

We can feed the world while protecting its ecosystems.

Through on-the-ground partnerships in 12 states, EDF is helping farmers save money, improve wildlife habitat and reduce pollution without sacrificing yields.



Wildlife habitat



Goal: Conserve wildlife by helping land-owners protect habitat.

Why: The unprecedented pace of energy development in the West has put the industry on a collision course with wildlife.

Our objectives by 2015:

- 1/ A habitat exchange for the lesser prairie chicken has been created and approved by state and federal regulators.
- 2/ Three new habitat exchanges launch in target states affected by energy development.
- 3/ Half a million acres of prairie chicken and sage grouse habitat are conserved or restored.

EDF leadership:

David Festa, *VP Land, Water and Wildlife*
 Rebecca Shaw, *Associate VP*
 Courtney Taylor, *Policy Director*

Mississippi River Delta



Goal: Restore coastal wetlands of the Mississippi River Delta.

Why: Decades of mismanagement of the Mississippi River system and its Delta have caused the loss of half of Louisiana's threatened coastal wetlands.

Our objectives by 2015:

- 1/ \$5 billion of BP penalty funds are secured for priority restoration projects.
- 2/ Design process has begun for an improved navigation system to meet New Orleans's port needs while allowing Mississippi sediment and freshwater to flow again to wetlands.

EDF leadership:

Steve Cochran, *Director*
 Elizabeth Weiner, *Senior Policy Manager*
 Elizabeth Skree, *Communications Manager*

Agriculture



Goal: Help farmers become stewards of clean air and water.

Why: Overapplication of nitrogen fertilizer results in polluted runoff and creates air pollution that worsens climate change.

Our objectives by 2015:

- 1/ Our work with Walmart and other food buyers paves the way for cutting fertilizer use by 2016 among the top 20% of U.S. corn farmers.
- 2/ Progress is under way to cut the number of U.S. waterways with dead zones in half within ten years. This is achieved by making it profitable for farmers to protect water quality.

EDF leadership:

Eric Holst, *Senior Director, Working Lands*
 Suzy Friedman, *Director*
 Jenny Ahlen, *Project Manager, Retail Team*

Efficient irrigation



Goal: Improve the efficiency of agricultural irrigation in the United States.

Why: New water management solutions can enhance the sustainability of agriculture, improve rural economies and preserve healthy river flows for wildlife.

Our objectives by 2015:

A new management framework for the Colorado River is in development—one that encourages water sharing and efficient water allocation to meet human and environmental needs.

EDF leadership:

Paul Harrison, *Senior Director, Water*
 Jennifer Pitt, *Director, Colorado River*
 Aaron Citron, *Policy Analyst*

FOR FARMERS, CONSERVATION PAYS

In America's heartland, corn is king. Ninety-seven million acres of the crop were planted in the United States in 2013—an area the size of Illinois, Iowa and Ohio combined. Much of the corn finds its way into some 45,000 products on supermarket shelves, from cereal to soda to beef. It's even fueling America's automobiles (40% goes to produce ethanol).

EDF is working across the food supply chain—from farmers to big box retailers—to reduce environmental impacts and see that stewardship pays dividends for those who grow our food.

Growing corn comes at a significant environmental cost. Across the Corn Belt, excess fertilizer runs off fields into critical watersheds, where nitrogen and phosphorous from the fertilizer create algae-filled “dead zones.” Historically, farmers never knew exactly how much fertilizer to use, so they often applied too much, just to be on the safe side. The result: an estimated half of what they applied was not taken up by crops.

Runoff plagues Lake Erie, the Chesapeake Bay and the Gulf of Mexico. Excess fertilizer also leads to nitrous oxide emissions, a global warming gas 300 times more potent than carbon dioxide.

To cut fertilizer waste, EDF helped build networks of farmers in a dozen states from Minnesota to North Carolina. With universities and farm groups, we're helping farmers use better data and field imagery to determine how much fertilizer their crops really need.

