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Month in Review • September 2025
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Woodwell Climate submits public comment in support of the Roadless Rule

Best available science shows increased logging in public forests will degrade carbon stocks, increase fire.

Sarah Ruiz Science Writer & Editor



On September 19, Woodwell Climate submitted public comment on the U.S. Forest Service’s proposed rulemaking to rescind the 2001 Roadless Area Conservation Rule, also known as the Roadless Rule. This rule banned logging and the creation of new logging roads in 58 million acres of National forests.

The federal agency’s intent to rescind the Roadless Rule aligns with the presidential Executive Order, “Unleashing Prosperity through Deregulation” which seeks to remove obstacles to extracting natural resources on public lands. Additionally, the agency claims the repeal of the rule will allow forest managers to remove trees from “overstocked forests” to prevent wildfire and disease.

Woodwell Climate strongly opposes the rescission of the rule, citing the best available science that shows increased roadways and subsequent logging will result in ecological degradation, increased wildfire, and loss of critical carbon stocks.

“The Roadless Rule currently protects millions of acres from extractive activities that would result in ecosystem degradation

and increased vulnerability to wildfire,” writes Senior Scientist Rich Birdsey in the comment. “Rescinding the Roadless Rule would harm many public uses of the land, cause significant emissions of greenhouse gases, and destroy critical habitat for many species of wildlife.”

Federal forests have major carbon storage and climate mitigation potential, absorbing approximately 3% of U.S. emissions from fossil fuel burning each year. Mature and old growth forests are responsible for the majority of that, and the Roadless Rule has been instrumental in preventing the logging of these important forests, including the Tongass National Forest in Alaska.

“Increased logging is the single greatest threat to these forests and the carbon they hold—and it is the threat we most directly control,” the Woodwell Climate comment states. “As the impacts of climate change become more extreme and damaging, we should prioritize protecting mature and old growth forests on federal lands, not harvesting them.”

Additionally, studies show that road building into previously undisturbed forests actually increases vulnerability to fire. This is because most wildfires are caused by human ignitions which become more common with better access roads. Undisturbed mature and old-growth forest ecosystems are also more resilient to wildfires compared to forests that are actively logged and managed.

DIG DEEPER

Read the full public comments on the 2001 Roadless Area Conservation Rule:
woodwellclimate.org/roadless-comments



Climate policy in the time of Trump

Advancing climate policy in the United States in 2025 requires resolve and focus

Sarah Ruiz Science Writer and Editor

What keeps Woodwell Climate Director of Government Relations, Laura Uttley going day to day?

Uttley leads the Center's domestic policy advocacy, and it's been a hard year for domestic policy. In the past, her work has involved building relationships with members of Congress, tracking climate-relevant legislation, and planning Hill visits and briefings with Center scientists. This year, it's been all that plus an exhausting gauntlet of crisis response, as climate science falls under attack from an antagonistic presidential administration. It is a federal policy landscape that makes advancing climate research, mitigation policy, and adaptation efforts harder than perhaps at any point in U.S. history.

But waiting for easier times is not an option.

Since the start of the new presidential administration in January, federal funding and support infrastructure for science has been slashed, and many laws, court rulings, and Environmental Protection Agency (EPA) regulations that form the foundation of the U.S.'s climate and environmental policy have been targeted or overturned to make way for an agenda that prioritizes fossil fuels. Protecting as much environmental policy as possible has become an urgent priority for Uttley and the rest

of the Government Relations team at Woodwell, but despite the chaos and uncertainty, they aren't flagging.

"What gets me going on a day to day basis, is that I have a job to do," says Uttley.

Holding back the floodwaters

At the beginning of the year, Uttley and the Government Relations team were bracing themselves for the new administration to "flood the zone." The tactic, which involves mounting as many attempts as possible to repeal legislation, cut funding, and stymie regular governmental proceedings in a short timespan, is designed to overwhelm potential opposition and the media.

