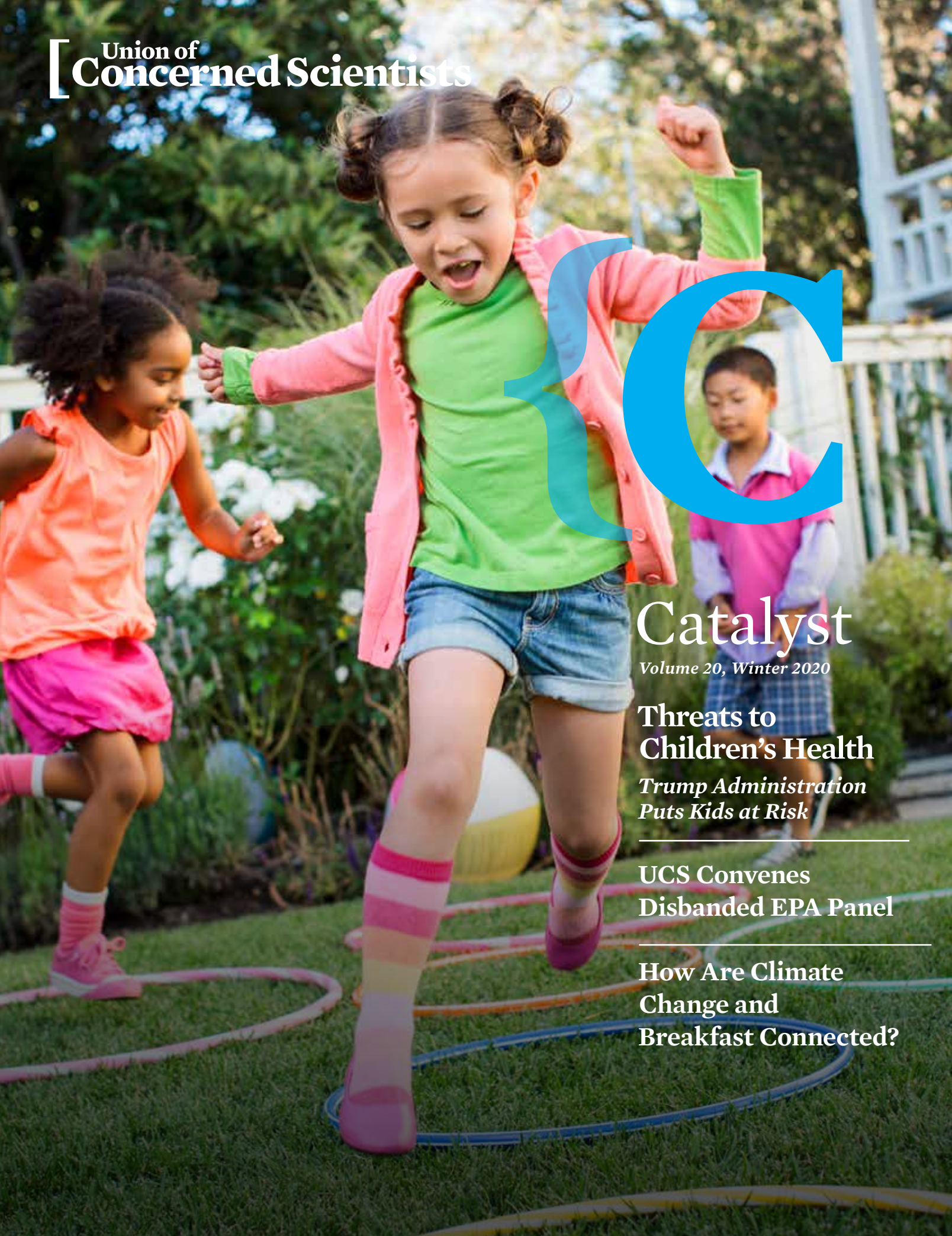

Union of Concerned Scientists

Catalyst

Volume 20, Winter 2020

Threats to Children's Health

Trump Administration Puts Kids at Risk

UCS Convenes Disbanded EPA Panel

How Are Climate Change and Breakfast Connected?

[Union of Concerned Scientists]

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The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with people across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

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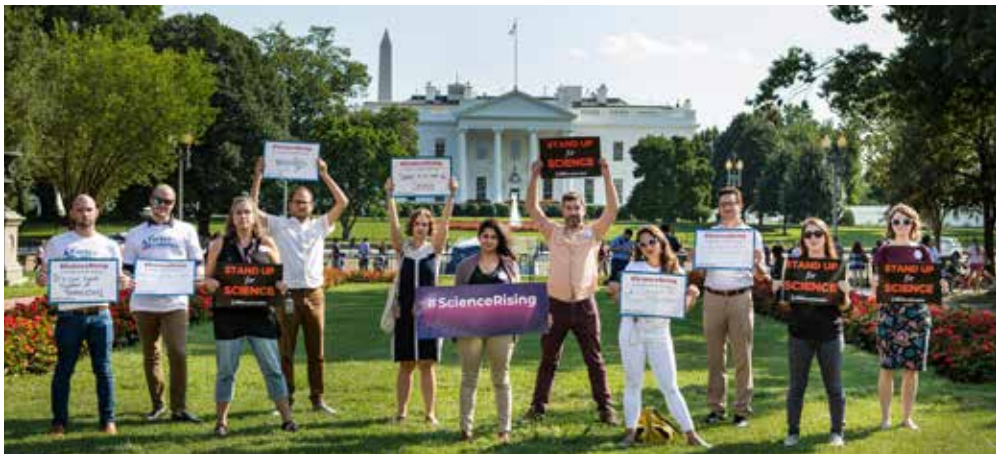
Science Fights Back



By Ken Kimmell

The past three years have been challenging for science and democracy. As we know all too well, the Trump administration has launched an unprecedented attack on facts and expertise, hollowing out the scientific capacity of key agencies and advisory boards, appointing agency heads committed to rolling back vital health safeguards, and writing new rules designed to prevent future administrations from properly deploying science.

But after three years of playing defense to block this onslaught, there are heartening signs that science is going on offense.

Consider the Trump administration's move to sideline science by disbanding a scientific advisory panel charged with advising the EPA on a proper air pollution standard for fine soot particles (known as $PM_{2.5}$). At the urging of the Union of Concerned Scientists, these experts agreed to take the unprecedented step of convening to do their jobs anyway. (For more on this case, see our story on p. 14.) UCS underwrote their efforts to comb through the scientific evidence on health impacts from $PM_{2.5}$ and produce a report that would become part of the official EPA record. Now, if the agency tries to disregard these experts' advice, we and others can take it to court for ignoring the experts.

> ***After three years of playing defense to block an onslaught of attacks on facts and expertise, there are heartening signs that science is going on offense.***

A second example: with bipartisan support, the House Science Committee recently approved the UCS-sponsored Scientific Integrity Act, a bill that would ensure government scientists' ability to share their work with the public, free from political interference. This landmark bill is gaining traction and has a good chance of being enacted—if not next year, then in the post-2020 Congress.

Newtonian physics teaches that for every action there is an equal and opposite reaction. The Trump administration's attacks on science continue, but we're increasingly finding innovative strategies to mount fierce and effective counterattacks.

It feels good to be back on offense. And you've made this possible—thank you.

Photos: Richard Howard (Ken Kimmell); Mike Olliver (UCS staff)

WHAT OUR MEMBERS ARE SAYING

Here's a sampling of recent feedback from the UCS Facebook page (*www.facebook.com/unionofconcernedscientists*) and Twitter feed (*www.twitter.com/ucsusa*).

ON THE VARIOUS LAWSUITS ATTEMPTING TO HOLD FOSSIL FUEL COMPANIES LIABLE FOR THE EFFECTS OF CLIMATE CHANGE

Garth Lewis:
The fossil fuel industry [wants] the profits but leaves the water and wildlife damaged for generations.

@cacti_sprout:
Aiming for the low-hanging fruits and making incremental improvements is no longer enough for businesses nor governments. Bold plans and actions will benefit the planet as well as the resilience of companies going into the future.

Brian Martins:
Oil companies should be responsible for the cost of providing a clean, green future powered by renewables. Time for those large profits to be applied towards a sustainable life.

ON UCS CONVENING A PREVIOUSLY DISBANDED EPA PANEL OF AIR POLLUTION EXPERTS (SEE P. 14)

@ClimateHawk2:
It's reasons exactly like this . . . why I am proud and determined to be a monthly donor.

Jacquelyn Mourgelas:
Thank you for not letting this administration silence you—despite its best attempts.

ON THE EPA'S PROPOSED RULE LIMITING POLICYMAKERS' ABILITY TO BASE DECISIONS ON SCIENCE (SEE P. 22)

Jason Wadleigh:
We will just have to clean up the toxic legislation like the environment. We live in a backwards world.

Richard Taylor:
The EPA should be looking at all the science to make their rules!

Pat Macfarlane:
This is why local government is so important . . . VOTE . . . vote in people who care about you, your children, and the environment.

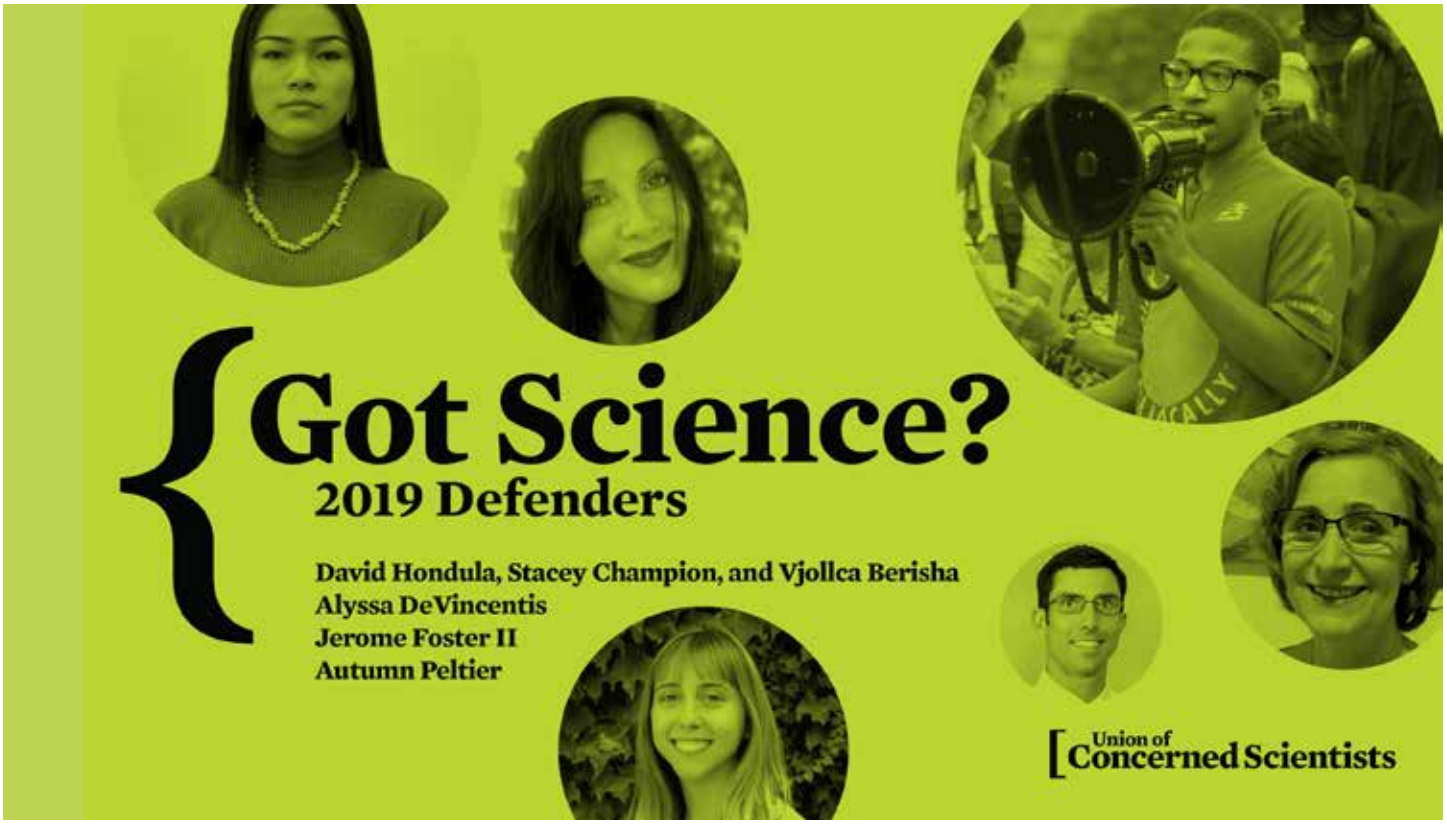
ON AUTOMAKERS SUPPORTING THE TRUMP ADMINISTRATION'S ROLLBACK OF VEHICLE EMISSIONS STANDARDS (SEE P. 18)

Veronica Carter-Macchione:
If the car doesn't meet or exceed the highest standards for clean running cars, I won't be buying it, from any company.

