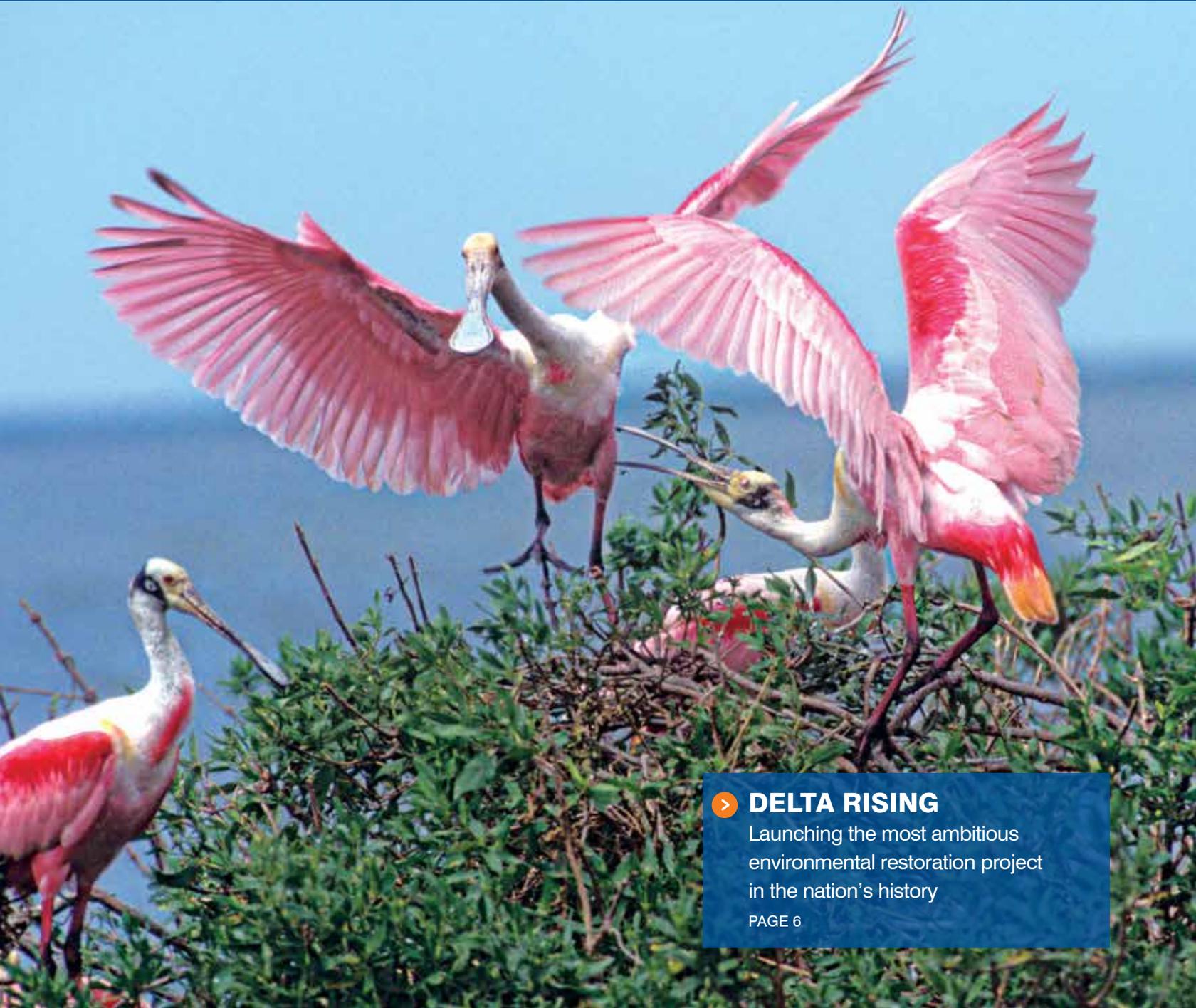


SOLUTIONS

Vol. 43, No. 4 / Fall 2012



> **DELTA RISING**
Launching the most ambitious
environmental restoration project
in the nation's history
PAGE 6



Environmental Defense Fund's mission is to preserve the natural systems on which all life depends. Guided by science and economics, we find practical and lasting solutions to the most serious environmental problems.

Our work is made possible by the support of our members.



ON THE COVER: It's time to set right a great wrong. Oil spill penalties, levied against BP, are soon expected to begin paying for a historic restoration of the battered Gulf coast.

Solutions editor Peter Klebnikov traveled to the Mississippi Delta to meet the remarkable array of partners working with EDF to heal the coast. See page 6.

Cover photo: Roseate Spoonbill by Phyllis Greenberg/Animals Animals

SOLUTIONS

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TALK BACK CLIMATE CHANGE IS HERE

The year 2012 may be remembered as a turning point in the history of global warming: Americans endured the hottest 12 months on record.

What lies ahead? After wildfires in the West, a killer storm in the Northeast and withered corn crops throughout the Midwest—the once-moribund topic of climate change and how it drives extreme weather is suddenly big news. The impacts of a warming planet have hit home, as these stories from our members attest. Is Congress listening?



Candice Towell/AP Photo

A Nevada farmer inspects his devastated crops. Without action to curb carbon emissions, scientists say the American Southwest will turn into a permanent Dust Bowl by 2050.

True tales of the new normal

"The last two years' worth of rain has been shocking. Last year our farm flooded seven times—in just two months. Other farms suffered great damage. We now focus on how to proactively manage extreme weather."

—Sean Z., Livingston Manor, NY

"Almost every storm has had a Weather Service warning—once a rarity here—of high winds and flash floods. There was one particularly bad storm. When it hit, we were driving home and found ourselves in a nightmare. Trees and live power lines were falling everywhere. I've never experienced a storm like that."

—William K., Washington, DC

"I live in farm country. Crops are drying up. Cows, stressed by the heat, are producing less. But northern Wisconsin, where my sister lives, had flooding all summer. We both live in disaster areas, drought or flood.

I'm concerned about my nieces and their children. What will be left when they grow up?"

—Patricia T., Butler, WI

"Last year's crops were nearly as bad as this year. Farmers can stand a loss like this occasionally but not years in a row. Global warming now seems a devastating possibility to farmers."

—Tom W., Columbia, MO

"In the center of Iowa we have re-established some tallgrass prairie areas. While the introduced grasses in pastures have dried up, our prairie areas are still lush and green. They are producing seed because of their deep roots in spite of the moisture shortage."