"It is done very intentionally," says Uttley. "To distract. To exhaust. To cloud your judgment on things, and get you too focused on one area, so that you're unaware or unable or too limited in terms of resources to work in a different space."

And that's exactly what newly appointed officials did—from pulling the U.S. out of the Paris Agreement, to proposing the sale of public lands, to firing staff from key agencies like the National Oceanic and Atmospheric Administration (NOAA), to

changing regulation around how the EPA implements signature environmental legislation.

The instinct, Uttley says, for individuals and organizations that care about diversity, the environment, or public funding

for science, is to react to everything because every attack feels like a devastating loss. But that is exactly what drains motivation and resources the fastest.

“I don’t have the luxury of outrage right now,” says Uttley.

So she and others have had to stay focused on the most significant policy

battles, concentrating resources on the areas most aligned with Woodwell Climate’s mission and expertise.

“You could make the argument that we should be in any number of fights and policy debates,” says Uttley. “But if we go too far afield, the impact of our voice changes in those dialogues that are so core to our mission. Staying focused can be really hard to do when everything feels so deeply important.”

Top Priority: The Endangerment Finding

Among the fights the Center’s Government Relations team has engaged in, protecting the infrastructure of American climate policy has been a chief priority. In July, the administration announced its intent to revoke the Endangerment Finding, which underpins the majority of U.S. climate action. This finding from the Environmental Protection Agency (EPA) affirms that the emission of six greenhouse gases into the atmosphere—including carbon dioxide and methane—represents a threat to human health and wellbeing, giving the agency authority to regulate them. The decision was based on rigorous science, and was re-affirmed in a 2018 study, led by then-president of Woodwell Climate, Dr. Phil Duffy, who wrote that in the intervening years evidence in support of the finding had only accumulated.

The current administration has attempted to call into question the scientific basis of the finding by releasing a report from the Department of Energy (DOE) that challenges consensus on the damaging impacts of carbon emissions. The suggestion that regulating emissions has caused more harm than the effects of climate change, according to Dave McGlinchey, who served as Woodwell Climate’s Chief of Government Relations between 2016 and 2025, is a blatant dismissal of scientific fact.

“We built an operation here at Woodwell that is very non-partisan, but the idea that the Executive Branch of the U.S.

federal government just doesn’t engage with evidence, or moves forward despite clearly contravening evidence, is a real challenge,” says McGlinchey.

It also dismisses the fact that the EPA’s ability to regulate things like tailpipe and power plant emissions has improved air quality for millions of Americans. The finding has made our skies clearer, lungs healthier, and contributed meaningfully to reducing the U.S.’s emissions.

Legal challenges to the proposed repeal began to roll in almost immediately after its announcement, and the opportunity for public comment on the rule was extended to September 22. The Woodwell Climate team developed an organizational comment in support of the Finding to throw more scientific weight behind the efforts to keep it in place.

Climate risk spans political divides

While the political landscape around climate mitigation remains contentious, opportunities to advance resilience projects on the local scale remain. Communities across the political spectrum are feeling the acute impacts of climate change and need information to protect themselves.

“Risk is a bipartisan issue,” says McGlinchey. “Unfortunately, in this country, we have repeated, catastrophic reminders of what climate change impacts look like, so people are attuned to that. They want to understand risk and they want to understand how to become more resilient.”

Andrew Condia, External Affairs Manager, leads the Center’s primary climate adaptation project, Just Access. The initiative



connects climate scientists with communities both in the U.S. and around the world to provide assessments of current and future climate risks at no cost to the communities. With a better understanding of how variables like flooding, drought, heatwaves, and fires will impact their communities in the coming years, leaders in municipal governments have been able to have climate-informed conversations about planning, infrastructure, and public health. Even in overwhelmingly conservative areas.

“We work with some Democratic mayors, some Republican mayors, and they are lined up and equally as engaged in the process,” says Condia. “They understand the importance of this information and know that it’s a critical tool to help them as their communities grow and change in the future.”

