



Homeland Security

Protecting a
vulnerable planet
in the age of Trump

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tireless legal
team in action

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out of the labs,
into the streets

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the environment

A herd of pronghorn antelope is wading through a river. The antelope in the foreground is the most prominent, looking towards the camera. Other antelope are visible in the background, some partially submerged in the water. The sky is bright blue with scattered white clouds. The water is dark and reflects the sky and the antelope. The overall scene is a natural, outdoor setting.

At risk

Opening millions of acres of federal land to oil and gas drilling is a pillar of President Trump's energy strategy. Such a move would imperil vital migration corridors for pronghorn and other wildlife. EDF is fighting to save pristine public lands and creating tools to help reduce the damage. Recently, Nevada and the Newmont Mining Corporation committed to protecting 1.5 million acres of prime sagebrush habitat through a habitat exchange, a cooperative approach pioneered by EDF that rewards landowners for preserving habitat.

A battle we must win



IN 50 YEARS, EDF HAS GROWN FROM TEN voices to more than two million. As an organization, we've never been stronger, and we'll need that strength more than ever before.

President Trump and his pick to head the EPA, former Oklahoma Attorney General Scott Pruitt, have laid out a plan to slash EPA's staff and budget and roll back bedrock environmental protections developed over many decades by Democrats and Republicans working together. EDF and our allies cannot let that happen. We will fight to protect the environment and human health.

Let's get one thing straight: This rollback would cost thousands of lives. By allowing pollution to rise, President Trump would allow more premature deaths, more heart attacks and asthma attacks, and more sick days from school and work. According to EPA, revoking the Clean Power Plan alone, which reduces a range of dangerous air pollutants in addition to carbon, will cause up to 3,600 more premature deaths each year, 1,700 more heart attacks, 90,000 more asthma attacks and 300,000 more missed work and school days.

Fortunately, U.S. law does not allow the president or Administrator Pruitt simply to erase protections like EPA's life-saving Mercury and Air Toxics Standards, finalized in 2011 after persistent efforts by EDF and others. A lengthy process of rule making and public comment would be required to change such standards, and EDF will defend them every step of the way.

I am confident we will prevail because Americans did not vote to have mercury, arsenic and other poisons spewed into the air by coal-burning power plants. EPA received more than 800,000 supporting comments when these standards were adopted, and the public and leading businesses are still on the side of clean air today.

But defending against all of the administration's threatened rollbacks—from climate, clean air, clean water and fuel economy standards to the Endangered Species Act—is only half our job. That's why EDF experts are also finding ways to drive progress in the states and around the world, as our cover story describes (*see story, page 8*).

That story also digs into our legal strategy to protect and defend against the administration's agenda. Legal action has been key to EDF's strength since our earliest days, when a small group of scientists on Long Island first met with an attorney to oppose the spraying of DDT. Ultimately, they won a nationwide ban on the pesticide, spurring the dramatic recovery of magnificent birds of prey like the osprey and bald eagle. In the process, they helped lay the foundations of U.S. environmental law.

I thank EDF members for the unprecedented support that makes today's strong defense possible. Our collective voice is a powerful one and will be heard in the White House and Congress.

Fred Krupp
EDF President



Finding the ways that work

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:

Fifty years after EDF was founded to protect raptors like the osprey from the ravages of DDT, President Trump and Congress are attacking our bedrock environmental protections. EDF executive director Diane Regas, a former top EPA official, describes how we are fighting back and how standing together is reenergizing the environmental movement.

Cover illustration: Anuranjan Pegu

Solutions

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©2017 Environmental Defense Fund.
Published quarterly in New York, NY
ASSN 0163-2566

New York / Austin / Bentonville, AR /
Boston / Boulder / Raleigh / Sacramento /
San Francisco / Washington, DC /
Beijing, China / La Paz, Mexico / London

FIELD NOTES



ANIMALPICTURES.CO/EDF.COM

In the Southwest, the black-capped vireo has made a comeback.

An end to the songbird wars in Texas

Twenty years ago, “shoot, shovel and shut up,” was the motto of some Texas ranchers who had black-capped vireos and other endangered songbirds on their land. Hostile to the Endangered Species Act and fearing government restrictions on their property, a few took to bulldozing the shin oak shrub habitat where the vireo mainly nests.

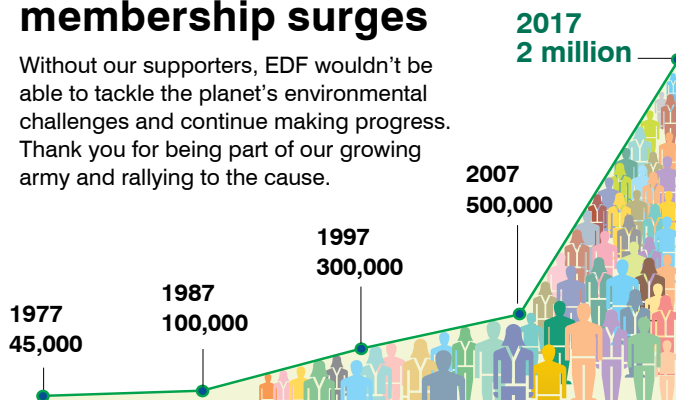
Times have changed. Thanks in part to a collaborative approach to conservation pioneered by EDF, large numbers of Texas ranchers have stepped up to protect vireo breeding habitat on their land, by prescribed burning to prevent woody overgrowth and trapping cowbirds, which lay their eggs in vireo nests and trick the vireos into raising the cowbird chicks.

As a result, black-capped vireo populations have soared, from an estimated 350 adult birds in 1987 to more than 14,000 today in Texas, Oklahoma and Mexico. The bird’s dramatic comeback has prompted the U.S. Fish and Wildlife Service to propose to delist it. Helping to revive populations was the Safe Harbor program, which EDF designed and launched in 1995. The program gave landowners incentives to restore wildlife habitat while allowing them to avoid new curbs on how they used their land.

“The recovery of the black-capped vireo shows the Endangered Species Act works as it’s supposed to when it’s paired with the right incentives for landowners,” says David Wolfe, EDF director of conservation strategy.