—Carl K., St. Anthony, IA

"Trees are leafing and flowers blooming eight weeks earlier. But the real extreme weather story is about the elected officials

who disseminate false information. Many of them come from the states hit hardest. If they took the time to visit the farmers they represent, they'd see the devastation." —Daniel H., Braden River, FL

"We've avoided the fires but not drought. Our forests are dying from the pine beetle, exacerbated by warmer winters. Fish are struggling to survive in our streams, running low and warm. In contrast, last year brought a 100-year flood. The weather is not right."

—Justin H., Steamboat Springs, CO

➤ [Submit your story at edf.org/sharestories](http://edf.org/sharestories)

A scientist speaks out:

**"This is a view of the future,
so watch out."**

– Kevin Trenberth, senior scientist with the National Center for Atmospheric Research

At the "crossroads of the world," a stark reminder



Half a million people pass through New York City's Times Square daily. To reach the throngs of overheated tourists, EDF created a 15-second video, "Sweltering? Blame global warming," which highlights the thousands of heat records shattered in the past year. It was shown every hour on a jumbo screen.

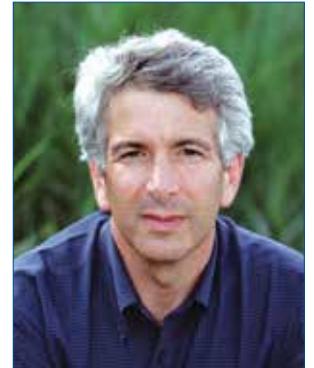
➤ [Watch the video at edf.org/timessquarevideo](http://edf.org/timessquarevideo)

EDF wants to hear from you. Email us at editor@edf.org or visit us at facebook.com/EnfDefenseFund. All letters are edited for clarity and length.

THE ART OF SEIZING OPPORTUNITY FROM CRISIS

By EDF President Fred Krupp

It's the kind of victory that doesn't happen often. In a strongly bipartisan vote this summer, Congress approved a plan that EDF helped design to heal the Gulf Coast—using billions of dollars in penalties from BP's 2010 oil disaster. Out of that catastrophe arose a once-in-a-generation chance to restore a devastated coastal ecosystem. (See story, page 6.)



T. Charles Erickson

We need similar bipartisan courage to address an even larger crisis: global climate change. While other countries have been moving forward on this issue, two camps in the United States have been talking past each other: the majority that is convinced by the overwhelming evidence, and a vocal minority that remains unconvinced.

But a summer of unprecedented heat—with half of our nation declared a federal disaster area because of drought—has begun to shift the conversation. The odds of this record heat occurring randomly, rather than as a result of climate change, are one in a million. After Colorado wildfires drove 30,000 people from their homes, Princeton University physicist Michael Oppenheimer, formerly EDF's chief scientist, said this:

"What we're seeing is a window into what global warming really looks like. It looks like heat, it looks like fires, it looks like this kind of environmental disaster."

EDF is working hard to help change the polarized debate over climate. Already, some prominent skeptics have reassessed their positions. In a recent study, partly funded by billionaires David and Charles Koch, physicist Richard Muller concluded: "You should not be a skeptic, at least not any longer." And Republican leaders like Governors John Kasich of Ohio and Chris Christie of New Jersey have also spoken out about the reality of climate change.

These views may represent a tipping point. We'll have a much better shot at stabilizing climate if leaders across the political spectrum are engaged.

We can start by agreeing on some basic propositions: (1) Dramatic alterations to the climate are under way and are likely to worsen—with profound damage to the economy—unless sustained action is taken. (2) Some proposed climate solutions, if not well designed, could harm the economy. For any policy to succeed, it must work with the economy, not against it.

As we saw in the Gulf of Mexico, nothing dismantles old thinking quicker than a crisis. America urgently needs the cooperative spirit Congress demonstrated when it extended a lifeline to the Gulf Coast. With your help, EDF is working to build these crucial bridges.

A SHARP TURN TOWARD CLEANER CARS AND SAFER AIR



John Rae

For EDF and our allies, it was a clean sweep: cleaner cars, and a huge court victory for clean air.

In late August, the Obama administration finalized rules requiring new cars to average 54.5 miles per gallon by 2025. The rules represent the greatest improvement in fuel economy standards since 1975. When fully implemented, they could cut oil use by 2.2 million barrels a day—nearly half what America imports from OPEC.

EDF helped pave the way, starting in 2002 when we secured the votes for California's landmark clean car law, which became the foundation of the new federal standards.

Implementation of the new rules, supported by U.S. automakers and the United Auto Workers Union, was made possible by a series of victories in the courts.

The most recent came in June when a federal appeals court unanimously upheld EPA's 2009 "endangerment finding," in which the agency determined that carbon dioxide from cars and light trucks constitutes a danger to public health. That finding, under the Clean Air Act, meant EPA was required to regulate those gases. The decision dealt a decisive blow to companies and states that for years have been fighting steps to address climate change.

"This was a clear-cut win for EPA's historic, science-based policies to address

climate change," said EDF general counsel Vickie Patton. "In strong and clear language, the court declared EPA's interpretation of the Clean Air Act was 'unambiguously correct.'"

Together with several states and other environmental groups, EDF intervened on the side of EPA in the case, which was challenged by industry groups and states such as Texas and Virginia.

The challengers argued that climate change carries no threats to human health, and therefore any regulation of emissions is unauthorized. If that argument had prevailed, it would have undercut everything EPA is trying to achieve under the Clean Air Act to protect the public from global warming pollution.

In its decision, the court upheld two related regulations as well:

- The Timing Rule, which addresses the timetable for large new industrial facilities to deploy cost-effective pollution controls for greenhouse gases.
- The Tailoring Rule, which requires that new, large industrial emitters (such as power plants) phase in the best-available controls, while exempting smaller emitters.

Perhaps the most significant aspect of the decision was the judges' support for climate science. In blunt language, the court rejected the plaintiffs' assertion that EPA's scientific analysis of climate change was faulty and the agency had relied too much on papers that synthesized scientific work.

"This is how science works," the court wrote. "EPA is not required to re-prove the existence of the atom every time it approaches a scientific question."

The court's opinion "was a sharp rebuke of those who deny or denigrate climate science," said Dr. Steven Hamburg, EDF's chief scientist.

