

Ecosystems

Making conservation pay



“If we are going to meet our growing needs for food and water and energy, we will have to do it in ways that stop harming the environment and start helping the ecosystems we depend on to survive.”

David Festa
Senior VP Ecosystems

Twenty years ago, EDF wanted to test a new idea: Would offering rewards for practices that improve ecosystems result in the widespread adoption of those practices?

Acting on the theory that most private landowners want to be good stewards, we introduced a way for them to protect habitat without restrictions that kept them from making a living. The result—Safe Harbor—saved more than four million acres of prime habitat.

Ever since, EDF has sought to balance human interests with the needs of ecosystems. We mobilize financial, legal and technical incentives to reward landowners who restore habitat and reduce pollution.

With climate change putting added stress on ecosystems today, we need to protect our land, water and wildlife at a scale never before attempted. EDF aims to increase the resilience of these systems so they can thrive, even under

stress. That means working hand in hand with the people whose livelihoods are tied to healthy land and water.

Today, thanks to public-private partnerships launched by EDF, landowners nationwide are frontline stewards of clean water, healthy air, vibrant habitat and a stable climate. Where EDF and its partners work, coastal erosion, fertilizer runoff, habitat loss and water consumption are being decreased. And landowners are discovering that when they improve land and freshwater systems, they save money.

“Inevitably, when I’m on a farm or a ranch, the owner often starts talking about the wildlife and the water quality,” says David Festa, EDF’s senior VP for ecosystems. “The habitat they restore is often their favorite part of the ranch. They can’t stop talking about it.”



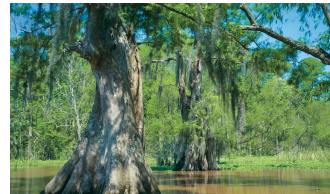
EDF landowner partners:



Apply fertilizer precisely to reduce nutrient runoff harmful to aquatic life, improve water quality and reduce greenhouse gas emissions.



Create and improve wildlife habitat to help at-risk species.



Restore wetlands to filter pollution, protect communities from floods and recharge groundwater, building resilience against droughts.



Improve soil health to reduce the impacts of climate change and enhance food security.

A Hill Country success

Fort Hood Army Base in Texas is home to the largest population of golden-cheeked warblers. The base needed to conduct maneuvers, so EDF created a habitat exchange, allowing the Army to pay nearby ranchers to improve warbler habitat on their properties. Once-skeptical landowners expanded habitat. The result? The known population of **warblers nearly doubled** from 5,000 to 9,000 birds. The cost? One-eighth of what easements would have cost.

The endangered golden-cheeked warbler nests only in central Texas.





“I’d still be fighting the U.S. government if it weren’t for EDF. Thanks to you guys, I’ve seen a huge change in how the U.S. Fish and Wildlife Service works.”

Kerry Russell

Texas rancher who restored warbler habitat on his land at the edge of Austin

Bringing conservation into the 21st century with habitat exchanges



Celebrated for its colorful courtship displays, the greater sage grouse is in trouble. Once numbering in the millions, the bird's population has plummeted by more than 70%.

In fast-changing rural America, existing tools for protecting wildlife can no longer preserve habitat on a large enough scale. Dozens of species slip closer to extinction as conflicts between developers, landowners and conservationists escalate.

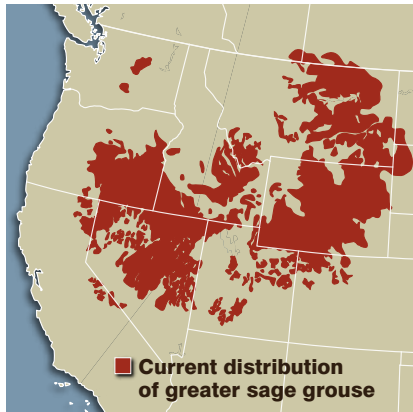
Nowhere is the urgency greater than in the West, where the oil and gas boom threatens a shy bird that symbolizes the Western prairie—the greater sage grouse. In 2015, the U.S. Fish and Wildlife Service considered listing the sage grouse under the Endangered Species Act, a move that would have triggered costly legal battles throughout the bird's 11-state range, without any guaranteed benefit for the bird.

EDF had a different idea. We developed incentives for private landowners, industry and conservationists to share resources, so that everyone wins, including the sage grouse.

