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SCIENCE

How the U.S. Protects the Environment, From Nixon to Trump

A curious person's guide to the laws that keep the air clean and the water pure

ROBINSON MEYER

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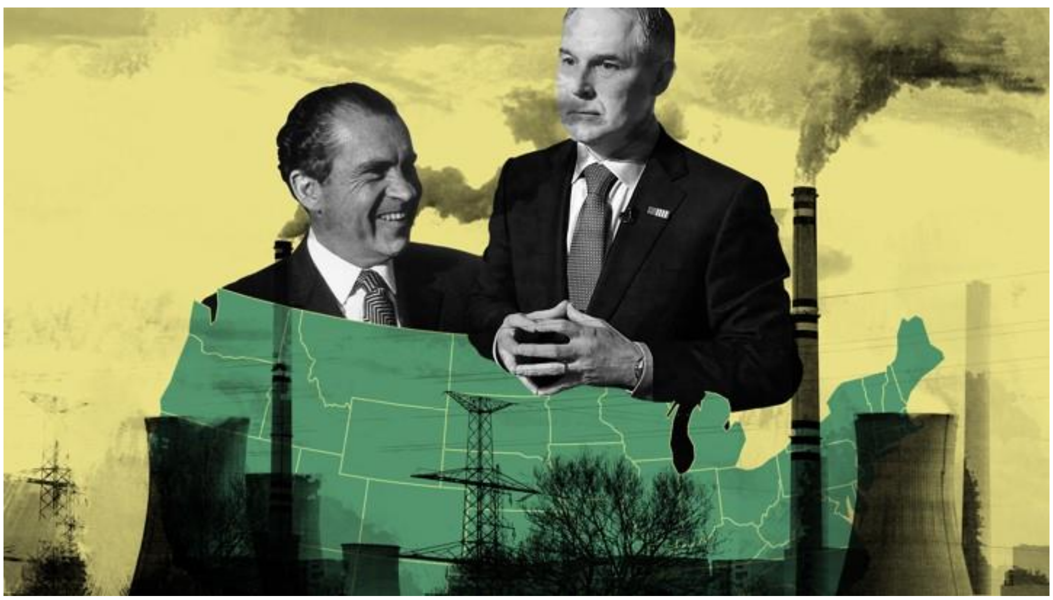

A little less than 50 years ago, President Richard Nixon united with a Democratic Congress to pass laws that altered the everyday experience of almost everyone living in the United States. These laws arose from a flurry of legislating—nearly all emerged in the same two-year period—and they had astonishingly large goals. They sought to restrict toxic air pollution nationwide, clean up hundreds of streams and rivers, and erect a permanent, federally empowered Environmental Protection Agency.

Here is the most astonishing thing about these laws: They worked. Although they contained flaws, the laws accomplished their goals with greater success than critics predicted; and their rules cost businesses less money to implement than even hopeful supporters forecast.

The laws remain in place today, though the EPA still bickers with various industries over their scope. EPA employees consult the most recent science about conventional air or water pollution, formulate rules to protect the public from those dangers, and turn them into law. The American public benefits from this process, according to most research; and a large majority of Americans tell pollsters that they approve of it. The system seems to work.

Or, at least, it worked. The Trump administration has indicated—through its proposed budget and through its choice of appointees—that it cannot abide the status quo. Its proposed budget cuts billions from the agency's budget, and it has begun the process of rescinding years of Obama-era regulatory work.

Trump could be the most hostile president ever to sit over the agency. His only rival is Ronald Reagan, who did not enjoy the benefit of a Republican Congress. Suffice it to say that this scares a lot of Americans. Many of them have looked anew at the environmental policy machine running in the background of the government and asked, essentially: *Wait, that old thing? How does* that *work?*

This is a brief guide to how it works.

How do we protect the environment in the United States?

We mostly do it with statutes and regulations. A statute is a law passed by Congress, while a regulation is a law promulgated by a federal agency.

The process works like this: Congress passes a law with a general goal in mind—say, cleaner air around the country. This statute formally empowers the EPA, an independent agency of the federal government, to issue regulations about what companies must do to help bring about that cleaner air. Congress also gives money to the EPA to enforce those rules. Some of that money is supposed to go to states, who will enforce some of the regulations themselves.

What are the most important laws governing the EPA?

There are two crucial ones, passed by Congress within a two-year span of Richard Nixon's presidency:

The Clean Air Act of 1970 tells the EPA to set standards for what kinds of toxic air pollutants can be released into the "ambient air," either from factories or cars and trucks.