The landmark decision validates EPA's common sense approach to address global warming pollution and will help secure a healthier future for all Americans.



Harrison Shull/Aurora Photos

EPA's rules for new power plants could lower U.S. demand for coal.



Marc van Vuren/Shutterstock

INDIA CLEANS THE AIR, ONE FAMILY AT A TIME

Champa, a farmer's wife and mother of three in southern India, used to get up every day before sunrise to cook breakfast over a wood fire in the family's tiny hut. The smoke aggravated one child's asthma, often keeping him from school.

As India's economy has boomed in recent decades, so have its emissions of global warming pollution. But a sizable portion of those emissions still comes from the burning of wood for cooking and heating by India's poor.

Poor quality cook stoves exacerbate the problem by burning wood very inefficiently, increasing the pressure on forests and releasing vast amounts of carbon once stored in living trees. The smoke from wood fires is also a deadly public health problem. The World Health Organization estimates that globally some 1.5 million people die every year from diseases like lung cancer and pneumonia caused by pollution from indoor cooking fires.

But how do you attack this problem in a nation of 1.2 billion people, one-third of whom lack access to electricity and more than half of whom earn less than \$500 a year?

"You start at the grassroots," says Richie Ahuja, EDF's program director for India. "You work in the 600,000 rural villages where most Indians still live, helping people find ways to reduce carbon emissions and live better lives."

As an example, Ahuja describes

Champa's life in Ananthpur District in the state of Karnataka. Until recently, she would spend a large part of her day in search of firewood, walking up to six miles, collecting wood as she went and carrying it in a bundle on her head, before returning home in the evening. But in June of last year, Champa's life changed overnight: she got a biogas digester and a small gas stove.

The digester is a small concrete pit with an airtight cover just outside her house. She fills it with the dung from her cows, which then decomposes, producing enough methane for her daily cooking needs. The remaining slurry is a good fertilizer for the farm.

Champa's digester is one of thousands being provided through the Fair Climate

Network, a coalition of nonprofit groups of which EDF is a founding member. Each digester reduces carbon dioxide emissions by approximately three tons a year, which will have value in future carbon markets. In fact, the digesters were funded in part through the advance sale of future reductions.

Champa no longer fills her hut with wood smoke at breakfast. Instead, she simply lights her gas stove, powered by methane from the digester.

Thanks to this simple convenience, her family's health has improved, meaning fewer days home from school and less money spent on visits to the doctor. And Champa no longer spends her days in search of wood. Instead, she has time to take better care of two family cows, which are producing more milk, increasing the family income. And she has begun to take in sewing and weaving jobs, bringing in still more income for the family. In time, the proceeds from carbon reduction credits also will flow to the household.

Ahuja calls it Low Carbon Rural Development. This simple intervention is one of many that are being implemented to deliver the elusive triple win: accelerating development and poverty alleviation, improving local air quality and health and reducing global warming pollution.

"Today, EDF and our Indian partners are working with some 150,000 Champas," Ahuja says. "And this is just the beginning. There are 150 million women like her in India. The work must be done."

LIGHTS! CAMERA! ACTION!

To spark action on climate change in India, EDF produced and distributed a Bollywood-style film in Hindi called *Aarohan* ("A New Beginning"). The film links global warming to rural development and has been seen in some 500 villages as part of our effort to promote low-carbon development in India.



Russell Kord/Aurora Photos

BRINGING THE GULF COAST BACK TO LIFE



By Peter Klebnikov

Forming a rare bipartisan coalition, EDF and our allies launch the nation's biggest environmental restoration. Our secret weapon? The mighty Mississippi River.

On the day in late June when Congress voted to dedicate billions of dollars in BP oil spill fines to restore the Gulf Coast, two key allies in the fight, EDF scientist Dr. Angelina Freeman and coastal scientist Dr. John Lopez (pictured above), were far from Washington in a muddy pass south of New Orleans, observing the future.

Around them, the Mississippi River was coursing through a willow swamp. The temperature was 101° and the mud was profound. But as they took measurements and scribbled notes, the scientists were delighted. They were seeing the Big Muddy run free.

An ambitious idea is taking shape in this swamp. EDF scientists are studying how the river builds up land by depositing sediment. Our goal is to replicate these mechanisms on a large scale, harnessing the power of the Mississippi to create land that is critical to local communities,

navigation and petroleum infrastructure and the survival of New Orleans.

“We don’t know exactly how a river builds land,” says Dr. Freeman. “But we do know it does so on a scale that humans with bulldozers can’t match.”

It was once a common event here for the Mississippi to overrun its banks and replenish wetlands with sediment. But for much of the past century, the Army Corps of Engineers built canals and levees, slicing up wetlands, turning the river into a walled barge canal and sending hundreds of millions of tons of precious sediment out into the Gulf of Mexico each year.

As a result, the Louisiana coast is losing 17 square miles of coastal land annually, exposing New Orleans to storms. “We need to reverse this mistake,” says Dr. Lopez, who directs the Lake Pontchartrain Basin Foundation.

To launch such a restoration, what’s

“EDF’s expertise in the region proved invaluable as we put together recommendations to restore the Gulf Coast.”

—Ray Mabus, Secretary of the Navy

needed, besides public consensus and sound science, is money—lots of it. So, shortly after the BP Deepwater Horizon disaster, we and our partners worked with Senator Mary Landrieu (D-LA) on an idea to dedicate BP’s penalties to Mississippi River Delta restoration.

Secretary of the Navy Ray Mabus, the Obama administration’s point man in the Gulf, seized on this idea and urged Congress to create a Gulf recovery fund dedicated to restoring wetlands and creating jobs in the hard-hit region.

There was one problem, and it was a big one: getting such an ambitious plan through Congress, which had been agreeing on little and doing even less for the environment. If Congress did nothing, BP’s penalties would have flowed to the federal treasury rather than to the area harmed by the spill.

To persuade lawmakers to dedicate the funds to the Gulf, EDF helped craft legislative language with our partners, the Audubon Society, National Wildlife Federation, The Nature Conservancy, Ocean Conservancy and Oxfam America.

We brought businesspeople, scientists and community leaders to Congress and, in studies with Duke University, demonstrated that environmental restoration generates more jobs than oil and gas investments. “We showed lawmakers that commerce and prosperity depend on conservation,” says Paul Harrison, senior director of our water program.