Karen Iovino:
Remember the thick smog LA used to have? Remember Beijing and the Olympics? Should we just ignore it or do something about it? Let's hope for wisdom and sane solutions that save our Earth.

[IN THIS ISSUE]

Celebrating the Science Defenders of 2019



Each year, the Union of Concerned Scientists bestows the title of Science Defenders on several individuals or groups of people who have done what's right in the service of science and the public good, even in the face of long odds or political pressure. The Science Defenders of 2019 made positive changes where they could—from their own communities to the United Nations.

WORKING TO REDUCE HEAT DEATHS

Vjollca Berisha, Stacey Champion, and David Hondula: In Phoenix, Arizona, hot summers are getting dangerously hotter. Berisha, Champion, and Hondula collaborate to make sure those who are most at risk of heat-related illness and death—including people experiencing homelessness, people living in poverty, elderly people, and communities of color—can survive extreme heat. The team is working on legislation that would require utility companies to keep power on during extreme heat events.

ENGAGING FARMWORKERS IN WATER MANAGEMENT

Alyssa DeVincentis: A PhD candidate in hydrologic sciences, DeVincentis brings what she's learned about agricultural water management in her lab at the University of California–Davis to farms across California that are experiencing water scarcity. She helps train farmworkers in groundwater management and how to get involved in their communities' groundwater agencies.

MOBILIZING YOUNG ACTIVISTS

Jerome Foster II: A senior in high school, Foster II joined the global youth climate strike movement by leading strikes every Friday in Washington, DC. He's also the founder of OneMillionOfUs, an organization that links climate change with other social issues that affect young people, such as gun violence, gender and racial equity, and immigration. In doing so he hopes to increase voter turnout among people his age.

DEMANDING CLEAN WATER FOR ALL

Autumn Peltier: After learning that dozens of First Nations communities across Canada don't have access to clean water, 15-year-old Peltier has been advocating for change before the United Nations General Assembly, the UN Secretary-General's Climate Action Summit, and Canadian Prime Minister Justin Trudeau. She was named chief water commissioner by the Anishinabek Nation, a political advocacy group for Ontario First Nations.

Illustration: House9 Design; Photos: Erica Pomeroy/FDA (rice farm); marabelo/Adobe Stock (ad)

UCS Triggers Investigation of Suppressed Science at the USDA

Federal employees discuss crop health with California rice farmers. A two-year study led by the USDA found that rice—a staple crop for millions—loses nutrients as carbon dioxide levels increase, but the agency chose not to publicize the results.

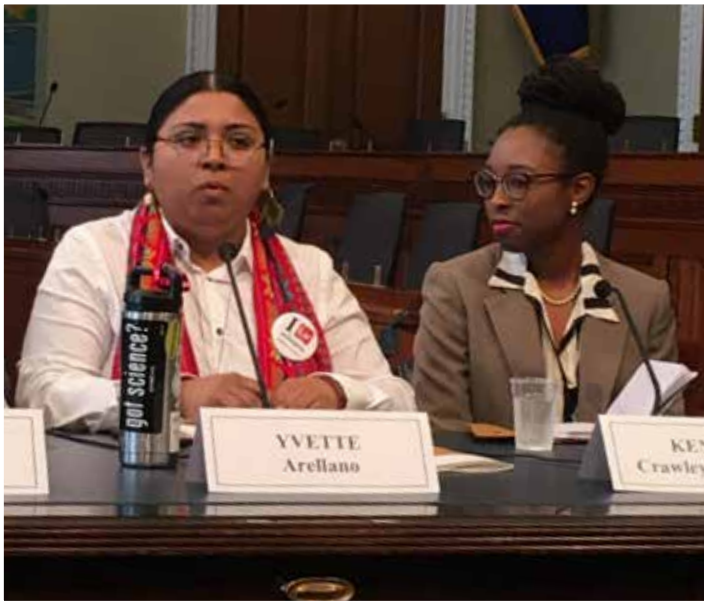
Over the past few years, scientists working with the United States Department of Agriculture (USDA) have released numerous studies on the vital topic of how climate change will affect the way we produce and eat food. Generally, when federal scientists reach important conclusions, press releases and media coverage alert the public to their findings. Under the Trump administration, however, these studies—including the gravely consequential finding that rice (which millions depend on for their daily calories) becomes less nutritious as carbon dioxide levels increase—have received little if any official notice. The administration even tried to stop the University of Washington, whose researchers collaborated on the rice study, from issuing its own press release on the work.

In the last months of 2019, UCS helped inform media coverage detailing efforts by USDA political appointees to bury their own scientists' research, and we urged the Senate to call for an investigation; 17 senators did so. The USDA Office of the Inspector General has now opened an investigation into this suppression of science.

Administration Gives Up on Its Pick to Head NOAA

The Trump administration's choice of former AccuWeather CEO Barry Myers to lead the National Oceanic and Atmospheric Administration (NOAA) was one in a series of troubling nominations. Myers, as UCS pointed out on our blog and in the media—including CNN, NPR, and the *Washington Post*—was not only unqualified but also had irreconcilable conflicts of interest, as he could have used his position to benefit AccuWeather, which is run by his brother. During the past two years, UCS helped collect and send 15,000 letters to the Senate opposing the nomination, and our scientists spoke out frequently to remind the public, our supporters, and senators of Myers' unsuitability—even helping the producers of John Oliver's *Last Week Tonight* create a segment on the National Weather Service and AccuWeather. In November 2019, Myers' nomination was finally withdrawn, joining a list of other egregious Trump nominations UCS has helped defeat.

Congress Briefed on Policies that Harm Marginalized Communities



Left: Protesters rallying for clean water and air in North Carolina. Above: Yvette Arellano, policy research and grassroots advocate with Houston-based t.e.j.a.s., and Kendyl Crawley Crawford, director of Virginia Interfaith Power & Light, gave testimony on the impacts of attacks on science with UCS staff on Capitol Hill.

As a result of the United States' history of setting policies that discriminate against communities of color, Indigenous communities, and low-income communities, people in these communities have borne a disproportionate share of harm from environmental problems such as air pollution. But the Trump administration is dismantling environmental and public health policies—and the science that underpins them—at an unprecedented rate, exacerbating existing inequities and increasing the likelihood of even greater harm. To document these outrages, and highlight the efforts of disenfranchised communities to push back against them, UCS collaborated with environmental justice advocacy groups Clean Power Lake County and t.e.j.a.s. (based in Illinois and Texas, respectively) on a 2019 report titled *Abandoned Science, Broken Promises*.

The report covers a range of consequences to marginalized communities when science and community members are deliberately left out of the policy-making process. Some are straightforward: increases in air pollution and chemical contamination because of weakened protections, heightened food insecurity due to cuts in nutritional assistance programs such as SNAP, or increased work-related deaths and injuries resulting from scientific recommendations on workplace safety being ignored. Less obvious is the harm that suppression of scientific research, or failure to collect data, can do to low-income communities and communities of color, because data on environmental risks, industrial emissions, and climate impacts are important to visualizing large-scale racial and economic inequities in the United States.

Following the report's release, UCS staff held two congressional briefings on its contents; the first was organized in cooperation with members of the House of Representatives' United for Climate and Environmental Justice Task Force and the House Natural Resources Committee. These briefings offered members of our partner groups and their communities—who are on the front lines of climate and pollution impacts—a platform to share stories of how attacks on science have affected them personally, and stress the importance of scientist-community partnerships.

Photos: AP Photo/Chuck Burton (demonstrators); Lindsey Berger/UCS (Capitol Hill briefing); Ira Arlook (Ricardo Salvador); Omari Spears/UCS (Paula Garcia)

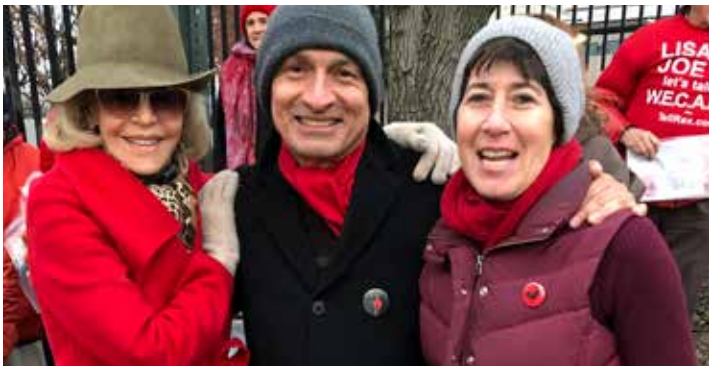
UCS Launches a Science Hub for Climate Litigation

More than a dozen lawsuits are now under way—and more are anticipated in the United States and other countries—seeking to hold fossil fuel companies accountable for climate-related damages and for misleading the public about the realities of climate science. To provide timely scientific support for these legal cases and others that aim to accelerate climate action, UCS is launching a Science Hub for Climate Litigation.

This new initiative will review legal complaints and communications for scientific accuracy, help connect legal teams with experts in relevant technical areas, and catalyze new science to inform climate litigation. And, in collaboration with partners, it will build greater capacity internationally within the climate science community to conduct legally relevant research and communicate that research in courts of law and public opinion.

Kathy Mulvey, the UCS climate accountability campaign director, says she's excited about the prospects for the new Science Hub. "As climate impacts worsen and become costlier, more frontline communities, political leaders, and investors are demanding that the companies that created this crisis take responsibility. We've been at the forefront of creating and making available top-quality science to aid in the effort to hold these companies accountable, and the Science Hub will help us reach a new level of effectiveness."