Post-election, EDF membership surges

Without our supporters, EDF wouldn’t be able to tackle the planet’s environmental challenges and continue making progress. Thank you for being part of our growing army and rallying to the cause.



WHAT AMERICANS WANT

67% of Americans want the Environmental Protection Agency to remain the same or to be strengthened and expanded.

Mr. Pruitt, are you listening?

SOURCE: IPSOS POLL FOR THOMSON REUTERS

NOSTALGIC FOR THIS? NOT!



If you’re of a certain age, you probably remember when thick pollution choked America’s cities and filthy rivers caught fire. Our video is a reminder of the state of the environment before EPA. >>> **WATCH AND SHARE** >>> edf.org/videobeforeepa

Acid rain on the wane

Good news for lakes and forests: EDF’s strategy to reduce acid rain, which had been devastating the Eastern backcountry, has proven to be an enduring success. Our approach, written into the 1990 Clean Air Act, required power plants to cut their sulfur dioxide pollution in half, but let them decide how to do it. This market-based method, coupled with other actions, has cut SO₂ emissions by 85%



ISTOCK

At its peak, acid rain devastated Eastern forests and lakes.

nationwide, at a fraction of the predicted cost. Reductions are on track to hit 90% in the near future.



12RFRC.COM

A border wall along Big Bend National Park would block wildlife like black bears from migrating from a biosphere reserve in Mexico.

Trump's wall impacts wildlife, too

President Trump's decision to build a \$14-22 billion wall along the U.S.–Mexico border raises complex questions about human rights and immigration—and the environment.

In seeking to build the wall, the Trump administration

may be wading into a legal morass—despite a 2005 law authorizing the U.S. Department of Homeland Security to build a border wall. Though the act was invoked in 2007, allowing 700 miles of fencing to be built along the border, that project

was mired in lengthy delays and cost overruns.

Amendments to the 2005 law now require that federal agencies consult with local governments, Indian tribes and property owners to “minimize the impact on the environment, culture, commerce and quality of life.” These stipulations open the door to the possibility of litigation against the project.

The wall would be built along the Rio Grande River, which supports a critical shared ecosystem for animals and humans. The existing fence has already resulted in significant habitat fragmentation, affecting mountain lions, bobcats and low-flying birds such as the pygmy owl. In addition, the proposed wall would separate families and communities.

Many groups, along with the state of California, are ready to fight the shortsighted project and prevent irreparable harm to wildlife and families.

A fish called Obama



PHOTO: RICHARD L. PYLE

Former President Obama doesn't have any court-houses or airports named for him yet, but he has something perhaps even better—a new species of fish, *Tosanooides obama*. Scientists in Hawaii discovered the reef fish last December in Pāpāhānaumokuākea Marine National Monument, which was expanded by the former president.

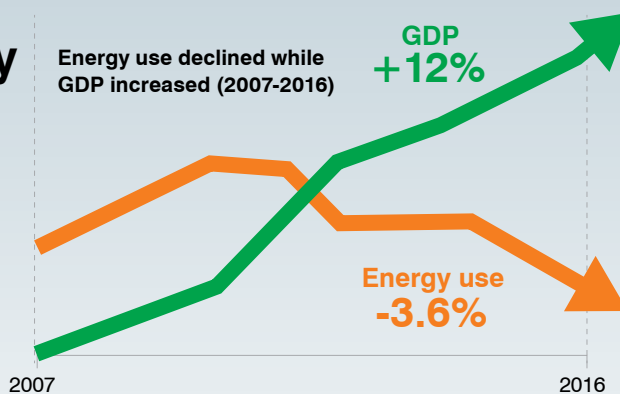
From tar sands to wind power

Norwegian gas and oil producer Statoil plans to develop a major wind farm off New York City's Rockaway peninsula. The project could generate up to 800 megawatts of electricity, enough to power 245,000 area homes, and is part of a broader strategy to ramp up offshore wind power in New York State.

Statoil placed the winning bid of \$42.5 million for the Rockaway site just hours after relinquishing its tar sands oil holdings in Canada.

The contrast could not be more dramatic—tar sands oil extraction is destroying Canada's boreal forest, and using tar sands oil generates 17% more carbon emissions than conventional oil.

America's energy economy is getting cleaner and creating jobs, too



SAVINGS

Consumers devoted **less than 4%** of their total annual household spending to energy in 2016, the smallest share ever recorded.

JOBS

U.S. wind and solar capacity has increased **over 473%** since 2008. Since 2010, solar alone has created **166,000** jobs.

STIMULUS

The U.S. Army has invested more than **\$1 billion** in energy-saving projects over the past five years.

SOURCES: 2017 Sustainable Energy in America Factbook; U.S. Army

A West Coast fishery rebounds



ISTOCK

Declared a federal disaster in 2000, a major West Coast fishery is experiencing a remarkable recovery, with more species certified as sustainable and fishing communities on the rebound. EDF's ideas have made the difference.

AT THE MOUTH OF THE COLUMBIA River, off the Oregon coast, an outrush of fresh water flows into the Pacific, providing habitat rich with marine life. The area, known as Astoria Canyon, supports an array of rockfish, once a mainstay of the Northwest economy. "This is one of my favorite fishing spots," says Paul Kujala, who operates *Cape Windy*, a 58-foot trawler, out of Warrenton, OR.

Since 2000, however, fishing here has been highly restricted. In an attempt to end overfishing, the government closed prime fishing grounds and restricted days at sea. The draconian measures were effective but took a huge toll on fishermen. "We toughed it out," Kujala says, "but it wasn't easy."

A new approach to fisheries management, championed by EDF and adopted in 2011, has helped turn the fishery around. This approach, called "catch shares," gives each boat a percentage of a scientifically determined annual catch limit and requires an observer on all

trawl vessels. If a fisherman catches more than his allotted amount—or a species other than the one targeted—he can buy shares from someone else, still keeping the total catch within the limit.

The result: Fish stocks are rebuilding, revenue is up, and the amount of discarded fish fleet-wide has dropped an astounding 80%. The system has been so successful that the Marine Stewardship Council has certified many of the most popular fish as sustainable.