“EDF had a lot of credibility going in,” adds the Rev. Robert Gorman of Catholic Charities in Houma. Among other achievements, EDF helped secure locally popular victories like the closure of the Mississippi River Gulf Outlet, a little-used shipping canal that funneled Katrina’s storm surge deep into the heart of New Orleans.

“We found the right business voices,” says EDF senior counsel James Tripp, who has been working in the Gulf for 35 years.

“Without them, restoration would be impossible.” Also key was the support of the navigation industry. Barge pilots worry that a key route, the Intercoastal waterway, has become exposed to rough open seas due to wetlands loss and sea level rise.

EDF worked across party lines with key senators to help craft the RESTORE Act, emphasizing both environmental and economic restoration. Ultimately, seven of the nine senators sponsoring the legislation were Republicans.

“Once the Gulf Coast delegation

reached consensus,” recalls our project director Courtney Taylor, “we supported them with a barrage of editorial board, grassroots and business backing in the region and nationally.” EDF members helped by sending more than 100,000 messages to Congress.

In March, the Senate approved the RESTORE Act as an amendment to the transportation bill. A similar version passed in the House. The final RESTORE Act was approved in June by huge bipartisan majorities: 373–52 in the House and 74–19 in the Senate. In her speech to Congress, Senator Landrieu called EDF “absolutely instrumental” to the legislation’s success.

The final bill dedicates 80% of Gulf oil spill penalty money to healing the Gulf Coast—an amount that could



LOCAL HERO

John Taylor grew up hunting and fishing around the Lower Ninth Ward, where the wetlands met the city. “I remember millions of trees here, flowers and animals galore like trout and black bear,” he says. “My parents tried to scare us from going into the woods, but that didn’t work.”

Then, in the 1960s, Taylor saw the rich ecosystem destroyed by the Mississippi River Gulf Outlet, a shipping channel that allowed salt water in. And in 2005, he watched



John Rae

John Taylor: “Sometimes I think about how it was.”

as Hurricane Katrina roared up the channel, demolishing the Lower Ninth. “The wetland would have slowed the storm surge and saved hundreds of lives,” he says. “It’s a shame we couldn’t stop its destruction. Sometimes I think about how it was, with the lilies blooming and the cypress knees everywhere. It looks monstrous now.”

As coastal restoration moves forward, Taylor and the organization he works for, the Lower Ninth Ward Center for Engagement and Development, will help guide the work, ensuring local jobs are created. “Nobody knows the coast better than the local people,” says EDF project director Brian Jackson.

EDF’s local allies range from riverboat pilots to the Catholic Charities in Houma, where Father Gorman dispenses gas money and clothes for job interviews to a fishing community still reeling from the BP oil spill. “Dozens of people are still losing their boats,” Gorman says. “We need to rebuild these communities.”

reach \$21 billion, assuming a settlement is reached. This money will spark the most ambitious environmental restoration project in U.S. history and it will improve the lives of millions.

What's next for New Orleans?

A local saying goes: New Orleans is a necessary city in an impossible location. Sit on the levee south of the city and you'll see why. Every five minutes, an enormous tanker glides by, taking America's food

and energy to the world. By volume, the port of south Louisiana is the nation's largest—by far.

But over the years, the destruction of cypress swamps, coastal marshes and barrier islands has exposed New Orleans to hurricanes and oil spills. Sea level rise and stronger storms due to global warming have accelerated the damage.

Today, the regional economy, including the port complex and oil and gas infrastructure, a \$23 billion fishing industry,

tourism and wildlife habitat, is threatened.

“Destruction of the Mississippi River Delta is by far the largest and most tragic loss of ecological resources in this country,” says Tripp. “Everyone understands that the way we've been managing the river was killing the Delta wetlands. We've pushed the system to the edge. Now it's time to rebuild it.”

With the legislation passed, we and our partners are eager to get to work. The guiding document is Louisiana's 2012

RECLAIMING LOUISIANA'S VANISHING WETLANDS

It took the mighty Mississippi River 7,000 years to lay down the sediment that built Louisiana's wetlands. But in the last century, nearly a third of that land has disappeared, largely due to flood control and navigation projects.

Now, EDF is helping to rebuild what has been lost, using billions of dollars in fines that will result from the Deepwater Horizon oil spill. Once again, the Mississippi will create coastland that preserves the region's fisheries and wildlife and protects the city of New Orleans.

Source: Louisiana Shoreline Change 1937-2000, J. Sneed, R. H. Peelle, and S.A. Binsellam, 2007, LSU Center for the Health Impacts of Hurricanes, Louisiana Geological Survey.



Coastal Master Plan, which EDF's Tripp played a key role in shaping. It outlines 145 projects to restore 860 square miles of coastal land, nearly half of what Louisiana has lost since the 1930s.

The goal is to fundamentally change the way the Mississippi has been managed for the last 100 years.

Our top restoration priorities are projects to reconnect the Mississippi to its wetlands, so that sediments from the river can replenish the coast. The Army



Craig Semelko

In Southern Louisiana, healthy oyster beds mean much-needed jobs.

EDF HELPS REBUILD A VITAL COASTLINE

Rejoining the river to the delta

Levees keep the Mississippi from depositing sediment, causing wetlands to erode. EDF is using the river to rebuild marshes in places like Myrtle Grove.

Giving the Atchafalaya a boost

The Mississippi feeds the Atchafalaya River and supports America's largest swamp. Smart environmental management has partially replenished the river's wetlands. EDF is pushing for flows that mimic natural fluctuations to build even more land.

Filling in old canals

Obsolete canals, like the Mississippi River Gulf Outlet boondoggle, allow salt water into freshwater marshes, destroying them and damaging fisheries. EDF is working to refill these old waterways.

Protecting living reefs

Oyster reefs protect the coast from storms, provide fish and bird habitat, and improve water quality. We're working with oystermen to restore reefs in exposed areas.

Restoring barrier islands

Barrier islands are the first line of defense against a storm surge. They also help maintain a balance between fresh and salt water.

Corps is using EDF's models to plan these restoration projects, which include the Central Wetlands east of New Orleans and Myrtle Grove to the south. "Soon, the river will once again build wetlands for generations to come," says Harrison. "We'll make sure there are no more boondoggles like the Mississippi River Gulf Outlet."

Inherited from Spanish kings

In an area where people's lives are inextricably bound up with the water, reconstruction of wetlands will bring social change. EDF is working with communities and industries to help them adapt. A priority is the Gulf oyster industry.

