants must agree to do the following: sign a consent form for Department of Environmental Protection staff to enter their property, provide at least an average 12-foot stream corridor when installing the fencing, and maintain the fencing for at least 10 years. A participant agrees to refund payment to the program if maintenance guidelines aren't met. The Department of Environmental Protection makes periodic inspections of properties to confirm conformance with maintenance procedures.

Number of Participants: 212 since the beginning of the program

Resources Impacted by Program: More than 85 miles of critical stream reaches have been protected since inception of the program.

Other Measures of Program Success: Fencing projects have experienced a high level of compliance with maintenance guidelines.

Challenges Encountered: Landowner interest in the program exceeds available funding.

Characteristics of Incentives: \$1.6 million in cost share since the beginning of the program (figure includes some federal monies)

Staff Resources: 6 agency staff members contribute time to the program.

Program Operational Costs: N/A

Source for Additional Information: Pennsylvania DEP, Fact Sheet: DEP Stream Bank Fencing Program – Landowner Participation

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Rhode Island Farm, Forest, and Open Space Act Program

Key Implementing Agency(ies): Rhode Island Department of Environmental Management (DEM) with the Rhode Island Division of Taxation and County Tax Assessors' Offices

Goals/Focus of the Program: To encourage the preservation of agriculture and forestland by encouraging landowners to make a long-term commitment to reserve land for agricultural or forestry production or the maintenance of open space.

Incentive Category(ies): Property Tax Reduction

Program Status: Current form of program operational since 1980 (program roots go back to tax law circa 1956)

Legislative Basis: Farm, Forest, and Open Space Act (Chapter 44-27 and sections 44-5-39 through 41 of the Rhode Island General Laws)

Eligibility Requirements: Landowners with land of 10 or more acres qualifying as agricultural land, forestland, or open space are eligible.

Program Operational Structure and Characteristics: Landowners must submit an application fee of \$10, provide tax assessor office certification, and complete a 5-year forest management plan prepared by a professionally qualified forester and approved by the DEM. Every 5 years, landowners must update the forest management plan and submit evidence of work completed during the 5-year period. The DEM is the lead agency for applications from forest and farmland owners, and local tax assessor offices process applications from owners of open space land. The DEM completes inspections of each participating property at least once every 5 years. Forest management plans must incorporate one or more of suggested forest management objectives, such as watershed management, soil stability, and wildlife management.

Number of Participants: 113 parcels enrolled (2001)

Resources Impacted by Program: 17, 428 acres covered by management plans (2001)

Other Measures of Program Success: Program staff emphasize the number of land tracts now under management plans and the role of such plans in qualifying landowners for other types of assistance programs (e.g., federal programs). Contacts characterize the Farm, Forest, and Open Space Act Program as a good segue into further collaboration between landowners and the DEM and other natural resource agencies.

Challenges Encountered: Prior to recent modifications, the program experienced difficulties associated with the inconsistency of current use tax rates across municipalities and with the methodology that was used in determining the rates.

Characteristics of Incentives: N/A

Staff Resources: Program administered with 1 full-time employee equivalent.

Program Operational Costs: N/A

Source for Additional Information: Rhode Island DEM Office of Agriculture, Farm, Forest and Open Space Act

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Tennessee Greenbelt Program

Key Implementing Agency(ies): Tennessee County Tax Assessors' Offices, Tennessee Division of Forestry

Goals/Focus of the Program: To preserve agricultural and forest lands

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1976

Legislative Basis: Agricultural, Forest, and Open Space Land Act

Eligibility Requirements: Forest landowners who have at least 15 acres of forest under management are eligible. Agricultural lands must produce \$1,500 in annual income to qualify.

Program Operational Structure and Characteristics: Landowners contact county tax assessor. For forested lands, the landowner must have a management plan developed by a professional forester. The land is assessed at current use value based on agricultural or forest productivity. Landowners can enroll up to 1,500 acres per county in the program. The property is reassessed every 7 years, and if the landowner decides to convert the land he/she has to pay a penalty equal to savings from the previous 3 years.

Number of Participants: 183,314

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Lack of forestry personnel, especially at the Division of Forestry, to service reassessment demands.

Characteristics of Incentives: N/A

Staff Resources: 33 field foresters and each county's tax assessors contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: Species most commonly planted is loblolly pine.

Sources for Additional Information: Gottfried, Robert and Madelaine Haddican, The Effectiveness of Tennessee's Greenbelt Program in Preserving Forests: A Case Study

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Tennessee Reforestation Incentive Program

Key Implementing Agency(ies): Tennessee Division of Forestry

Goals/Focus of the Program: To achieve reforestation of steep slopes

Incentive Category(ies): Cost Share

Program Status: Operational since 1997

Legislative Basis: None

Eligibility Requirements: Open to landowners with marginal and highly erodible fields with a majority of soil classified and certified by Natural Resources Conservation Service (NRCS) as Land Classes VI, VII, VIII, or crop and pasture lands classified as “highly erodible” by NRCS.

Program Operational Structure and Characteristics: Landowners contact district forester for seedlings. After planting and inspections, landowners receive the cost share for 50% of costs, up to \$5000 in one year. There is a survival check of the trees after inspection and costs have been reimbursed. Landowners are obligated to maintain and protect planted trees for at least 10 years.