"Fish stocks on the West Coast are the healthiest they've been in 20 years," says Shems Jud, EDF's West Coast fisheries director. "Catch shares have allowed for a more flexible, efficient regulatory system where we can protect fish and habitat but also provide more opportunities for fishing communities."

In February, the National Marine Fisheries Service

increased quotas for several species of rockfish, some of which, like canary rockfish, had recovered from dangerously low levels. New data indicates that improvements in fish biomass justify increasing quotas and easing some of the gear restrictions that are no longer necessary with catch shares. The allowable catch for canary rockfish has gone up 23-fold.

That's good news for fishermen like Kujala—and for seafood lovers. "Strict limits have helped revive the stocks," he says. "With individual accountability and 100% observer coverage, it's in our economic interest to avoid certain species." Best of all, he may soon be able to return to Astoria Canyon.



Capt. Paul Kujala: "I didn't want to be the one to catch the last fish that's out there."

Why coal is not coming back

By Frank Convery, EDF Chief Economist

In his February address to the joint session of Congress, President Donald Trump said, “We are going to stop the regulations that threaten the future and livelihood of our great coal miners.” But regulations are not the main threat to miners’ future and livelihood; the market is. Coal supplies go mainly to power plants, and increasingly, plant owners prefer natural gas to coal because gas is cheaper.

And even if the sharp decline in production were to be reversed, there would be only modest jobs gains in Wyoming and the interior, and bigger job losses in Appalachia.

In a recent interview on NPR, Professor Robert Godby of the University of Wyoming spoke about the jobs implications of a 5% increase in coal production. “Most of that production increase is going to occur in the West, and that probably will occur in Wyoming,” Godby said. “So you might see about 600 new jobs, maybe more in the West, particularly in Wyoming. And you might see about a thousand more job losses in Appalachia. And the interior might get 150 to 200 new jobs.”

President Trump does a serious disservice to coal miners in Appalachia when he both misdiagnoses the problem (regulation is not what is threatening the future of coal) and proposes that deregulation will be their salvation. These miners need real help, not bombast, to adapt to coal’s ongoing decline.

>>> READ MORE >>> edf.org/wilson



This regular column honors the memory of Robert W. Wilson, a longtime EDF supporter and champion of harnessing market forces to drive environmental progress.



MICHAEL AMENDOLA

Scientists are now connecting specific weather events such as this year’s devastating Australian heat wave to climate change.

Connecting climate and weather

CLIMATE CHANGE MARCHES ON: 2016 was the earth’s hottest year on record. Last year, the United States experienced more than 15 climate change-related disasters at a total cost of \$46 billion in damages. But none of that seems to matter to the new administration in Washington, which has shown itself hostile to climate science.

Those who reject climate change offer a grab bag of false claims intended to spread doubt. But junk science will soon be harder to spread. Great progress has been made in answering the question of whether, say, a particular drought in the West can be attributed to climate change. Not all weather events can be attributed in this way, and success depends on having good historical data, but science is starting to measure how climate change is making weather more extreme.

Increased computing power and improved climate models are giving scientists the tools they need to advance the science of “extreme event attribution.”

“Until recently, studies on climate attribution were typically published a year or more after a storm or heat wave, long after public attention had waned,” says Dr. Scott Weaver, senior climate scientist at EDF. “But the science of extreme weather attribution is becoming nimble.”

A leader in the field is the World Weather Attribution project, an international consortium that conducts analyses of weather events worldwide.

“The oft-repeated statement that you can’t connect individual weather events to climate change is no longer true,” says Dr. Heidi Cullen, chief scientist at Climate Central, which leads the project. “Thanks to advances in the science, we can now assess how climate change is impacting specific weather events. As scientists, we must share this information with the public and decisionmakers to ensure the best decisions are made and the general public understands that climate change is happening right now.”

In 2016, the consortium studied the August Louisiana floods—three days of torrential rain that killed 13 people. Shortly after the flooding, the team released a study showing that climate change made such an event about twice as likely and 10% more intense.

In 2017, the group analyzed the brutal heat wave that struck southeastern Australia, finding that such weather was ten times more likely to occur than a century ago, because of global warming.

Ultimately, Weaver believes, scientists will not only be able to attribute extreme weather events to climate change in real time, they’ll also be able to predict the likelihood of small-scale events, like thunderstorms, occurring in a given area.

Extreme weather attribution is bolstering the arguments of environmentalists about the real impacts of climate change. That’s important at a time when science is under assault in Washington.

CORBIS

Fighting back

By Diane Regas

EDF Executive Director



In his first 100 days, Donald Trump has established himself as the most anti-environmental president in U.S. history. EDF and our allies are fighting back in Washington, and we're making progress in cities and states. EDF executive director Diane Regas, who spent two decades as an attorney at EPA, explains our strategy.

WHEN I ARRIVED AT EPA IN 1987 as a young attorney, I found an agency still reeling from its darkest years.

Back in the 1980s, under anti-environment administrator Anne Gorsuch, federal marshals escorted political appointees from the previous administration out of the building. Leading scientists and respected attorneys were targeted on political watch lists. Side deals later came to light in which some EPA political appointees promised favored companies they wouldn't enforce the law. Gorsuch wanted to dismantle EPA, but instead she failed and left Washington under a cloud.

In the 1990s, Congress took its turn. Extremists attacked the Endangered Species Act, and the House of Representatives targeted EPA for huge budget cuts. EDF and our allies fought back, and we won those battles too.

Now the environment is under attack again, this time from President Donald Trump and many in Congress. This is the toughest fight we've ever faced, but I believe we will win in the long run. We've seen environmental leaders and citizens working together as never before. Every day, our members are calling their elected representatives and sending letters. The marches opposing the Trump agenda, including the March for Science on Earth Day, are building new support.

No one voted last November for dirty air or water, but President Trump has embarked on an unprecedented campaign to upend decades of bipartisan environmental progress. Scott Pruitt, the former Oklahoma attorney general appointed to run EPA, has made a career out of attacking the agency. Pruitt has sued EPA at least 14 times to oppose clean air and water protection, has denied that carbon dioxide is the primary driver of climate change and has called climate science "a religious belief."

EDF engages

At EDF, we've worked with Democrats and Republicans for 50 years to build a legacy of environmental protection.



