Chuck Leavell wants to be heard, and not only when he’s playing keyboard with the Rolling Stones. The rock star has a lot to say about family forestry and what he calls “the invisible forest health crisis.”

Though Leavell is better known for keyboarding with the Stones and in earlier stints with the Allman Brothers, Eric Clapton and others, he is as passionate about forests as music. Last month he spoke at a Congressional briefing on forestry issues, and, along with co-author Mary Welch, has published a new book, \textit{Forever Green: The History and Hope of the American Forest}.

Chuck and his wife, Rose Lane Leavell, are family forest owners who’ve spent much of their adult lives tending their family property near Macon, Georgia. Like most family foresters, the Leavells manage their property for wildlife, recreation, timber, aesthetics and other objectives. Over the last 20 years, Leavell has become not only a forest management expert, but also a spokesman for the conservation of family forestlands.

To date, the national forest debate has focused on wildfires and the management of western public lands. In contrast, in the East the vast majority of forestland is privately owned, mostly by individuals and families. Thus Leavell is concerned with a different crisis: the erosion of forests by development, a loss that he describes as “a crisis where many forest owners don’t see a way to preserve...”

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“IEATRCWS,” the red truck’s license plate defiantly proclaimed. Of course the truck’s owner didn’t really dine on endangered red-cockaded woodpeckers, but like many other longleaf pine forest owners in the North Carolina Sandhills and elsewhere in the Southeast in the mid-1990s, he was wary of conservationists and Endangered Species Act restrictions. The woodpecker (*Picoides borealis*) was listed as endangered in 1970, and more than two decades later, some progress had been made in conserving its habitat on state and federal lands, such as Fort Bragg in North Carolina. In contrast, recovery efforts languished on private lands in the Sandhills and elsewhere in the bird’s range.

And for good reason. The Endangered Species Act offered landowners no encouragement to practice the land management that the woodpeckers needed. In addition, good longleaf stewardship was a risky proposition. Along with red-cockaded woodpeckers came legal obligations that could restrict a landowner, perhaps from cutting timber when income was needed.

Indeed, some landowners cut their trees early just to avoid any chance of future woodpecker problems. In such cases, not only did the law not help the species—it made things worse.

To resolve this dilemma, a group of state and federal government employees, private conservation groups and other red-cockaded woodpecker experts began discussions in the early 1990s. Their consensus was that landowners did want to be good land stewards and didn’t dislike red-cockaded woodpeckers, but couldn’t be recruited as conservation partners without eliminating their liability. A landowner who didn’t fear the burden of new land use restrictions was far more likely to volunteer to help the bird.

The group turned to Endangered Species Act expert and Environmental Defense attorney Michael Bean to find a means of regulatory relief. By late fall 1994, the group outlined the basic concept that Sandhills Area Land Trust attorney Marshall Smith dubbed “Safe Harbor”—a name that reflects the policy’s benefits for both wildlife and landowners. Bean ran the idea by Interior Secretary Bruce Babbitt, who was enthusiastic. Within weeks, Safe Harbor was approved.

The next step was the most critical. Unless landowners volunteered for Safe Harbor, the new conservation tool would not be an on-the-ground reality, regardless of how many government agencies or environmental groups endorsed it. Would landowners actually be willing to invite an endangered species to take up residence on their property? Two who promptly said “yes” were the Pinehurst Resort and Country Club and private forester Jerry Holder.

Brad Kocher, then Pinehurst’s “I think we’ve come a long way.
It hasn’t been that many years ago, when the general mind set, especially among private property landowners was that of no good deed goes unpunished. Thanks to Safe Harbor, we’re able to still function and earn a living off the land, but at the same time feel we’re benefiting endangered species...”

*Julian Johnson, Landowner and early Safe Harbor participant*

“Safe Harbor is a great program... because it recognizes the desire private landowners have to help endangered species and assures them that even if an endangered species moves onto their property they will maintain control of their land. The program has done a lot to restore trust between the federal government and private landowners. Landowners like Julian Johnson, Jerry Holder, and David Wilson of the North Carolina Pine Needle Producer’s Association have helped tremendously by being great spokesmen for the Safe Harbor concept.”