The sweeping nature of cutbacks on the federal level has meant that municipalities are now one of the only places these conversations are able to move forward.

“I think local governments recognize that in the absence of federal leadership, it’s up to them to step up to make progress on these issues. It’s the only climate action in the country that is really making meaningful progress right now,” says Condia.

Bigger picture, longer term

At higher levels of government, McGlinchey says the current top priority is to maintain relationships with policymakers and lay the groundwork for long-term changes while momentum in the short term has been halted.

“We can’t look at how bleak the landscape appears to be and throw our hands up and give up. Because political winds shift frequently in this country, and fairly dramatically, and when they shift again, we don’t want to start at zero,” says McGlinchey.

For the past three years the Government Relations team has organized “fly-ins”, which bring Woodwell Climate scientists to Washington D.C. for meetings with Members of Congress and their staff. The fly-ins are key to how the Center stewards relationships on Capitol Hill and raises issues like permafrost thaw or flood insurance risk to the attention of legislators. Despite this year’s political changes, Uttley was still able to bring 12 scientists, board members, and staff for meetings with 15 congressional offices this September.

“We’re engaged in the Adaptation Working Group, Friends of NOAA, the Coalition for National Science Funding, and more,”

ACKNOWLEDGEMENTS

Woodwell’s work on policy is supported by unrestricted funds from loyal donors, such as the Hermann Foundation.



says Uttley. “From a policy perspective we have really seen the advocacy community rally together this year.”

And while the U.S. regresses on climate action, the rest of the world continues forward. Woodwell Climate is helping to propel important climate policy on the international stage, forming a delegation to the annual UN Conference of Parties (COP) in Belém, Brazil in November. Given its location, tropical forests will feature heavily on the agenda this year, and the Center will be showcasing emerging work on tropical regenerative agriculture, sustainable development in the DRC, and financing for forest protection. The Center is also collaborating with the United Nations Framework Convention on Climate Change (UNFCCC) to provide technical support for countries submitting biennial transparency reports on their progress towards climate goals.

Momentum on climate means telling climate stories

Still, facing down the urgency and magnitude of climate change, these incremental wins and slowly unfolding plans often don’t feel like enough compared to swift federal actions. Especially for individuals who don’t have their hands on the levers of power. But Uttley says the local level is where most change has always started, and individuals can make a difference.

“While I’m working to make systemic change on the federal level, one of the most powerful things each of us can do to keep up momentum on climate is to tell stories about local impacts,” says Uttley. Whether it’s about soccer practices canceled for heat or commuting lanes flooded, stories that connect climate change to our daily lives help change minds and motivate action.

Working on climate policy in times like these is a careful balance of hope and disappointment, Uttley says, but in order to move forward hope always has to win out. Not wishful thinking, but the kind of hope that springs from facing down the obstacles and getting to work.

“I’ve been in public policy and advocacy for 15 years,” says Uttley. “If I didn’t have a strong sense of optimism and hope, I would not be able to do this job.”



Tiny but mighty: microbes living on trees could enhance carbon sequestration

Boreal Biosequester project plans to harness the power of methane-consuming microbes to combat methane in northern regions

Sophie Knight CarbonFix

When it comes to sucking carbon dioxide out of the atmosphere, trees and forests are well-known champions. But when it comes to sequestering methane, their role is much more complicated. Forest ecosystems sometimes absorb methane, other times they emit it—creating a complex exchange of gases that scientists are only beginning to understand. Boreal forests across Canada, Alaska, Scandinavia, and Russia can sometimes be methane sinks, but they're also set to become major emitters as climate change accelerates.

That's the challenge the Boreal Biosequester project is tackling. By deploying newly developed methane detecting chambers at Howland Research Forest in Maine, Woodwell Climate Associate Scientist Dr. Jennifer Watts and Senior Research Scientist Kathleen Savage, along with collaborators from Arizona State University and University of Maine Orono plan to measure methane flows on a granular level to understand which bacteria consume it and how they function across the ecosystem.