With polar ice at record lows, scientists protest in Antarctica.

Pruitt was the first nominee for EPA administrator we've ever opposed. Engaging our grassroots activists and deploying TV, radio and online advertising, we made the case that Pruitt is outside the bipartisan tradition of environmental protection. We highlighted his opposition to standards that would protect children from toxic mercury emissions, smog that causes asthma attacks, and carbon pollution that threatens our future.

Our members (whose numbers surged past the two million mark after November) have never acted more quickly. Just four days after the inauguration we delivered 100,000 signatures to the Senate opposing Pruitt's nomination.

The result was a better informed public and the highest number of votes ever against an EPA administrator. These successes will be critical for the fights ahead over clean air, clean water, climate change and other environmental issues.

We also sent a clear message to Congress and the Trump administration: if you attack the environment, you will pay a political price. And we will hold senators who voted for Pruitt responsible for the damage he does.

One of the first environmental targets of the new administration was EPA's budget. The administration proposed an unconscionable 31% cut in the agency's

budget—abolishing the jobs of thousands of people who implement and enforce our environmental laws. The budget would slash funding for environmental justice programs, designed to help poor communities grapple with local pollution. Funding for cleanup of the Chesapeake Bay would be zeroed out. Incredibly, research into climate science would be halted.

At the Department of Energy, the ARPA-E energy innovation lab would be eliminated, as would EPA's Energy Star program, which saves consumers money by promoting efficient appliances.

An opening gambit

The budget cements Trump's standing as the most anti-environment president in American history. The proposal is probably his opening gambit for future negotiations, a deliberate overreach. The endgame? A less draconian (but still disastrous) outcome, on his terms.

It's hard to avoid the conclusion that Trump simply doesn't care about the environment. EDF will fight his extreme budget cuts in Congress and will hold accountable those who support such a radical departure from mainstream environmental protection.

One of the most worrisome weapons in the hands of Congress is an obscure ▶

If the president won't protect Americans, we the people will.

law called the Congressional Review Act (CRA). The law could be deployed to overturn safeguards that cut pollution from trucks, as well as recent requirements that protect states from air pollution drifting across state lines.

The House used the CRA to throw out a popular rule EDF helped secure last year to limit methane pollution from oil and gas operations on public land. EDF has successfully pushed back in the Senate, however. As *Solutions* went to press, EDF was still fighting to convince key senators not to dismantle the rule.

In March, Trump issued an executive order to take the first steps toward revoking the Clean Power Plan—the centerpiece of U.S. climate strategy. It was a hugely destructive move, and thankfully not one easily executed with the stroke of

a pen. Most established rules, like the Clean Power Plan and clean car rules, which will boost fuel efficiency to 54.5 miles per gallon by 2025, can't summarily be rescinded. The process for unravelling them is usually arduous and lengthy. It includes hearings, public comment periods and legal reviews. EDF's legal team will be there.

Our staff attorneys are analyzing new legislation, looking for hidden language that Congress will slip in to undercut environmental protections. Also, as some in Congress push their anti-environmental agenda, we will counter them in court battles that will shape environmental policy for decades.

Looking ahead, EDF is beefing up our defenses against Trump's environmental assaults. We're hiring more economists, attorneys and political experts.

Since the election, our EDF+Business team helped coordinate an open letter from 880 businesses and 100 investors, from DuPont to Nike, supporting climate



Back to the past, when pollution blanketed many neighborhoods.

WIKIMEDIA COMMONS

Trial by fire: EDF's tenacious legal team holds the line

At high noon on Inauguration Day, January 20, EPA's climate website went dark.

Earlier that day, EDF staffers had caught wind that this might happen. Our legal team kicked into gear, filing a request with EPA

under the Freedom of Information Act to restore public access to data. The Trump administration was put on notice that its attempt to conceal the truth wouldn't go unchecked. The rapid response set in motion a legal process to ensure the preservation

of critical health and air pollution data. "The public has a right to know the facts," our general counsel Vickie Patton says. "During these extraordinary times, the law is our strongest ally."

Four days later, rumors swirled that the administration planned that evening to permanently take down all climate-related material from EPA's website. EDF attorneys Peter Zalzal and Martha Roberts assembled a team of more than a dozen young attorneys and legal fellows who huddled around their laptops in EDF offices in Boulder, CO, and Washington, DC. They frantically downloaded data sets to ensure climate information compiled over years isn't lost.

"This scientific data is the foundation for sound environmental and health policy," says Zalzal. "To eliminate it would be unprecedented." The health of generations of Americans hangs in the balance. Thanks to our work—and the work of others—the administration backed off. "Guerrilla archiving" was just the opening salvo, a small part of EDF's broad legal strategy.

Helping defend the public interest is a new generation of environmental lawyers. People like Rachel Fullmer (photo, second



D. SCOTT CLARK PHOTOGRAPHY

EDF v. Trump: Attorneys in our Boulder, CO, office, led by Vickie Patton (center), present a united front against reckless attempts to roll back environmental protections.

action and opposing any retreat from the Paris Climate Agreement. The signatories collectively take in nearly \$1.15 trillion in annual revenue and employ almost two million people.

Many successful companies have become convinced that environmental protection pays. Walmart, for example, has been an EDF partner for more than a decade, and the company has now pledged to cut greenhouse gas emissions by a massive one billion tons by 2030—more than the annual emissions of Germany, the world's fourth-largest economy.

Another strong line of defense lies with the states. While attention is focused on Washington, DC, EDF is helping states cut emissions and drive investments in clean energy. In recent months, we:

- Helped pass an Illinois law that will double the state's renewable energy by 2030 and cut power-sector carbon pollution by more than half.
- Successfully urged Ohio Governor John

Kasich (R) to veto a bill that would have gutted energy efficiency and renewable investments in the state and cost at least 80,000 jobs.

- Helped win approval of a new rate plan for New York's major electric utility, Con Edison, that will increase energy efficiency funding and offer incentives for electric vehicles.