The Clean Water Act of 1972 tells the EPA to set standards for what pollutants can be released into lakes, streams, and rivers, and it forces polluters to get permits to do so.

When these statutes were passed, they were popular, bipartisan bills. Nixon signed the Clean Air Act in a well-publicized ceremony.* "I think that 1970 will be known as the year of the beginning, in which we really began to move on the problems of clean air and clean water and open spaces for the future generations of America," he told reporters.

There are two more laws that don't directly affect the EPA as much, but which come from the same period and expanded the government's environmental power:

The National Environmental Policy Act of 1970 (NEPA) requires the federal government to conduct a lengthy environmental-impact study every time it wants to build, approve, or renovate something.

The Endangered Species Act of 1973 lets NOAA and the Fish and Wildlife Service protect species at risk for extinction, granting the U.S. government huge powers in the process. (This is partly because it was drafted by environmentalists and quickly signed by Nixon, who sought to give the press a Christmastime distraction from the Watergate scandal.)

How does the Constitution play into this?

Congress has the power "to regulate commerce with foreign Nations, and among the several States, and with the Indian Tribes." Every major post-1970 environment law relies on this Constitutional power—the Commerce Clause in Article I, Section 8—to restrict air and water pollution and protect endangered species.

But isn't that a Congressional power? How does that power become the EPA's?

Because Congress delegated it to the EPA. In the Clean Air Act and the Clean Water Act, Congress defines a specific version of that power and loans it to the EPA. The EPA can then formulate rules within the purview of that delegated power. Those EPA rules then carry the force of law—but they can still be overturned by a Congressional law, because Congress remains the higher power.

This kind of delegation is basically how all executive or independent agencies get power. Congress often took this approach in the 20th century. Lawmakers of both parties believed that subject-matter experts in technical agencies could make better, more consistently up-to-date regulations than professional legislators.

Why doesn't the Constitution protect the environment explicitly?

Because the Constitution is very old, and the idea of *the environment* is very young.

I talked to Jedediah Purdy, a professor of law at Duke University and the author of *After Nature*, an intellectual history of the environment in America. "The concept of the environment in our sense—an interdependent system that almost amounts to a planetary organism, that's interconnected at every point and fragile as well as resilient—people don't really talk that way until the middle of the 20th century," he told me.

“Even the concept that you need extensive management of resources, like forests and water and soil, because they could otherwise be misused and wasted to the point where you would have crises of supply—even that doesn’t get taken seriously in the U.S. until the decades after the Civil War,” he added. *The environment* is a newer idea than the invisible hand, equal justice under law, and freedom of speech.

How does the EPA make a regulation?

It goes through a big process.

To demonstrate, imagine a new rule about air pollution.

An administrator at the Office of Air and Radiation takes charge of the rule. First, that person asks the office’s policy employees to sketch what the new rule will do and what it will say. Then, the office hires outside consultants to summarize environmental and public-health studies about the rule’s topic. They also conduct economic modeling of how the new rule might affect the cost of doing business. This process takes months.

Eventually, the consultants report back to the EPA. The administrator oversees any changes to the rule and then brings the draft to the White House’s Office of Management and Budget, which is in charge of overseeing the executive branch for the president. If the White House approves it, then the EPA publishes a draft rule in the Federal Register.

The process is not even close to over.

After a draft rule is published, comments from citizens, activists, nonprofits, and businesses begin to pour into the agency. Agency employees hold meetings across the country to explain the rule and ask for people’s criticism. Legally, an EPA employee or contractor must read, categorize, and respond to each of these comments (even if that response is mechanical).

This “notice and comment” period is mandated by the Administrative Procedure Act. After the Obama administration published a draft Clean Power Plan, its signature climate-focused rule for the power sector, the EPA received more than 4 million public comments.

The EPA then modifies the rule again—in response to public comments, to changes in the economy, and to any significant new research on the topic. The administrator and the senior EPA staff run the final rule past the White House again. Finally, it’s published.

“It’s a lengthy process, but it’s also an analytically demanding process for rules of the complexity that EPA typically encounters,” says Jonathan Cannon, who was general counsel at the agency from 1995 to 1998.

Why does this process take so long?

Because the agency knows it will get sued later. After the EPA publishes a new rule, industry groups often try to weaken the regulation and delay its enforcement in court. In these lawsuits, judges will check the thoroughness of the EPA’s “administrative record,” the paper trail of how an idea became a regulation.