Number of Participants: 188

Resources Impacted by Program: 6,715 acres planted

Other Measures of Program Success: N/A

Challenges Encountered: Lack of funding to increase personnel as the program grows. The program does not cost share on cut-over lands.

Characteristics of Incentives: \$306,772 cost shared since 1997

Staff Resources: 33 field foresters who work part-time and 1 administrative staff person contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: Species planted most often is loblolly pine. The program has a state-dedicated funding source.

Source of Additional Information: <http://www.state.tn.us/agriculture/forestry/landowners/trip.html>

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Texas Landowner Incentive Program

Key Implementing Agency(ies): Texas Parks and Wildlife Department

Goals/Focus of the Program: To encourage landowners to practice conservation measures that benefit rare and endangered species on their properties.

Incentive Category(ies): Cost Share

Program Status: Operational since 1997

Legislative Basis: None

Eligibility Requirements: Open to all private landowners

Program Operational Structure and Characteristics: The application process includes a site visit from a Department biologist. The proposed project must benefit at least 1 rare species on the property; a rare species is defined as one federally or state listed as threatened or endangered, or included within the 1995 Endangered Resources Action Plan of Texas. The property that is the site for the project must be within the historic range of the targeted species. Results of management actions that can be documented in less than 5 years are preferred. The application selection committee consists of landowners along with natural resource agency representatives. Participants sign a project agreement or management plan and agree to allow biologists onto their property for periodic progress checks. The kind and amount of information recorded during the progress checks can be negotiated by the landowner. The program covers no more than 80% of the costs for each project. The maximum funding for each project is \$10,000 per year and can cover materials as well as labor for projects. A minimum of 10% of the funds will be retained until conclusion and final assessment of the project.

Number of Participants: 28 participants through 2000

Resources Impacted by Program: More than 6,500 acres have been impacted through habitat improvement projects targeting species, such as the lesser prairie-chicken, Attwater's prairie-chicken, the Texas poppy mallow, the Texas tortoise, and the ocelot. In addition, 200 traps have been distributed and operated to curtail cowbird parasitism of endangered songbird nests

Other Measures of Program Success: The program is unusual in that it sponsors projects that focus on threatened and endangered plant species, in addition to wildlife species in general.

Challenges Encountered: Landowner demand greatly exceeds available funding.

Characteristics of Incentives: \$446,057 awarded through 2000

Staff Resources: N/A

Program Operational Costs: N/A

Miscellaneous Information: The program was the first in the nation to target private landowner incentives specifically for the conservation of rare species.

Source for Additional Information: Texas Parks and Wildlife, Landowner Incentive Program, available at <http://www.tpwd.state.tx.us/consERVE/lip/lip.htm> and Texas Parks and Wildlife, Rewarding Reclamation.

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Vermont Better Backroads Program

Key Implementing Agency(ies): Vermont Department of Environmental Conservation, Vermont Local Roads Program, Vermont Resource Conservation and Development Councils

Goals/Focus of the Program: To protect and enhance the water quality of Vermont's lakes and streams by promoting the use of erosion control

Incentive Category(ies): Cost Share

Program Status: Operational since 1994

Legislative Basis: None

Eligibility Requirements: Program applies to public and private roads that pose a threat to water quality through erosion. The proposed erosion control work should not be already required by town, state, or federal regulations.

Program Operational Structure and Characteristics: Municipalities, private landowners, and neighborhood groups with project ideas submit an application, which includes a location map, an itemized materials list with cost estimates, photos of the location, and a sketch of the proposed erosion control project. A maximum of \$5,000, or 66% of the project costs, can be awarded. Upon project completion, a documentation form, including color photos of the site before and after, must be submitted. Also, a newspaper article must be written to publicize the project. Reimbursements are made at the time of completion of the projects. 25% percent of projects are checked later for maintenance.

Number of Participants: 3 private landowners since 1994 (and over 60 public lands projects)

Resources Impacted by Program: N/A

Other Measures of Program Success: Program staff note that the quality of proposed project ideas has steadily increased since the program began. Also, program has improved relationship between partnering groups.

Challenges Encountered: Proposed projects exceed available funding.

Characteristics of Incentives: Approximately \$64,000 available for cost share in 2000

Staff Resources: Program administered by equivalent of 2.5 full-time employees

Program Operational Costs: N/A

Sources for Additional Information: Vermont Better Backroads: Clean Water You Can Afford (1997) and Vermont Better Backroads Manual (1995), <http://www.anr.state.vt.us/dec/waterq/lakespro.htm#backroads> and <http://www.anr.state.vt.us/dec/waterq/resources.htm#lwpp>

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Vermont Use Value Appraisal (UVA) Program

Key Implementing Agency(ies): Vermont Forests, Parks, and Recreation Agency, Vermont Department of Taxes

Goals/Focus of the Program: To encourage long-term productive use of Vermont's forest land and to provide an incentive for maintenance of contiguous blocks of private forest land

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1980

Legislative Basis: The Use Value Appraisal Law (as amended by Vermont Acts No. 220 (1984), 262 (1986), 57 (1987), 200 (1988), 178 (1996), and 60 (1997)) (Vermont General Law Title 32, Chapter 124, §3751-3776)

Eligibility Requirements: Land must be in contiguous blocks of at least 25 acres and not contain housing or other development.