Once they've mapped these methane-munching microbes—called methanotrophs—across varying tree species, temperatures, and seasonal shifts, the researchers want to publish their findings so governments, land trusts and foresters can enhance the activity and presence of these climate superstars, transforming ecosystems from methane sources into sinks.

Why methane matters

Methane has been overlooked in climate discussions, which largely focus on carbon dioxide, but it's 87 times more powerful at trapping heat over a 20 year period. Atmospheric levels of methane are now 2.6 times higher than pre-industrial levels—the highest they've been in 800,000 years. Crucially, methane emissions from boreal forests are expected to rise or even double as temperatures rise.

Natural environments, such as wetlands and forests, account for a large portion of global methane emissions, which is why finding nature-based solutions to bring down emissions is such an important area of research. Boreal Biosequester's approach offers the chance to turn natural sources into sinks, while also providing co-benefits such as enhanced biodiversity, wildlife habitats, flood reduction, erosion prevention, and improved air quality.

"If the methanotrophs are there, why not learn to work with them as effectively as possible?" says Watts. "If we were to work with human technology to reduce methane, you'd have to build something energy-intensive. This is a passive way to work with the forest sustainably. If we leave a forest to grow or regenerate, or if we afforest, we can both draw down CO₂ and, we hope, consume methane."

The genesis of the project

Watts and Savage were initially looking at methane sources and sinks for the US National Science Foundation. At first, they focused on soils, which were at the time considered the primary drivers of whether forests were sources or sinks. Then a groundbreaking paper revealed trees' crucial role in methane uptake. With microbial ecologist Dr. Hinsby Cadillo-Quiroz from Arizona State University, they decided to study methane fluxes around tree trunks and canopies as well as in the soil, and sought funding from CarbonFix to carry out this study.

"When we looked at the canopy level, we could see net consumption, but soil data were all over the place," Watts explains. "The data showed something important happening between the soils and treetops."

The world of methanotrophs on plant surfaces is largely uncharted. The team will isolate and study these bacteria in labs

while measuring methane consumption across soils, trunks, and canopies through different seasons and climates.

“We’re really the explorers venturing into this new micro-universe,” says Watts. “We know there are microbes out there, we just need to get to know them.”

Only in the last 15 years could methane gas be measured accurately at this scale. The team is uniquely positioned at Howland Forest, which has rare historical methane flux data from eddy covariance towers (structures measuring the exchange of gases) dating to 2011, plus access to both pristine and harvested forest areas for direct comparison.



The Method

CarbonFix’s grant will be used for the first phase to map methanotroph behavior and measuring fluxes across forest layers across the course of a year. Once they’ve secured additional funding, the team will identify optimal conditions for methane consumption across different tree species and environments. Next, they’ll test hypotheses in greenhouse settings, demonstrating how specific tree species can convert methane-emitting wetlands into methane-consuming ecosystems.

Finally, they’ll share findings through reports and presentations targeting governments, land trusts, foresters, and carbon markets to implement these practices in forest management.

Potential impact

For now, the team will focus on working out how methanotrophs function, and the conditions in which they thrive.

“A tiny creature, like a methanotroph, can influence a tree in many ways: it can fix nitrogen, it can clean metabolites. But the true beauty of this partnership is that a single tree could host methanotrophs in many ways and a thousand trees can host methanotrophs in a million ways. We just need to figure out how to channel this partnership to remove many tons of methane molecules. Achieving that would be a major breakthrough to help gain time against climate change,” says Cadillo-Quiroz.

The findings may extend beyond forests to landfills, agriculture, logging, or fire-damaged areas—countless applications where understanding and influencing methane fluxes through bacteria could prove transformative.

What’s more, if the team’s findings show how methanotrophs can be inoculated into new forests, they could become part of every new reforestation project.