“The EPA gets challenged a ton, but they win most of the time,” Ann Carlson, a professor of environmental law at the University of California Los Angeles, told me this month. “And one of the reasons they win, even with conservative courts, is that they’re very careful in really examining the science and building an administrative record that demonstrates expertise, and care, and thoughtfulness.”

“If the agency decides to rescind the Clean Power Plan, the final rule may be quite simple, but it’s got to be based on a record,” Cannon said.

Do the states get a say in regulating pollutants?

Yes. Generally, the EPA establishes a floor for how strictly a pollutant may be regulated. But there is no ceiling: States can go further if they wish.

An exception is the Clean Air Act’s rules on car tailpipe emissions, where only California is allowed to set stricter standards than the EPA. Other states can then opt into California’s tighter rules.

Let’s go back to Congress for a moment. Were there any new environmental laws after Nixon left office?

Yes, but they mostly tinkered around the edges. In 1976, Congress authorized the EPA to regulate toxic chemicals. In 1977, President Jimmy Carter and a Democratic Congress amended the Clean Air Act to ensure that cleaned-up air would stay clean. In 1980, Carter and Congress passed the bill which created a federal “Superfund” for toxic-waste cleanups.

In 1990, under President George H. W. Bush, Congress again amended the Clean Air Act to address new pollutants and the risks of acid rain. And that’s pretty much it—although, last year, Congress updated the toxic-chemicals law.

So the United States has gone almost 30 years without major new environmental legislation?

Yep.

Did the courts do anything?

Kinda. During the 1970s, the courts broadly upheld the constitutionality of the big environmental laws—but they declined to expand them. In the early part of the decade, environmental groups hoped that the judiciary would expand environmental protections, just as they had expanded civil-rights protections the decade before. The courts did not seize the opportunity.

“There was a sense among liberal lawyers—rooted in the real experience of the civil-rights era—that maybe the courts could do a whole lot in this domain,” says Purdy. “People thought it might be possible to redirect all of federal policy in an environment-friendly protection through NEPA suits.”

It didn't come to pass. By the middle of the decade, the judiciary branch had decided that NEPA was "procedural, rather than substantive." In other words, it told you the steps to take, but it didn't pre-judge an outcome. There's a pattern here, from NEPA to the EPA's administrative record-keeping: Because important environmental laws are concerned mostly with process, lawsuits with an environmental goal in mind will argue about procedural details as a means of securing a different outcome.

Did President Reagan do anything?

In a way, his administration ultimately made the EPA much more powerful because he opposed it so vehemently.

In 1980, Reagan appointed Anne Gorsuch Burford to lead the agency. (She is, in a delicious twist of American history, Neil Gorsuch's mother.) Burford opposed most of the EPA's agenda, and she spent her three unpopular years trying to weaken its regulations. Her leadership also helped politicize the EPA.

In 1984, the Supreme Court considered the legality of one of her new, weak rules. The justices ruled that they found the EPA's new regulation out of joint with the text of the Clean Air Act, but that they ultimately had to defer to the EPA's understanding of its own statutes. This inaugurated the doctrine of*Chevron deference*: the idea that if a federal agency can come up with a plausible legal case for its regulation, then a court should let it stand—even if the courts don't think it's the best legal case.

Democratic administrations have generally used this idea to expand the EPA's authority, and Republican administrations have generally used it to weaken the agency.

If there hasn't been a major environmental law passed in 30 years, how does the EPA regulate climate change?

You can thank the Supreme Court. In 2007, the court ruled in the case *Massachusetts v. EPA* that the EPA must consider whether carbon dioxide and other greenhouse gases are harmful pollutants under the Clean Air Act. The court overruled Chevron deference to do this, dismissing the Bush-era EPA's argument that it did not have the authority to regulate non-conventional pollutants.

This has led to an odd political arrangement: The United States is using a set of laws designed for conventional pollutants to regulate the harmful but non-toxic gases that lead to climate change.

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Does every environmental law involve the EPA?

No. There is a second category of environmental laws, which are almost all older than the EPA laws. These control how the U.S. government uses federally owned public land. This is more important than it seems, as about a quarter of the entire land area of the United States is federally owned, and the government has a lot of power over how it uses that acreage.

These laws tend to be less well-known in cities and suburbs, particularly on the east coast, where most land is private. But more than 70 percent of all the land in Utah and Nevada are federally owned. These land laws are important beyond the West, though, because they provide most of the environmental law that predates the 1970s statutes.

Does the government really think about the environment when it divvies up public land?

