Habitat Conservation Incentives Workshop - Background Papers

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Session 1A – Farm Bill Incentive Programs

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FARM BILL PROGRAMS

Background: Why are Farm Bill Programs Important

Farm Bill conservation programs have the potential to proactively restore and conserve wildlife habitat and species, both for species already listed, but more importantly, to prevent additional listings. Farm Bill conservation incentives programs are applicable to all ecosystem types where farming, ranching and forestry still take place. Current programs target about 75% of the rural landscape, thus a multitude of ecosystem types can be addressed. Additionally, the amount of funding authorized in the 2002 Farm Bill for resource conservation is over $5 billion a year, which dwarfs any other item in the federal budget for resource conservation. A portion of this funding is directly aimed at wildlife habitat or species restoration and conservation activities. Lastly, Farm Bill incentive programs are voluntary and preventative in nature, thereby having the potential to supplement a more regulatory approach.

Although most are aimed at improving water quality and stemming soil erosion, Farm Bill conservation programs may have indirect beneficial impacts for wildlife habitat. The Wildlife Habitat Incentives Program, the Wetland Reserve Program, and in some places the Conservation Reserve Enhancement Program, are directed at wildlife habitat for both listed and non-listed species at risk. The primary problem with determining the impacts of Farm Bill programs that address habitat conservation is that there is no effective monitoring or evaluation of program or project impacts. A recent report by the Wildlife Habitat Management Institute (USDA 2000b) concluded that there is little direct evidence thus far on the impacts of Farm Bill wildlife habitat or species recovery, with the possible exception of the Conservation Reserve Program.

There is some indirect evidence of beneficial, but limited, application of Wildlife Habitat Incentives Program projects on habitats for listed or at-risk species. In 1999, 10 percent of the total area enrolled in this program (about 72,000 acres) was aimed at habitats of species listed as threatened and endangered (NRCS 2000). Although the area for listed species increased to 15

percent in 2001, total acreage was less at 31,000 acres (NRCS 2004). In some states, threatened and endangered species and their habitats have been prioritized for program assistance[1].

Barriers to Increased Effectiveness and Efficiency

There is a lack of targeted state-level conservation strategies for native at-risk wildlife habitat and biodiversity that exist on private lands, including those under agricultural ownership and production. With the exception of the State of Florida, Farm Bill wildlife conservation funds have not been directed at areas identified in any planning process that have been determined to be strategically important for conservation purposes. This may be due to the strictly voluntary nature of these programs and evaluation criteria that do not take into account the relative risks to some habitats and species over others. There is a need for well articulated targeted strategies that guide all federal habitat conservation programs.

The technical service infrastructure to deliver state-of-the-art and science-based advice to private landowners concerning species or habitat conservation and recovery is fragmentary and absent in large stretches of the country. Technical services lack sufficient numbers of wildlife biologists to help with conservation planning and implementation. Furthermore, those traditional partners that assist U.S. Department of Agriculture in implementation of resource conservation projects have not had a high degree of interest in biodiversity or addressing endangered species issues. Federal funding for technical assistance to deliver conservation programs, and for the research and development of new conservation technologies, has actually declined over the last ten years.

There are numerous Farm Bill programs that impact wildlife habitat, either directly or indirectly, each with its own set of rules and incentive measures to encourage participation. While this situation may have some advantages in terms of the types of resource problems that are addressed and the incentive mechanisms available to producers, it can cause landowners to incur substantial search and transactions costs that discourage participation. The numerous, and sometimes redundant, conservation programs are complex and difficult to understand because each has multiple information, eligibility, and technical assistance requirements. The fragmentation and complexity of conservation programs contribute to administrative and implementation costs.

The Farm Bill habitat conservation programs, as well as other soil and water programs, have been "practice-based" as opposed to "outcome-based." With the exception of the impacts of Conservation Reserve Program on bird populations, there has been no comprehensive system for monitoring and evaluating the impacts of resource conservation practices on native plant and animal species, nor the economic incentives employed to attain resource conservation goals. Program performance has been traditionally monitored and evaluated by the numbers of acres, participants, types of practices installed and dollars spent. There is a need to measure the biological performance of habitat and species conservation programs in order to achieve the most technically efficient and cost-effective means of accomplishing desired goals.

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[1] States that have indicated that their primary goal is improving conditions for threatened and endangered species include Arizona, Colorado, Kentucky, Maine, Maryland, Montana, New Jersey, Nevada, and New Mexico (Burke 1999).

Related to the point above, a major barrier in Farm Bill conservation programs is the lack of concrete, stated priorities for what we want these programs to achieve. Instead, programs like the Environmental Quality Incentives Program, the Conservation Security Program, the Conservation Reserve Program, and even the Wildlife Habitat Incentives Program are guided by eligibility criteria and/or some sort of largely un-weighted ranking criteria. Those criteria allow for multiple objectives ranging from soil conservation to endangered species habitat to water quality improvement. The lack of stated objectives also leads directly to the practice-based versus outcome-based approach.

The increasingly fragmented nature of land tenure in agricultural landscapes is a real barrier to all conservation efforts on agricultural land, but it may be more serious for biodiversity conservation, especially if we are seeking more permanent change in land use. Another set of barriers is related to support mechanisms for maximizing production of low value commodity crops on as broad a scale as possible. Commodity support programs targeted to maximum production of selected row crops can work at cross purposes to habitat conservation programs and act as a disincentive to habitat preservation or enhancement. Similarly, marketing and research programs that focus on increasing yields or sales of a few commodities also can cause significant barriers.

Policy Recommendations

Scope

Targeting essential habitats for protection and restoration efforts requires that these habitats first be identified. State-based planning efforts are now under way to identify essential native habitats that should be permanently protected and/or restored, including those habitats under agricultural ownership. Federal funding for additional state-based habitat plans is authorized through Title VIII of the 2001 Interior Appropriations Act and Title IX of the 2001 Commerce, Justice, State Appropriations Act, and state plans must be developed by 2005. When these plans are completed, effective ways must be developed to link Farm Bill programs to these strategies.

Approaches need to be developed for linking Farm Bill programs to state habitat conservation efforts. A mechanism or institution is required to develop links to state habitat plans and make the necessary compromises in allocation among state habitat, water quality, air quality, water conservation and other plans.

The U.S. Department of Agriculture's experience with conservation programs indicates that there are potentially significant cost savings in designing programs to protect or enhance natural resources on agricultural lands if those programs target lands with the highest conservation potential. The ability to target valuable habitat areas for protection requires that conservation programs be flexible enough to account for different species, habitats, and activities in different parts of the country (Lewandrowski and Ingram 1999).