Reforestation is urgently needed: between 2001–2023, Canada, Alaska, and the Northern US lost over 70 million hectares of forest—three times the UK’s landmass—from fire and harvest. Most of these wet soil areas are net methane emitters. Reforesting and inoculating them with methanotrophs could create carbon and methane sequestration superheroes. The team estimates targeted afforestation could remove over 10 million metric tons of methane—reducing 30–40% of high-latitude methane budgets while simultaneously sequestering CO₂.

But for now, there’s lots of work to be done. The team of four are rolling up their sleeves for fieldwork and lab analysis.

“At minimum, it will be fascinating data filling knowledge gaps about methane uptake,” says Savage. “If we can remove methane short-term, we have leeway to address more challenging CO₂ elements requiring extensive work.”

Watts adds, “Our group is always thinking about how what we do now will impact society later. I’m excited to develop methodologies that we can share worldwide, creating community transformation for people across the planet.”

This story was originally published on CarbonFix.org

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The first year of this project was funded by a grant from CarbonFix. CarbonFix helps scale up projects and innovations in the climate space, connecting them to funding and new networks.

Woodwell Climate announces recipients of endowed chair positions

Chairships award leading experts in policy, conservation, and carbon systems science

Director of Government Relations Laura Uttley, Senior Scientist Dr. Sue Natali, and Senior Scientist Dr. Brendan Rogers were appointed to Woodwell Climate's three endowed chairship positions to honor their leadership in the field of climate research and policy.

These appointments are professional distinctions that honor the living legacy of Sally Shallenberger Brown, Dr. George Woodwell, and Dr. Richard "Skee" Houghton, whose vision and leadership continue to guide work at the Center. The endowed funds provide salary support for a renewable three-year term, annual stipends, and recognition of the appointee's leadership.

"I'm thrilled to announce the appointment of these remarkable experts to Woodwell's three endowed chairs," said Woodwell Climate President and CEO Dr. Max Holmes, who led the selection committee along with Drs. John Holdren and Jennifer Francis. "This public recognition of their extraordinary contributions, along with the support provided by the endowments, will unlock exciting opportunities to advance climate solutions."

The Sara Shallenberger Brown Chair of Environmental Policy

LAURA UTTLEY, M.P.A., DIRECTOR OF GOVERNMENT RELATIONS

Sara Shallenberger Brown was an influential environmentalist and philanthropist who served on the boards of many environmental and conservation nonprofits throughout her lifetime, including Woodwell Climate Research Center.

The Brown chairship recognizes Uttley's fifteen years of experience bridging science and policy in Washington, D.C. She has developed federal advocacy strategies and facilitated



outreach to policymakers, ensuring that Woodwell Climate's leading research influences policy development and implementation. Prior to joining Woodwell, Uttley worked at Lewis-Burke Associates and served in the offices of Congressman James Langevin, Senator Jack Reed, and the Assistant Secretary of Defense for Legislative Affairs. She is also a Truman National Security Project Political Partner and teaches advocacy at American University. Her expertise and leadership embody the Brown Chair's mission of connecting science with conservation and policy at the highest levels.

Dr. Kilaparti Ramakrishna previously held the Brown chairship.

The George M. Woodwell Chair in Conservation

DR. SUE NATALI, SENIOR SCIENTIST

George Woodwell was not only the founder of the Center, but a pioneer and visionary whose scientific inquiries hit on the biggest environmental issues of the late twentieth century, including DDT, nuclear radiation, and "the carbon dioxide problem."

Natali is a leading Arctic climate scientist whose pioneering research on permafrost thaw has deepened our understanding of the immense risks it poses. She directs the Permafrost Pathways initiative, funded through the TED Audacious Project, which brings together scientists, policymakers, and Indigenous communities to inform equitable adaptation and mitigation strategies. Natali's commitment to collaboration, her extensive fieldwork across the Arctic, and her global engagement exemplify the legacy of George Woodwell, whose vision was to unite science and conservation for lasting impact.