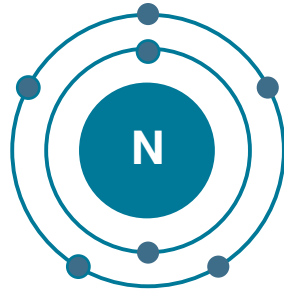
Indiana farmer Rob Ternet is one partner. As he surveys a row of 12-foot-high corn, he says: “In my 29 years of farming, this could



THE STORY OF CORN



The U.S. produces half the world's corn



The amount of nitrogen fertilizer applied to an acre of corn has increased an average of 25% over the last 40 years



Fertilizer runoff in the Mississippi River has created a dead zone in the Gulf of Mexico the size of New Jersey



Our farm partners have reduced nitrogen fertilizer use by an average of 25%, saving them approximately \$16 per acre

be my highest yield ever.” And he’s done it using about 25% less fertilizer. With fertilizer accounting for as much as one-third of farm costs, that’s money in Ternet’s pocket.

EDF’s goal is to cut fertilizer use for the top 20% of farmers, who produce half the nation’s corn. To help us get there, we’ve teamed up with Walmart, the nation’s largest grocery buyer. In September 2013, the retailer announced commitments from 14 key suppliers, including Coca-Cola and Kellogg’s, to reduce fertilizer waste in their supply chains. In addition, Smithfield Foods, the nation’s largest pork producer, is working with EDF on a plan to improve fertilizer management by farmers.

“We need to make informed use of fertilizer the rule, not the exception,” says Suzy Friedman, our agriculture sustainability director. “That way we can make a real difference in water quality and greenhouse gas emissions and keep farms highly productive.”

“The beauty of EDF is that they’re not trying to regulate the farmer. They’re promoting more efficient fertilizer usage, benefiting the environment without sacrificing yield.” Greg Kneubuhler, Ternet’s crop advisor





“Our goal is for farmers to become stewards of clean water, fresh air, wildlife and a healthy climate. They will need to do this, if our planet is to sustain a growing population.”

David Festa, VP Land, Water and Wildlife

Rob Ternet / A conservationist in corn country



“This land is our livelihood. We want to pass it on in as good shape as when we got it.”

Rob Ternet started from scratch, working on other people’s farms for 18 years before purchasing his own in 1997. He built a state-of-the-art grain facility with his own hands, and today he and his wife, Kim, and their sons grow corn, soybeans and wheat on 4,500 acres in northeast Indiana, a few miles from where he and Kim grew up.

His success is a testament to hard work and his commitment to the land. For the last four years, Ternet has worked with EDF to use fertilizer more efficiently and implement conservation practices. “We want to do the right thing,” he says. He runs test plots, practices no-till agriculture and grows cover crops such as red clover to reduce soil erosion.

“Farmland is not a renewable resource,” says Kim. “We can’t farm it to death. God gave us this land. It’s our responsibility to treat it well.”

NEW LIFE FOR AN ICON OF THE PRAIRIES

Some of America's rarest animals continue to decline, as existing methods of conservation have not saved habitat fast enough to restore these species' populations. EDF has a new approach.

The lesser prairie chicken, a symbol of the vast western plains, has declined by more than 99% over the past 40 years. It is among the first of 250 plants and animals that could be added to the Endangered Species List over the next five years. Much of the bird's grassland habitat has already been cleared for crops, and now it is further imperiled by booming energy development, sparking a fierce clash between developers and conservationists.

To ease the conflict and save the prairie chicken, EDF introduced habitat exchanges. Simply put, an exchange lets landowners earn credits by restoring wildlife habitat on their land. Once the habitat is verified, the owner can sell the credits to developers to offset the impact of development nearby. We first used this approach at the Fort Hood Army Base in Texas, where neighboring ranchers created habitat for endangered golden-cheeked warblers.

Now our coalition of scientists, landowners and energy companies is showing how habitat exchanges could become a national model for saving species in a fast-changing landscape.

“For every acre developed, our program requires two acres restored, thereby enlarging high-quality wildlife habitat.” Eric Holst, *Senior Director, Working Lands*



WHAT'S NEW ON THE GULF COAST? POSSIBLY THE LARGEST ECOSYSTEM RESTORATION IN THE WORLD

123 million Americans live by a coastline.

Coastal communities are increasingly vulnerable to sea level rise and pollution. In Louisiana, vanishing wetlands have left New Orleans exposed to storms, endangering the nation's most significant port. The 2010 BP spill made the problem worse, but created an opportunity to change how the U.S. manages wetlands.

EDF helped build a coalition of scientists, business leaders, local communities and government officials that persuaded Congress to dedicate billions in BP penalties to restoring the Gulf Coast. In 2013, help began to flow, with \$1.25 billion allocated to rebuild the threatened Mississippi River Delta. EDF is making sure the money goes where it's needed.