Science and Star Power



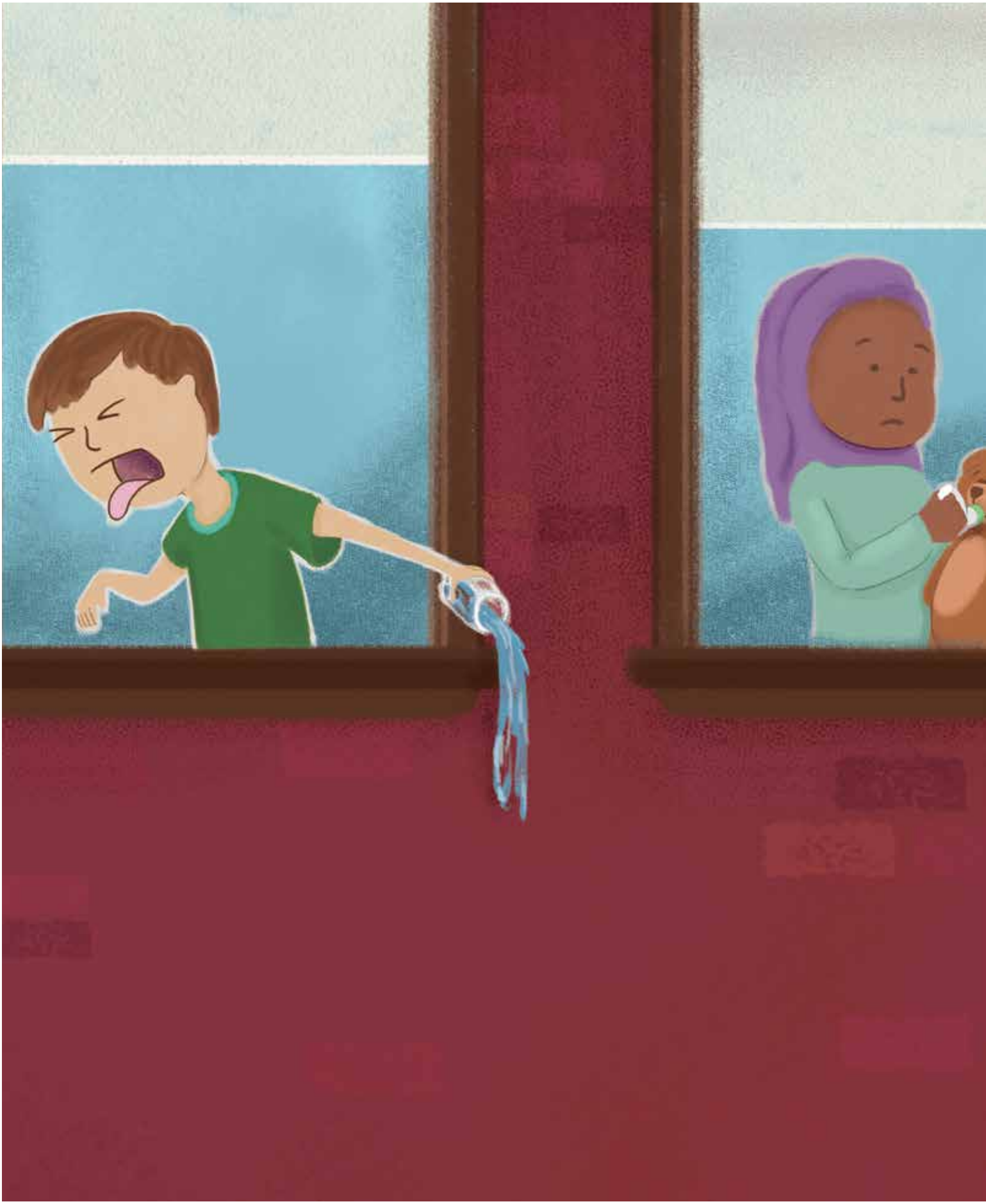
Ricardo Salvador (center), director and senior scientist with the UCS Food and Environment Program, with actress and activist Jane Fonda and her daughter Vanessa Vadim, on December 1, 2019. Fonda invited Salvador to a Thanksgiving teach-in on food justice and climate change in Washington, DC, and to participate in civil disobedience the next day with her "Fire Drill Fridays" on Capitol Hill. Salvador, Fonda, and 36 other climate justice activists were then arrested (and eventually released) as they peacefully protested federal inaction on climate change.

UCS in the Community

UCS Energy Analyst Paula Garcia presented her team's findings on clean energy possibilities in East Boston at a community meeting last fall.

Residents of East Boston already live with environmental health threats such as dangerous levels of air pollution from vehicle traffic, Logan International Airport, and busy shipping channels, and now a major utility wants to build a power substation near a neighborhood playground—and a massive jet fuel storage facility. Local activists have joined forces to stop it, and the environmental justice organization GreenRoots partnered with UCS to promote clean energy alternatives to the substation.

Our analysts demonstrated the feasibility of meeting East Boston's energy needs with a combination of rooftop solar installations and battery storage, publishing a series of blog posts along with an open letter encouraging further research into clean energy possibilities for the neighborhood. UCS and GreenRoots also hosted a community meeting that rallied residents to push back on the substation proposal and drew coverage on Telemundo. Read more at https://blog.ucsusa.org/tag/eastiecleantransition.



CHILDREN AT RISK

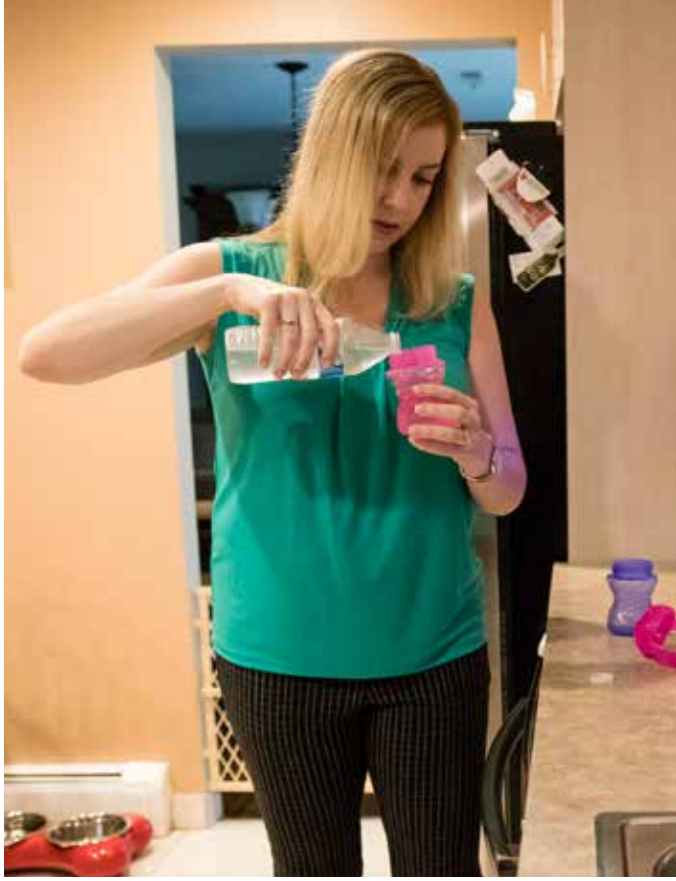
How Trump administration policies are harming the most vulnerable among us

BY PAMELA WORTH

The past three years have been a whirlwind of bad and worse news. As the Union of Concerned Scientists pushes back on the Trump administration's threats to science-based public policy, their sheer number can overshadow the damage being inflicted, and who is most at risk. But as a new UCS report clearly shows, the administration's policies are harming one of the nation's most vulnerable populations: our children.

Over the centuries, people in the United States have worked hard to ensure that future generations enjoy an ever-improving quality of life. When we've discovered through science that certain practices or products are dangerous for children's health and safety—such as the use of lead paint in homes, or asbestos insulation in schools—we've changed our laws to reflect that new information, and to afford kids the best chance to live healthy and safe lives. The Trump administration has reversed that longstanding progress and put our children—and future generations—in harm's way. Political appointees at federal agencies have ignored science, capitulated to industry demands, enacted rollbacks of crucial health and safety protections, and failed to enforce existing safeguards.

"As an analyst at UCS, I'm alarmed. As a parent, I'm outraged," says Genna Reed, author of *Endangering Generations: How the Trump Administration's Assault on Science Is Harming Children's Health*. "We do everything in our power to keep our kids safe. But a lot is out of our control, like the quality of the air our kids breathe, or the safety of the food we buy for them at the store. It's scary to know this administration does not have our backs."



Under the Trump administration, the EPA's proposed and completed rollbacks of air pollution protections could result in hundreds of thousands of asthma attacks, cases of respiratory illnesses, and missed school days for children. And multiple agencies' efforts to hide information about the risks to drinking water from PFAS chemicals could affect the 3 million children who attend schools or childcare facilities within five miles of PFAS contamination sites.

In a well-functioning government, Reed says, the best available science and evidence inform Congress and federal agencies' decisions to set and enforce rules that protect children's health. This tenet is codified into some of our most important laws, such as the Clean Air Act and Clean Water Act. "When we set standards based on protecting children's health and safety," she says, "obviously that benefits kids. Every risk covered in the report affects children's growing brains and bodies more than those of non-elderly adults. But it also benefits all of us—protections based on the most sensitive among us keep everyone healthier."

Well-functioning governments also conduct regular inspections to uphold safeguards, Reed says. As her report shows, simply setting standards isn't enough. Industries often try to cut corners to save costs—which is far easier to do when no one is watching. "Enforcement is necessary," she says. "And with so many of our federal agencies dealing with reduced staff, unmotivated leadership, and less oversight capacity, the current level of enforcement is wholly inadequate."

Although UCS has long documented abuses of science and their consequences for our health and safety, the new report is the organization's first to focus on the harms experienced disproportionately by children. Reed admits that the work was psychologically taxing.

"Going into this project, I knew about each topic we covered," she says. "But it was overwhelming to be confronted by the length of our list, how vulnerable children are, and the breadth of harm being done. I probably hugged my daughter more than she wanted while I was compiling this information."

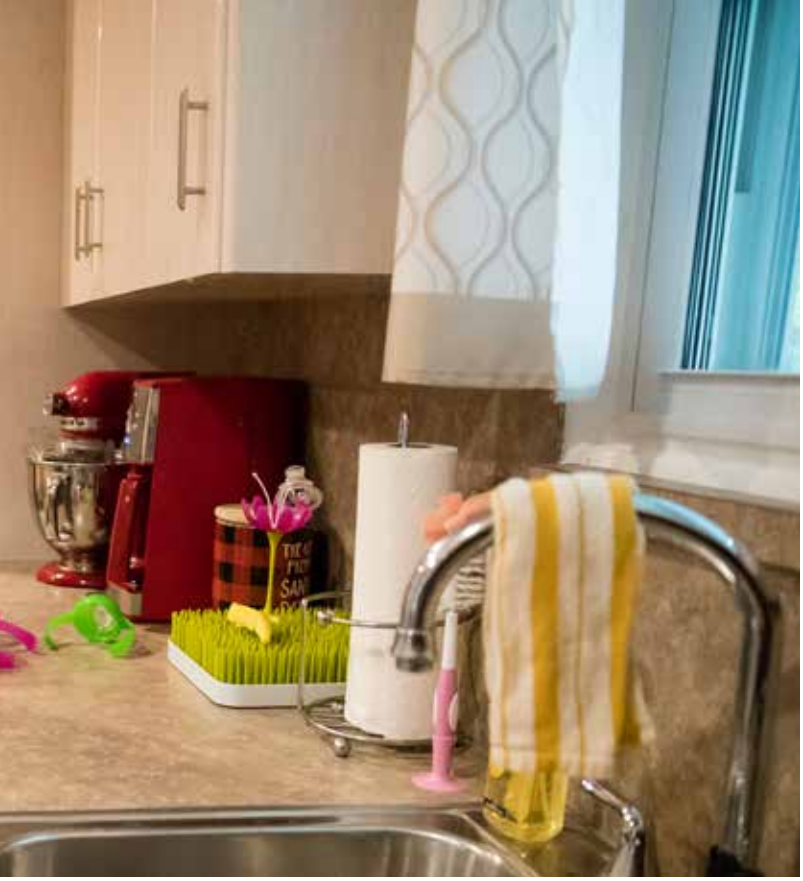
HARM TO DEVELOPING BRAINS AND BODIES

Under the Trump administration, protections for children against environmental threats have been undermined, rolled back, canceled, and ignored, putting the health of millions of children at risk. (See http://act.ucsusa.org/endangering for a full list.)

Consider, for instance, that the Trump administration overruled the Environmental Protection Agency's (EPA's) own staff scientists' recommendations in order to continue to allow the use of chlorpyrifos, an agricultural pesticide derived from nerve agents used in World War II. There is ironclad evidence that even a small amount of exposure to chlorpyrifos can inhibit brain development in children; the EPA banned its use in homes 20 years ago because of the risks to children's health. The agency is also ignoring its scientists' advice by failing to ban the import of asbestos and neglecting to enforce regulations around existing asbestos insulation in buildings like schools. Exposure to asbestos greatly increases the risk of mesothelioma, a cancer that affects the lining of the lungs. Children are particularly susceptible, as they spend more time closer to floors, where asbestos fibers can collect, and breathe faster than adults.