*Susan Ladd Miller, Safe Harbor biologist, U.S. Fish & Wildlife Service*
maintenance director and now vice-president grounds and golf course management, recognized Safe Harbor’s benefits as soon as he heard about the new program. Helping the woodpecker would be entirely compatible with golf course operations. He sold the idea to his boss, and on June 20, 1995, Pinehurst Resort and Country Club became the nation’s first Safe Harbor landowner.

Sandhills landowner Jerry Holder was familiar with both the economic value of the longleaf pine forest and the need to make the Endangered Species Act more sensitive to landowner concerns. The private forester derived part of his income by collecting and selling pinestraw—the 8-inch longleaf needles that fell to the ground—for mulch and landscaping material.

In 1995, pinestraw harvesting was a lucrative $50 million industry in North Carolina. Thus illegal poaching by pinestraw rustlers was a major concern of Holder and other pinestraw entrepreneurs, who worked both on their own land and under contract on land owned by others. Holder found allies in Michael Bean and Melinda Taylor, also of Environmental Defense, who joined him in an effort to persuade local sheriffs to stop the poaching. That legal assistance won Bean and Taylor not only landowners’ gratitude but also the trust that was essential for advancing Safe Harbor. Jerry Holder became one of the earliest landowners to enroll in the nation’s first Safe Harbor Agreement.

Holder’s contributions to Safe Harbor didn’t end when he enrolled his land. As a past president of the North Carolina Pine Needle Producers Association and a well-known Sandhills landowner, he has been a valuable link to other area landowners. Years later, he is an ambassador for Safe Harbor on the national level, encouraging other landowners to participate.

In May of this year, several dozen landowners, conservationists, and state and federal agency officials gathered at Pinehurst to thank Safe Harbor landowners, recognize key participants in Safe Harbor’s creation and celebrate its success. There was plenty to celebrate: 91 Sandhills landowners had enrolled 48,127 acres as of May. The agreement had been the model for Safe Harbors in other states, including six more for the woodpecker. At present, more than a half a million acres are enrolled in red-cockaded woodpecker Safe Harbor agreements, and about 35% of the private land woodpecker groups live on Safe Harbor properties where the number of groups has increased by 10%. And what about the license plate on the red truck? Its owner, Dougald McCormick, was one of the first to sign up for Safe Harbor. These days a Sandhills landowner just might get a license plate that says I GROW RCWS.

A decade after the first agreement was signed, Safe Harbor is a nationwide program. A few numbers from June 2005 follow:

- Over 3 million acres of land enrolled.
- More than 325 landowners participating.
- 32 agreements (including both single landowner and multi-landowner or “umbrella” agreements).
- 36 species included in agreements.
- More than 60 agreements under development.
- Enrolled properties ranging in size from small ponds to large ranches.
- Types of land enrolled include family forests, ranches, an agricultural company, golf courses, a monastery, a winery, residential properties and many others.

Forester Dougald McCormick’s (left) love for the land his family has owned for generations led him to become an early Safe Harbor participant. Forester and pinestraw raker Jerry Holder (right) advanced Safe Harbor in the North Carolina Sandhills and nationwide.
Dairy owners find innovation is key to environmental and economic success

Unconventional partnership brings new ideas

“You want me to join a council with who?” A few Florida dairy groups unfamiliar with Environmental Defense wondered if the enemy had arrived under the guise of cooperation when, in fall 2003, the organization’s Center for Conservation Incentives teamed with California-based Sustainable Conservation to launch a new approach to the nation’s dairy industry manure management challenges.

Fortunately, Art Darling of Sunshine State Milk Producers and other dairy representatives from around the country gave the enviros a chance. As often happens when we leave our assumptions at the door, a productive relationship followed. To identify economically and environmentally feasible manure management methods, the new partners formed the National Dairies Environmental Stewardship Council, an alliance that also includes university researchers, cooperative extensions, the Natural Resources Conservation Service and the Environmental Protection Agency. For more about the council, see www.suscon.org/dairies/ndesc.asp.

Meeting both business and environmental goals

Visiting just three Florida farms demonstrates that dairies can use fundamentally different approaches to satisfy both business goals and state environmental regulations, while achieving individual goals for environmental stewardship and a role in the community.

Manure management on dairy farms—and all animal operations—is a key component in protecting water and air quality. Although nutrients in properly managed manure can be valuable fertilizers for crop and forage growth, the same nutrients and pathogens from poorly handled manure impair water quality when they enter waterways through leaching or runoff. Improperly managed manure also contributes to air quality problems by releasing hydrogen sulfide, ammonia, methane and other harmful gases. Depending how it is stored and used, manure is either a valuable resource or a waste product.