California is at the forefront of state efforts to sustain strong climate action. The state's clean cars law, enacted in 2002 with decisive backing from EDF, mandated steep reductions in carbon emissions from automobiles. Then, in 2006, California passed landmark legislation, cosponsored by EDF, that is lowering emissions, even as the state's economy flourishes. Governor Jerry Brown (D) has pledged that California will go its own way on climate policy if the Trump administration scales back national efforts.

Cities, too, are joining the fight. "Mayors and local leaders around the ▶

from left), a recent graduate of Georgetown Law School. "This is not the political climate I expected to encounter in my early days as a lawyer," says Fullmer, who grew up in northern Indiana within a few miles of an oil pipeline, mills and a nuclear power plant. "I thought I'd be advancing the Clean Power Plan. It's been a totally different pace."

Thrust into the fray, Fullmer and her cohorts have been working around the clock, reacting to executive orders, tracking scores of anti-regulation bills in Congress, providing analysis and preparing legal responses.

"The notion of 'regulatory reform' sounds innocuous," says Zalzal. "Our task is to reveal what is really happening, a deeply pernicious assault on bedrock environmental protections."

In addition to defending core environmental laws such as the Clean Air Act and Clean Water Act, our legal team is taking the offensive. We're using the courts to derail or delay destructive policies, and

working with states to protect the rights of citizens to collect and disseminate data, such as air quality information that local residents rely on to stay informed and protect the health of their families.

"We're not going to crawl away and hide for four years," says Patton, who is orchestrating EDF's legal strategy. "In this moment of populism, people, including us, need to be engaged in every way they can."

Renowned for her strategic thinking and encyclopedic knowledge

of the law, Patton is also known for her ability to find a path forward, no matter what the circumstances.

"Before coming to EDF, I'd heard of Vickie Patton," says Fullmer. "My professors had told me she's a legend in the field. It's inspiring to work with someone who has fought these battles so many times on the front lines. I can't imagine doing anything more important than this."

"During these extraordinary times, the law is our strongest ally."

— EDF general counsel
Vickie Patton

IN THE CROSSHAIRS:



THE CLEAN POWER PLAN

President Obama's most important environmental legacy is the Clean Power Plan, which will limit carbon emissions from power plants. President Trump signed an executive order rolling back the plan.



THE MERCURY RULE

As Oklahoma attorney general, Scott Pruitt sued EPA to throw out the rule protecting Americans from toxic mercury in power plant emissions. EDF fought for the mercury rule and defended it in court.



THE PARIS CLIMATE AGREEMENT

President Trump has promised to pull out of the Paris Climate Agreement, ratified by 194 nations and supported by 71% of the American people. Doing so could turn the U.S. into a global pariah.



CLEAN CAR RULES

President Trump intends to undo the Obama administration's clean car and truck rules, having told auto executives that environmental regulations are "out of control."

country are determined to keep pushing ahead on climate change,” says former New York mayor Michael Bloomberg. EDF is working with Austin, New York and Chicago, among other cities, to curb emissions.

State action threatened

Another real danger is that the federal government under Trump and Pruitt will interfere with states’ efforts through a process called “preemption.” Just as state legislators in Michigan have “preempted” the power of cities and towns to ban plastic bags, Congress could preempt states from limiting carbon emissions.

Ironically, some of the politicians threatening to preempt state environmental laws are the same ones who have claimed for years that the federal government infringes on states’ rights. EDF will take the preemption fight to federal and state courts everywhere strong state environmental laws are attacked.

The first volleys in this fight have

shown us we need to be ready for anything, and we know we’re facing a host of challenges. We’ve already seen moves to weaken the Clean Water Act and undermine critical health protections in the new toxic chemicals law. And some members of Congress are proposing radical changes to the Endangered Species Act, one of our most critical environmental laws.

As we gear up, I’m inspired every day by EDF’s staff, and I’m equally inspired by our dedicated members. For all its flaws, our democracy still responds to public opinion. Nothing gets the attention of elected officials faster than a sackful of angry letters, a flooded voice mailbox or a standing room only town hall. The American people, by a wide margin, support clean



Moms Clean Air Force lobbyists making the rounds on Capitol Hill

air and clean water. According to the polling firm Morning Consult, 78% of Trump voters want the same or stronger clean air protection. No one wants to go back to the way things used to be.

If the president and his team won’t protect and defend America, We the People will.

Science under attack

Strong, peer-reviewed science has been behind every important effort to improve the quality of our nation’s environment and public health. In cleaning up our air and water, or protecting threatened species, successful legislation and regulation has followed the lead of scientific research. The new administration, however, seems intent on ignoring that reality.

The president denies the reality of climate change and has had all references to it scrubbed from the White House website. The Trump appointee who now heads the influential Office of Management and Budget asked in a now-deleted Facebook post, “Do we really need government-funded research at all?”

No surprise, then, that science in the Trump administration faces diverse challenges, ranging from deep cuts in the budgets of institutions like EPA to attempts to muzzle government researchers.

Among the targets for defunding is NASA’s climate science program. NASA has more than a dozen satellites that orbit the earth, helping track sea level rise, the temperatures of the atmosphere, the



ANDRANJAN PRU

ozone layer, air pollution and changes in sea ice. Taking them away would take away our eyes and ears.

“Ignoring or denying science will only result in bad decisions,” says EDF chief scientist Steve Hamburg. “Sound science is a prerequisite of good policy, but today there are growing questions about whether fact-based science is driving the Adminis-

tration’s policies.”

Even as the administration seeks to undercut science, EDF will ensure that science remains central to every debate on environmental policy.

In the end, it won’t be easy to suppress science—and the political cost of trying to do so will be onerous.

Saving kids from dirty air

LORENA LOPEZ LIVES IN CHICAGO with her husband Manuel and three children. The youngest, Yaretzi, is eight years old and has suffered most of her life from severe asthma.

“She was born prematurely and had to stay in the hospital for months,” says Lopez. “Two months after she came home she became very congested. We took her to the hospital and they diagnosed her with asthma.

“It was incredibly hard to deal with,” Lopez adds. “We needed to have a nebulizer available at all times, and we had to worry about outdoor air quality. A couple of times we thought she was going to die.”

Lopez left work to care for Yaretzi, whose asthma slowly improved with the help of medical specialists. Today, she attends second grade full time and loves to dance, though the school has an “action plan” so it can react immediately if she has an asthma attack.