For landowners within a target area, a three-tiered strategy could be implemented. The first tier would target protection of intact remnant habitats that still exist on agricultural lands. The second

tier would support targeted restoration and landowner management of essential habitats. The third tier, which most current programs are aimed at, would support implementing beneficial wildlife habitat management practices on those lands that remain in agricultural production.

For each tier of participation, agricultural landowners could adopt a farm- or ranch-level habitat protection and/or restoration plan that is consistent with a statewide habitat conservation strategy. The farm-level plan could be developed with the assistance of federal or state wildlife biologists, or certified private wildlife biologists. The farm-level plan would define desired environmental and ecological outcomes and include a monitoring program to determine whether those outcomes had been achieved.

Many environmental concerns have been identified, including Total Maximum Daily Load, hypoxia and greenhouse gases. Farmers manage lands, especially if they are seeking diversified production, in a holistic way and to achieve multiple agro-ecological outcomes. It is critical that ways be found to "nest" environmental habitat conservation goals and benefits at a local, regional and larger scale, but in ways comprehensible at the field and watershed scale.

Structure

Recommendations for the structure of Farm Bill programs would stress (1) flexibility in producer choice of conservation management practices and incentives that best fit the individual physical and financial situation, and (2) increased financial support for research, development, and technical assistance programs to facilitate habitat conservation and management. A flexible approach to incentives recognizes that the social and economic factors which influence decisions with respect to habitat conservation are not the same for all landowners, or in all parts of the country. What will motivate a small woodlot owner in the Southeast to conserve long-leaf pine forest will not necessarily motivate a Midwestern farmer to conserve native grassland habitat.

The new Conservation Security Program, as written in the legislation, should be implemented. Under the Conservation Security Program, income support payments could be based on a contract and linked to the adoption and maintenance of habitat conservation practices. The Conservation Security Program could be a vehicle for longer term and sustained conservation activity by agricultural landowners.

Whether set by administrative agencies or by mutual agreement by interested parties, natural resource management programs and projects should specify clear environmental outcomes to be achieved. For example, a wildlife habitat project goal may be to increase habitat for an at-risk species by "x" percent over a specific time period. Outcome measurement should not only address the technical effectiveness of recommended management practices, but also the cost-effectiveness of incentive instruments selected by producers. However, agreement on the need to determine environmental outcomes does not make this difficult task any easier or less expensive to implement. The U.S. Department of Agriculture is currently investigating various "outcome" indicators under its Conservation Effects Assessment Program that could serve as the basis for evaluating habitat conservation efforts for technical effectiveness. The Conservation Planning Tool, developed by the U.S. Geological Survey, for use in predicting changes in species abundance based on changes in landscape management, is another promising development. This

effort should be fully supported over the long term and resources for developing and testing other evaluation methods should be increased.

A project rather than a program focus is one solution to meet environmental performance criteria. Moving from program-based to project-based implementation is the only way to tie current conservation programs to performance and outcomes.

There needs to be a strategic direction on where Farm Bill programs should fit in the larger context of biodiversity conservation programs across the federal government. For example, what is the comparative advantage of Farm Bill programs given their largely voluntary and largely short term nature? To respond to this question it is necessary to know what the biodiversity conservation potential is for various agricultural landscapes so that we can focus attention on those opportunities that are ecologically important, economically feasible for landowners/operators, and socially acceptable in rural communities.

Administration

Administrative recommendations include developing alternative habitat conservation practices and streamlining existing wildlife habitat resource conservation programs. With respect to conservation management practices, agricultural producers should have the flexibility to design, test, and implement (with the assistance of qualified government technical agencies, third party nonprofit groups, and/or certified private consultants) new habitat conservation practices that are appropriate to local environmental and economic conditions. Producers should be allowed to modify existing management practices to meet habitat or species resource conservation goals. Producers could also submit one application for a habitat conservation effort and then the appropriate program(s) would be applied. The technical and administrative capacity of federal conservation agencies to plan, administer and effectively monitor native wildlife habitat and species protection and conservation projects needs to be increased.

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Session 1B – Landowner Incentive Programs (Paper 1 of 3)

Joe Hinson (Northwest Natural Resource Group, LLC; Idaho Landowner)

COORDINATED DELIVERY OF FISH AND WILDLIFE INCENTIVES FOR PRIVATE LANDOWNERS

It would be a mistake to conclude that farmers and ranchers either dislike wildlife or merely tolerate it as part of their operation. Quite the opposite is true – it would truly be rare to find a farmer or rancher who does not enjoy the wildlife on their lands and is willing to do more to encourage their numbers.

It can be said, though, that private landowners face issues that may cause them to view fish or wildlife in an unfavorable context. These include:

- Pressures to allow unlimited hunting or fishing access,
- Problems from trespassers,
- Wildlife depredations on crops or livestock,
- Hunting seasons that conflict with farm or ranch operations,
- Restrictions arising from listed or candidate species on both private lands and on the federal grazing permits associated with a ranch operation, or
- Potential restrictions arising from either third-party lawsuits or agency actions to protect listed or sensitive species.

Add to these concerns, the often-related issues that arise under the federal Clean Water Act for reduced sediment and nutrients to streams from farm or livestock operations. While water quality regulations are usually enforced through state or federal agencies that do not have direct responsibility for fish and wildlife management, most landowners would probably view the laws and possible land use restrictions as closely related.

It is important to encourage the best possible management of wildlife resources on private lands. In many western states, critical wildlife habitat is to be found on this ownership, particularly for species that need winter range or have become dependent upon agricultural practices – for example, the relationship between Columbian sharptail grouse and agricultural lands that are banked in the Conservation Reserve Program.

There are many tools available to help farmers and ranchers improve water quality, assist in fish and wildlife management or improve habitat on their lands through related programs like noxious weed control. Many of these are public programs, available at little or no cost. Others take the form of more sophisticated endeavors like Habitat Conservation Plans or participation in the implementation of water quality Total Maximum Daily Loads. In Idaho, there were even 100% tax credits available to offset some of the costs of participation in water quality or wildlife programs (that law has now sunsetted).

Table 1 summarizes some of the programs and financial support for fish and wildlife efforts on private lands, along with the agencies or entities that typically have the expertise in each of the programs. As the table illustrates, there is a lot of help available to private landowners, but no single agency or other entity with which landowners commonly work is likely to be conversant in all these programs. Furthermore, there are voids where no entity promotes or administers a particular tool that might be useful. For example, no public agency promotes the possible use of conservation easements to landowners who might benefit from them.