Louisiana remains the world's leading producer of oysters, but the industry is in trouble. Threatened by coastal erosion and salt water intrusion, 90% of the oyster beds south of Houma are gone. This is troubling both for economic reasons—200,000 people depend on the industry—and because oysters are a keystone species. They improve water quality and form shallow reefs that protect the coast against hurricanes and serve as habitat for other economically valuable species.

Mike Voisin of Motivait Seafoods in Houma leases 15,000 acres of oyster beds to grow his Gold Band oysters. His ancestors began harvesting oysters here when the area was still a possession of King Charles IV of Spain. "I'm proud of

what we have and I don't want to lose it," he says. "But I worry about how our community will survive the changes."

Sea level rise from global warming is a leading concern. "I'm afraid in my lifetime this will all be under water," says Houma oysterman Jason Gilfour, gesturing at a landscape of shopping malls and gas stations. "All the concrete infrastructure you build will not help you if the sea continues to rise."

"We're preparing for change," adds Voisin. "We're among the first to experience the effects of the continual coastal loss." Like many people here, Voisin believes that rebuilding the wetlands, if done correctly, can save coastal areas.

"Soon, the river will once again build wetlands for generations to come."

—Paul Harrison, EDF water program

As freshwater wetlands are restored, oyster beds will need to be moved closer to sea for the optimal salt/freshwater balance. EDF is helping oystermen determine where the future beds will be.

"EDF brought together fishermen and others and got these communities to sit down together," says Voisin. "With EDF involved we are moving forward."

A MOTHER SPEAKS OUT ON MERCURY POLLUTION



Reg Morrison/Corbis



Dr. Stacy Small-Lorenz is an EDF conservation scientist in our land, water and wildlife program.

I grew up in a small town perched on a bluff overlooking the Ohio River, in southwestern Pennsylvania. While charming, the town was also within breathing distance of a coal-fired power plant, the world's largest zinc smelter, an oil refinery, several steel mills and foundries, a couple of plastics factories, and a synthetic rubber plant.

Many hot summer nights, when we slept with the windows open, I fell asleep holding the covers over my face to filter the stink from the air.

Arsenic, lead, mercury, zinc and cadmium contaminated the soil. During my childhood, officials told us not to eat locally grown vegetables or locally caught fish.

For my grandparents, that was hard to accept. Despite laboratory tests that revealed dangerous levels of soil pollution, they kept eating vegetables from their garden.

Both suffered serious cancers of the digestive tract.

Now I'm a new mother, and, like any parent, I want my child protected from toxic chemicals, especially mercury, a dangerous neurotoxin.

As a wildlife ecologist, I'm also concerned that mercury and other pollutants poison fish and wildlife by building up in the food chain.

That's why I'm relieved that the Environmental Protection Agency recently passed a rule to slash mercury and other toxic emissions from coal-fired power plants.

But we can't rest yet.

Congress tried to overturn the rule in June and some are still fighting to stop EPA from enforcing fundamental clean air laws. There are companies that support cleaner air, but it seems some polluters will never stop trying to use Congress and the courts to try to kill clean air protections.

MOMS TO THE RESCUE

MOMS
clean air
FORCE
FIGHTING FOR
OUR KIDS' HEALTH

In June, Senator James Inhofe (R-OK) introduced a bill in the Senate that would have killed EPA's new mercury rule, which will slash emissions 90% over the next three years.

Moms Clean Air Force, a group of mothers and other clean air supporters, now more than 100,000 strong, swung into action to defend the rule, one of the biggest public health advances in a generation. Inhofe claimed that the public health benefits of lowering mercury emissions are "EPA propaganda."

America's coal-burning power plants release about 70,000 pounds of toxic mercury into the environment each year. Mercury exposure, even in small quantities, can lead to serious neurocognitive problems, including impacts on thinking and memory. Young children are particularly susceptible.

EDF lobbied hard to defeat Inhofe's proposal, which was finally voted down 53-46. A big part of our push came from Moms Clean Air Force, a project that gives mothers a way to help protect

the environment through "naptime activism."

Heading the effort, author Dominique Browning leads a diverse community of bloggers including a science teacher from Connecticut, an Army wife in Texas and a staff cartoonist for *The New Yorker* magazine. More than 50,000 members sent messages to the Senate warning it not to touch the mercury rule. Says Browning, "No politician wants to make a mother angry."



AP Photo

Senator Inhofe still doesn't get it.

➤ **WHAT YOU CAN DO:** Tell President Obama and EPA Administrator Lisa Jackson to keep fighting for clean air at momscleanairforce.org/action.

PROTECTING OUR MOST VULNERABLE

New safe-chemicals law begins to move in Washington



easonilao/Getty Images

Momentum may finally be shifting toward action on chemical safety.

EDF scientist Dr. Richard Denison has been working for more than a decade toward reforming our nation's obsolete Toxic Substances Control Act (TSCA). This 36-year-old law doesn't regulate even the most dangerous chemicals—such as asbestos, formaldehyde and lead—despite their linkage to many chronic diseases. And—incredibly—the vast majority of the 80,000 chemicals available in the United States have never been tested for toxic impacts on people or the environment.

Over the years, Denison has shined a spotlight on the shortcomings of TSCA, writing reports, blogging, testifying before Congress and helping to create coalitions. But he credits a newspaper story for tipping the scales in favor of action.

Chicago Tribune lights a fire

“Playing with Fire,” a four-part series that recently ran in *The Chicago Tribune* (chicagotribune.com/flames), exposes a deceptive campaign by the chemical industry in the 1970s to enact laws mandating massive amounts of toxic flame retardant chemicals in furniture and other consumer goods. The effort involved extensive collusion between chemical companies and Big Tobacco to blame flammable furniture for house fires actually caused by cigarettes.

The ruse took the pressure off cigarette makers and enriched chemical companies. Yet recent tests show that the flame retardants mandated by the laws don't actually retard fires. They do, however, accumulate in people's bodies, particularly children's.

Compared to their mothers, toddlers have three times the level of flame retardants in their blood. And studies show that exposure early in development can increase the risk of learning and behavioral disabilities.

“Every American is contaminated with toxic chemicals because of the failures of TSCA,” said Denison. “For too long, people have been involuntary guinea pigs for chemical testing.”

The revelations in the *Tribune* stories sparked

long-overdue action on Capitol Hill and elsewhere.