Program Operational Structure and Characteristics: Preparation of a management plan, or conservation plan for land not in crop production, is required. An annual conformance report and a 5-year inspection are also required. All changes to activities covered by the plan must be approved by county foresters. Management or conservation plans must be updated every 10 years. The standards for the management plans are established by the Commissioner of Forests, Parks, and Recreation. County foresters administer the management/conservation plan requirements and complete the 5-year inspections of participating properties.

Number of Participants: Approximately 8,200 land owners (1999)

Resources Impacted by Program: More than 1 million acres are enrolled in the program (1999).

Other Measures of Program Success: As of 1999, approximately 30% of potentially eligible Vermont forest land is enrolled in the UVA program.

Challenges Encountered: Insufficient funding has curtailed growth of the program and resulted in enrollment moratoriums in certain years. A lack of resources to complete the inspections is also a problem.

Characteristics of Incentives: \$13-14 million annually

Staff Resources: Program administered with the equivalent of 4-5 full-time employees

Program Operational Costs: \$120,000 annually

Miscellaneous Information: In 1997, the program was amended so that towns with participating properties incur reduced school tax liability, thus allowing the costs of supporting the UVA program to be shared across a statewide level.

Source for Additional Information: Vermont Forests, Parks, and Recreation Agency, Use Value Appraisal Program Manual, June 2000, available at <http://www.state.vt.us/anr/fpr/forestry/>

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Virginia Riparian Buffer Tax Credit Program

Key Implementing Agency(ies): Virginia Department of Forestry

Goals/Focus of the Program: To protect riparian habitat

Incentive Category(ies): Tax Credit

Program Status: Operational since 2000

Legislative Basis: V.S.C 58.1-439.12.

Eligibility Requirements: Landowners with a Forest Stewardship Plan and timber harvesting operations on riparian habitat

Program Operational Structure and Characteristics: The landowner applies to the state forester, who determines the amount of credit and issues a certificate to the taxpayer. The taxpayer attaches the certificate to the Virginia tax return on which the credit is claimed. Tax credits can be for up to 25% of the timber value in the buffer area, up to a total of \$17,500. The buffer is not to be moved for 15 years, but initially the landowner can harvest up to 50% of the canopy cover. The buffer must be a minimum of 35 feet from the stream or river.

Number of Participants: approx. 25

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Lack of awareness by the landowners. Usually the more urban landowners take advantage of this tax credit because they are more aware of it.

Characteristics of Incentives: N/A

Staff Resources: 2-3 foresters in 100 counties contribute to the program.

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation provides the funding for the program.

Source for Additional Information: <http://www.cnr.vt.edu/forestupdate/Volume15/15.1.1.htm>

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Washington Salmon Recovery Grant Program

Key Implementing Agency(ies): Washington Salmon Recovery Funding Board

Goals/Focus of the Program: To enable salmon recovery and habitat restoration

Incentive Category(ies): Direct Payment

Program Status: Operational since 1999

Legislative Basis: R.C.W: 77.85

Eligibility Requirements: Landowners must get a sponsoring agency to serve as the lead entity in applying to the program funding board.

Program Operational Structure and Characteristics: If a private landowner decides to apply for funding, he or she must go to the coalition of local citizens groups and ask the lead entity to apply to the funding board. The term of the projects varies, depending on project.

Number of Participants: 307 projects since 1999 (not all are on private land)

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Salmon issues are contentious, and this program can only target river habitat restoration, not dams, fishing efforts, or marine habitat.

Characteristics of Incentives: Biennial budget is \$15 million

Staff Resources: 15 full-time and 20 part-time personnel contribute to the program.

Program Operational Costs: N/A

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Washington Open Space Taxation Program

Key Implementing Agency(ies): Washington State County Tax Assessors' Offices

Goals/Focus of the Program: To preserve open space

Incentive Category(ies): Property Tax Reduction

Program Status: Operational since 1970

Legislative Basis: Open Space Taxation Act, RCW 84.34

Eligibility Requirements: To qualify, owners of forestlands must have at least 15 acres of forest under management. Agricultural lands must produce \$1,500 in annual income to qualify.

Program Operational Structure and Characteristics: Landowners contact county tax assessor. For forested lands, the landowner must have a management plan drawn up by a professional forester. The land is assessed at current use value based on agricultural or forest productivity. Open space land is assessed at a value depending on benefits to the public; it will not be assessed at a higher value than agricultural lands. The classified land must not be changed for 10 years in order to avoid a penalty of 7 years of back taxes at the highest rate.

Number of Participants: N/A

Resources Impacted by Program: 12 million acres

Other Measures of Program Success: N/A

Challenges Encountered: Loss of tax revenue and shifting of tax burdens to others. Also, it is up to the tax assessors to determine the qualification of properties, and some properties are enrolled in the program when they should not be.

Characteristics of Incentives: N/A

Staff Resources: N/A

Program Operational Costs: N/A

Miscellaneous Information: General state funds allocation provides the funding for the program.