10-Mile Grade Dairy: Focus on grass

One of the nation’s largest grass-based dairies, 10-Mile Grade Dairy in Hardee County, Florida, is owned by the Nickerson family. The farm follows a rotational grazing management approach that rotates cows through multiple paddocks. Grass supplies most of the herd’s nutrition, and as they graze, the cows distribute their manure, which fertilizes the forage pastures and reduces runoff and leaching to groundwater.

To save their business financially, the Nickersons shifted to rotational grazing in 1992. Even though grazed cows typically produce less milk than grain-fed cows in a confinement system, the costs of feeding cows on grass are much lower. The change significantly reduced the dairy’s costs, making the farm’s 2,200-cow herd profitable “We look at the bottom line,” says Chris Nickerson. “We have the lowest production per cow, but our cows are profitable.”

The change has paid off environmentally as well. The milking parlor is the only area where manure must be collected and managed. It is pumped underground to a neighbor, who uses it to fertilize and irrigate hayfields and in turn sells the hay to the Nickersons.

Says Norm Nickerson, “The state environmental regulators really like this grazing concept. It satisfies a lot of their concerns, such as how we spread the manure, and the cows aren’t concentrated in one area. The threat of pollution with us is almost nil.”

M&B Dairy: Advocating innovation

Each of the 600 cows in the two open-air barns at M&B Dairy in Lecanto, Florida has an individual stall with a foam mattress and ready access to feed and water. Mist sprayers and fans keep cows comfortable year-round, and recycled water flushes the alleyways three times daily. All effluent flows into a deep concrete-lined lagoon, and what isn’t flushed is applied to 216 acres of grass fields. The grass is harvested on a rota-
Shenandoah Dairy: Making herd comfort paramount

In 1987 the Henderson family launched Shenandoah Dairy in Live Oak, Florida with 100 cows. Eighteen years later, 2,100 cows live on the farm. Half of them are housed in free stall tunnel barns where they are not tied up or confined to a single stall, but free to roam. When the Hendersons complete renovations, the remaining 1,050 cows will also be in tunnel barns. These barns are bedded with sand and are flushed with recycled water three times daily, maintaining extremely clean conditions. Large fans and misters cool the cows by evaporation and circulate fresh air in the barn, which is open at one end.

“Cows housed in the tunnel barn are healthier and more productive,” said Ed Henderson, who handles the farm’s finances. “Healthier cows have fewer problems, which leads to a longer productive life.”

To manage nutrients and odors properly, the Hendersons carefully monitor manure application on the land by regularly sampling soil and plant tissues and analyzing forages. Their feeding program protects water quality by using forage as much as possible and employing manure nutrients as organic crop fertilizer. The dairy is a member of the Suwannee River Partnership (see sidebar) and has participated in the Environmental Quality Incentives Program, a voluntary USDA incentive program. Community outreach is another important goal for the Hendersons, who host many school groups and are initiating efforts to address any concerns and inform neighbors how the dairy operates.

Some people criticize Shenandoah Dairy for its growth, but the Hendersons believe expansion has enabled them to stay economically viable and address environmental issues. “By increasing the size of our business, we have increased our opportunity to meet demanding challenges,” says Henderson. “We keep our focus on cows and people. Our system is built with the environment at the forefront.”


Differing methods achieve good results

Using individual approaches, each dairy meets its business and environmental goals, as well as local challenges and regulatory requirements. The bottom line? An economically and environmentally successful dairy operation doesn’t follow any one particular model.

—Suzy Friedman

scientist and agricultural policy analyst
Center for Conservation Incentives
Environmental Defense

The author thanks Art Darling, Sunshine State Milk Producers, and Scott Wallin, Dairy Farmers Inc., both of Florida, for significant assistance with this article.

A community approach to conservation

Going beyond the individual farm approach to conservation, agricultural community members in north-central Florida’s 7,640-square-mile Suwannee River Basin joined forces in 1999 to protect the environment and public health. To address increasing nitrate-nitrogen levels in the Suwannee and Santa Fe River Basins, more than 50 federal, state, regional and local agencies; private agricultural associations; and others coordinate programs and resources through the Suwannee River Partnership. Shenandoah Dairy and other dairies, poultry farms and hay and row crop producers implement and maintain best management practices on a long-term basis with technical assistance and cost share funding from the Partnership.