Yaretzi is far from alone. America is in the grip of an asthma epidemic. Asthma afflicts about one in 12 children and one in 14 adults, and air pollution is a major trigger of asthma attacks.

Instead of addressing the epidemic, many members of Congress and President Trump are bent on dismantling health protections as fast as they can.

“If the Trump administration were to succeed in eliminating the basic environmental and health safeguards that protect our water and air, many thousands more Americans will suffer from preventable disease and face premature deaths,” says Sarah Vogel, EDF’s vice president for health.

“The folks who would be the most vulnerable to rollbacks in our bedrock



Families living near highways will be hard hit if air quality declines.

environmental protections are kids, seniors and the socioeconomically disadvantaged with the least access to quality health care,” says EDF scientist Dr. Elena Craft, who works on environmental justice issues.

When he was attorney general of Oklahoma, Scott Pruitt, the new head of the Environmental Protection Agency, sued the agency 14 times. Among other things, he sued to stop the Cross-State Air Pollution Rule, which protects states from smog pollution that originates in other states. This rule and its recent update prevent 470,000 asthma attacks every year, according to EPA’s analysis.

Overall, if the new administration makes good on its irresponsible promises to gut EPA, the Clean Air Act and other public health protections, it will have serious, and in some cases fatal, health

consequences for millions of people across the country. These include:

- **Rollbacks on mercury and other toxic air pollutant protections could result in an annual:**

11,000 additional premature deaths
130,000 additional asthma attacks

- **Rollback of the Cross-State Air Pollution Rule and its update could result in an annual:**

34,000 additional premature deaths
470,000 additional asthma attacks

- **Overtuning the Clean Power Plan, which cuts pollution from power plants, could result in an annual:**

3,600 additional premature deaths
90,000 additional asthma attacks

“Eliminating basic environmental and public health protections will result in a major step backwards in American progress toward cleaner air and water and healthier people,” says Vogel.

Working with our allies in Congress and in areas hit hardest by pollution, EDF is fighting to defend and protect vital environmental and health safeguards. Together we’ll make sure those in power in Washington know that Americans didn’t vote for dirty air and water.



Then and now: Yaretzi Lopez’s struggles with asthma prompted her mother to become a climate activist.



Boom times for clean energy jobs

By Rod Griffin

Investors are pouring money into clean energy from wind and solar power. As they build and maintain the power grid of the future, millions of American workers are finding a prosperous place in the clean energy economy.

WHEN PRESIDENT TRUMP announced his Energy Plan on February 7, he declared that he would end “job-killing restrictions on shale, oil, natural gas and clean, beautiful coal. And we’re going to put our coal miners back to work.”

Only days later, the owners of the largest coal-fired power plant in the West, the Navajo Generating Station near Page, AZ, announced they would shut down the facility in 2019. The stated reason: “Rapidly changing economics of the energy industry.”

Few people, even in coal country, are under the illusion that coal mining jobs are coming back. Meanwhile, jobs in solar and wind power and energy efficiency are booming. More than three million Americans work in clean energy, more than twice the number of Americans em-

ployed in fossil fuel generation, according to the U.S. Department of Energy. These are well-paying, local opportunities that boost the economy. The solar and wind energy industries alone employ nearly half a million people. Solar jobs have grown at a rate of about 20% annually in recent years, and the solar industry is creating jobs at a rate 17 times faster than the rest of the U.S. economy.

The country’s fastest-growing job is wind turbine technician. The number of such jobs is expected to double over the next decade.

“For the past six months, recruiters have been banging down my door,” says Auston Van Slyke, a former Marine who now runs a school in Colorado training wind technicians. “We’ve got some recruiters who could hire 40 people tomorrow, but we only graduate 15 at a time.”

Thirty-five percent of the students at his school, Ecotech Institute, are veterans. “Working on wind farms is just another way for them to serve their country,” Van Slyke says. “Every vet knows these wars are fought over oil. We also see a lot of people from the oil and gas industry who are looking for a transition.”

“It doesn’t matter who’s in the White House. The growth in wind is market-driven.”

—Doug Herr, AeroTorque, Sharon City, OH

The renewable energy jobs rush is not just in blue states or purple states like Colorado. In fact, there is now more wind and solar energy in Republican districts than in Democratic districts nationwide, including in states like Iowa, Oklahoma and Nevada.

Republican governor George W. Bush helped put Texas on a path to producing the most wind power of any state. Today there are times when wind provides nearly

BY THE NUMBERS
CLEAN ENERGY JOBS
VASTLY OUTNUMBER
FOSSIL FUEL JOBS

3 million

Americans working in the clean energy industry, including

470,000

Americans working in the solar and wind industries

1.2 million

Americans employed in fossil fuel extraction and electricity generation, including

160,000

Americans employed in the coal industry

SOURCE: U.S. ENERGY AND EMPLOYMENT REPORT, 2017, D.O.E.

half of the state's energy. Companies are taking notice. General Motors announced an agreement in February to purchase wind power to supply 100% of the electricity for a huge factory outside Dallas that builds 1,100 SUVs a day.

Similarly, Facebook is building new data centers in Iowa because of its impressive wind resource. And one hundred Fortune 500 companies have committed to obtaining all their power from renewable energy. These business decisions will translate into jobs.

"It's not just guys in hard hats," says Steve Murchie, director of EDF's national field operations, "but people all along the

supply chain." That includes employees who manufacture ball bearings for wind turbines, investors who finance solar projects, tech entrepreneurs who build energy-saving apps, carpenters who construct pallets for solar panels, engineers who do modelling, truck drivers who haul materials, salespeople who market solar energy and so on.

Nationwide trend

Across the country, 29 states have renewable energy portfolio standards (RPS) on the books, which require them to obtain a certain percentage of their electricity from clean energy sources such as wind and solar. With EDF's help, Republican governors in Illinois and Ohio recently helped advance renewable energy.

Ohio, a state hard hit by the loss of jobs from closed coal plants, is now the nation's leader in wind energy manufacturing with more wind-related manufacturing facilities than any other state. All told, it boasts 100,000 clean energy jobs.