Or consider that the administration's Department of Defense and EPA are stalling on addressing the problem of widespread PFAS exposure. This class of chemicals is commonly used in firefighting foam, nonstick cookware, and food packaging, and can be found in food, drinking water, and the environment. Exposure to PFAS can result in damaged kidney function, increased asthma risk, and resistance to vaccines in children; Reed's report estimates that nearly

Illustration (previous page): Anthony Eyring/UCS; Photos: AP Photo/Scott Smith (children); AP Photo/Matt Rourke (mother); Anthony Eyring/UCS (book)



> *"There can be no keener revelation of a society's soul than the way in which it treats its children. . . . Our actions and policies, and the institutions we create, should be eloquent with care, respect, and love."*
>
> —NELSON MANDELA

3 million children in the United States attend schools or childcare facilities within five miles of a PFAS contamination site. "There are so many pollutants and known toxins that are being allowed near where kids live and play and learn," Reed says. "This is the largest category in the report."

Some of the administration's decisions to permit the use of dangerous chemicals, roll back bans, or simply refuse to enforce safeguards are giveaways to industry and special interests. Others are due to reduced enforcement and inspection at agencies like Housing and Urban Development and the EPA, resulting from attrition and lack of resources.

However, Reed says, it's reasonable and appropriate to demand that schools be free of asbestos, and that babies and children not be exposed to carcinogens and neurotoxins. "Putting special interests before children's health has consequences," she says, "and the consequences are that children will get sick."

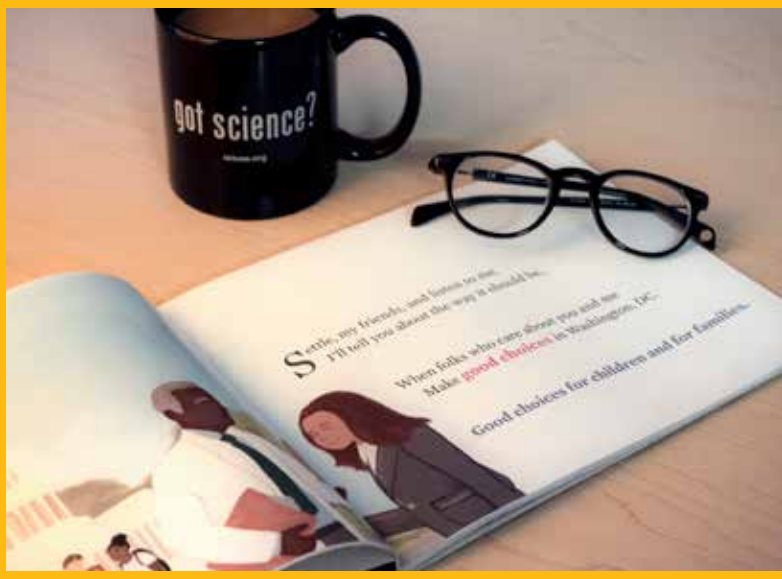
HARM TO CHILDREN'S SAFETY

The Trump administration is also endangering children's safety by failing to enforce key consumer protections. The case of a popular jogging stroller illustrates these dangers. From 2012 to 2018, more than 200 documented injuries—including adults'

(continued on p.21)

A UNIQUE TAKE ON SERIOUS THREATS

After so much reckless anti-science decisionmaking by this administration, many are feeling fatigued by the endless stream of bad news from Washington, DC. We knew we needed a new approach to draw attention to this issue. To accompany the release of *Endangering Generations: How the Trump Administration's Assault on Science Is Harming Children's Health*, we've created *Breathe in the Smog, Drink in the Lead: A Grim Scary Tale for People Who Care about Kids,* a storybook that is definitely not for children. The illustrations accompanying this article are reproduced from the book, which employs dark humor to convey the all too serious consequences this administration's policies are having on children's safety and health. A video reading of the book, along with a resource guide for readers who wish to get involved, are available on our website. If you'd like a hard copy, you can order one at http://store.ucsusa.org.



Can Your Breakfast Change Agriculture?

INTERVIEW WITH KAREN PERRY STILLERMAN

You were involved in a UCS analysis that calls out a surprising contributor to climate change and destructive agricultural practices: breakfast cereals. So what's the problem with our Corn Flakes?

KAREN PERRY STILLERMAN: Well, in that case, it's right there in the name. Many popular breakfast cereals have corn as their main ingredient—not just the ones you expect, like Corn Pops and Corn Flakes, but Froot Loops, Kix, and Trix. While most corn doesn't end up in breakfast cereal, US farmers grow a lot of it: in 2017, more than 89 million acres' worth—an area larger than the state of New Mexico. And today's dominant corn production system damages our soil, pollutes our water, and releases heat-trapping gases.

It isn't working out so well for farmers, either: crop prices are low, bankruptcies are on the rise, and trade wars are making everything worse. The soil is eroding at unsustainable rates, threatening farmers' ability to pass down viable farms to their kids and their grandkids, and to keep growing food into the future. There's a lot of room for improvement.

You could also say that about most processed food in the United States. Why did your team focus on cereal?

KAREN PERRY STILLERMAN: This was a strategic decision. Most people in the United States eat at least some breakfast cereal sometimes, and many of us eat cereal for breakfast every day. It's a highly visible and beloved staple—so it could be an effective lever for consumers to use for improving the sustainability of our food and farm system.

How would that happen? How can cereals improve sustainability?

KAREN PERRY STILLERMAN: Our analysis estimated the benefits that cereal makers could achieve if they sourced their grains more sustainably. We did that by focusing on the top-selling corn- and oat-based cereals—Frosted Flakes and Honey Nut Cheerios, respectively—and estimating how much of those primary grains is in each box of cereal. From there, we could calculate how many acres of land it takes to grow the amount of grain in a box, multiplied by the sales for all the boxes sold in a year.

Then we looked at a long-running Iowa State University study that shows adding oats into the typical corn-and-soybean rotation can dramatically reduce soil erosion and pollutant runoff while maintaining farmer profits. *[Editor's note: oats require less nitrogen fertilizer—which is produced using natural gas—than corn or soybeans.]* We used the result of that study to develop scenarios for what would happen if a company purchased the amount of grain in Frosted Flakes and Honey Nut Cheerios from farms transitioning to this more sustainable rotation.

A third scenario we examined involved a company purchasing these more sustainably grown oats for an equivalent number of servings of oatmeal. We found that purchases on this scale could save a million dollars in annual water cleanup costs from reduced erosion, and $12 million in reduced annual damage from nitrogen fertilizer pollution in water.

For companies that produce breakfast cereal, how difficult would it be to achieve that switch to sustainability?

KAREN PERRY STILLERMAN: It's important to remember that these numbers involve shifting sourcing for

As senior strategist and senior analyst in the Union of Concerned Scientists Food and Environment Program, Karen Perry Stillerman manages initiatives aimed at transforming and modernizing the US food system to make it safer and healthier for consumers, farmers and farmworkers, rural communities, and the environment. Stillerman co-authored the report discussed in this article, *Champions of Breakfast*; you can read the report on our website at www.ucsusa.org/champions-breakfast, and listen to her full interview on our *Got Science?* podcast at http://act.ucsusa.org/got-science-ep67.

Photos: Sanjay Suchak (Karen Perry Stillerman); Will Van Wingarden/Unsplash (ad)

> *If companies start seeking out more sustainably grown ingredients for their cereals, the environmental, economic, and climate benefits could be enormous.*

the amount of grain in a few individual brands, not for these companies' entire product lines. The biggest cereal companies could turn this into a much bigger change. Just four of them account for 86 percent of the $8.5 billion US breakfast cereal market: General Mills, Kellogg Company, Post Consumer Brands, and Quaker Oats (a division of PepsiCo).

Some of these companies have begun to take steps to improve the sourcing of their ingredients, but there's plenty of opportunity to do more.

And for the farmers who grow these grains, how hard would it be to implement these sustainable growing practices?

KAREN PERRY STILLERMAN: Farmers want to take good care of the land, and they want to pass something valuable along to the next generation. Many of them are already interested in changing their practices, because of what they see happening to the land and to their bottom line. But farmers also need new markets if they're going to make big changes. We've heard from some that they'd love to try growing new crops or farming in new ways—but the risk is too big if there's no one there to buy them, especially at a fair price.

We're asking companies to change their sourcing priorities and practices so farmers can change theirs. At the same time, we need better public policies that help underwrite some of the costs while the markets get rolling. But by investing in supply chain improvements, defining and improving sustainability standards, and raising consumer awareness, big cereal companies can help expand opportunities for sustainable grain farmers, setting the wheels in motion for larger-scale market shifts.

Could such changes have effects beyond our cereal bowls?

KAREN PERRY STILLERMAN: Absolutely. Many of the brands belonging to the four big breakfast cereal companies are household names; each has other divisions that make lots of other food and beverage products. The change in our analysis is small in the grand scheme of things, but it could leverage bigger change. If companies start seeking out more sustainably grown ingredients for all their cereals and all the other products they make—if these changes could be implemented on a larger scale—the environmental, economic, and climate benefits could be enormous.

Until that happens, what's the best option for the cereal lovers out there?

KAREN PERRY STILLERMAN: Choose an organic brand. Grains grown organically tend to be grown more sustainably, and the USDA organic label is currently the best signal available to consumers that packaged-food ingredients are grown in better ways. Then there's oatmeal. Sustainably grown whole oats can have even more soil-saving, pollution-preventing potential than formulated oat-based cereals, simply because there are more oats per serving. {C}

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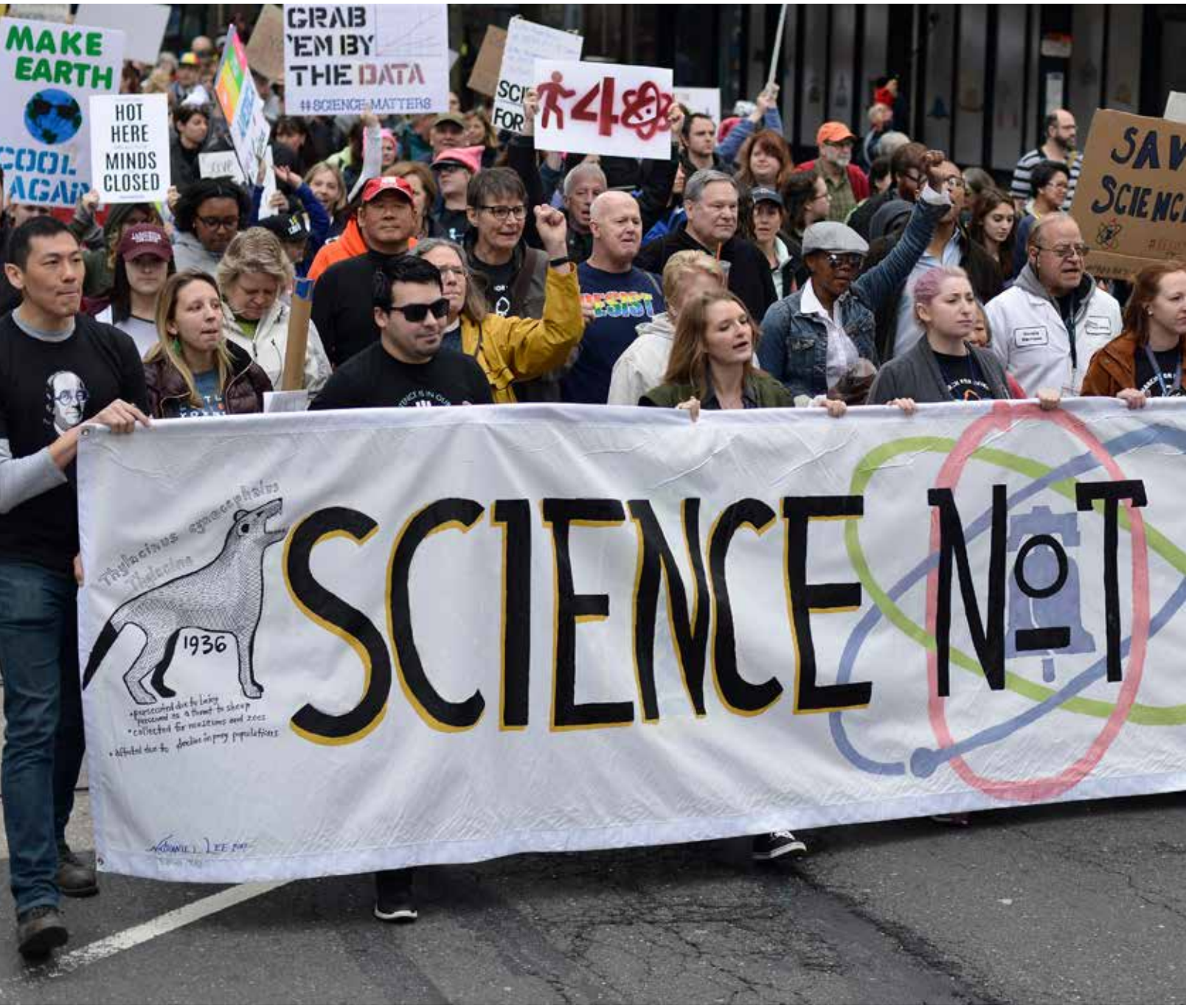