Table 1. Delivery of Wildlife Incentives and Assistance to Landowners

Agency or Organization	Programs or Expertise	Significant Direct Landowner Contact
Idaho Dept. of Fish and Game	Habitat management; ESA programs through Sec. 6	Yes
U.S. Fish and Wildlife Service	HCP's and CCA's; Habitat management	No
Gov's Office of Species Cons.	HCP's and CCA's; Policy issues	No
Idaho Dept. of Lands	Forestry assistance; Forest Legacy easements	Yes
Bureau of Land Management	Grazing permits	Yes
Forest Service	Grazing permits; Private forestry programs	No
Soil Conservation Commission	"Farm Bill" conservation programs; Water quality	Yes
Idaho Dept. of Agriculture	Water quality; Noxious weeds	Yes
Nat'l Resource Cons. Service	"Farm Bill" conservation programs; Water quality	Yes
Local RC&D's	Funding mechanisms	No
Dept. of Environmental Quality	Section 319; Water quality protection	No
NGOs and Consultants	Various, depending on individual expertise	Yes
Colleges and Universities	Research and communication through extension	Yes
No Clear Responsibility	Tax advice; conservation easements; private grants	

The table also shows the occasionally overlapping responsibilities for various programs and raises the issue of program coordination and communication that can effectively educate landowners about their options. Typically, communication with landowners is through newsletters, meetings and other forms of mass communication. By necessity such general communication seeks to inform landowners about available help, but with little ability to consider a landowner's specific situation. Finally, these types of communications are compartmentalized. While a representative of the Department of Fish and Game may extol the virtues of that agency's ability to help in creating better pheasant habitat to a local farm group, the same person will not likely be able to speak to the potential for building an artificial wetland through funds from the North American Wetlands Conservation Act or the Farm Bill as a way to both create pheasant habitat and meet Clean Water Act obligations for sediment reduction.

Following is a potential test of an approach that might address shortcomings in the current delivery of fish and wildlife-oriented services to private landowners. It is based on an on-the-ground assessment of an individual's lands, informs the landowner of all that is available to them in one sitting, and directs them toward the help that is pertinent for their situation and ownership goals. The elements of how to do this include:

- A cadre of individuals, most of whom will come from agencies, non-government organizations, or the private sector who can combine into a "visiting team" to offer advice and expertise to individual landowners (or small groups of landowners) who have similar situations and goals,

- A single meeting with the landowner (or group of landowners) that will include enough time to comprehend the situation on the ground and to make well-reasoned recommendations,
- A written report to the landowner (or group of landowners), briefly describing the situation, the ownership goals, recommendations for assistance that the landowner should seek and why that assistance will be of value,
- Specific names, addresses and contact points for those who can assist the landowner, and, (if the landowner agrees) a referral of the landowner to those agencies or individuals,
- Professional, third party management of the process, so that schedules can be developed and met and there is staff responsible for the necessary communications and coordination. Having a neutral third party provide these services should also alleviate controversies over "who's in charge" among the agencies, and,
- A pool of money sufficient to support a trial effort.

This approach should be focused on a geographical area that is small enough to assure that all landowners (or a large representative sample of them) can be contacted and visited, if they so desire, and where land uses and landowner goals are likely to be similar. This implies an area like a 5^{th} or 6^{th} order watershed and certainly much smaller than most counties in Idaho. Ideally, there will be an organization that represents or can contact most landowners within the area, the "Weiser River Cattlemen" for example or perhaps an individual soil conservation district.

In practice, the manager for the program would first develop the process for implementing this proposal, including building support for it among the various agencies and interest groups and the process for interacting with private landowners. Each agency or interest group would designate several staff members familiar with the programs for which that agency was responsible and who have an aptitude for working with private landowners. The project manager would initiate discussions with local landowner groups and then for those who wanted to further understand their opportunities and liabilities for fish and wildlife on their lands, set up a meeting with the "visiting team". Each team would include those with expertise applicable for the local situation – a team for a landowner group in Washington County, for example, would not likely need a forester, while a visit to Bonner County wouldn't require a sage grouse expert.

With the landowner group identified and the "visiting team" selected, the project manager would set up the team visit, perhaps comprising as much as three days, during which team members would visit the as many landowners as possible to gain a thorough understanding of the landowners' goals and problems that are typical of the area. The work product of this effort would be a written report to the landowner(s), including an assessment of their opportunities and liabilities, recommendations for future directions available to the landowner, and contacts to help employ any of the tools that might be useful in their particular situation.

This would be a relatively expensive process. The costs of the project management plus possible reimbursement of out-of-pocket agency costs would not be insignificant. However, it is also a proactive step toward providing single source wildlife and environmental quality information for the landowners most interested in such opportunities. This proposal would also pave the way for major gains through one-on-one relationships with "early adapters" and the ability for those relationships to spread outward within the community.

Session 1B – Landowner Incentive Programs (Paper 2 of 3)

Larry Wiseman (American Forest Foundation)

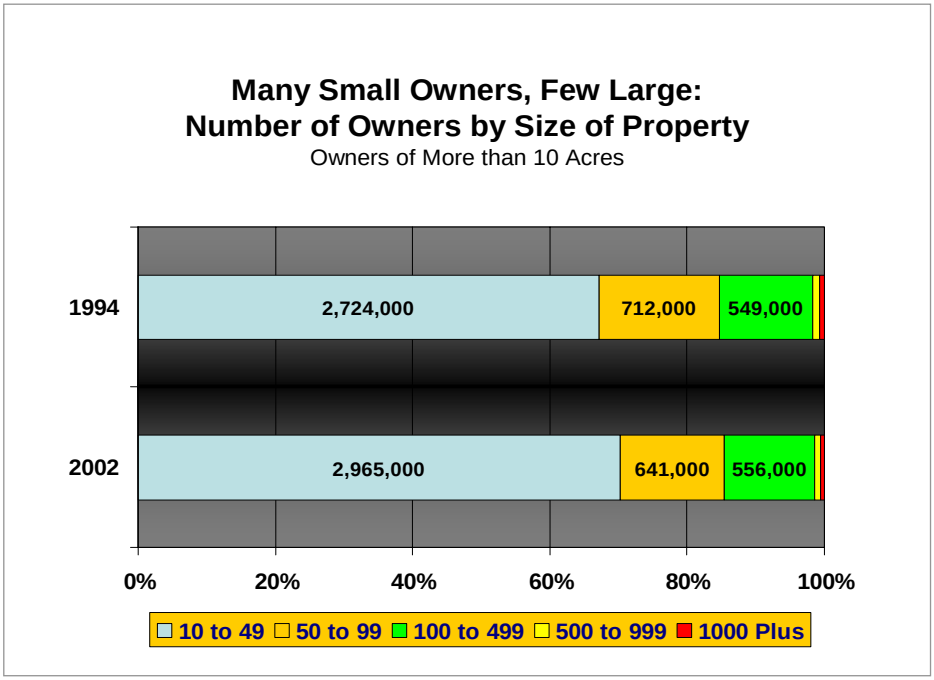
ISSUES CONFRONTING FAMILY FOREST OWNERS IN THE 21ST CENTURY: BACKGROUND ASSESSMENT BY THE AMERICAN FOREST FOUNDATION

Demographic Challenge

Current ownership patterns suggest that the median age for family forests owners is over 60. This portends major challenges for their heirs, and for others who care about sustaining family forests.