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Wisconsin Forest Landowner Grant Program

Key Implementing Agency(ies): Wisconsin Department of Natural Resources

Goals/Focus of the Program: To encourage stewardship practices on privately-owned forest land

Incentive Category(ies): Cost Share

Program Status: N/A

Legislative Basis: N/A

Eligibility Requirements: Forested land tracts under 500 acres are eligible.

Program Operational Structure and Characteristics: Participants must complete an application form and have an approved Forest Stewardship Plan in place. The Department of Natural Resources approves Forest Stewardship Plans and program applications.. Practices eligible for funding include management plan development, wetland restoration, tree planting, forest improvement, prairie restoration, and other approved practices for fishery and wildlife habitat enhancement. Up to 65% of eligible costs are refunded upon completion of work. Maximum cost share is \$10,000 per year.

Number of Participants: N/A

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: N/A

Characteristics of Incentives: N/A

Staff Resources: N/A

Program Operational Costs: N/A

Source for Additional Information: <http://www.dnr.state.wi.us/org/land/forestry/Private/financial/wflgp.htm>

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Wyoming Habitat Grant Program

Key Implementing Agency(ies): Wyoming Game and Fish Department

Goals/Focus of the Program: To assist local entities -- landowners, land managers, and conservation groups -- with their habitat improvement projects

Incentive Category(ies): Cost Share

Program Status: Operational since 1996

Legislative Basis: None

Eligibility Requirements: Open to all private and public lands

Program Operational Structure and Characteristics: Landowners contact local biologists and carry out management plans created by biologists. The landowner must provide a 50% matching contribution to cost either in money or in kind. Maximum amount that can be granted is \$10,000. Projects include riparian, wetland, and upland habitat enhancement. There is a 15-year obligation for all participating landowners. Maintenance is provided by the landowner.

Number of Participants: 260

Resources Impacted by Program: N/A

Other Measures of Program Success: N/A

Challenges Encountered: Lack of personnel and funding are the major obstacles. Lack of personnel prohibits monitoring activities. Habitat extension biologists are not considered full-time employees and contract with the agency on a part-time basis, which hinders the quality of extension services that the agency can provide to landowners. This problem is considered a legislative oversight, beyond the power of the agency.

Characteristics of Incentives: \$350,000 per year

Staff Resources: 17 part-time biologists contribute to the program.

Program Operational Costs: N/A

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AGGREGATE ANALYSIS OF INCENTIVE PROGRAMS

In this section, we look across the programs to gain a better sense of the incentives program universe in the aggregate. Upon first glance, some basic characteristics of the program universe include the following:

- More than two-thirds of the programs have a legislative mandate backing them.
- The median number of years in which the programs have been in operation is 10. The range is between 1 and 80 years.
- Tax programs have been in place the longest. The Indiana Classified Forest Program is the oldest incentive program, dating back to 1921.
- Other types of incentive programs have emerged mainly in the last decade or so.
- Natural resource agencies and fish, wildlife, and game agencies are the most common implementers of the incentive programs.
- No strong geographic trends appear to exist among the incentive programs, although the Southwest and New England regions have relatively low numbers of programs.
- With five programs each, Illinois, Minnesota, and Maryland are the states with the most programs in our study. California, Colorado, and Indiana each have four.

Going deeper in the analysis, as previously discussed, we encountered difficulties due to data limitations. For many programs, even basic information was hard to locate. Data evaluating the performance of programs was almost non-existent. Working with the information available, we examined the universe with regard to the following areas:

- Program focus areas
- Eligibility requirements
- Economic incentives
- Program resources
- Program implementation
- Activity and accomplishments.

Program Focus Areas

When reading program literature and talking to program staff, we found that incentive programs have differing objectives, as well as various degrees of scope or focus. Using the

specified objectives for the programs, we classified the programs based on program area focus. These program focus area classifications are provided in the box below.

Focus Areas of Landowner Incentive Programs	
General Habitat	28%
Game Conservation	25%
Non-Game Conservation	8%
Forests	17%
Other Ecosystem Focus	22%

The largest number of programs are dedicated to general habitat improvements. A significant number of programs also focus on conservation of game species. The game species of most interest are elk, deer, and moose and pheasants and other fowl. The remaining programs are split mainly among specific ecosystem-related goals, such as the conservation of forests (17%) and the conservation of native prairies, wetlands, lakes, and streams (22%). Notably, only four, or roughly seven percent of the programs, have a specified focus on non-game species, suggesting that the programs, by and large, are not being used as priority tools to conserve rare or endangered species. These four exceptions are the following:

- *Arkansas Wildlife Habitat Enhancement Program*, which includes a focus on endangered bat populations.
- *Maryland Waterfowl Restoration Program*, which aims to create and protect habitat that serves a variety of wetland-dependent wildlife species.
- *Minnesota Native Prairie Tax Exemption Program*, which encourages the recovery of native prairies.
- *Texas Landowner Incentive Program*, which funds habitat projects that benefit rare and endangered species.

Also, few very programs include an overt focus on plant species outside of those targeting either forests or other vegetation that provides wildlife food or habitat. The exceptions are the last two programs listed above, the Minnesota Native Prairie Tax Exemption Program and the Texas Landowner Incentive Program. Both programs include efforts dedicated to restoring rare or endangered plant populations.