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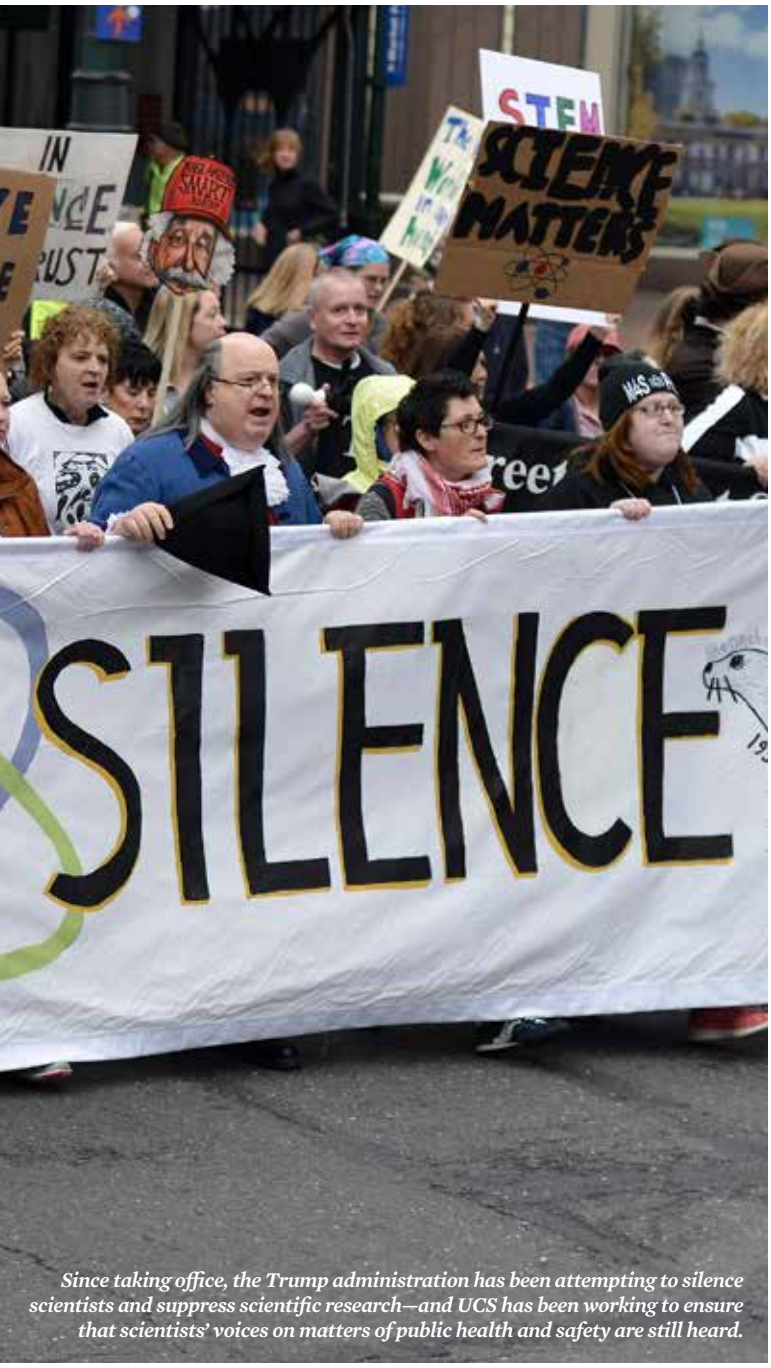


Since taking office, the Trump administration has been attempting to silence scientists and suppress scientific research—and UCS has been working to ensure that scientists' voices on matters of public health and safety are still heard.

Photo: NurPhoto/Getty Images

With a novel approach, UCS refuses to allow the Trump administration to sideline expert advice on air pollution standards.

BY ELLIOTT NEGIN

The Union of Concerned Scientists has used many tactics to disrupt the Trump administration's anti-science, anti-environment agenda. Challenging regulatory rollbacks in court has often proved successful, and UCS has initiated or been a party to a number of these lawsuits. But last fall, the Center for Science and Democracy at UCS employed a novel approach: it reassembled a key air pollutant advisory panel that the administration had eliminated. At the urging of UCS scientists, and underwritten by the organization, the entire panel met last fall and then formally presented its recommendations to the Environmental Protection Agency (EPA).

"Reconvening a disbanded pollutant review panel breaks new ground," says the Center's research director, Gretchen Goldman, who hosted the ostracized panel's meeting in mid-October. "Nothing like this has ever been done before. Indeed, nothing like this has ever been necessary. But we live in unprecedented times."

A MATTER OF LIFE AND DEATH

Before it was terminated, the Particulate Matter Review Panel, comprised of some of the nation's leading experts on air pollution, advised the EPA's congressionally mandated, seven-member Clean Air Scientific Advisory Committee (CASAC). As specified in the Clean Air Act, the EPA is required by law to set science-based air pollution standards. CASAC was established in 1978 to periodically review the most recent scientific findings and ensure the EPA's current standards adequately protect public health. The disbanded expert panel was an integral part of this process.

Given that air pollution standards are informed by a wide range of scientific disciplines, including epidemiology, toxicology, and medicine, the EPA has organized several panels of experts to assist CASAC over the last few decades. The agency created the Particulate Matter Review Panel in 2015 to evaluate the latest science on the microscopic particles emitted from smokestacks, tailpipes, farmland, and wildfires that can cause respiratory and cardiovascular disease and even premature death. Particulate matter is a serious threat to public health: according to a 2017 study in the British medical journal *Lancet*, fine particles with a diameter of 2.5 micrometers or less ($PM_{2.5}$) were responsible for more than 88,000 premature US deaths in 2015—more than those caused by firearms and traffic accidents combined.

STALLED PROGRESS

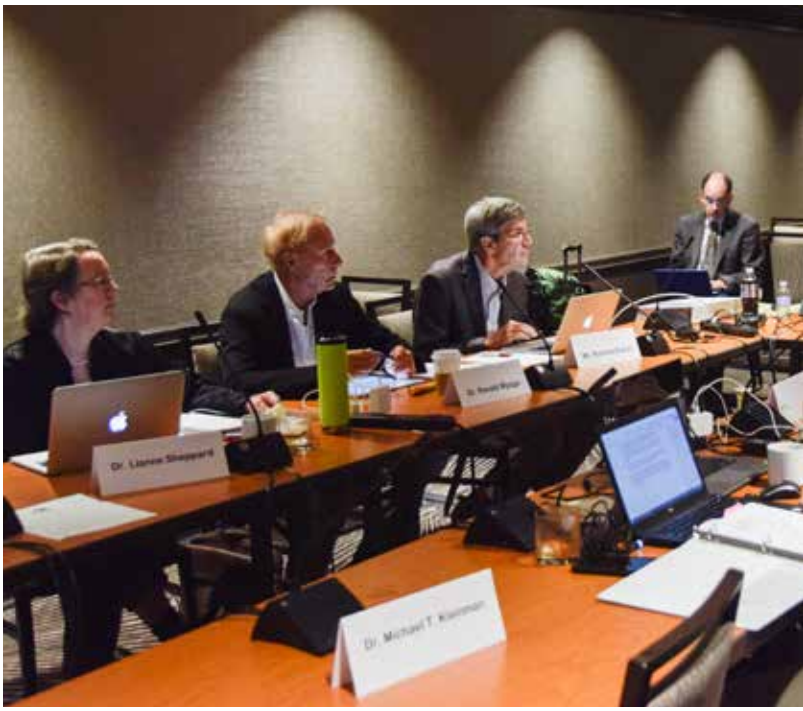
Until recently, the United States was making steady progress in reducing particulate pollution. The average annual levels of fine particulate matter declined by 24 percent nationally between 2009 and 2016, according to an October 2019 study by two Carnegie Mellon economists based on EPA data. Over the next two years, however, particulate pollution jumped 5.5 percent, the study found, largely due to stronger economic growth, western wildfires, and weaker enforcement of federal air pollution standards. Today, more than 20 million Americans live in areas that exceed the current particulate pollution standards.

Instead of shoring up EPA resources to address this problem, EPA Administrator Andrew Wheeler—a former coal industry lobbyist—disbanded the Particulate Matter Review Panel in October 2018 and replaced all but one of the academic scientists on CASAC with industry representatives and political appointees. Tony Cox, an oil and chemical industry-funded risk analyst who disputes the widely accepted link between particulate pollution and mortality, became CASAC's chair.

Eliminating the particulate matter panel made it impossible for CASAC to do its job. Despite its nominal commitment to protecting public health, the newly constituted committee realized that it did not have the expertise to assess the latest science on particulate matter and asked the EPA in April 2019 to reinstate the expert panel. Wheeler refused. In early September, he tapped a dozen consultants to advise the committee on particulate pollution and smog, roughly half of whom have industry ties.

UCS STEPS UP

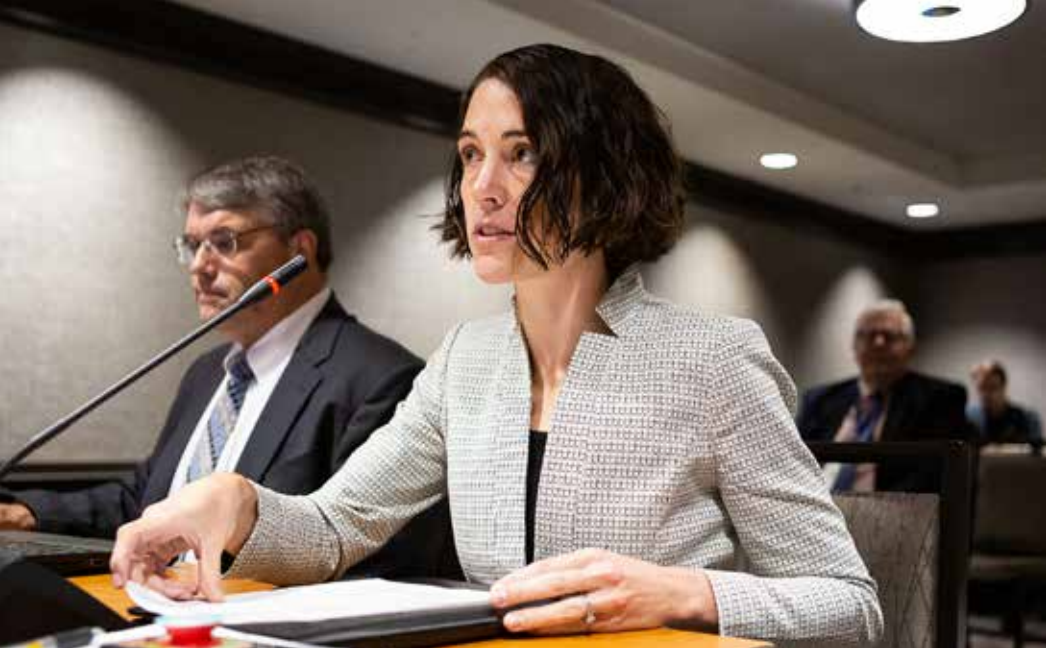
During this period, Goldman had been working behind the scenes with the dismissed particulate matter experts, discussing the possibility of reconvening their group and dubbing it the Independent Particulate Matter Review Panel. Last October 10 and 11—exactly a year after the EPA had fired them—the idea came to fruition. At a hotel in Arlington, Virginia, the panel's 20 members met to conduct a comprehensive review of the latest science related to particulate matter. The panelists, who spent many hours preparing for the meeting, provided their services for free. UCS paid for some travel expenses and covered the cost of the conference room.