Increasing Number of Owners

The number of family forestland owners is exploding. Between 1978 and 2002, the total number of owners grew from about 7 million to between 10 and 10.5 million.[2]



This chart looks at the 4 million families and individuals who own more than 10 acres. Eighty percent of them own less than 100 acres. Those who own more than 500 acres total only about 60,000 owners.

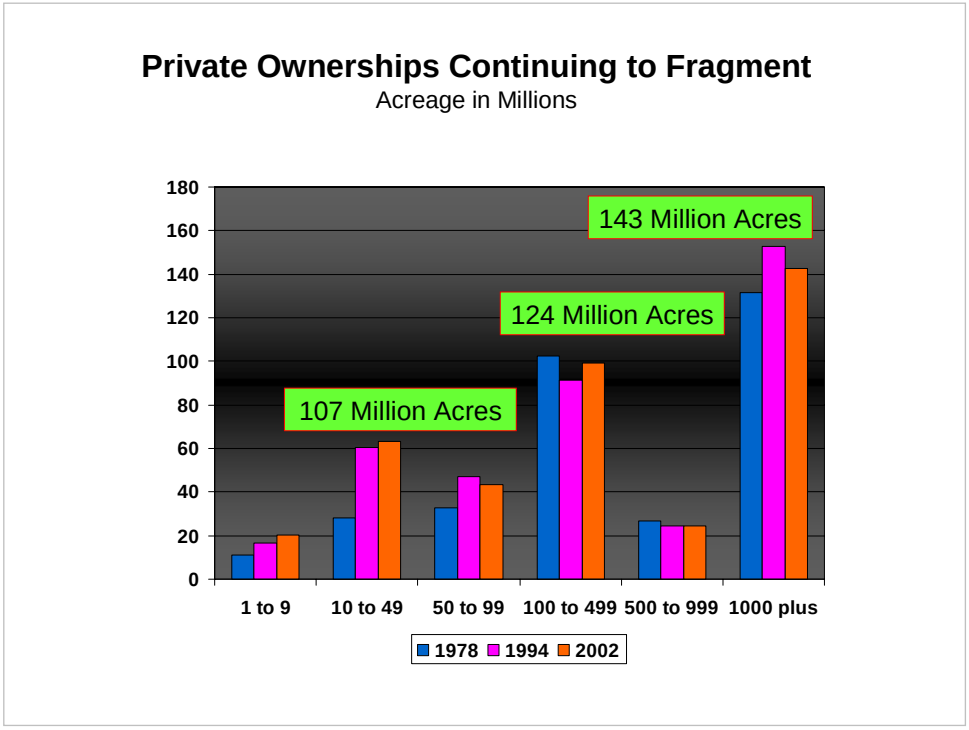
[2] All data drawn from National Woodland Owners Survey, US Forest Service, 2002, www.fs.fed.us/woodlandowners/index.htm.

Shrinking Tract Size

Parcelization and fragmentation of family forest tracts poses substantial risk to watershed health and wildlife habitat. Consider that 88 percent of precipitation falls on private land, and that 95 percent of endangered species find at least some of their habitat on private forestland.

Between 1978 and 1994, we saw dramatic fragmentation in the size of family ownerships. The fastest growing segment of ownership was the 10 to 49 acre class. In general, woodlots smaller than 100 acres proliferated. The number with sizes between 100 to 1000 acres shrank.

This trend continued through 2002, albeit with some moderation and slippage.



Still, today we face a private forest land base where roughly 107 million acres is in the 1 to 99 acre category, about 124 million acres in the 100 to 1000 acre category, and just 143 million acres in the over 1000 acre category.

Our "target" market is increasingly being sliced into smaller and smaller pieces, and while the data haven't been thoroughly parsed, you can imagine where these smaller plots are proliferating – in hotspots where sprawl and conversion are blooming.

The consequences of these demographic shifts not only threaten watershed health and wildlife habitat. They complicate the already difficult issues inherent in landscape-level resource planning.

The Conversion Conundrum

In an average year, roughly 4 million acres of forest burn in wildfires. As a nation, we spend billions of dollars annually to prevent and suppress these fires, and protect human life and property. Few would argue that fighting wildfires is a legitimate national priority.

In that same average year, though, our nation loses more than 1 million acres of forest land year to development, most of it family- or individually-owned. The pace of conversion is increasing.[3]

After forest fires, new forests grow. After development, forests are lost forever. But federal and state dollars available to sustain these family-owned forests are insubstantial and appear to be shrinking.

- Of the $17 billion in conservation funding authorized in the 2002 Farm Bill, 99.4 percent was devoted primarily to farmers; 0.6 percent primarily to family forest owners. Family forest owners control about the same amount of rural land as farmers – even more in the East.
- The only remaining family forest cost-share program, the Forest Land Enhancement Program, enacted in the 2002 Farm Bill, was zeroed out by the Bush Administration. For the first time in half-a-century there exists no federal cost-share program primarily for family forest owners.

Cash, Conservation and the Future of Family Forests

Markets for wood are internationalizing. In the United States, they're declining – putting family forest owners in a tight cash squeeze – especially those who depend on timber sales for the income to reinvest in their forests.

Even those who aren't in the "business" of growing timber (the vast majority of owners) need cash to sustain their land. About 9 in 10 owners list aesthetics, wildlife, recreation and "being outdoors" as primary goals for their forest land. But they still pay taxes, they need insurance, and many still seek some cash to underwrite forest improvements.

Taxes and the cost of compliance with both public and private regulation (e.g. certification) exacerbate the problem. Owners don't begrudge this kind of expense; almost all sincerely want to leave the land better than they found it. But without cash, there can't be investment in conservation – no matter how willing an owner might be.