Eligibility Requirements

Overall, the incentive programs do not set forth many specific eligibility requirements beyond ensuring a match between a piece of private property and the basic goals of the program. For example, the wetland-focused programs require that property meets the established definition for a wetland, and many of the erosion control programs require that a piece of property pose a documented threat to a water course. Most programs are open to any private landowner proposing any of a number of habitat improvement measures for a piece of land.

The major exceptions are acreage and land use requirements of programs targeted toward agricultural and forest lands. Usually, these two program types impose both acreage prerequisites (usually between 15-20 and up to 500 acres) and minimum income levels generated by the property (on average, a total income of \$1,000 annually). The Georgia Preferential Assessment for Agricultural and Forestry Property Program is unique in requiring that a landowner receive at least 80 percent of his or her income from agriculture in order to participate. The habitat programs that do impose acreage prerequisites set a lower minimum, usually around 10 acres. The Colorado Ranching for Wildlife Program stands out in that its minimum acreage requirement is 12,000 contiguous acres.

Rather than lay out specific eligibility requirements, incentive programs appear to rely on the selection process to focus on the projects that best meet the project's goals. Notably, a judgment about habitat quality overall does not appear to be part of the selection criteria for many programs. California's Private Land Management Program and the Arkansas Wildlife Habitat Enhancement Program are unique in carefully considering potential quality of the habitat to be created by proposed projects.

Economic Incentives

As previously mentioned, the programs fall into four main categories with respect to the type of economic incentives offered: tax benefits, cost share, grants or direct payment, and hunting-related benefits. No connection between program focus area and the type of economic incentives employed appears to exist beyond the popularity of tax benefits for forest protection programs. The tax benefit programs as a group make up approximately 32 percent of all of the

programs. Tax credits and a property tax reduction or exemption are the two kinds of benefits offered in these programs.

A common mechanism is current use valuation, where agricultural land, forest land, or land dedicated to conservation is taxed at a lower value than that for its highest possible income use. The tax rate varies across states and land types, but 75 percent of fair market value is a representative figure. The Minnesota Native Prairie Tax Exemption Program and the Indiana Classified Forest Program stand out in that they impose a nominal tax on targeted land, between \$2 and \$5 per acre and \$1 per acre, respectively. Other programs approach the tax benefits differently, allowing deductions – usually from 50 to 75 percent – for specific conservation projects performed.

Many tax programs represent partnerships between local tax assessment offices and a state’s natural resources agencies. We found that the total savings generated by the tax programs are not well-known among the natural resource agencies, though we know that the figures can vary widely across programs. Within the state of Georgia, for instance, one tax program has produced an average annual tax savings of approximately \$300,000 (Preferential Assessment for Agricultural and Forestry Property), while another tax program has produced an average annual savings of \$30,000,000 (Current Use Valuation of Conservation Use Properties).

Of the non-tax programs, cost-share programs are by far the most common. Programs that use direct payments and those that administer more than one type of incentive – often a combination of direct payment and cost share – are the next most common. Only two programs, or approximately 5 percent of the programs we covered, rely on hunting-related benefits as their sole incentives. The distribution of non-tax incentives is shown in the box below.

Types of Non-Tax Landowner Incentive Programs	
Cost Share	64%
Direct Payments	13%
Hunting Benefits	5%
Two or More Incentive Types	12%

The cost-share programs differ widely with respect to the amount of funding that agencies provide and the amount that landowners are expected to contribute. The average

program contribution is around 70 percent of a project's costs, up to an average maximum of \$5,000. Interestingly, two water quality programs, the Maryland Agricultural Water Quality Cost-Share (MACS) Program and the North Carolina Agriculture Cost-Sharing Program, offer a much greater amount of cost share – up to \$20,000 and \$75,000 per project, respectively.

The Ohio Wetland Restoration Program stands out in the way in which it combines cost share and direct payment. Under the program, if a landowner signs a contract to maintain certain conservation practices for 10 years, he or she may receive a 50 percent cost share up to \$500 per acre. If the landowner signs a contract for 20 years, however, she or he receives a direct payment to cover 100 percent of a project up to a maximum of \$1,000 per acre. The Illinois Streambank Stabilization and Restoration Program also differentiates between cost share and direct payment by funding 100 percent of its cost-share projects that are deemed to be of high visibility and environmental educational value. The available data on direct payment programs overall indicate that awards are often provided on a per acre value, ranging from \$7 to \$30 per acre.

The Colorado Habitat Partnership Program, the Colorado Ranching for Wildlife Program, and the California Private Land Management Program are the three programs that offer hunting-related incentives. In the case of the Colorado Habitat Partnership Program, participants are allowed to conduct off-season hunting for their own private use or for paid enterprise. Similarly, in the other two programs, additional hunting fee licenses are granted to participants. The landowners can sell these licenses for their fair market value, which can approach as much as \$6,000 per license for the right to take a bull elk.