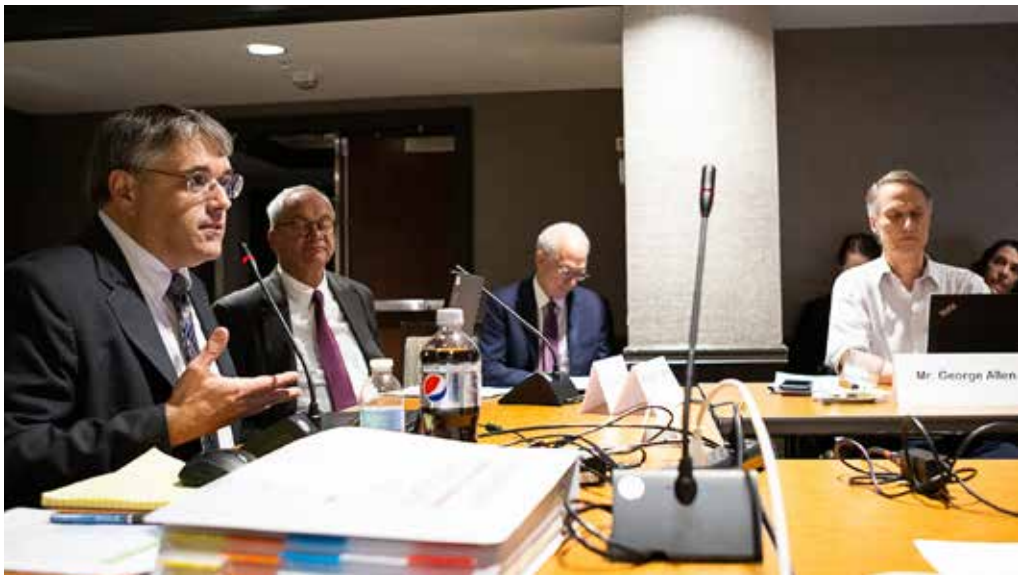


"We went by the book," Goldman says, "replicating the same procedures the panel would have followed if it were still officially operating. With the help of a network of retired EPA staff, the same ethics officer who would have vetted the panelists for the EPA was there to ensure they have no conflicts of interest, the same lawyer who would have helped the panel interpret statutes was there, and the same EPA scientist who had previously worked with the panel was there. We dotted all the I's and crossed all the T's."

Goldman and the panel also insisted on transparency. The two-day meeting was open to the public and streamed live on the internet. They even provided for a public comment period.

Photos: Catherine Xu/UCS (p. 16); Francis Chung/E&E News (p. 17)





Top: Gretchen Goldman, research director of the Center for Science and Democracy at UCS, addresses members of the EPA's disbanded panel of experts on particulate air pollution, which UCS reconvened for a two-day meeting. Left and right: Members of the Independent Particulate Matter Review Panel, including chair Christopher Frey, discuss setting a new, higher standard for the pollutant.

"We wanted to put on the record: here are all the things that should have happened had we not been disbanded," says panel chair Christopher Frey, an environmental engineer who teaches at North Carolina State University. "And here's the science advice that the agency would have gotten from us."

The panel issued a 183-page report on October 22 that concluded the current standard for fine particles does not protect public health. Maintaining the status quo, the panel wrote, would disregard epidemiological evidence, which is not scientifically justified. It recommended that the EPA lower the current annual limit for $PM_{2.5}$ by as much as a third, which could have a major impact on tailpipe and power plant emissions standards.

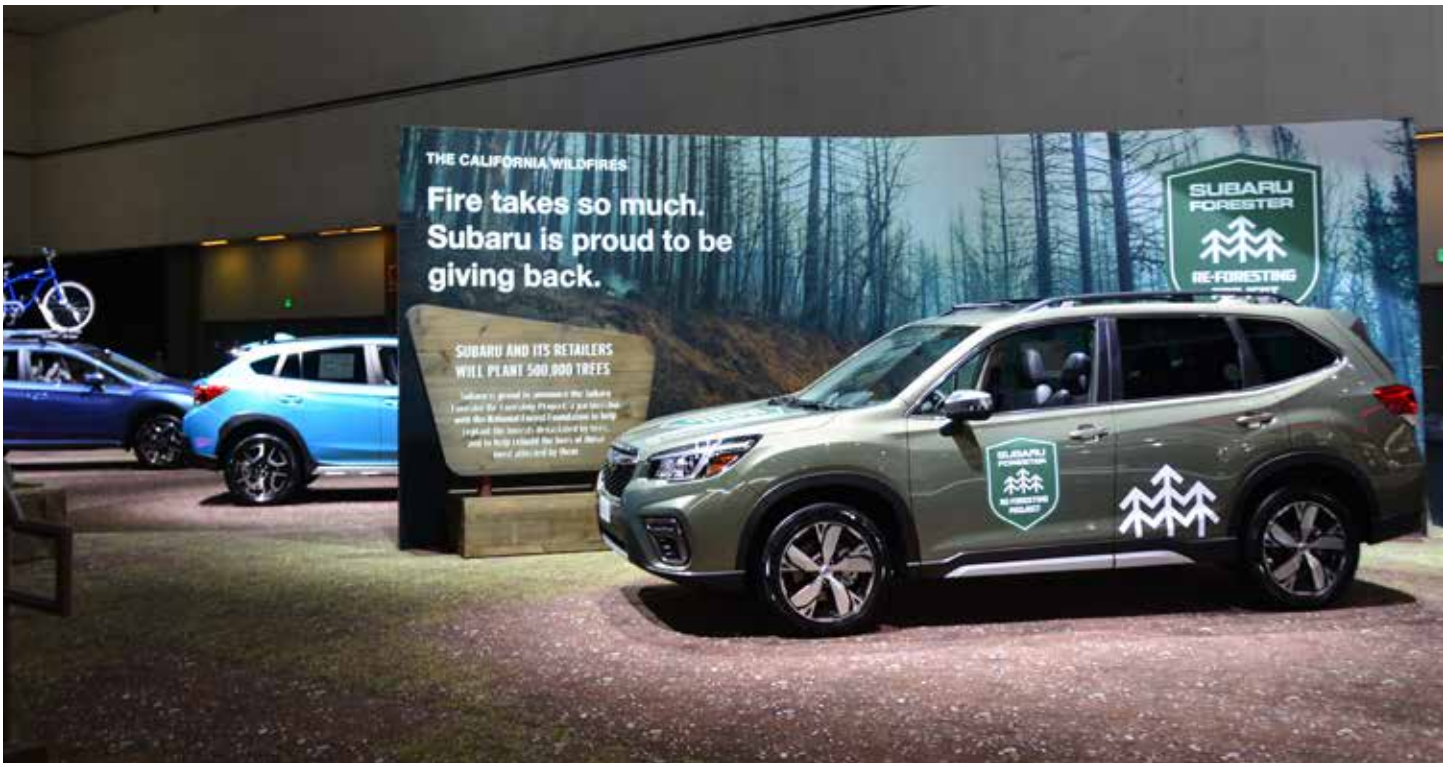
"The most important takeaway from the meeting is that an independent panel of experts has established a benchmark against which the EPA and its science advisors can be measured," says Goldman.

Instead of heeding the independent panel's advice, CASAC released a report in mid-December in which the majority of its members concluded that the current annual limit for $PM_{2.5}$ is adequate. However, because the independent panel's report was officially submitted to the EPA, it is now part of the record and could provide the basis for a legal challenge to the current standard in the future.

"The stakes are high," says Goldman. "Particulate matter is responsible for more sickness and death than any other air pollutant nationwide. If the EPA fails to set a standard that aligns with our scientific understanding of particulates, public health is at risk. We deserve to have a particulate matter standard that protects us. But we won't have one unless unvarnished scientific advice informs the EPA administrator's decision as required by law. That's why UCS stepped up—and will continue to stand up for science." {C}

Automakers Try to Have It Both Ways on Vehicle Standards

By Dave Cooke with Jiayu Liang



Subaru displays a model Forester next to a reforestation pledge display at the Los Angeles Auto Show in December 2019. Meanwhile, the automaker has joined forces with others to undermine standards that would reduce global warming emissions.

Over the past three years, the Trump administration has worked to roll back the strong vehicle efficiency and emissions standards that were on target to cut global warming emissions from new cars and trucks in half over 2005 levels by 2025. This effort is based on ideology, not the best available data, and it's not in the best interest of consumers or the environment. Unfortunately, many automakers have been all too eager to go along with the rollback—and some are actively working behind the scenes to undermine environmental protections. The latest chapter in the saga involves California and more than a dozen other states, a few unscrupulous car manufacturers, and a lot of "greenwashing."

It's important to recognize that while automakers are divided in their approach to vehicle emissions regulations, they are unanimous on one point: every single automaker that produces gas-burning cars wants the current standards to be weakened. Less than a month after President Trump's inauguration, 18 automaker CEOs urged the administration to weaken the strong standards finalized by the previous administration. The letter used a typical industry tactic, exaggerating the potential negative economic impacts of the standards, and claiming that market realities require weakening them, even though—as confirmed by UCS analysis—automakers have had no problem meeting and even exceeding past years' federal standards, producing several generations of vehicles that were cleaner and cheaper to drive than what came before.

The automakers got more than they asked for: an administration proposal to roll back the current standards completely. But the problem they should have foreseen is California-sized. California began setting its own car emissions standards in the 1960s, predating federal action. Recognizing this leadership, Congress granted California unique authority under the Clean Air Act to set more rigorous protections than federal standards—and it also allowed other states to adopt the Golden State's standards. Because California already

Photo: David Reichmuth/UCS

> ***It's well past time for auto manufacturers to stop putting short-term gains ahead of the public interest and withdraw their support of the Trump administration's attack on clean car standards.***

reviewed the federal regulations finalized under the Obama administration and deemed them appropriate, *the Trump administration's rollback creates two separate standards for the industry to follow.* The administration is now refusing to recognize California's authority to regulate global warming emissions from vehicles, creating even more uncertainty in the auto industry.

A group of automakers attempted to resolve the uncertainty last summer, when BMW, Ford, Honda, and Volkswagen agreed with California on a voluntary framework for future emissions standards. Rather than pushing the companies to offer a different vehicle mix in California than the rest of the country, the agreement allows them the flexibility to meet the state's rigorous standards by manufacturing a nationwide fleet more in line with California's transition to a cleaner, electric transportation future. In return, the companies explicitly acknowledged California's legal authority to set strong standards under both its Low- and Zero-Emission Vehicle programs.

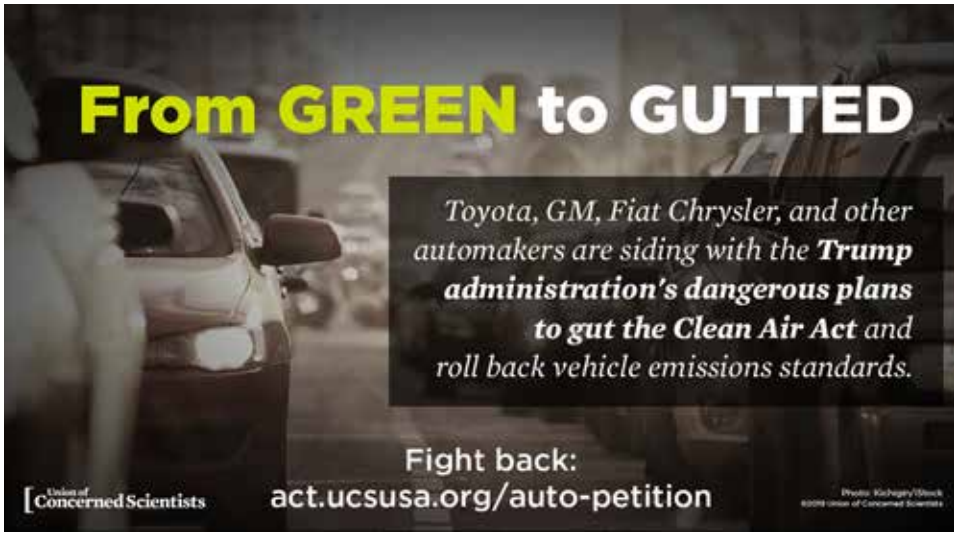
EMPTY PROMISES

Near the end of 2019, instead of signing on to the California deal, much of the rest of the industry banded together to create the misnamed Coalition for Sustainable Automotive Regulation (CSAR). CSAR is led by Fiat-Chrysler (comprising Jeep, Dodge, and other brands), General Motors, and Toyota, but also includes Hyundai, Kia, Mazda, Nissan, and Subaru, as well as the National Automobile Dealers Association. The group claims that it seeks "a national regulatory program that includes feasible increases in fuel economy, along with holistic market-based approaches that facilitate the continued transition [to] efficient advanced technologies, including electrification." If this were true, CSAR would have signed onto the California deal, which actually provides these benefits. California's ability to set its own standards has brought countless auto industry innovations to market, including catalytic converters, hybrids, and electric vehicles. And now the very companies that could and should be investing in the technologies needed for a more sustainable transportation future are instead expending time and energy fighting against environmental protections. In other words, CSAR exists not to support sensible long-term standards, but to support the Trump administration's position that California does not have the legal authority to protect its own residents.