Family Forest Owners are Volunteers

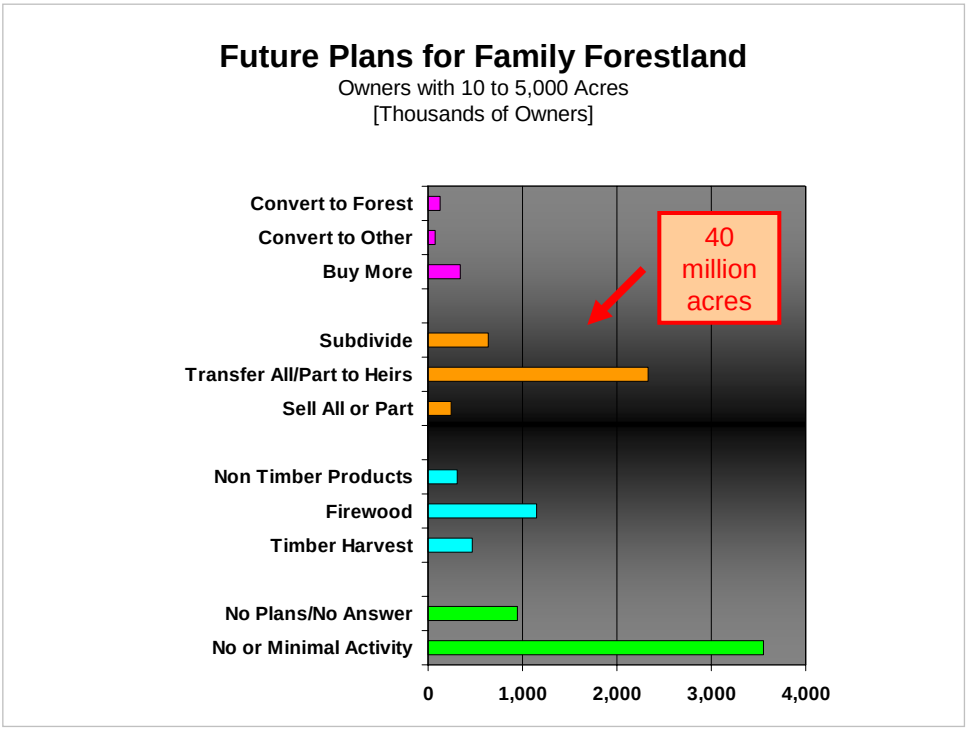
Particularly in the East, family forest owners choose not to sell land for development. As land values increase, and taxes with them, that choice becomes harder and harder to make. We need to make that choice easier.

[3] Data drawn primarily from the National Resource Inventory, Natural Resources Conservation Service, USDA.

To meet that challenge, we must:

- Find ways to "monetize" the conservation and environmental value of family forests. We need to develop public and private markets for the environmental services provided by these owners.
- Modify the tax system so that it works for, not against, multi-generational stewardship of family-owned forests.
- Create and fund federal incentive programs commensurate with the scale of family forest ownership and the magnitude of the environmental services they provide. These programs, like those for farmers, should receive steady support so that family owners can remain confident about future income streams.
- Use regulation as a last resort. Psychological burdens can be as troublesome as economic burdens. According to one prominent family forest owner: "Cost is one thing, but when I have to jump through hoops, when it stops being fun, I'm out."

Finally, as the chart below suggests, one of our most profound challenges is educational.



Most family owners simply don't think purposefully about the future of their forestlands. Half live off the land, and many younger owners are disconnected from traditional networks of rural communication. Fifty years ago, we could find new forest owners at the Grange Hall. Now they're at Starbucks.

Even so, what happens to their forests will depend on how much they learn about their choices, and whether they feel comfortable making them. We need to reassess our models for outreach and education, and invest in strategies tuned to modern audiences.

Session 1B – Landowner Incentive Programs (Paper 3 of 3)

James A. Kraft (Senior Vice President, General Counsel
and Secretary, Plum Creek Timber Company, Inc.)

THE LARGE LANDOWNERS' PERSPECTIVE ON HABITAT INCENTIVES

Forestry today is a global (not local) enterprise, affected in the short and long term by economic and demographic forces and influences far away from the soil, water and weather shaping our forests on the ground. As Larry Wiseman has pointed out, these forces are putting pressure on forested landscapes. It isn't just the small non-industrial forest base, however, that is being fragmented and converted to uses that are not friendly to wildlife habitat conservation. Large industrial forestland owners, too, face pressures that are resulting in the sale, development and fragmentation of larger forested landscapes. If the larger forested landscape is crucial to wildlife and habitat planning, then the loss of these same landscapes to fragmentation and to uses other than forestry is a serious matter indeed.

If true, long term, on the ground, conservation is to be achieved, then these trends must be addressed. What would induce large landowners to keep productive lands in forestry? What institutional and legal forces are hastening the demise of large forested landscapes? What changes can be made to enhance large industrial forestland conservation outcomes?

To answer these questions, I start with two basic premises: the first being, "the perfect is the enemy of the good;" and the second: "if it isn't economic, it isn't sustainable in the long run." How do these principles apply to the large industrial forestland owner? How do they apply to habitat conservation incentives?

First of all, large industrial timberland owners are rational economic actors; if they can't earn their cost of capital with respect to a tract of land, then it will be sold or converted for some other use. Most large landowners have a good sense for the net present value of their lands, based on projected costs, interest rates and cash flows from timberland operation or for perceived highest and best use. If the cost of conservation initiatives cannot be made up in some other economic values, those initiatives will not be undertaken. In other words, if the net conservation initiative cost is too great – if the land is burdened by regulation and the conservation outcome cannot earn its cost of capital – then it will not be attempted in the first place or sustained over the long haul.

There is often a strong desire to mandate conservation outcomes on the land through command and control regulation, including land use regulation. On the surface this is seen as a low cost option since the landowner is forced to bear the cost of what is essentially a public benefit. While there will always be a level of regulation and zoning, at a certain point this strategy has the effect of causing the landowner to fight the conservation outcome politically as well as economically. In the end, if the regulation isn't economic it will not be sustainable in the long run. While this logic seems rather straightforward and obvious, our system of adversarial litigation and command and control regulation seemingly ignores this principle. The result has been decidedly

mixed. While the baseline of regulation enforced through litigation has raised the “bar” for protecting habitat, it has had the perverse and unintended consequence of driving costs up and land into alternate uses.

If litigation and regulation have inherent limitations, then where do we go from here? How do we obtain the desired level of conservation on large industrial forested landscapes? This brings us to the second maxim: we must overcome the desire to force perfect solutions and accept good solutions. The reason for this is tied to the first principle. The cost of the “perfect” outcome can be infinite and the incremental benefits often do not justify the cost; the cost of a “good” solution is manageable and can lead to far greater conservation than few or no “perfect” solutions.