Program Resources

In general, the incentive programs are funded three different ways: monies from a state's general budgetary allocation; monies from a dedicated funding source; or monies from multiple sources, including state, federal, and non-governmental organizations. In the majority of cases, the sale of hunting licenses or of habitat stamps, or taxpayers who contribute to tax donation check-off programs generate the dedicated sources of monies.

A precise analysis of incentive program budgets is not possible, given a lack of data. For most programs, we were unable to gather separate estimates for operational costs and the value of incentives distributed. Usually the data were not available because the incentive programs

draw in large part on shared funds and personnel that are part of the collective resources of their implementing agencies.

Based on the figures we were able to collect, we estimate that 10 to 25 percent of incentive program budgets are spent on operational costs. This range translates into approximately \$78,000 per year for the programs with available data, which are all among the larger-sized programs. The available data also suggests that non-tax programs drawing largely on general state funds – versus dedicated funding sources – appear to distribute slightly higher amounts of incentives per year and when applicable, have higher numbers of acres enrolled. However, with regard to staff resources, programs with dedicated funding sources appear to have higher numbers of full-time staffing. Almost all incentive programs are administered by less than five full-time employee equivalents (i.e., full-time employees plus part-time employee time).

Program Implementation

All incentive programs begin with a relatively similar process, in which landowners submit applications and participants are selected. The amount of detail required on application varies, with roughly half the programs using a fairly simple form that only requires basic personal information and a description of the proposed project. The other half of the programs require more information, such as a map or photos of the proposed project site, a sketch of the proposed conservation measures if applicable, and details about previous conservation measures employed on the property. An initial inspection of the proposed project site is a common feature among the incentive programs.

With regard to making the participation selection decisions, the programs follow one of two basic models. Under the first model, staff members administering a program, such as the district forester or agency biologists, decide whether to select a landowner for participation. This model is followed by all of the tax programs targeting forest conservation. Under the other model, a program assembles a selection panel that makes the decisions. In the Texas Landowner Incentive Program, for instance, a panel consisting of natural resource agency staff, private landowners, and environmental non-governmental organization representatives makes the selection decisions.

A common requirement for landowner participation in incentive programs is the preparation of a habitat or conservation management plan. More than half the programs require landowners to either prepare such a plan prior to selection or work with agency staff to prepare one as part of program participation. Almost all programs targeting forest conservation and water quality require management plans.

More than a fourth of incentive programs require that the landowner and the implementing agency sign an agreement. In such an agreement, the landowner pledges to maintain the particular conservation measures for a specified length of time. The standard contract agreement is for 10 years, though it ranges from 5 years to permanent enrollment. Tax benefit programs, especially those targeting forest conservation, are the ones with permanent enrollment and more often than not impose tax penalties for withdraw from the program. In contrast, a number of the cost-share programs involve one-time activities and have no stipulations for maintaining the funded measures.

Overall, incentive programs rely on the landowner's goodwill to ensure that the conservation practices are maintained. Less than half the programs include formalized monitoring procedures. What monitoring there is tends to be periodic, occurring every couple of years, and selective, meaning that only a portion of program projects have undergone the most recent inspections. No programs appear to conduct formal wildlife community or population surveys or other quantitative monitoring procedures.

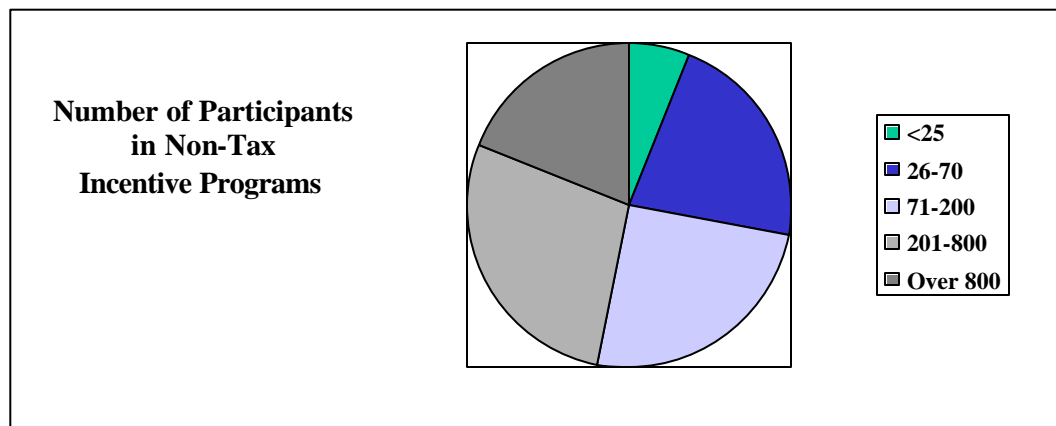
Another interesting aspect of implementation is the role played by environmental non-governmental organizations and other community members in some of the programs. In addition to partnering with tax assessor offices and federal agencies, a number of state agencies draw on the resources of environmental non-governmental organizations, hunting organizations, universities, and other community groups and institutions in implementing incentive programs. Such groups play a vital role in at least 15 of the programs. For example, in the Arkansas Wildlife Habitat Enhancement Program, Arkansas chapters of Ducks Unlimited and the National Wild Turkey Federation play a significant role in providing technical assistance to landowners and in promoting the program among their members and others. In the Indiana Game Bird Habitat Partnership/Development Program, Quail Unlimited pays 50 percent of the cost share for habitat improvement projects. The Illinois Furbearer Fund, Habitat Fund, and Pheasant Fund Programs are examples of programs that require landowners to be sponsored by a community

group, a university, or other institution or agency. The Colorado Pheasant Habitat Improvement Program incorporates educational opportunities into its projects by contracting some of the habitat improvement work to the Boy Scouts and other community organizations.