In this light, the public positions of some automakers are almost laughable. Most understand that the public wants cleaner, greener vehicles, so their ad campaigns promote a commitment to sustainability, while behind the scenes they work to undermine federal and state standards. Subaru even posted a lengthy description on its website, since removed, about how its all-wheel-drive vehicles will keep consumers safe in a changing climate—which the manufacturer itself is contributing to.

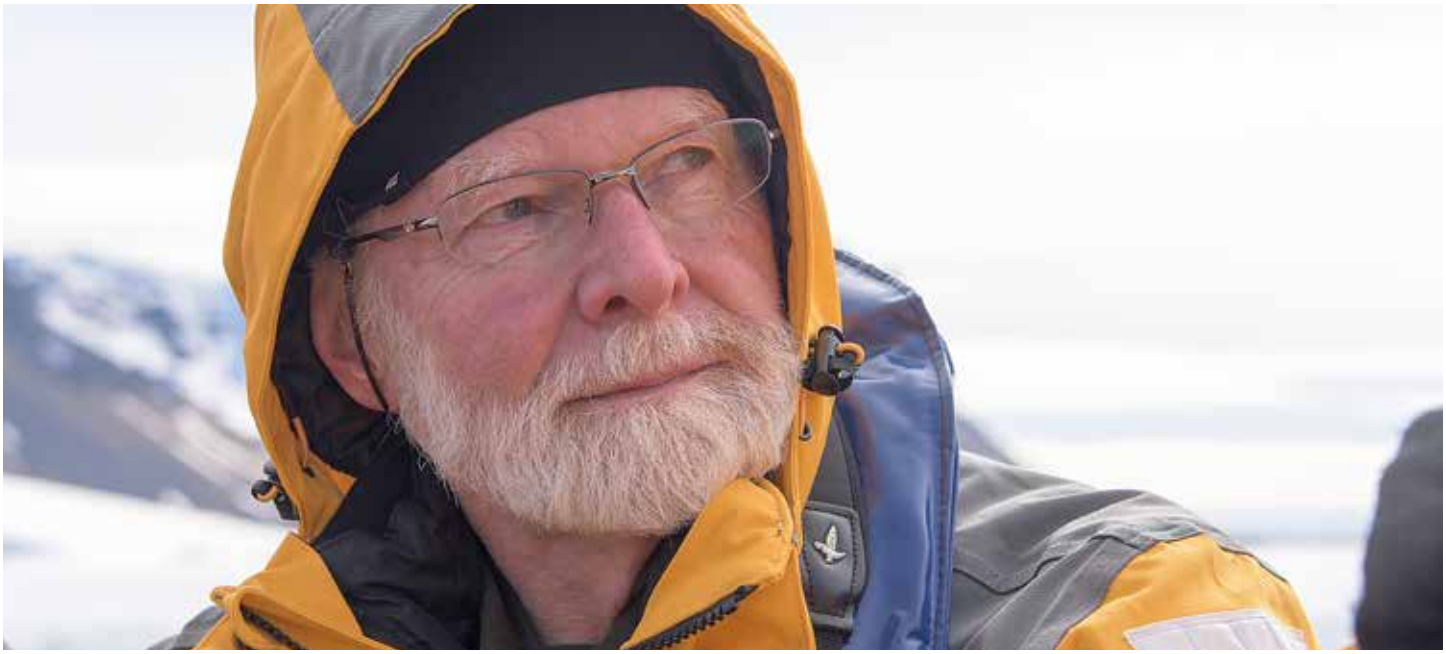
California quickly responded to the CSAR effort by announcing it would not buy vehicles for its government fleets from any automaker attacking the state's regulations. It's well past time for auto manufacturers to stop putting short-term gains ahead of the public interest and withdraw their support of the Trump administration's attack on clean car standards. Our climate can't take any more of their greenwashing. {C}

Dave Cooke *is a senior vehicles analyst in the UCS Clean Transportation Program. Read more from Dave in our blog,* The Equation, *at http://blog.ucsusa.org.* ***Jiayu Liang*** *is a contributing writer to* Catalyst.



UCS has been sharing this image on social media to inform our followers and mobilize them to take action for cleaner cars.

Remembering UCS Board Chair James J. McCarthy



The staff and board members of the Union of Concerned Scientists are deeply saddened by the passing of Board Chair Emeritus James J. McCarthy in December 2019 at the age of 75. UCS was one of many organizations Dr. McCarthy made stronger with his leadership, passion for advancing scientific understanding of Earth's climate and oceans, and tireless commitment to finding and promoting science-based solutions for climate change.

McCarthy was the Alexander Agassiz Professor of Biological Oceanography at Harvard University, where he also served as director of the Museum of Comparative Zoology from 1989 to 2002. Committed to interdisciplinary research before it became a norm in academia, McCarthy's primary research focused on the regulation of plankton productivity in the ocean, particularly in regions affected by seasonal and year-to-year variations in climate. Through his work, he could plainly see the far-ranging and interconnected consequences of a warming planet, and devoted much of his public service to education and advocacy on climate change.

He served on and led national and international organizations dedicated to addressing climate and global change. He was a co-author of regional, national, and international climate change assessments, vice chair of the UCS-led Northeast Climate Impacts Assessment, and headed the 2001 Intergovernmental Panel on Climate Change (IPCC) Working Group II. In 2012, President Barack Obama appointed him to the US Arctic Research Commission.

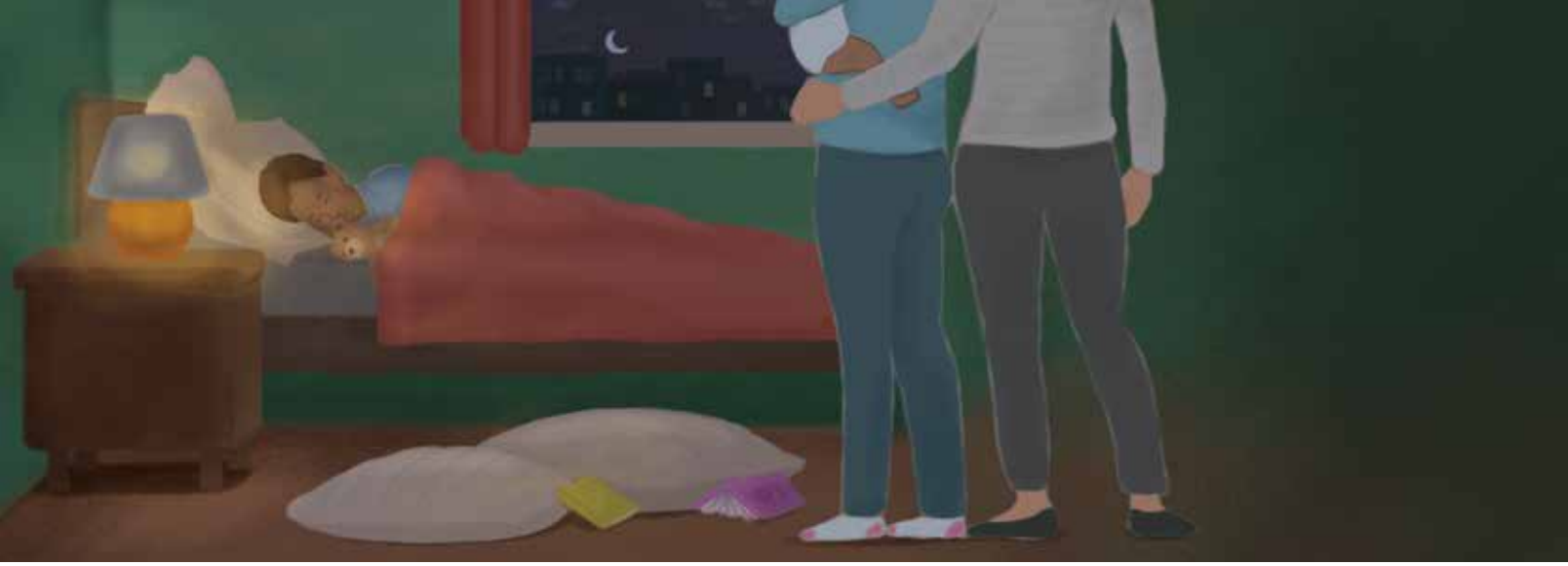
> ***UCS was one of many organizations Dr. McCarthy made stronger with his leadership.***

McCarthy joined the UCS board of directors in 2003 and served as chair from 2009 to 2015. He previously served as chair of the American Association for the Advancement of Science (AAAS) as well as that organization's president. In 2018, McCarthy was named a co-recipient of the prestigious Tyler Prize for Environmental Achievement.

UCS Executive Director Kathleen Rest recalls, "Jim was a warm, generous and inspirational leader, colleague, mentor and friend. He brought to UCS his scientific expertise and concern about our climate, oceans, and environment. But he also brought much more than that, showing genuine concern and care for our staff at all levels of the organization. It was my great privilege to know and work with him for more than 15 years. He was truly loved and admired by all of us."

And UCS President Ken Kimmell says, "I was struck by Jim McCarthy's rare combination of brilliance and humility, and his graceful intelligence the first time I met him. Jim was a passionate advocate for the essential role science plays in our democracy and was a key architect in the formation of our Center for Science and Democracy in 2011. It was an honor to work together and to become Jim's friend." {C}

Photo: Christopher Michel; Illustration: Anthony Eyring/UCS



Children at Risk

(continued from p. 11)

broken bones and children's shattered teeth—related to a Britax brand jogging stroller were reported to the federal Consumer Product Safety Commission (CPSC), triggering an investigation and a lawsuit against the company for failing to recall the faulty models. Under the commission's new leadership, appointed by President Trump, the lawsuit was settled in 2018 without requiring Britax to issue a recall of the stroller.

This settlement is emblematic of decreased enforcement at the CPSC, which is responsible for ensuring 15,000 consumer products sold every day are safe to use. "Public recalls in general have dropped, and recalls of products for kids fell by 55 percent in 2017," says Reed. And in 2018, the CPSC dismantled a team that had helped find potentially dangerous defects in children's products. "Our government should be strengthening oversight of children's products like toys and strollers, not ignoring it," she says.

Under the current administration, it's becoming the Wild West for consumers at the grocery store as well. Standards have been lowered for the processes used to ensure the safety of chicken and pork—two of the foods most responsible for outbreaks of foodborne illness. Trump administration policies have led to rushed line speeds at processing plants, and less capability for food workers to identify hazards like fecal contamination. While eating contaminated food threatens everyone, it poses particular risks for children, whose immune systems are still developing, and whose lives could be threatened by common pathogens such as *Salmonella* and *E. coli*.

"Our government knows how to protect us from these illnesses," Reed says. "Yet they're siding with industry and ignoring well-established best practices, leaving families to wonder if the food they're feeding their children is safe."