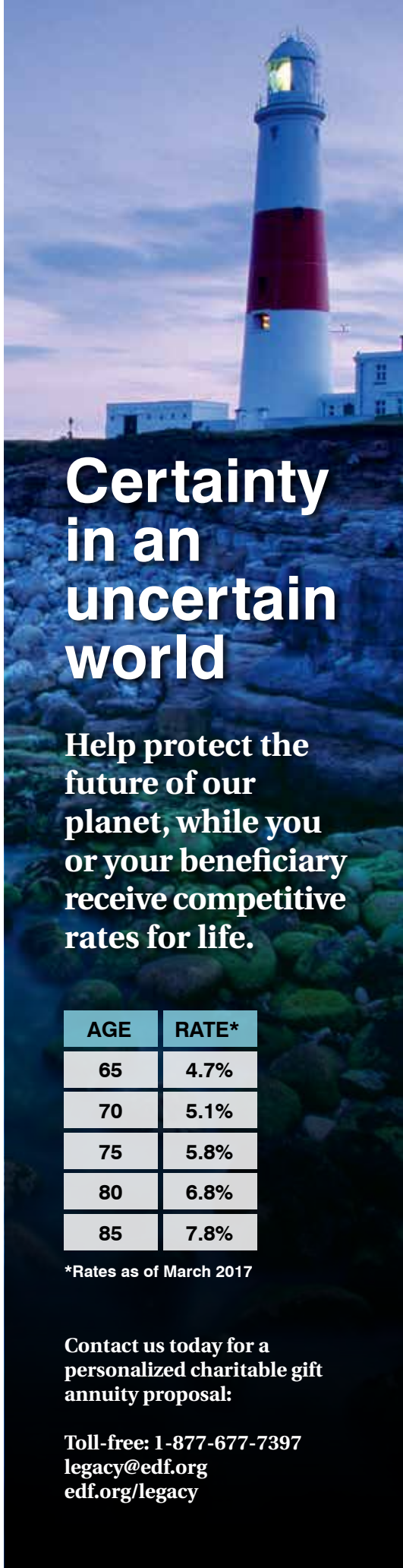
Take AeroTorque, which manufactures wind turbine parts at its plant in Sharon City, OH. Its parent company has long made underground mining equipment for coal. "We branched off into wind because we saw a growth opportunity," says Doug Herr, a VP at AeroTorque, "and we're now exporting to China. It doesn't matter who's in the White House," he adds. "The growth in wind is market-driven."

Matthew Fox, a 31-year-old wind technician who has worked servicing GE turbines in the Wind Belt—which stretches from North Dakota to Texas—is part of that burgeoning market. "The more that wind contributes to the energy pie, the better off we'll be as a nation," he says. "Wind power has zero emissions."

"Being 300 feet up on a windy day, working with large amounts of voltage, is a bad-ass job," he adds. "You feel you're doing something important."



Auston Van Slyke, a former Marine, says wind energy jobs are a good fit for veterans.



Certainty in an uncertain world

Help protect the future of our planet, while you or your beneficiary receive competitive rates for life.

AGE	RATE*
65	4.7%
70	5.1%
75	5.8%
80	6.8%
85	7.8%

*Rates as of March 2017

Contact us today for a personalized charitable gift annuity proposal:

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edf.org/legacy



EDF celebrates 50 years of impact and innovation

Half a century ago, a small band of scientists and a lawyer went to court to ban the pesticide DDT. “Filing a lawsuit was just this side of bomb throwing,” recalls Dr. Charles Wurster, an EDF founder. “You didn’t do that in polite circles, but we did it anyway.” Their victory, EDF’s first, saved America’s great birds of prey.

Today, we’re drawing on our 50 years of experience to mount a ferocious defense of the environment. Here are a few of our historic victories.

Thanks to all our supporters who have been with us on this journey! Watch the videos, explore the interactive timelines and add your own message about why you care: edf.org/50years



1990

REDUCING POLLUTION FASTER, AT LOWER COST

The Clean Air Act cuts power plant sulfur dioxide pollution in half using EDF’s market-based approach, serving as a model for carbon-cutting programs in California, Europe and China.

1967

EDF BEGINS

Ten people assemble to incorporate Environmental Defense Fund.

1985

CLIMATE PROGRAM LAUNCHES

EDF calls attention to global warming and helps plan a series of international climate conferences.

1973

NEW LAW FOR WILDLIFE

EDF helps create Habitat Conservation Plans under the new Endangered Species Act.

1987

SAVING SEA TURTLES

EDF helps get special devices on shrimp trawls to reduce sea turtle drownings.

1967

1977

SAFER PJs FOR KIDS

An EDF campaign curbs the use of a hazardous flame retardant, TRIS, in children’s sleepwear.

1987

HELP FOR THE AMAZON

EDF works with Brazilian rain-forest activist Chico Mendes to reduce deforestation.

1991

PROTECTING A WILDERNESS CONTINENT

EDF plays a key role in winning a global accord to ban mining and oil exploration in Antarctica for 50 years, protecting the last wilderness continent.





2010

GIVING FISHERMEN INCENTIVES TO CONSERVE

The U.S. adopts "catch shares" as part of official policy. Championed by EDF, the approach transforms U.S. fisheries, helping drive a 60% drop in overfished species.

1995

THE GRAY WOLF RETURNS

Groups including EDF help bring back gray wolves to much of their historic range in Idaho and Wyoming.

2006

CALIFORNIA ACTS ON CLIMATE

The Global Warming Solutions Act, co-sponsored by EDF, sets the stage for the state's transition to a low-carbon future.

2012

REPAIRING THE GULF OF MEXICO

After the BP Horizon oil disaster, EDF helps pass the RESTORE Act, directing 80% of BP civil penalties to coastal restoration.

2016

SAVING MONARCHS

EDF launches a habitat exchange to restore milkweed habitat along monarch butterfly migration routes.

2013

WORKING WITH WALMART

Walmart unveils a new policy, in partnership with EDF, to reduce toxic chemicals in products it sells.

2006

A VAST OCEAN RESERVE

Following efforts by EDF, the Northwestern Hawaiian Islands become the world's largest marine reserve.