Activity and Accomplishments

The lack of evaluation data on the incentive programs makes it challenging to judge their accomplishments with a high degree of certainty. One way to examine program activity is through landowner participation numbers. We found that tax programs tend to have the most participants, usually in the hundreds or thousands. The Tennessee Greenbelt Program, for instance, appears to have the highest number at over 183,000 participants. Programs targeting agricultural lands also consistently have relatively large numbers of participants. However, in general, participation figures do not appear to show any strong correlation with program focus, type, or value of incentives provided, program requirements, or geographic location. The figure below depicts a rough distribution of non-tax incentive programs with respect to participation numbers. We were somewhat surprised to find that large participation numbers (i.e., between 201 and 800 over the course of the program) are relatively common.

Another way in to look at program activity is to try to quantify the natural resources impacted by the programs. Many programs lack the capacity to measure these impacts even in terms of acres enrolled or practices performed, much less in terms of actual effects on wildlife populations. For those programs for which data are available and acres are an appropriate unit of



measurement, over two-thirds have more than 1,000 acres enrolled. This figure is true even exempting the tax programs, which as in the case of participating landowner numbers, tend to have the largest acre enrollment. Unlike the figures for participating landowners, the quantity of acreage enrolled (in those programs where it is applicable) seems to correlate most with the program characteristics of incentive type (i.e., tax benefits or other) and the number of years in which the program has been operational.

As mentioned above, practices performed or some other measure is often more appropriate to characterize the activity of incentive programs. For instance, projects might be described in terms of levees built, shrubs planted, miles of streambed protected, or even number of parasitic cowbirds removed. Some examples follow:

- *Arkansas Wildlife Habitat Enhancement Program:* Projects have constructed over 40 wildlife watering holes, created 640 forest wildlife clearings, planted approximately 1,230 acres of hardwood trees, and enhanced more than 18 miles of woodland edges and field borders for early successional wildlife.
- *Texas Landowner Incentive Project:* 200 traps have been distributed and activated to curtail cowbird parasitism of endangered songbird nests.
- *Alaska Kenai River 50/50 Cost Share Program:* 25,000 feet of riverbank has been protected or restored.

To translate these results into benefits for wildlife, program staff almost always have only anecdotal evidence. For instance, in programs that create wetland habitat or bird and bat nesting structures, staff note that observations of new populations can be almost immediate. For other programs with more subtle or long-term habitat improvements, it is more difficult to characterize project accomplishments.

When speaking of the impact of the programs, staff members also point to other types of benefits outside of those directly linked to habitat. A number of program contacts noted that the programs are great for building relationships between landowners and agency staff and for introducing landowners to additional technical assistance and conservation education opportunities. Several program contacts also pointed out that the incentive programs create a great foundation for developing conservation partnerships between state agencies, environmental non-governmental organizations and other groups, and community residents.

INTERPRETATION OF FINDINGS ABOUT INCENTIVE PROGRAMS

When looking across the aggregate analysis of the incentive programs, we note two different kinds of important trends, one involving characteristics for success, and the other, common obstacles to success. In this section, we describe each trend.

Characteristics for Success

We have identified two implementation characteristics that we deem to be significant determinants of incentive program success. The first is the broadly defined strategy of *leveraging resources*. By leveraging resources, we mean both finding a way to utilize a variety of different funding sources and accomplishing program implementation through the involvement of other organizations. For example, many of the projects that seem to show the most tangible results have close ties to Ducks Unlimited, The National Wild Turkey Federation, and other hunting groups. Hunting groups have a strong motivation to protect and enhance certain types of habitat and can contribute funds as well as publicity, manpower, and technical assistance for the conservation projects. Likewise, environmental non-governmental organizations and universities appear to play a significant role by taking part in the project proposal and selection process of many of the stronger programs. Finally, several of the programs with a community partnership approach have consciously incorporated an educational component, for example, by involving students in the project work. Not only does such involvement enable implementers to extend program outreach, as well as promote conservation in general, it also helps in the significant area of winning community support for the landowner incentive efforts.

The second characteristic for success concerns the kinds of project proposals accepted by the incentive programs. We have noticed that the stronger projects often appear under the programs that encourage *place-based, landowner driven proposals*. These programs are the ones that require a habitat management plan to be in place at the time of application and use flexible criteria when selecting projects. The program's selection procedures also involve having agency biologists examine a proposed project in the overall ecological context of the landowner's property. We propose that landowners will be more personally invested in maintaining

conservation measures that are part of an overall ecological approach, rather than just part of a checklist of fundable practices.