GULF PROTECTOR



For 40 years, EDF attorney James Tripp has been helping to save the Gulf Coast. He's recruited barge owners, restaurateurs and other environmentalists to prevent expansion of unneeded navigation channels. He's saved precious bottomland hardwood forests and helped expose how the U.S. Army Corps of Engineers cooked its books on a billion dollar boondoggle to enlarge underused locks on the Mississippi.

Today, Tripp serves on Louisiana's commission on coastal restoration, which makes him an architect of the greatest wetlands restoration project in American history. "We've pushed the system to the edge," he says. "Now it's time to rebuild it."

"EDF's expertise in the region proved invaluable as we put together recommendations to restore the Gulf Coast." **Ray Mabus**, *Secretary of the Navy*

A ONCE-IN-A-LIFETIME OPPORTUNITY TO REPAIR A NATIONAL TREASURE IN THE GULF OF MEXICO

01

Wetlands restoration

The road map for rescuing the Gulf is Louisiana's Coastal Master Plan, which EDF helped shape. It calls for rebuilding 860 square miles of land by reconnecting the sediment-rich Mississippi to its wetlands. As its first step, the state is proceeding with our cornerstone restoration project in Barataria Basin, where the newest land in the United States will soon be created.

02

Scientific guidance

Strong science is a prerequisite for work on this scale. EDF scientist Dr. Angelina Freeman helped create a model to restore wetlands near Myrtle Grove, which is now being used by the government as a guide. Our scientists have demonstrated how people, wildlife and the economy all benefit from coastal restoration.



03

Help for communities

We're helping identify business opportunities that will follow coastal restoration, and making sure that hard-hit communities benefit.

04

Engaging business

EDF meets regularly with the navigation, fishing and tourism industries to encourage their involvement and support for restoration efforts. Our message: prosperity depends on conservation.

05

Pressure on BP

As evidence accumulated that spilled oil is working its way up the food chain, BP opted to go to trial rather than pay civil damages. We organized rallies and press conferences and generated 133,000 petitions to the Department of Justice to hold BP fully responsible.



A GREAT AMERICAN RIVER CAN ONCE AGAIN REACH ITS DELTA

Until the early 20th century, the Colorado River flowed freely to its delta, where wetlands and forests flourished on two million acres. But so much water has been drawn from the river that it dried up before reaching the Gulf of California. Now, thanks to an agreement that EDF and our U.S. and Mexican partners helped broker, some of the original ecosystem can thrive, benefiting farmers and wildlife. The pact provides a framework for sharing water and for water conservation. Already, farmers are getting paid for selling water rights to our water trust. This marks the first time Mexico and the United States have agreed to release water to restore the delta's ecological health.

The pact “is the most important agreement that has ever been put together between the United States and Mexico on water in the Colorado River.” Ken Salazar, *Secretary of the Interior 2009–2013*



Susan Ford Dorsey / A business approach to sustainable farming



“EDF makes things happen. It looks for solutions and doesn’t just make ideological arguments.”

EDF trustee Susan Ford Dorsey has supported EDF’s corporate partnerships work through the Sand Hill Foundation, which she established with her late husband Tom Ford, a real estate developer who helped preserve open space on the San Francisco Peninsula. “The fact that EDF worked with corporations like McDonald’s appealed to us,” she says.

Today, Dorsey also supports our work on agricultural sustainability. “The impact of so much wasted nitrogen fertilizer on

the water supply is pretty stunning,” she says. “EDF understands how the supply chain works and knows how to get the incentives right—the carrots and the sticks—so everybody wins: greater crop yields for farmers and less nitrogen pollution in the environment.”

Dorsey adds, “EDF makes things happen. It looks for solutions and doesn’t just make ideological arguments. It works with all the players. In the long run, that’s what it’s all about.”

EXTENDING A WELCOME MAT TO WILDLIFE



The world's largest population of endangered golden-cheeked warblers nests at Fort Hood Army Base in Texas. The birds are doing fine, thanks to a program designed by EDF. Fort Hood is paying to restore warbler habitat on nearby private land. That allows the base to continue maneuvers. Meanwhile, landowners are getting paid and warblers thrive in greatly expanded habitat.

“Nothing like this has been tried before. It absolutely could work at other bases.” *Ron Perry, Director, Mission Support Element, III Corps Fort Hood*