2007

COURT RULING ON CLIMATE

The Supreme Court rules that EPA can regulate global warming pollution, siding with EDF and its allies.

2015

CHINA'S CARBON MARKET

China pledges to launch a carbon cap-and-trade program, after EDF helps guide earlier pilot programs.

2017



2016

ENSURING CHEMICAL SAFETY

The most important environmental law in a generation, the Lautenberg Chemical Safety Act, is passed by Congress after a long EDF campaign to make everyday products safer.

5 ways to make a difference

In these unprecedented times, we've seen something equally unprecedented—a surge of activism by Americans unwilling to let the environment be destroyed. We've pulled together some resources to help you fight effectively for a clean and healthy environment.



Make your voice heard

Countable

Not sure what your elected officials are doing? Countable makes it quick and easy to understand the laws Congress is considering. It also streamlines the process of contacting your lawmakers and allows you to track how they're voting on important issues.

countable.us

Moms Clean Air Force

Take action by joining Moms Clean Air Force, the EDF-backed group of nearly one million parents and others acting on behalf of children to protect the environment.

momscleanairforce.org/action

Call the Halls

What's the best way to communicate with people in government who are supposed to represent you? This guide, written by a former congressional staffer, explains why calls and letters are better than tweets or emails and walks you through strategies for making your communication count.

gumroad.com/l/callthehalls-guide

Defend Our Future

Join EDF's Defend Our Future movement and make climate change a rallying point for young voters. You can also learn about small but substantive actions you can take that make a real difference.

defendourfuture.org

Plug into your community

Indivisible: local power

A lot of the progress over the next four years will be made in cities and states. Indivisible is coordinating a network of local groups to fight back when Washington goes too far. Find groups in your area already at work, or learn how to start your own.

indivisibleguide.com/groups-nav

Let EDF be your guide

EDF's Path Forward site offers a variety of ways for you to speak out in defense of the environment. Learn about urgent issues and concrete actions you can take right now.

edf.org/pathforward

Stay informed

Keep careful tabs on how the environment is faring with reliable green journalism. Check out these websites: Grist, Climate Progress, Climate Central, Environmental Health News and Environmental News Network.

When the Trump administration placed public communication restrictions on EPA and other federal agencies, unofficial "rogue" versions of government science institutions began popping up on Twitter. There are dozens now, proudly posting reliable climate change data and speaking out against climate denial. Here are a few of them.

[@RogueEPASTaff](https://twitter.com/RogueEPASTaff)
[@AltUSNatParkSer](https://twitter.com/AltUSNatParkSer)
[@RogueNASA](https://twitter.com/RogueNASA)
[@RogueNOAA](https://twitter.com/RogueNOAA)

Fight back in your backyard

Use your piece of the planet to grow milkweed to help monarch butterflies, or make your backyard bird-friendly by nurturing native vegetation by using Audubon's planting guide.

audubon.org/plantsforbirds

Take a hike

With so much to do to stop the regulatory rollbacks, don't forget to occasionally remind yourself what you are fighting for. Spend time in the places you love. Turn to nature to relax, recharge and stay motivated. Pace yourself.

Members unite for the planet

We asked, and you shared. With EPA under threat, your memories of an era before environmental regulations are a clear reminder of how far we've come—and what we are fighting to save. You also told us what you are doing for the environment. Your voice in these dark times is critical. Thank you for all that you do.



The way it was, and how you are helping

The upper reaches of the Potomac River ran through our town. It was gray and thick with pollution from the paper company there. If you fell in the river, your parents would immediately take you to the doctor. We could smell the stink of the town five miles away. My father worked at the paper company and said that was the smell of money.

—William D., FL

I was born in 1955. In Dallas, as children, we were excited by the mosquito fogging trucks. None of us went inside. In fact, some kids liked to run through the chemical fog.

—Jay J., CA

When I was a kid, we lived on Lake Ontario, east of Rochester, NY. There were constant fish kills, and as kids we could never swim on the beach. My father became town supervisor and, after years of effort, successfully pushed for a waste cleanup system from the Kodak and Xerox plants. Now the waterfront is so different. My dad is my inspiration. Today, I'm part of a group advocating for my city to source 100% of its power from solar and wind.

—Lori B., MA

I'm a college student, and I'm working to get my school to divest from fossil fuels and save energy by distributing free LEDs to students and, of course, calling my elected officials almost every day. There's so much to be done, now that Trump is president, but honestly I love the chance to be so busy working on my environmental passion. My actions have never felt so important!

—Jacob H.-G., MO

I founded an environment club in my retirement community and gave guest lectures at the community college on renewable energy. I wrote a green column in a local magazine and began promoting rooftop solar. My community now has 1,255 houses with rooftop solar.

—Drury B., AZ

I am part of the clergy who seek ways to motivate faith communities to preserve our environment, including divesting from fossil fuel companies and using solar power. I frequently write to my elected officials, identifying myself as a Christian minister who is concerned about our stewardship of the world we inhabit. I belong to Interfaith Power and Light.

—Jeffrey C., IL

MEMBER PROFILE

A single voice... magnified



Laura Moser: Activism one day at a time gets results.

The day after the election, Laura Moser, a writer, mother of two and an EDF member, just wanted to stay in bed. She felt scared and full of uncertainty about the world her kids would grow up in. "Did we just throw away our one chance to put the brakes on climate change?" she wondered.

In the weeks that followed, Moser managed her anxiety about the new administration by donating to organizations working to protect people and the planet. "We're relying on nonprofits like EDF now more than ever," she said.

Still, she wanted to do more. So with the help of her husband's digital media company, she created Daily Action, a text message-based service that educates subscribers about important issues and makes contacting elected officials quick and easy. Daily Action (dailyaction.org) now has over 250,000 subscribers.

"Before I had kids, I used to volunteer a lot," said Moser. "Then I just got too busy. But this election has reminded me that taking care of my kids is bigger than packing lunches and getting them places on time: it's about fighting for a cleaner, safer future for them.

"It's up to us now," Moser added. "Find out what you're good at and do it. Or find out what no one is doing and do it. We all just need to do a little bit more than we have before."

**“I was taught the way of progress
is neither swift nor easy.”**

—Marie Curie