Thus far, the group has leveraged more than $30 million from federal, state and local governments and farmer contributions. The goal is to implement conservation plans and best management practices on 80% of the region’s dairy, poultry and row crop farms by 2008. For more information on this innovative partnership, visit http://mysuwanneeiver.com/.
Private forestlands
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their family’s heritage of voluntary, private stewardship.”

Every year about 1.5 million of the nation’s 750 million acres of forestland are lost to sprawl and development. In the South alone, the U.S. Forest Service predicts that we’ll lose 20 to 25 million acres to development over the next four decades. When forest vanishes, a wealth of public benefits also disappears. For example, the southern forest products industry contributes $120 billion a year to the economy. About 70% of our wood comes from family-owned forests.

For other public benefits, it’s difficult to assign a monetary value. Forestland provides habitat for both game and non-game wildlife, drinking water supplies, recreational opportunities and open space that enhances neighboring property values and quality of life.

For these invaluable ecosystem services, private landowners receive very little compensation. They can sell wood, but have a tougher time capturing financial benefits from their forests’ ecosystem services. If landowners could derive income from standing trees, perhaps less forestland would be lost to sprawl. Yet forest owners get only a tiny fraction of the more than $3 billion the federal government gives each year to private landowners as conservation incentives. Although the Conservation Reserve Program has funded conversion of marginal croplands to forests, few dollars have been spent to manage and conserve existing forestlands. Landowners have few places to turn for technical and financial assistance to write forest management plans, use prescribed fire, control invasive species, thin fire-suppressed stands of trees or otherwise manage their lands in ways that satisfy multiple objectives.

In the 2002 Farm Bill, Congress authorized the Forest Land Enhancement Program which was to receive about $20 million annually. Although the program is small by Farm Bill standards, forest landowners have had to struggle to maintain it. The Bush Administration and even some Congressional appropriators have sought to eliminate its funding, and only an outcry from forest owners and conservation groups has kept the program alive, demonstrating the strong support for forest incentive programs.

Another option for forest landowners under the Farm Bill is the Environmental Quality Incentives Program, funded at about a billion dollars a year and administered by the Natural Resources Conservation Service. Although forest owners are eligible for EQIP funding, the program has largely benefited livestock producers and other farmers. Some states, such as Arkansas and New Hampshire, have set aside EQIP funding for forests, but nationwide less than 2% of the program’s dollars are spent on forests activities annually. A large share of that goes to installing shelter belts and other activities on farmland that can hardly be considered forestry.

Several non-governmental organizations are working to increase awareness of the “invisible forest health crisis.” In May, the American Forest Foundation, The Nature Conservancy, National Wildlife Federation, Southern Environmental Law Center and Environmental Defense’s Center for Conservation Incentives helped organize Capitol Hill briefings to call attention to the need for resources to conserve and manage southern forests. Joining these organizations were the Southern Group of State Foresters, U.S. Forest Service researchers, the National Association of Conservation Districts, the Hardwood Lumber Association and the Society of American Foresters, demonstrating the depth of support for expanding conservation incentives and assistance programs for family forest owners.

That same day Chuck Leavell was supposed to be in New York, alongside Mick Jagger and Keith Richards, announcing the Rolling Stones’s new world tour. Instead he was in Washington giving the keynote address at the Congressional forestry briefings. When it comes to raising awareness about the need to protect private forestlands, Chuck Leavell rocks.

~Robert Bonnie
managing director
Center for Conservation Incentives
Environmental Defense

Laurence D. Wiseman
president and chief executive officer
American Forest Foundation
Safe Harbor’s next decade: Improving it for landowners

Following April’s electrifying announcement of the ivory-billed woodpecker’s rediscovery, Interior Secretary Gale Norton listed Safe Harbor as one potential tool for recovering this long-thought extinct bird. A decade earlier, when the nation’s first Safe Harbor landowners volunteered to manage land for endangered red-cockaded woodpeckers, no one envisioned that those foresters might be leading the way for helping an even rarer woodpecker.

A role for Safe Harbor may be a bit of a stretch when we don’t yet know if more than one ivory-bill remains. However, Safe Harbor opportunities are clearer for dozens of other rare species and a multitude of farmers, ranchers, foresters and other private landowners. And a decade of Safe Harbor experience gives us several ideas how to further the use of this still new conservation tool.

