

# Carbon Sequestration

*Restoring native wildlife habitat and capturing carbon*

One of the tools developed by the U.S. Fish and Wildlife Service over the past decade to address climate change is an innovative terrestrial carbon sequestration program that uses plants to absorb carbon dioxide. The program, born out of conversations between the Service's biologists and Dynegy in 1997, is the first of its kind among natural resource agencies.



*Prothonotary warbler*



*Green tree frog*

Today, the program has grown into a multi-pronged effort involving individuals, energy companies and conservation organizations. It is a key part of the Service's effort to restore the Lower Mississippi Valley, which saw its forested wetland habitat shrink from 24 million acres to less than five million acres in the 20th century. Success in the Lower Mississippi Valley led the Service to expand the program nationally.

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*Pocosin Forested Wetland, Pocosin Lakes National Wildlife Refuge*

The Service works with more than two dozen energy companies, Environmental Synergy, Inc., The Trust for Public Land, Dynegy, and The Conservation Fund. In total, the Service has added 40,000 acres of restored habitat on nearly fifty national wildlife refuges — and created a new refuge in Louisiana, the Red River National Wildlife Refuge — while restoring more than 80,000 acres of former farmland to native habitats on

existing refuges for the benefit of fish, wildlife, and migratory bird populations.

Together these partners have planted more than 22 million trees that will capture more than 33 million tons of carbon over the next 90-plus years. And it's not just bottomland hardwood restoration where the opportunities are being found.



*Machine planting hardwood seedlings, Tensas River National Wildlife Refuge*

In 2006, the Service began restoring Tamaulipan thorn-scrub habitat on the Lower Rio Grande Valley National Wildlife Refuge in Texas with the American Forests Global ReLeaf and The Conservation Fund's Go Zero program. More than 175 acres of habitat have been restored.

Nearly 11,000 acres of pocosin wetlands, or shrub bogs, have been restored on the Pocosin Lakes National Wildlife Refuge by installing water control structures.

## U.S. Fish & Wildlife Service

The wetlands, which had been drained for agriculture and peat mining, act as chemical sponges for carbon, nitrogen and metals. The Service is working on the project with the North Carolina Department of Environment and Natural Resources and the Duke University Wetlands Center.

Early in the Service's carbon sequestration program, partners simply restored natural vegetation on highly degraded lands already owned by the Service. Today, energy companies purchase high value lands, restore them based on wildlife conservation priorities, then donate the restored lands to land trust partners and the Service. They also provide limited funds to support operations and maintenance, reserving the carbon credits to report for themselves under long-term agreements.

In 2007, the Service announced a new partnership with The Conservation Fund and its Go Zero initiative that gives individuals and organizations a way to offset their carbon emissions by contributing funds to plant native trees on national wildlife refuges. It's a voluntary, non-regulatory program to reduce carbon emissions. Working with

the Service, The Fund expects to restore wildlife habitat through reforestation across the refuge system by planting at least 400,000 trees annually. That means each year, the Service will plant enough trees to sequester at least 300,000 tons of carbon over 90-plus years.

With ever-tightening budgets, the Service is working with partners to pursue strategic, landscape-level conservation activities aimed at ensuring the right conservation activities take place in the right places. Expanding terrestrial carbon sequestration activities will be an increasingly important part of the Service's conservation work. With this and other innovative conservation tools, the Service and its partners will enhance and connect critical wildlife corridors and blocks of habitat in the most important areas based on the best science available related to climate change impacts and mitigation needs.

The next frontier for this work involves working with private landowners. The Service will work closely with other federal, state, and private conservation organizations that use existing incentives or newly created ones to conserve and restore native habitats on private lands.



*Hand planting seedlings, Catahoula National Wildlife Refuge*

Restoring native wildlife habitats and capturing carbon represents a "win-win" for the Service, its partners, and our constituents.

For more information, please contact Pete Jerome, Refuge Supervisor, U.S. Fish and Wildlife Service, at 404/679 7157 or [pete\\_jerome@fws.gov](mailto:pete_jerome@fws.gov)



*Tree planting crew, Alligator River National Wildlife Refuge*



*Old growth forest, Bayou Cocodrie National Wildlife Refuge*



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