In June, California Governor Jerry Brown called for a sweeping overhaul of that state's flammability standards to dramatically reduce or eliminate toxic flame retardants in furniture and baby products. (California is such a large market that its regulations typically become de facto standards for the nation.)

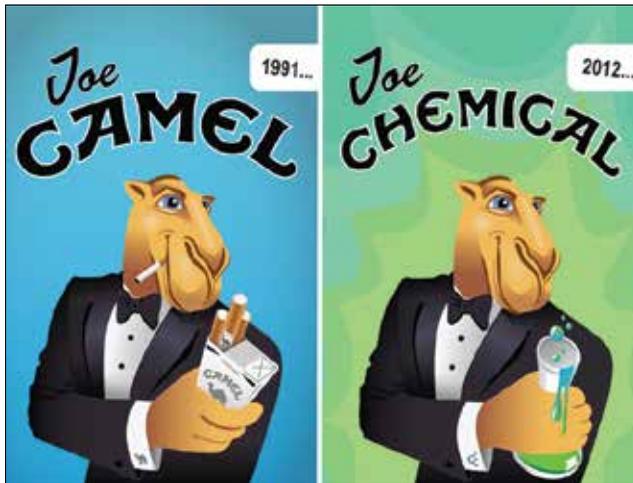
In July, EPA announced a broad investigation of flame retardants, and the Consumer Products Safety Commission urged lawmakers to grant it special authority to speed removal of these chemicals from new upholstered furniture.

The same month, the Safe Chemicals Act, a bill that would reform TSCA, passed the Senate Environment and Public Works Committee. This opens up the possibility of a full Senate vote this session.

Exposing a history of deceit

The *Tribune's* story also helped explode one of the chemical industries' main arguments against TSCA reform: that companies are *already* protecting public health through voluntary measures like the American Chemistry Council's “Responsible Care” program.

“An industry that has consistently lied to the public can't be trusted to regulate itself,” says Denison. “We'll continue to insist that the Safe Chemical Act place the burden on chemical companies to prove their products are safe, rather than on EPA to prove they are unsafe.”



Same actors, different poisons. EDF ran this ad to illustrate how chemical companies lie to the public.

TEACH YOUR CHILDREN WELL

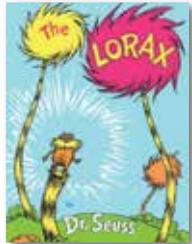


Adrian Green/Getty Images

The stories we read to drowsy children just before they go to sleep are indelible. We know this because we recently asked *Solutions* readers to tell us about favorite environmental books for young people, and many of you responded with fond memories from your own childhoods.

Here are a few of your favorites:

The Lorax by Dr. Seuss (1972, Random House). This rhyming fable of the small, nonviolent Lorax's stand against the greedy Once-ler, who wants to cut down all the trees, was your overwhelming favorite. "This book is beautifully written and has a clear message of environmental stewardship," writes Ariel Debroux of Madison, WI. *The Lorax* concludes: "Unless someone like you cares a whole awful lot / Nothing is going to get better. It's not."



The Giving Tree by Shel Silverstein (1964, Harper Collins). A tree gives everything to a boy but gets no appreciation until it's too late. Silverstein's poem packs a powerful conservation message.

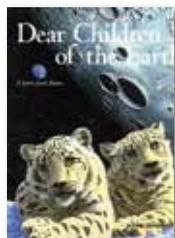


Lost in the Woods by Carl R. Sams and Jean Stoicks (order at strangerinthewoods.com). "He slept alone in the tall grass. Was he lost?"

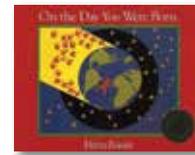


The animals of the forest wanted to know. This story of a fawn—the second book of a well-regarded series—is told in unstaged photographs accompanied by text. Starla Morgan of Bentonville, AR, called it "a sweet, true depiction with animals."

Dear Children of the Earth by Schim Schimmel (1994, Cooper Square Publishing). Featuring spectacular illustrations by the author, this letter from Mother Earth asks for help from children everywhere. "Very good message (in a gentle way) to encourage our youngest to respect and appreciate our only home," writes Ellen Heitman of Mauston, WI.



On the Day You Were Born by Debra Frasier (1991, debrafrasier.com). When "things were at their darkest" in her difficult pregnancy with her daughter Calla, Frasier "asked a nurse at the hospital to bring me some paper so I could write down all the things on our Earth that would welcome my daughter, if she would just get here." Lyrical language and bold, intricate artwork combine to describe the Sun, Moon, North Star, rain, tides and circle of people awaiting each child.



Minn of the Mississippi by Holling C. Holling (1951, Houghton Mifflin Harcourt). This book for young teenagers adopts the point of view of an alligator snapping turtle journeying down the Mississippi to the Gulf of Mexico. In his other books, author-illustrator Hollings imagined himself as a tiny carved canoe floating to the sea; a cottonwood tree on the Santa Fe Trail; a scrimshaw ivory gull carried by sailors; and a hermit crab in a tidal pool. "All these books are fantastic!" writes Lauren Ranz of Lafayette, CA.



ENRICHING YOUNG MINDS

Some wonderful titles that were suggested to us may be out of print, but these and other used-book sellers have a wide selection.

- Alibris New, Rare & Used Books, Movies & Music at alibris.com
- Amazon Used Books at amazon.com
- Barnes & Noble Used Books at barnesandnoble.com
- Powell's Books at powells.com



Siemens Corp.

ENGINES OF CHANGE

In the hypercompetitive global economy, management and labor have a shared interest in staying competitive by keeping costs down.

With that in mind, EDF has been working with the IUE-CWA, a 45,000-member union, on a series of energy efficiency “treasure hunts.” The hunts are designed to eliminate sources of wasted energy at large manufacturing plants around the country.

Union members naturally hope that saving money by saving energy will make their jobs a little more secure. “What’s good for the environment is good for labor—and good for company profits,” says EDF project manager Brendan FitzSimons. So far, EDF and IUE-CWA have

conducted five treasure hunts. One recently took place at a Siemens factory in Norwood, OH, 20 miles north of Cincinnati. The plant, which builds large electric motors—up to 18,000 horsepower—has been operating since the 1890s. During World War II, it built electric motors for submarines.

The Norwood plant produces custom motors, including some that are one of a kind—and much of the critical work, like winding the insulated copper coils, is done by hand. The plant’s 500 workers, some of whose fathers also worked here, firmly believe they build the best large motors in the world.