Dr. Richard Houghton previously held the Woodwell chairship.

The Richard “Skee” Houghton Chair in Carbon Cycle Science

DR. BRENDAN ROGERS, SENIOR SCIENTIST

Since becoming one of the Center’s first employees, Skee Houghton has shaped the organization as its Acting Director & President, and his research field, notably contributing to the reports of the Intergovernmental Panel on Climate Change, which was awarded the Nobel Peace Prize in 2007.

Rogers’ research focuses on boreal forests and Arctic tundra, with particular emphasis on wildfire, permafrost thaw, and their consequences for the global carbon cycle. He integrates field measurements, satellite observations, and modeling to understand rapidly changing northern ecosystems and to inform resource management and policy. As co-lead of Permafrost Pathways, Rogers has emerged as a global leader in translating science into action, embodying the tenacity, rigor, and collaborative spirit that defined Dr. Houghton’s career.

Rogers is the first to hold the Houghton Chair.



WOODWELL CLIMATE CONVERSATIONS SERIES

Wednesday, October 22 • 5-7 pm

Climate Week Recap & Road to COP30

Join Woodwell Climate scientists and staff as they discuss two important fall climate events.

Event Recordings

Four conversations in the series were recorded and are available to watch online.

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Selected news coverage

Morris Alexie was featured in an episode of the podcast *Ice and Fire* about *usteq*—the Yup'ik term for catastrophic land collapse caused by thawing permafrost.

Living on Earth interviewed Edward Alexander about the enormous climate risks of permafrost thaw and how Indigenous cultural practices can help protect this vital resource.

A *New York Times* article about smoke from Canada’s wildfires quoted Dr. Sue Natali about efforts to monitor smoke in communities, as well as Edward Alexander about the unique challenges smoke presents to those communities.

Dr. Jen Francis spoke with KESQ News Channel 3 about the American Meteorological Society State of the Climate report, and the significance of decreasing polar ice.

Grist quoted Dr. Zach Zobel explaining how ocean warming influences the strength of hurricanes in a story about a new climate attribution study focused on hurricane Katrina.

ABC News interviewed Dr. Jen Francis about the outlook for the rest of hurricane season in the Atlantic—relatively quiet so far, but warm waters could provide ample fuel for any future storms.

In a *Bloomberg* article, Dr. Jen Francis explained the weather patterns behind the current drought in the Northeast that’s causing wildfire concerns. The article was republished in a number of outlets, including *Phys.org*.

Globo quoted Board member and Executive Director of IPAM André Guimarães on how forest protection through the Tropical Forests Forever Facility will help protect food production in tropical areas.

Mongabay interviewed Dr. Jon Sanderman for a story on soil carbon’s role in net zero commitments, and included a photo in the story by Colleen Partida.

An article from Yale School of the Environment quotes Dr. Jon Sanderman about how public-private partnerships will be needed to build the evidence base and market confidence to continue scaling soil carbon solutions. The article highlights a recent comment in *Nature Climate Change*, co-authored by Sanderman.

Two articles from the *Alaska Beacon* highlighted the work of the Arctic T-SLIP project: a longer feature story about landslides and tsunami risk, and a shorter story that calls out the importance of federal funding to Alaska landslide monitoring and research.

NASA published a summary of the 11th ABoVE Science Team Meeting, including updates from the Carbon Dynamics Working Group co-led by Dr. Jennifer Watts. The article also highlighted a presentation from Dr. Brendan Rogers on Permafrost Pathways research, and a career trajectory panel featuring both Watts and Rogers.

cover: Woodwell Climate scientists, staff, and leadership met with 13 congressional offices, approximately 30 congressional staff, 3 Members of Congress, and Members involved in the House Sustainable Energy and Environment Coalition (SEEC) Building Resilient Housing Task Force during our September visit to D.C. / photo by Eric Lee

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