Common Obstacles

Given the diversity of incentive programs, we were surprised by the commonality of the obstacles that we observed. By far the most common problem expressed to us by program staff is a *lack of funding*. Program contact after program contact indicated funding is not adequate to expand their programs or even meet consistent levels of demand. In fact, precarious funding is a common threat to the existence of the programs and in some cases, like that of the Alaska Kenai River 50/50 Cost Share Program, has ended a successful program. For those programs that manage to continue, a lack of funding not only limits distribution of incentives, but also hurts other important program aspects like the monitoring of project results.

Thus insufficient funding is a factor behind another program obstacle, a *lack of data on baseline ecological conditions and on the effects of specific habitat improvements*. The lack of data on baseline ecological conditions is often an agency-wide problem, as natural resource agencies lack the resources to monitor wildlife populations and habitat conditions. Even less likely is that agencies would have gained the permission to collect the necessary data on private lands. This lack of baseline data is one reason programs cannot record the impacts of the ir habitat projects. The long-term nature of and the difficulties behind the necessary ecological monitoring is another dimension of the problem. However, without the ecological data, incentive programs will experience difficulties justifying their expenditures and learning which kinds of projects are most beneficial.

A final obstacle to the program's conservation goals is one that is not recognized by most program staff. The obstacle involves the *uncertainty regarding the temporal component of habitat improvements*. As discussed earlier, many programs have no specific temporal requirements. Even for those programs that require maintenance of a habitat improvement for 10 or more years, much uncertainty exists about what will happen to the habitat when the contract ends. Tax programs aimed at forest conservation are really the only ones that impose economic penalties if an owner makes land use changes on a piece of enrolled habitat. If the participating landowner – or a new landowner – decides to change the land use of a piece of property (i.e., clear-cut a forest tract), there might be a net loss in diversity if the area has succeeded in

attracting species populations. Implementing agencies are justified in asking whether the incentive programs are cost-effective, given the inevitably temporary nature of many of the conservation measures.

CONCLUSIONS

We conclude our study with two final sections. First, we present a series of recommendations for incentive programs resulting from our research and analysis. Second, we outline areas we have identified as important for future research concerning private landowner incentive programs.

Recommendations

We have formulated three main recommendations for incentive program implementation, drawing in large part on our review of common obstacles to success. First, we suggest that *implementing agencies take a more rigorous scientific and ecological approach in program design, implementation, and monitoring*. Recognizing the difficulties arising from lack of necessary resources, we have generated a few ideas to try to accomplish this aim in a cost-effective manner. For instance, we recommend that programs consider replacing a number of different isolated projects with a more focused effort that concentrates resources on the most critical areas and habitat improvements (e.g., the creation of wildlife corridors across multiple properties). Also, we recommend that more programs encourage specific, place-based project proposals versus the application of a number of off-the-shelf practices. Finally, to make further data collection and monitoring possible, we suggest that programs encourage hunting groups, environmental non-governmental organizations, students, and other community members to take part in these activities.

As a related recommendation, we suggest that *implementing agencies work to have their programs included in the ongoing state critical habitat and gap analyses*. A number of states are in the process of using global information system technology to create maps of critical habitat areas and gaps. Including state and federal landowner program coverage as a data point within these analyses would help agencies determine where habitat improvement efforts would be most beneficial, such as for the creation of wildlife corridors.

The third recommendation concerns *achieving greater leveraging of resources*. In the section of characteristics for success, we stressed the importance of drawing on the resources of other groups. We suggest that programs that have not yet partnered with a hunting or conservation organization consider doing so. Such groups have strong motivations to take part in habitat improvement projects and can contribute a variety of resources – financial and otherwise – to the efforts. Further, we recommend that incentive programs look for even more creative funding tie-in opportunities by working with state tourism development agencies, for example, to explore farm tourism and wildlife viewing possibilities for landowners who might be interested in generating income from those activities. One case where such creative tie-in activities are taking place is South Texas, where the Attwater Prairie Chicken Festival and the Adopt-A-Prairie-Chicken programs educate residents about rare and endangered wildlife species and generate support for landowners taking part in conservation efforts.

Areas for Further Research

It is important to stress that this study represents only a preliminary examination of landowner conservation incentive programs. In conducting our analysis, we identified three areas that are beyond the scope of this study but that deserve further attention. These areas are as follows:

- *The effect of game and hunting-focused incentive programs.* Given the dominant role that game species conservation and programs aimed at enhancing hunting opportunities play within this area, we suggest that more research needs to be done to look at the impacts of these efforts on non-game species and biodiversity overall. The effect of the programs on the conservation possibilities for rare, threatened, and endangered species should receive special consideration.
- *The conservation context of a changing landscape.* Given the trends toward development and property fragmentation, an important question to ask concerns the present and future applicability of the landowner incentive programs. Implementing agencies must investigate whether landowner practices on smaller, fragmented land parcels can really have an impact on conservation, especially for more fragile populations of threatened or endangered species.

- *Questions involving the Endangered Species Act (ESA).* We were surprised to find a lack of concern with how the landowner responsibilities and benefits conveyed by the state programs fit into the ESA framework. A number of scenarios are possible in which the landowner responsibilities and benefits of these programs are called into question by superseding federal law. Implementing agencies must consider the possible takings situations that might be generated should a participating landowner successful in attracting an endangered species decide not to maintain the voluntary measures responsible for creating the habitat for the species.

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