With EDF habitat exchanges, ranchers and farmers are paid to improve habitat on their working lands and to play host to appropriate wildlife—much the way Airbnb lets homeowners get paid for taking in travelers. A company that degrades habitat is required to fund the creation of enough better-quality terrain to more than compensate for the damage it causes. EDF



Sage grouse are dependent on sagebrush for both food and cover. Protecting their habitat will benefit the entire ecosystem, not just one species.



scientists helped develop a reliable way to gauge the impacts and benefits to the grouse.

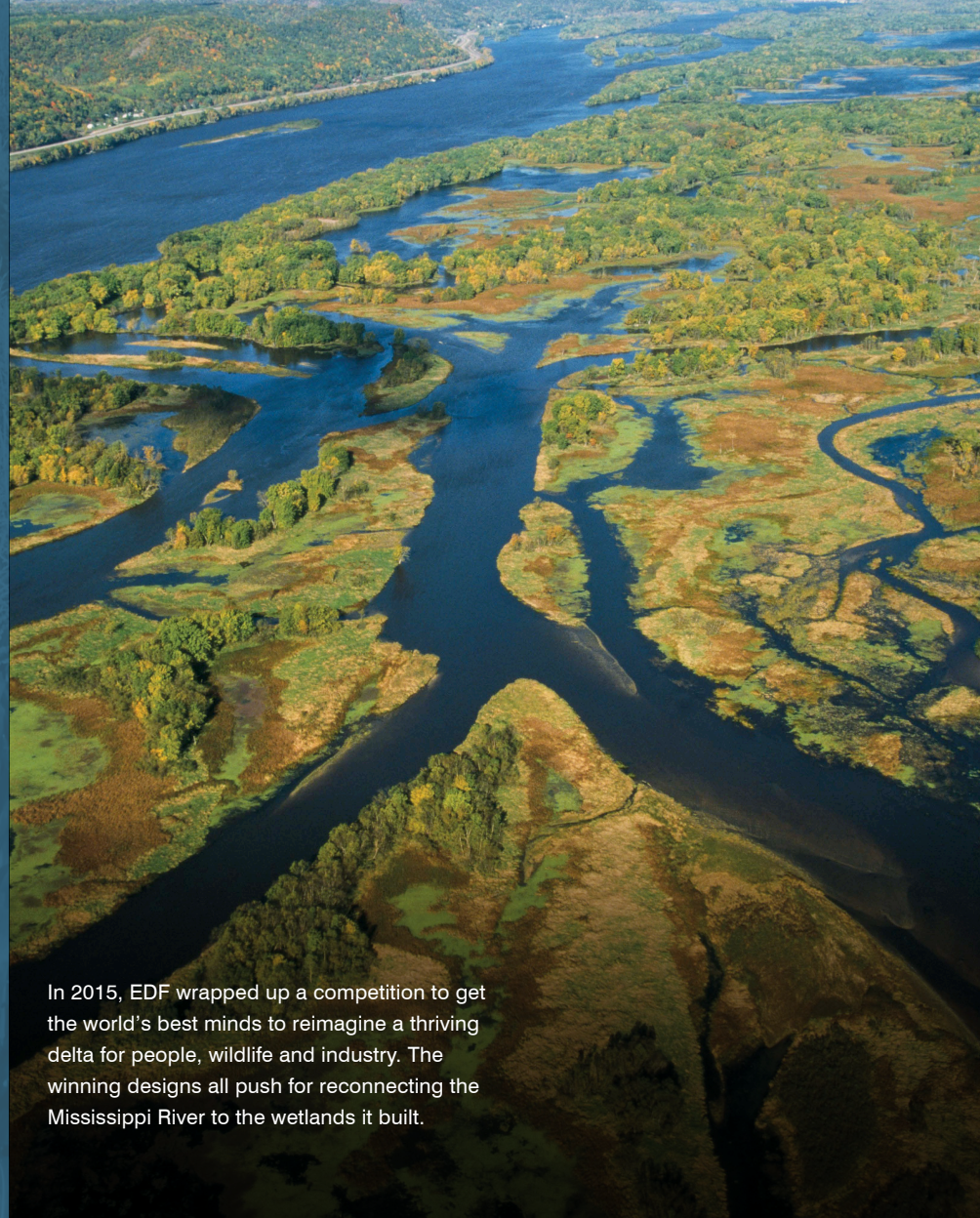
Impressed by the program, Colorado Governor John Hickenlooper helped EDF develop an exchange for sage grouse. “It’s inspiring to see Colorado ranchers, conservationists and business leaders come together for this iconic bird,” the governor said. Colorado, Nevada and the federal Bureau of Land Management now recognize habitat exchanges as a way to save imperiled species without onerous regulations.