Applying these principles leads to a number of recommendations for change:

1. Make Habitat Conservation Plans more efficient, easier and cheaper to do and amend or adapt over time:
    - Not only do landowners know the value of their land, they also know what the regulatory baseline is, and this should be the beginning point to evaluate what more is needed to develop a conservation strategy. A "gap analysis" between what is provided by regulation and desired for long term conservation is a way for everyone to get on the same page. This keeps Habitat Conservation Plans effective and efficient from a cost perspective.
    - Reduce the costs of doing Habitat Conservation Plans and other plans under the Endangered Species Act by streamlining the National Environmental Policy Act, Clean Water Act, National Historic Preservation Act, and Endangered Species Act compliance.
    - Conservation planning should take into consideration that economic forces will cause land ownership patterns to change over time. Accordingly, development of a conservation strategy, Habitat Conservation Plan or Safe Harbor Agreement should not just consider what should happen if a new owner arrives on the scene – it should anticipate and expect it to happen. This means that the mitigation measures and adaptive management / monitoring program should be geographically and topically specific so that new landowners and added landowners under a program can clearly identify what is expected of them.
    - Wise use of the concept of adaptive management can bridge the gap between "good" solutions and "perfect" solutions by constructively and credibly investigating technical "leaps of faith" that are necessary to get a plan completed in a reasonable time frame. By the same token, topics brought into adaptive management need to be realistically solvable in affordable terms. Not every disagreement or questionable unknown can be tossed into the adaptive management corral.

2. Litigate less; collaborate more:
    - Reserve litigation for truly bad actors; don’t routinely challenge every Habitat Conservation Plan initiative (remember a good Habitat Conservation Plan is better than a perfect one that was foregone in favor of a housing development).
    - Focus scarce resources on on-the-ground conservation measures, not on litigation expense.

3. Leverage public and private conservation dollars in high impact conservation markets for property and easements:
    - Make Habitat Conservation Plans "platforms" for other conservation initiatives. The Habitat Conservation Plan can provide an excellent template for focusing private and public resources. Habitat Conservation Plans are not just biology / business plans, but also serve as platforms for other constructive and useful activities, such as land exchanges, conservation easements and land sales, landscape research and thoughtful development. Habitat Conservation Plan participants should insure that the design of these plans allows the door to remain open for more comprehensive and innovative actions in the future.
    - Work with the federal government, states, counties, cities, land trusts, philanthropic foundations, and water districts to fund the acquisition of high priority conservation values. Provide the large industrial forestland owner a means to monetize the environmental values in the land while keeping the land in forestry uses.

Session 2A – State Incentive Programs

Sara Vickerman (Defenders of Wildlife)
Steve Bender (Texas Wildlife and Parks)

STATE PROGRAMS FOR HABITAT CONSERVATION

Background

There are a number of reasons why states should have an interest in the development and implementation of habitat incentive programs for private landowners. First of all, states have the primary authority over most wildlife, and statutory responsibility for preventing the depletion of indigenous species. Second, the needs of states vary considerably, and federal incentive programs may not address the full range of needs, or distribute incentive benefits equitably. For example, Farm Bill programs tend to concentrate investment in the Midwestern states, where agricultural commodities are produced. Third, states have a growing interest in exerting more control over the management and recovery of federally listed species. Effective state-based inventive programs may help states make the case to the federal agencies that they can handle the added responsibility. Finally, Congress has directed states that wish to continue receiving funding under the State Wildlife Grant Program to develop comprehensive Wildlife Conservation Strategies. Since so much important wildlife habitat is found only on private lands, incentives will be a key element in many of the state strategies.

Examples of State Programs

All states have some form of landowner incentive programs. These programs have been researched and summarized by Defenders of Wildlife (www.biodiversitypartners.org/pubs/CinAReport/Intro.shtml) and Environmental Defense (www.environmentaldefense.org/article.cfm?ContentID=2342). They represent a potpourri of cost share, property tax break, income tax credit, special recognition, regulatory relief, educational, and technical assistance programs that operate across the spectrum of small and large land ownerships, agricultural, forest and urban lands. They are administered by many different agencies and have diverse goals, including the improvement of water quality and land management techniques, restoration of riparian and wetland habitats, increasing the production of game animals, and the recovery of endangered species. Four programs are highlighted below, to provide examples:

1. Texas Agriculture Property Tax Conversion for Wildlife Management. Land that is used for wildlife management, and otherwise meets agricultural land use requirements, can be appraised as agricultural land. The land must be used to generate a sustaining breeding, migrating, or wintering population of indigenous wild animals. This program, available since 1997, provides habitat guidelines specific to each ecoregion of Texas. Landowners must implement a wildlife management plan that meets flexible guidelines. The landowner can choose the wildlife and habitats they are interested in conserving, and

many have chosen to focus on multi-species habitat needs. The program is administered through counties, although the interest level from different counties is variable. Participating landowners have been very satisfied with the program.

2. California Natural Heritage Preservation Tax Credit Act of 2000. This program encourages donations of land, conservation easements, or water rights to a government agency or a non-profit. The intent of the program is to foster public/private partnerships designed to resolve land and water use disputes, to reward and assist habitat stewardship, and to demonstrate the state's commitment to encourage and reward landowners who perceive habitat as an asset rather than a liability. Landowners receive an income tax credit for 55% of the value of the donation. Properties must meet at least one of these criteria: (1) fulfills the goals of a conservation plan; (2) protects species or habitat (including preventing future listings); (3) conserves threatened farmland; (4) is a water right that helps protect a species or habitat; or (5) increases public access to parks or open space. A range of landowners, including large development companies and family farmers, have taken advantage of this program to protect California habitats and species. California budgeted $100,000,000 for the program for FY 2001-2005. The program was very popular and successful, however, due to the state's fiscal crisis, it was temporarily suspended after about a third of the money was spent in 2001-2002.

3. Missouri Conservation Assistance Guide. The Missouri Extension Service has developed an interactive website that allows Missouri landowners to identify the range of federal and state assistance programs that are available for different types of conservation projects (http://outreach.missouri.edu/mowin/conseguide2/guide.htm). Landowners can learn what programs are available based on entering simple information about what resources they want to conserve, specific conservation practices, or type of assistance.

4. Oregon's Flexible Incentives Account. In 2001, the Oregon Legislature created the Flexible Incentives Account to be administered by the Oregon Watershed Enhancement Board. The Board is directed to use the account to "assist landowners in the implementation of strategies intended to protect and restore native species of fish, wildlife and plants and to maintain long-term ecological health, diversity and productivity in a manner consistent with statewide, regional, or local conservation plans." The account is to be used to fund strategies that offer the greatest public benefit at the lowest cost. The purpose of the fund is to test the notion that where conservation plans with clearly articulated goals exist, landowners should be assisted in meeting those goals with a minimum of rules constraining eligibility and requiring specific practices. Unfortunately, the concept has never been tested because the legislature declined to fund it. The director of the Oregon Watershed Enhancement Board resisted testing the concept because the Board had already developed rules for allocating lottery and federal funds for habitat (totaling over $50 million annually), and thought enough flexibility existed already.