During the three-day hunt, EDF and IUE-CWA found numerous instances of

energy waste. In many production areas, for example, lighting-control timers had been disabled. Instead, workers turned on the lights manually, but forgot to turn them off. Many lights were left burning all weekend. Total savings from correcting the problem: \$23,000 per year.

A common problem at all the plants was leaks in compressed air lines. “You can never put your thumb on all of them—it’s a continuing struggle,” says Ed Derr, a union official. Several leaks were found at the Siemens plant; fixing them will save \$16,000 per year.

But the program isn’t “just about the money,” Derr says. “It’s about the environment, about our families, working together toward a common goal.”

Altogether, EDF and IUE-CWA recommended changes at the Norwood plant that will save \$173,000 every year, and prevent more than 1,100 tons of carbon from entering the atmosphere. In the future, the union plans to expand the treasure hunts and conduct them at hundreds of workplaces. One key goal is to make energy efficiency part of the culture at these plants, not just something to think about once or twice a year.

“It’s one thing to say, we need a greener planet,” says Mark Phair, a manager at the Siemens plant. “But when you can go to the plant manager and say, ‘Here’s your greener planet, and here’s \$20,000, too,’ it’s a little more interesting.”

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Getty Images

In California, solar for the ordinary homeowner?

Many homeowners would love to install solar panels and other clean energy improvements, if only they could afford them.

In California, EDF has an innovative solution: Provide easier access to financing, with repayments made on monthly utility bills. We're working with state legislators and utilities to create the first statewide on-bill repayment program for energy upgrades, to be financed by private lenders.

Here's how it would work: After performing an energy audit, a contractor recommends improvements such as high-efficiency windows. If the homeowner agrees, the contractor sends a loan request to a participating bank for approval.

"The key is that the energy savings must be worth more than the monthly repayment," says Brad Copithorne, EDF energy program director of financial innovation. "So the monthly utility bill would actually go down."



Under our program, banks would finance home-energy upgrades.

Middle-income earners stand to benefit since they otherwise do not have access to low-cost, unsecured financing.

If just 1% of California homes subscribed to the program each year, it would generate \$2.7 billion in energy efficiency investments, create 20,000 jobs and, within five years, reduce CO₂ emissions equivalent to taking four million cars off the road. Other states, including North Carolina, Ohio and Texas, have approached EDF to explore similar programs.

Keeping track of methane

Of the many questions associated with the shale gas boom, one of the biggest unknowns is its effect on global warming. Even though natural gas emits only half the carbon dioxide of coal when burned, it could end up accelerating climate change. Why? Because some of it escapes from wells and pipelines, and unburned natural gas, mostly methane, is far more damaging than carbon dioxide.

The first step to stopping the leaks is finding them, but no one knows how much methane is leaking from the natural gas system. So EDF is working with researchers from the University of Texas at Austin, who have begun a major study to measure those emissions. Nine leading natural gas producers are also taking part in the study, to be completed by January 2013.

"If we want natural gas to be an accepted part of a strategy for improving energy security and moving to a clean energy future, it is critical for all of us to work together to quantify and reduce methane emissions," says Mark Brownstein, EDF's chief counsel for energy.

Fishermen *hate* throwing away fish

Under old-style rules, fishermen had to discard too many fish, most of them dead or dying.

Now they don't have to.

Under catch share programs, supported by EDF, fishermen can fish more selectively so they don't haul in fish they can't keep. The result: discards have dropped dramatically, helping populations recover.

In the Gulf of Mexico

50% less
wasted red snapper
(versus 2006)

In the Pacific

78% less
wasted fish
(versus 2009)

In New England

80% less
wasted fish
(versus 2009)



Even in hard times, conservation continues to pay dividends for America's farmers

During the bone-dry Dust Bowl years of the 1930s, widespread loss of topsoil led to the creation of the first federal farm conservation program. Today, the federal Farm Bill is the largest source of funding for landowners who agree to protect wildlife, prevent erosion and filter water.

EDF has long encouraged the use of Farm Bill funds to benefit the environment, and today we're finding exciting new ways to do just that.

In Bloomington, IL, for example, we're helping city managers tap a Farm Bill program to improve their drinking water supply, which has tested high for potentially dangerous nitrates found in fertilizer from upstream farms.

The solution? Wildlife-friendly wetlands. EDF and our partners showed that "nitrate removal wetlands," which filter runoff, can reduce nitrogen levels in

the water by 50% or more and save money. "This project will help us avoid a \$2 million water treatment facility," says Rick Twait, head of water purification for Bloomington.

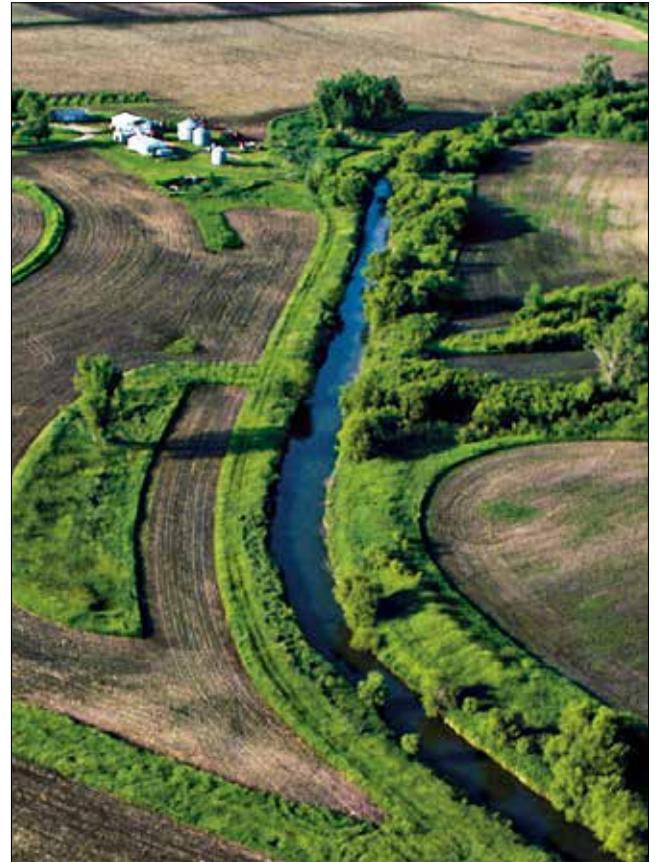
"This could be a model for many cities with similar problems," says EDF consultant Terry Noto.