By mid-2015, EDF and its partners won enough restoration commitments from ranchers to persuade the Fish and Wildlife Service that a sage grouse listing is not warranted.

“Securing the future of the sage grouse without having to resort to the Endangered Species Act’s safety net is a win for wildlife and people across the West,” says Fish and Wildlife Service director Dan Ashe. “I never thought I would be so happy and so proud to hear the words ‘not warranted.’”

Justice comes to America's grandest delta

The world's largest coastal restoration is ramping up in Louisiana, thanks to the infusion of billions of dollars from BP's settlement for damages from the 2010 oil disaster. **EDF has been working to make sure the money leaves coastal communities better off**, while helping to lead science and policy efforts to restore the state's vanishing coastal wetlands.



In 2015, EDF wrapped up a competition to get the world's best minds to reimagine a thriving delta for people, wildlife and industry. The winning designs all push for reconnecting the Mississippi River to the wetlands it built.



In California's Central Valley, 90% of disadvantaged communities rely exclusively on private wells, many of which have gone dry. We're making sure they benefit from sustainability plans.

Helping California weather the drought

California's underground aquifers are vital for drinking water, farms and ecosystems, but many are being sucked dry faster than nature can replenish them. EDF is helping at-risk counties develop **market mechanisms to sustainably manage their groundwater**. We're also developing policy reforms for water trading to benefit ecosystems and disadvantaged communities.

On the farm, thinking like an ecosystem

In August 2015, the “dead zone” in the Gulf of Mexico swelled to 6,474 square miles, the size of Connecticut and Rhode Island combined. Such algae blooms, driven by fertilizer, regularly choke marine life and threaten drinking water for millions from Lake Erie to the Chesapeake Bay. Excess fertilizer also forms nitrous oxide, a potent greenhouse gas. The problem is, farmers often don’t know exactly how much fertilizer to use, so they tend to apply too much.

EDF is tackling the issue with a focus on corn, the biggest source of fertilizer runoff. Over the past decade, working with crop managers and others, we’ve helped farmers on 750,000 acres in 12 states cut fertilizer loss by an average of 25%—while maintaining yields. We’re also advocating natural filters such as wetlands to keep the nation’s waterways healthy.

But to truly solve the problem, we need to scale up this approach nationwide. The fastest

way to make sustainable practices the norm in U.S. food production is to get major food companies and agribusiness on board. So EDF teamed up with Walmart, the nation’s largest grocer, to create demand for sustainably produced grains. With such a signal, the response wasn’t long in coming: United Suppliers, whose members advise growers managing 45 million acres, developed a plan to cut fertilizer and soil loss. In 2015, Campbell’s Soup, General Mills and others asked EDF to help them implement the plan to improve growing practices for their products. Together, a range of companies have committed to adopt best practices on 23 million acres by 2020.

“Besides saving money, I feel good that my operation is helping improve water quality and keeping fertilizer out of lakes and rivers,” says Brent Bible, a farmer who grows corn and soybeans on 3,000 acres in northwest Indiana.





EDF is working with farmers and businesses to improve farming practices. So far, 15 companies representing 30% of the U.S. food and beverage market have committed to using fertilizer more efficiently and improving soil health.



Twenty times more fertilizer is used in the Corn Belt today than in the 1950s—but half of what's applied isn't absorbed by crops, leading to air and water pollution. The fertilizer crisis could become "one of the costliest and most challenging" of the 21st century, EPA says.

ALLIES FOR WILDLIFE

"We are looking for practical solutions that work for the environment and for people, and that is EDF's mission," says Gary Knoblock, lead program officer for the S. D. Bechtel, Jr. Foundation.



EDF's habitat exchange approach helps achieve one of the foundation's core goals: advancing conservation on privately owned land in California. "Habitat exchanges help make landowners allies in protecting habitat, and that's a powerful paradigm shift," says Knoblock. "Landowners and state and local government officials are keenly interested in new approaches that can work."

The foundation shares EDF's focus on results. "With habitat exchanges, we can measure concrete benefits to the ecosystem from the money spent on conservation," Knoblock says. "Previously, that's been quite hard to do."

"Conservation is our goal, but it has to be in the context of practical solutions. EDF excels at that."

Lauren B. Dachs

President, S. D. Bechtel, Jr. Foundation

“EDF habitat exchanges
offer conservation options
suited to our changing
circumstances. Every
credit sale makes species
and habitat better off.”

Steve McCormick

*Former President and CEO,
The Nature Conservancy*

Environmental Defense Fund
257 Park Avenue South, New York, NY 10010
212 505 2100 / edf.org / members@edf.org
©2015 EDF