HARM TO CHILDREN'S IMMEDIATE NEEDS

Some of the most visible harms Reed and her team examined are the result of the Trump administration's policy of separating children from their parents or caregivers in detention centers for people who have crossed the US border. According to the American Academy of Pediatrics, no amount of detention is safe for children; the trauma of being separated from their families negatively affects children's emotional, psychological, and even physical development in a lasting way.

"Regardless of one's views on immigration," Reed says, "this policy is unjust and inhumane. And it flies in the face of the science on children's needs."

Just as children need their families, they also need to eat. The Trump administration plans to restrict access to the federal Supplemental Nutrition Access Program (or SNAP benefits) for millions of families, despite a body of evidence that SNAP participation is beneficial for children's health, and that food security can help lift children and families out of poverty. Nearly half of the more than 44 million people in the United States who receive SNAP benefits are children, says Reed. The administration's most recent cuts—enacted before the holidays in 2019—mean that 700,000 unemployed or underemployed people lost access to food assistance.

"Evidence supports feeding children," Reed says. "And removing coverage from those in need hurts families, which is bad for everyone in the United States, socially and economically."

WE MUST PROTECT CHILDREN

At the launch of his Children's Fund in 1995, Nelson Mandela said, "There can be no keener revelation of a society's soul than the way in which it treats its children. . . . Our actions and policies, and the institutions we create, should be eloquent with care, respect, and love."

Children in our society are at risk right now because of the Trump administration, whose actions, policies, and institutions are harming their health and safety, and that of future generations. Because they cannot protect themselves, we must do so on their behalf.

"We need our government agencies to prioritize children's health," says Reed. "Our kids deserve that." {C}

The EPA Is Undoing Its Own Progress on Clean Air

By Michael Halpern

For those of us with no memory of life before the Clean Air Act, it might be easy to take the relative safety of our air for granted. Yet this achievement is alarmingly fragile. The same lobbyists who worked against protecting us from cigarette smoke have been coming after clean air protections for years. They've tried and failed to get Congress to weaken the Clean Air Act many times. Now, the Trump administration appointees running the Environmental Protection Agency (EPA)—led by a former coal industry lobbyist—are attacking these protections from the inside.

Today's EPA operates with a tobacco industry ethos: if the science isn't on your side, compromise the process. Its latest attempt involves a proposal that would force the agency to set aside thousands of critical scientific studies when developing public protections. It pays lip service to transparency by restricting the use of studies based on scientific data that are not publicly available. But given that this would apply to the confidential medical records that are vital to studying health impacts, the proposal is absurd.

If the rule moves forward, every safeguard the agency has established is at risk. But its main target is the Clean Air Act's pollution standards, which are required to be based solely on science. Any EPA administrator could relax pollution controls more easily if they can pretend the science required to justify strong standards simply doesn't exist.

EXPERT OPINIONS IGNORED

The EPA has thus far ignored calls to abandon its proposal from scores of scientific groups (including the Union of Concerned Scientists) and public health organizations, rebuffed offers of advice from the National Academy of Sciences, and sidelined its own Science Advisory Board from its customary role in reviewing such proposals.

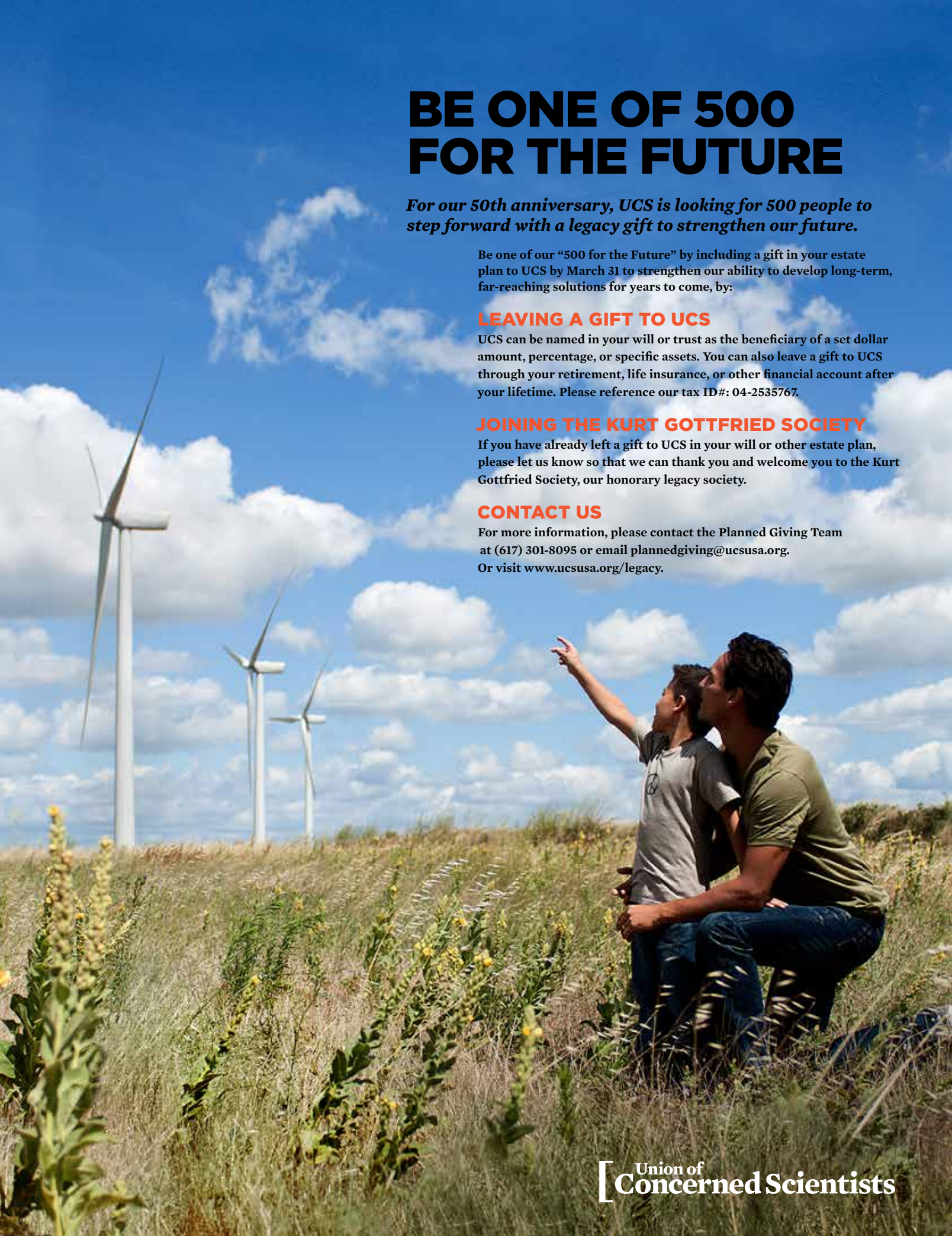
UCS has helped solicit hundreds of thousands of public comments, testified at public hearings, and organized scientists to weigh in on the impact the proposal would have on the way science is used to protect public health. We will continue doing so, but if the rule is adopted, we have built a strong public record documenting its flaws to potentially use against the EPA in court.

The EPA has not—and cannot—name what problem its proposal is trying to solve. It has not—and cannot—provide information about how this radical change will protect public health. And it has not—and cannot—explain how much this unnecessary exercise will cost, or who will pay.

This elimination of science from the policymaking process appears designed to benefit polluters at the expense of ordinary people—especially marginalized communities, where people experience more than the average share of health impacts from pollution. As *Catalyst* went to press, we were expecting a short public comment period to begin, and we could use your voice. Get involved at http://act.ucsusa.org/epa-science. {C}

Michael Halpern *is deputy director of the Center for Science and Democracy at UCS. Find more from Michael on our blog,* The Equation, *at http://blog.ucsusa.org.*

Photos: Anthony Eyring/UCS (Michael Halpern); trekandphoto/Adobe Stock; (skyline); Twinpix/Getty Images (ad)



BE ONE OF 500 FOR THE FUTURE

For our 50th anniversary, UCS is looking for 500 people to step forward with a legacy gift to strengthen our future.

Be one of our "500 for the Future" by including a gift in your estate plan to UCS by March 31 to strengthen our ability to develop long-term, far-reaching solutions for years to come, by:

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If you have already left a gift to UCS in your will or other estate plan, please let us know so that we can thank you and welcome you to the Kurt Gottfried Society, our honorary legacy society.

CONTACT US

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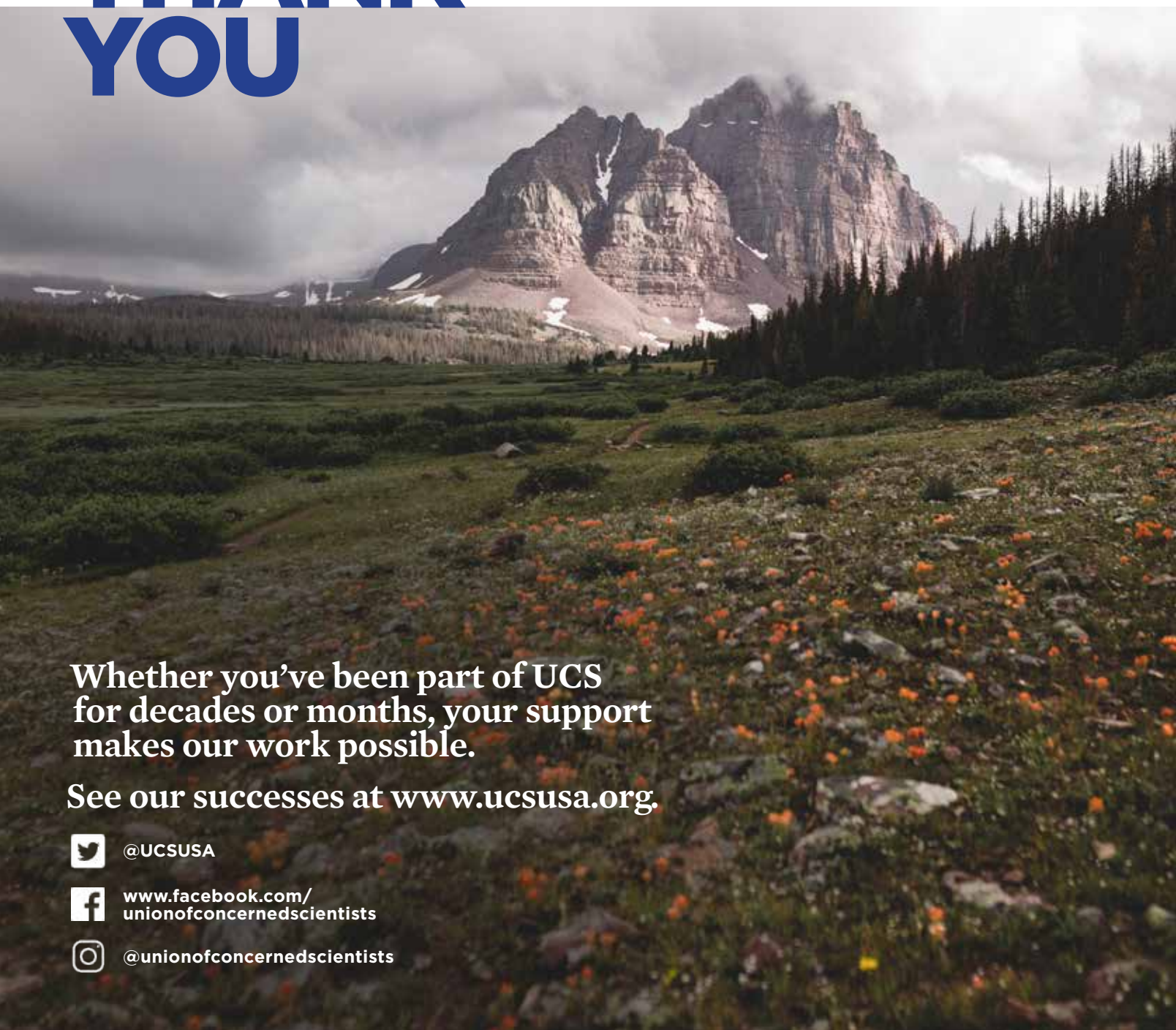

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