Barriers to the Implementation of Effective State Habitat Incentive Programs

The barriers affecting state habitat incentive programs are similar to the ones that hamper other programs. Few states have formed and articulated a common vision to direct public funds to the habitats and species of greatest need. If such a vision existed, to the extent that it included private lands, there would likely be discrepancies between the state's interest and the goals of thousands of private landowners. States face unprecedented financial difficulties, so habitat incentive programs must compete with the needs for education, health care, and other pressing social needs. Few programs have a sufficient number of trained personnel to work with landowners to access and implement the programs on their lands. Many of the programs are outdated or structured to satisfy the interests of a narrow constituency, such as management for game species (including introduced species) or protection of open space or working landscapes with no regard for habitat values. To the extent that state incentive programs exist to address the needs of endangered species, they focus on a limited number of species, and are not easily applied to broader ecological purposes consistent with preventing additional species from becoming endangered. Most programs also suffer from inadequate monitoring and tracking of project implementation and ecological effectiveness.

Other barriers to effective incentive programs relate to the goals and perspectives of individual, diverse landowners. Many landowners are simply unaware of incentive programs. In other cases, incentives are not large enough (compared to federal programs or development opportunities), or the wrong kind, to interest landowners. Some programs require the landowner to allow public access to the land, while others prohibit ongoing commodity production. Some landowners are distrustful of government programs under any circumstances.

Recommendations

Effective landowner incentive programs have several elements in common, including coordination with a broader conservation plan, adequate and stable funding, good technical assistance, and flexible options for landowners. In addition, programs need to be accessible enough for landowners to understand their options and to request participation in appropriate programs. Partnerships between government agencies, non-profit organizations, and landowners also increase participation and effectiveness of programs.

The first recommendation is for states to use their comprehensive wildlife conservation plans/strategies to clarify goals and priorities for the recovery of listed species and to prevent additional species from becoming endangered. The plans should specify priority habitats and highlight the needs of private landowners relative to opportunities that exist on their lands.

Since the bulk of the money for landowner incentive programs will probably continue to come from federal sources, it is important for state and federal programs to be coordinated as closely as possible. There are many federal programs that continue to be difficult for landowners, especially small landowners, to access. States with approved conservation plans, who provide the appropriate level of administrative and technical support for landowners, should have preferential access to federal funds. Further, the states should have the option of receiving the

funds in a lump sum to administer without the bureaucratic constraints that exist under federal administration of the programs.

An alternative mechanism would be for state personnel to receive landowner applications for assistance on a single standard form, then evaluate funding options, and apply to appropriate state or federal programs on behalf of the landowners. This would provide landowners with one-stop-shopping access to diverse state and federal programs. Since providing this level of administrative and technical assistance is expensive, states could focus on high priority areas to test the effectiveness of this approach, then expand as capacity increases and more landowners express interest. Trusted local partners (such as Soil and Water Conservation Districts, land trusts, watershed councils, and extension service) would play a key role in making initial contact with landowners.

One federal program already exists that is consistent with the characteristics of flexible programs described above. The Landowner Incentive Program, administered by the Department of the Interior (U.S. Fish and Wildlife Department), provides grants to state wildlife agencies to hire administrative staff and make grants to landowners. The program could be improved by expanding the level of appropriations, streamlining the permit and compliance process, and requiring states to use funds to accomplish goals in the comprehensive wildlife conservation plans. Such a requirement should not be overly restrictive, and could expand the scope of the program beyond sensitive species, which is the current focus.

Another recommendation is to ensure that the habitat incentive programs for landowners, at both the state and federal level, can be used for multiple species, and can address the needs of species not listed. This will tend to shift the emphasis from single listed species to habitats and associated groups of organisms.

Session 2B – Transportation Incentive Programs

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INCENTIVES FOR HABITAT CONSERVATION IN TRANSPORTATION

Background

In the United States, a variety of laws require federally funded transportation projects to compensate in some way for their adverse environmental impacts, in a process known as mitigation. The traditional form of compensatory mitigation is conducted on a project-by-project basis. First, a project is planned and designed. During the subsequent environmental review and permit phase, the project sponsor, in cooperation with regulatory and participating agencies, determines the amount of environmental damage that can be expected and proposes actions that can be taken to mitigate that damage. Often, this mitigation is conducted on-site, by setting aside a portion of the land in the project area. For example, if a new highway project fills 25 acres of wetland, the project sponsor might be required to create an additional 25 acres of wetland. Mitigation areas are often chosen ad-hoc, rather than as part of a large-scale planning effort.

Transportation officials often divide one large project into many smaller, more manageable phases. While this might make sense from an operational and administrative standpoint, it can create additional problems for mitigation. Applicants conducting mitigation projects often seek the most inexpensive solution that meets the minimum acceptable standards. However, mitigation on several small projects can be very expensive. When small mitigation sites are used to compensate for small development phases, economies of scale are lost. The cost per acre will increase as size of the mitigation site decreases.

Not only is small-scale mitigation expensive, it is rarely ecologically sound. Small, isolated patches of natural area are vulnerable to stochastic events and can be degraded over time by such things as off-road vehicle traffic, invasion of non-native species and illegal dumping. Numerous small areas are also costly to monitor, which is imperative to successful mitigation.

The shortcomings of traditional, on-site mitigation have led to the concept of mitigation banking for wetlands, defined in 1995 as *"the restoration, creation, enhancement or preservation of wetlands and other aquatic resources for purposes of providing compensatory mitigation in advance of authorized impacts to similar resources at another site*."[4] Property owners earn mitigation credits from regulatory agencies, based upon acreage and function of wetlands established on their property. Those credits can then be sold at market rates to either public or private developers that face mitigation requirements for their projects. Buying the credits would then relieve the developer of the need to conduct mitigation efforts as a direct part of the project. Banks can be established by private investors, public agencies or non-profits.

[4] Federal Register: November 28, 1995 (Volume 60, Number 228). Page 58605-58614.

The practice of banking, then, is both anticipatory and aggregative. Banks are established in anticipation of future demands for compensatory mitigation, and are designed to consolidate at one site the mitigation for activities that may be widely dispersed.[5] Mitigation banking places a dollar value on wetlands – which had long been considered worthless – and thus brings a market approach to conservation. This reverses the phenomenon of property losing its value once designated as conservation land.

The concept of mitigation banking is now being applied to ecosystems other than wetlands. Much like wetland banking, **conservation banking is the practice of proactively preserving and enhancing large, contiguous and viable tracts of habitat for the purpose of offsetting the adverse impacts of future development projects**. Wetlands are but one of several imperiled ecosystems in the United States. Rates of conversion for coastal areas, grasslands, forests and croplands rival those for wetlands. Without protection, many of our landscapes will be severely degraded within the next century. For example, if today's land consumption trends continue, more than one quarter of the country's coastal acreage will be developed by 2025 – up from 14 percent in 1997.[6]

Mitigation banks have existed for more than 20 years, and policies within the Federal Highway Administration have promoted wetland mitigation banking for more than a decade. The majority of early mitigation banks were single-user banks established by state departments of transportation. In 1992, nearly half of all banks were state highway banks.[7]

Just as wetland mitigation banking was pioneered and widely used by transportation agencies, conservation banking could be an especially helpful tool in reducing delay in transportation projects and increasing environmental benefits. Road building has significant impacts on natural resources, wetlands and wildlife habitat. While the facilities are linear, the impacts extend far beyond the right of way.