First, simplify and speed up the process by which the Fish and Wildlife Service develops and approves Safe Harbor Agreements. Why make landowners who are ready and willing to restore habitat for rare species wait six months or a year for paperwork to be completed? Yet, they often do wait that long or even longer. A few careful changes to FWS’s standard operating procedures could eliminate many unnecessary impediments, such as multiple layers of review when most agreements could be approved at the field office level, biological opinions that shouldn’t be required for most agreements and lack of specification for what information needs to be in an agreement.

Second, ensure that agency staff who review and approve the agreements have appropriate training and motivation. An unfortunate consequence of decades of conservation battles is that a bunker mentality sometimes sets in. Agency staff who think of themselves as “combat biologists” often have difficulty making the mental transition needed to work successfully with private landowners who are willing, given the right incentives, to volunteer as conservation partners.

Third, incorporate incentives. Safe Harbor Agreements remove a major disincentive—the fear that conservation management will encumber one’s property with unwanted restrictions. But managing land for conservation costs money, sometimes considerable sums. Few landowners can pay the full cost, particularly for activities that do not otherwise benefit the landowner. At present, no source of cost-

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RECOMMENDED RESOURCES


The above three publications are available at www.environmentaldefense.org/article.cfm?ContentID=4467. For a hard copy, email ccieditor@environmentaldefense.org or call 1-800-684-3322.

White House Conference on Cooperative Conservation. Information on this invitation-only August conference is at www.conservation.ceq.gov. Profiles of cooperative conservation projects posted by private organizations and government agencies are at www.cooperativeconservationamerica.org.

Farmland Information Center. American Farmland Trust and Natural Resources Conservation Service. Online clearinghouse offers information on farmland protection and stewardship, including laws, literature, statistics and technical resources. www.farmlandinfo.org

sharing assistance exists specifically for Safe Harbor landowners.

Fourth, make Safe Harbor assurances available to landowners enrolled in other conservation programs. Generously funded Farm Bill conservation programs could greatly benefit rare wildlife, but little of that potential has been realized. A primary reason is that the FWS has not yet devised a simple way to provide Safe Harbor assurances for Farm Bill-funded landowners. Solving that problem could multiply the benefits of Safe Harbor Agreements.

The Healthy Forests Reserve Program, created by Title V of the Healthy Forest Restoration Act, promises both regulatory and financial incentives to widen Safe Harbor use by private forest owners. Yet Congress has appropriated no money for the program, although the law authorized up to $25 million for FY2004 and “necessary” funds in FY2005-2008 for private landowners to restore habitat for rare plants and animals. Landowners who enter 10-year agreements, 30-year easements or 99-year easements with a restoration plan that benefits rare species are to receive U.S. Department of Agriculture cost-share assistance for implementing that plan and, in the case of easements, payments for the reduction in property value.

Fifth, more nongovernmental organizations can and should use Safe Harbor Agreements. From the program’s start, private groups have contributed significantly to Safe Harbor achievements, but there’s potential for wider involvement. By signing “programmatic” or “umbrella” Safe Harbor Agreements under which individual landowners can enroll, The Peregrine Fund, The Nature Conservancy, Environmental Defense and other groups have saved landowners time and money. An additional benefit, in some instances, is increased privacy for individual landowners, as only the umbrella permit holder’s information is published in the Federal Register.

Land trusts can participate in Safe Harbor in two ways: by encouraging area landowners to volunteer to enroll in agreements and by enrolling their own property. Like any other non-federal landowner, a land trust can engage in beneficial management for species covered by a Safe Harbor Agreement without fear of additional Endangered Species Act restrictions on the use of its property.

Last, eliminate the fee charged to landowners who apply for Safe Harbor permits. Unfortunately, FWS instead doubled the fee to $50 in April, explaining the cost was too trivial to discourage landowner participation. Certainly the few hundred dollars total collected each year would be even less burdensome for FWS to assume, as in all fairness it should, rather than charging landowners who volunteer to help the Service do its conservation work.

As in Safe Harbor’s first decade, unforeseen opportunities and obstacles will surely appear in upcoming years. However, tackling the above concerns could significantly advance Safe Harbor to the benefit of both landowners and rare species.

Help with conservation management expenses can be a powerful incentive for landowner participation.