Similar Farm Bill conservation programs have enabled farmers to plant nearly 30 million acres of grass, trees and wetlands across America. Today, the Farm Bill sets environmental policy for two-thirds of America's land.

"The benefits in terms of water quality, soil health and ecosystems far outweigh the costs," says Sara Hopper, EDF's agricultural policy director.

Yet, despite their success, Farm Bill conservation programs are in trouble in Congress: Both chambers are poised to slash at least \$6 billion.

We and our allies are working to make sure these valuable programs survive. "This assistance is a balance of economics and environmental stewardship," says



Landowners participating in Farm Bill programs have planted nearly 30 million acres of grass, trees and wetlands across America to filter runoff and create wildlife habitat.

farmer Todd Hesterman, who worked with EDF to create protective streamside buffers on his land in Northwest Ohio, using Farm Bill conservation funds. "To me, that was also the key to becoming involved with EDF."



Farm Bill beneficiary: The Illinois chorus frog, a rare and tiny species with a "squeaky wheel" croak.

Suzanne and Joseph Collins/Getty Images

NRCS

Helping corporations make every gallon of water count

In many parts of the country, water shortages are endemic and likely to get worse with climate change. Now EDF has teamed up with telecom giant AT&T to develop significant ways to conserve water. In several projects, we are targeting water loss from cooling towers atop AT&T's office buildings and data centers around the country.

Cooling towers are critical elements of air conditioning systems on large buildings. Improving their efficiency can

mean big water savings. For example, more efficient cooling towers at office buildings and factories in the Dallas-Fort Worth area alone could save 12 billion gallons a year—equal to the annual water use of nearly 500,000 homes.

Says EDF project manager Brendan FitzSimons, "If we're successful, the next step is to share what we've learned with other companies. It's a big opportunity for companies to save water—and money on the water bill."

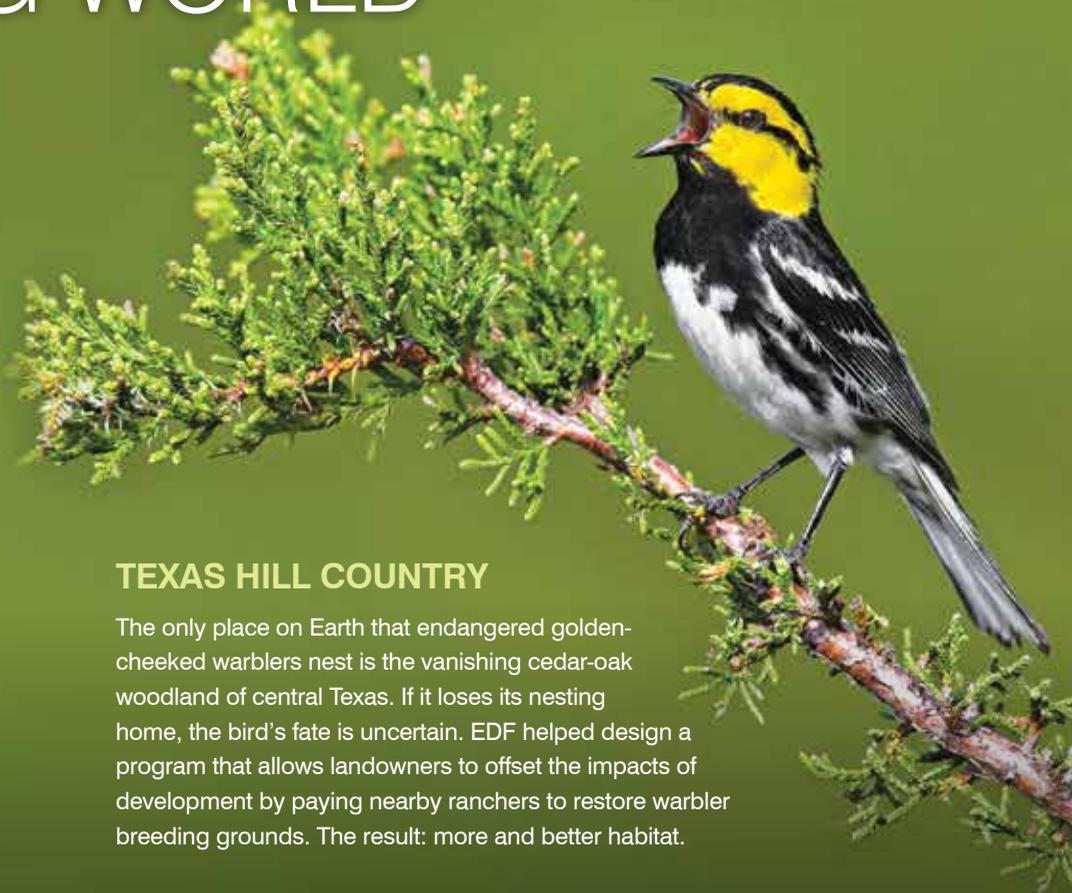


Cooling towers. Water down the drain.

Shutterstock

SAVING WILDLIFE IN A WARMING WORLD

We know that climate change is already playing havoc with many of the places wild creatures call home. But the science of helping them adapt to these changes is still in its infancy. One way to help wildlife is to expand their habitat. So EDF is partnering with the ranchers, farmers and foresters who manage two-thirds of U.S. land to do just that. Focusing on a variety of landscapes, our work aims to increase species' resilience in the face of climate change.



TEXAS HILL COUNTRY

The only place on Earth that endangered golden-cheeked warblers nest is the vanishing cedar-oak woodland of central Texas. If it loses its nesting home, the bird's fate is uncertain. EDF helped design a program that allows landowners to offset the impacts of development by paying nearby ranchers to restore warbler breeding grounds. The result: more and better habitat.



MOUNTAIN WEST

In the West, booming energy development threatens wildlife. EDF is creating offset-credit programs that will preserve habitat for animals like the mule deer.



EASTERN LONGLEAF PINE FOREST

On the road to recovery, the red-cockaded woodpecker faces new threats to its forest home. EDF is working with industry to protect the forest and its wildlife.



WESTERN RIVERS

As drought and growing urban demand strain the Colorado River watershed, EDF is working to improve water management and protect flows for the river otter and other rare species.