Here are some examples of state transportation agencies use of conservation banking to mitigate the impacts of road projects:

Colorado's Shortgrass Prairie Initiative

America's grasslands and shrublands are best known in the sagebrush steppes of the Rockies and in the prairies of the Midwest and Great Plains. However, the full system stretches from Florida's scrubs to Alaska's tundra. At 683 million acres, grasslands and shrublands comprise the largest ecosystem type in the United States, and the most mistreated. At least one-third of the country's rangelands have been converted to urban or agricultural uses since European settlement; 11 million acres between 1982 and 1997 alone.[8] This reduction in habitat has led to a decline in many species, including grassland birds, the prairie dog, burrowing owl, swift fox, and ferruginous hawk.

[5] Bean, Michael and Dwyer, Lynn. 2000. Mitigation Banking as an Endangered Species Conservation Tool. Environmental Law Reporter 30: 10537-10556.
[6] Beach, Dana. Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States. Pew Oceans Commission. 2002
[7] Zinn, Jeffrey. Wetland Mitigation Banking: Status and Prospects. Washington, DC. Congressional Research Service, 1997
[8] The State of the Nation's Ecosystems. The Heinz Center. Cambridge University Press. 2002

In order to preserve large tracts of prairie, the Colorado Department of Transportation, Federal Highway Administration, US Fish and Wildlife Service, Colorado Division of Wildlife (DOW), and The Nature Conservancy of Colorado developed the Shortgrass Prairie Initiative. Anticipating further impacts caused by the 20-year state transportation plan, the initiative seeks to mitigate in advance of expected impacts and protect a highly vulnerable system. Rather than mitigating for each state transportation project in a piecemeal fashion, this initiative takes a large-scale and more ecologically meaningful approach. The Colorado Department of Transportation and The Federal Highway Administration will develop land-management plans that meet mitigation requirements, as well as incorporate the support and concerns of private landowners, who are integral to the effort's success.

Partners signed a memorandum of agreement that outlines the project's objectives. The Nature Conservancy will acquire some of the targeted lands in order to ensure proper management and oversight and the Colorado Department of Transportation will seek other bankers to host selected land and easements. In order to receive mitigation credits, the project partners must develop management plans that will benefit the species that are included in the planning efforts.

North Carolina's Red Cockaded Woodpecker Habitat Bank

Old-growth pine forests of the southeast United States are home to hundreds of species specialized to this unique ecosystem, including the red-cockaded woodpecker. The red-cockaded woodpecker (*Picoides borealis*) hunts insects on tree trunks and creates nests within living pines. These nests are occupied for several generations and are used by many other wild creatures, such as chickadees, flying squirrels and raccoons. The red-cockaded woodpecker, however, has had to compete for these same century-old trees with timber and paper-pulp industries, which have clearcut the forests and decimated the species. As a result, the red-cockaded woodpecker was added to the endangered species list in 1970.[9] Protection of the scarce remaining habitat is essential to the existence of this and many other species.

The Palmetto Pear Tree Preserve was established in a partnership between the North Carolina Department of Transportation, the U.S. Fish and Wildlife Service, and The Conservation Fund. The preserve encompasses some 9,732 acres of the Coastal Plain of North Carolina and is managed to provide suitable habitat for the red-cockaded woodpecker. Pru Timber had intended to use the land for commercial logging, which would have jeopardized the clusters of red-cockaded woodpecker observed within its boundaries. U.S. Fish and Wildlife Service was concerned not only about the possible effects of logging, but of the possibility that without active management, the property would become inhospitable to the woodpecker, and would lose protection under the Endangered Species Act.

Under advisement of the U.S. Fish and Wildlife Service, the North Carolina Department of Transportation purchased the land from Pru Timber for approximately $16.3 million. The Conservation Fund will manage the site as a conservation bank. Credits may be used only when a state highway project has an unavoidable impact on the woodpecker and the North Carolina Department of Transportation can demonstrate to the U.S. Fish and Wildlife Service that there are no alternatives for avoiding or minimizing that impact. The credit ratio will range between

[9] http://endangered.fws.gov/wildlife.html#species

1:1 and 3:1 and will be decided on a case-by-case basis. For any given project, the U.S. Fish and Wildlife Service can suggest that mitigation via the bank is not the best means of mitigation. Although the agreement does not exclude the sale of credits to third parties, all or most of the credits will be used by North Carolina Department of Transportation.

Opportunity
If current trends in land conversion and road building continue, conflict between roads and wildlife will continue to increase. The need to mitigate the impacts of roads will increase exponentially as the amount of suitable habitat is further fragmented and degraded. The price of mitigation will increase accordingly as natural areas become scarcer and more expensive. State and local governments will need to make wise use of remaining conservation areas as well as mitigation dollars.

Benefits
Conservation banking can be used to solve problems with conventional mitigation, making it more cost effective by reducing the cost and increasing the ecological effectiveness. If guided by well-conceived policies, conservation banking also has the potential to address concerns with wetland mitigation banking and to contribute to endangered species conservation efforts. Using conservation banking, the transportation sector can make great strides in improving project delivery and controlling costs, while increasing the effectiveness of mitigation.

Obstacles
- Lack of understanding and knowledge of conservation banking opportunities among resource and transportation professionals
- Lack of trust in the banking concept among conservation professionals. Due to the poor track record of wetland mitigation banking, few conservationists are willing to support more ambitious future efforts.
- Lack of start-up funding. Because road projects are funded project-by-project, state departments of transportation rarely have enough money at any one given time to pay for multi-project mitigation like conservation banking.
- Shortage of properties available and appropriate for mitigation.

Recommendations
- Use conservation banking when avoiding and minimizing impacts is impossible and when consolidating mitigation is biologically preferable to onsite mitigation
- Create a revolving fund from which transportation officials can make interest-free withdrawals to acquire land that can be banked for mitigation purposes. Money would be reimbursed to the fund from project funding.
- Use existing conservation plans to determine the most valuable lands for banking. These include statewide comprehensive conservation plans, regional conservation plans, endangered species recovery plans, and critical habitat designations.
- Site conservation banks strategically, with a particular conservation objective in mind.
- When establishing conservation banking in a state, obtain a statewide Memorandum of Understanding among all resource and action agencies involved.