Sometimes. The law sets out somewhat conflicting goals for how the government should use the land. So it says that the land should be used, e.g., for timbering, grazing, hiking, conservation, and hunting. Then the government sets aside chunks of acreage for each goal.

The White House and the Department of the Interior can also issue broad directives for how that land should be used. President Obama focused many of his public-land executive orders on mitigating climate change: He issued a moratorium on coal mining on public land, and he restricted how much methane you can emit on public land. The Trump administration has already overturned some of these.

Are there any special public-land laws for environmental protection?

Yes. The most environmentally friendly public land laws are basically conservation laws. The National Park Service Organic Act of 1916, for instance, established the national parks system and sets up a process for making new national parks. The Antiquities Act of 1906 does something similar, with a twist: It allows the president to unilaterally set aside tracts of federal land for special cultural or conservation protection. These tracts become "national monuments."

Is there one public land law that's particularly weird?

Funny that you asked! Yes, there is—at least from the perspective of environmental advocates. It's called the Wilderness Act of 1964. The Wilderness Act allows the president and Congress to work together to set aside tracts of federal land for wilderness designation. Once land becomes wilderness, it can't be timbered, mined, used in an economically productive way, or cut through for roads. More than 170,500 square miles of land in the United States are federal wilderness, an area larger than California. (By contrast, only 81,000 square miles are in the national park system.)

"The really striking thing about the Wilderness Act—beside it just being sort of awesome—is it really is a wonderful law. It's worth reading the preamble and the definition of wilderness, because they look like they were written by John Muir," says Purdy. Indeed, this is an excerpt of the law itself:

A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.
The law continues (as does the casual midcentury sexism), defining wilderness as a place where "the imprint of man's work [is]

substantially unnoticeable" and which has "outstanding opportunities for solitude or a primitive and unconfined type of recreation." The law sounds so Muir-like because it was written in large part by an environmentalist named Howard Zahniser. Zahniser was not a legislator, but the longtime director of a nonprofit, the Wilderness Society. He helped introduce the bill in 1956 and lobbied for it for eight more years, dying just a few months before its passage in 1964.

What's next for environmental law?

First, it depends on what happens with climate change. For almost two decades, environmental policymakers have written bills that seek to bring down greenhouse-gas emissions. These mostly work by calculating the long-term costs of climate change into the price of fossil fuels themselves. But in 2009, a Democratic-controlled Congress could not pass the Waxman-Markey Bill, which would have established a nationwide carbon trading scheme.

"When Waxman-Markey failed, I think a whole generation of reformist thinking went with it," Purdy told me. "And there's not a paradigm to replace it, though there are reform voices."

Some of those voices belong to advocates for environmental justice, who argue that the larger progressive movement for racial and economic equality must take account of the environment. The NAACP, for instance, has shown that communities located near coal-burning power plants are more likely to be poorer and less white than the national average. The EPA has had an office of environmental justice since the Clinton administration, but it has been perennially underfunded, and its longtime leader recently resigned.

There is no major piece of environmental-justice litigation waiting in the wings, though.

Some conservative voices would like to see more environmental enforcement happen within the court system and the common law that it provides. Jonathan Adler, a law professor at Case Western Reserve University, argues that property rights should be expanded so that communities and advocates can negotiate for their own natural resources.

“Who do I talk to about a stream—what if I could negotiate with a local community?” he asked rhetorically. Doing so would allow environmental outcomes to focus more on the context and the actual harm of any individual polluter, he argues. Such a technique would also allow for more experimentation in environmental regimes across states, though it would require peeling back some of the modern-day permitting infrastructure.

Perhaps the biggest fight of the coming years, though, will be whether the basic mechanisms of the EPA survive. A Republican-controlled Congress could amend the Clean Air Act, perhaps to block the regulation of greenhouse gases or to deprive California of its special waiver ability. Both plans, though, would likely require 60 votes in the Senate.

If those fights arrive, Cannon hopes that people remember how much the EPA has done. “What people forget is that those acts, which basically established the authority of the EPA, were adopted by large majorities in both parties of Congress,” he told me.

“The programs have been a victim of their own success. People take the quality of the environment for granted and can’t see the mechanisms in place” to keep it that way, he said. “I mean, nobody likes regulations, right? You only accept regulation when you believe the benefits are worth it. And when you don’t see the benefits, you assume that it is the baseline state.”

** This article originally stated that Nixon signed the Clean Water Act. In fact, Congress passed the law over his veto. We regret the error.*

ROBINSON MEYER is a staff writer at *The Atlantic*, where he covers climate change and technology.

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