FREE

The Appalachian VOICE

Annual Edition 2025

10 of the Region's FUNKIEST FUNGI

After the Storm

Recovering from Helene & Preparing for the Future

ALSO INSIDE: Farmers Who Pair Agriculture with Solar | Hiking Our Public Lands | Community Defeats Power Plant

The Appalachian VOICE

A publication of AppalachianVoices

NC: 164 S. Depot St., Boone, NC 28607 • 828-262-1500
VA: 244 E. High St., Charlottesville, VA 22902 • 434-293-6373
816 Park Ave. NW, Norton, VA 24273 • 276-679-1691
TN: 815 Gill Ave #201, Knoxville, TN 37917 • 865-291-0083
Other Hubs: Durham, NC • Richmond, VA

AppVoices.org/TheVoice | voice@appvoices.org

Editor ..... Molly Moore
Associate Editor ..... Abby Hassler
Associate Editor ..... Dan Radmacher
Graphic Designer ..... Marcie Hancock
Distribution Manager ..... Meredith Shelton
Editorial & Distribution Intern ..... Kayla Masterman
Proofreaders ..... J. Davidson, J. Goodman, L. Harrison, J. Lawhorne, G. Silverman & H. Williamson

Printed on 100% recycled newsprint, cover 40% recycled paper, all soy-based inks

Share The Voice!

Want to share this annual print edition of The Appalachian Voice with friends and family? Is there a library, community center or business in your area that would like a small stack of papers for visitors?

Email us at Voice@AppVoices.org or call (828) 262-1500 to request free copies!

A note from our executive director

In mountain communities large and small, people take care of each other, especially when times get tough. Now, in the face of challenges unlike any we've seen before, the team at Appalachian Voices is bringing everything we've got to the fight for the well-being of our region — for intact mountains and forests, clean creeks and rivers, and healthy, thriving communities.

This work means bringing people together to strategically fight the greed that threatens the places we call home, and to maintain our progress working with localities, residents, businesses and local groups to advance solar power, post-mine land restoration, sustainable infrastructure and preparedness to weather future storms (p. 9).

When we come together across our differences to confront threats and build better alternatives, we're not just stopping a methane gas power plant (p.7), constructing a more energy-efficient home (p. 24) or powering a cleaner economy (p. 30). We're also building stronger ties with one another and our natural surroundings.

This connection to place, and to each other, is certainly what positions us to be successful when we go to bat for our mountains and our neighbors. And, stepping back, we also see that it's at the foundation of our democracy. Only by acting together on shared values and common interests can we be truly effective at standing up for what's right and what we love, or make any lasting progress.

In June, Appalachian Voices joined nonprofits, local governments and tribes from all across the country in filing a class-action lawsuit against the U.S. Environmental Protection Agency for its decision to arbitrarily claw back hundreds of Environmental and Climate Justice Block Grants nationwide — including the grant supporting our Community Strong initiative.

Our grant supported partnerships with five Southwest Virginia localities to develop plans for sustainable infrastructure projects. These projects would build environmental and community health, extreme weather resilience and local economies. Across 15 meetings, nearly 300 local residents helped create and prioritize local project plans. We've gotten excellent traction together, and we're doing our best to continue this work. But the EPA's termination of our grant earlier this year is a big setback.

We've challenged federal agencies in court during Democratic and Republican administrations over the years to uphold laws protecting our land, air and water. In this case, we're also standing up not just for our own grant and the communities it serves, but also for the hundreds of unlawfully terminated grants supporting similar work in rural communities, cities and suburbs from coast to coast.

We, our co-plaintiffs and our attorneys are also standing up for the basic principles of the Constitution and the rule of law. The fact is that Congress established this grant program in law. As an arm of the executive branch, it's the EPA's job to follow the law and implement it.

In difficult times, it's even more important that we stand strong in our values and stay connected to our communities and the places we cherish. We're incredibly grateful to have our dedicated members, partners and supporters with us for this challenging but important work.

— By Tom Cormons

Tom

Inside this Issue

About the Cover

These bright jack o'lantern mushrooms also glow in the dark! Photographer Jimmy Davidson shares his knowledge about funky fungi in the center of this issue. View more of his work at OrchardHillMedia.com | @orchardhillmedia

Inset: Debris piles in Marshall, N.C., two months after Helene. Read about storm recovery starting on page 8. Photo by Jimmy Davidson

AmeriCorps Continues, But Its Future Is Uncertain

It's been a chaotic year with potential trouble ahead for AmeriCorps, the federal agency responsible for national service and volunteerism. It enrolls over 200,000 people annually to serve with organizations that tackle community challenges in areas including healthcare access, conservation, education and disaster recovery. In 2024, over 3,300 North Carolinians, 4,300 Tennesseans, 2,800 Virginians and 2,900 West Virginians served with AmeriCorps.

This past year of service came with some interruptions. In April, the Trump administration took steps to dismantle AmeriCorps, including closing the National Civilian Community Corps and notifying the agency that it was terminating nearly $400 million in AmeriCorps grants. This move closed more than 1,000 programs, resulting in the premature departure of over 32,000 AmeriCorps members and AmeriCorps Seniors volunteers, according to America's Service Commissions.

In response, 24 states and Washington, D.C. sued the Trump administration. In early June, U.S. District Judge Deborah L. Boardman granted a temporary block on the government's cancellation of these grants in states that brought the lawsuit and for NCCC members "if they are willing and able to return." As of press time in July, many of these these members are back in service.

In May, the Trump administration released its proposed budget, requesting $32 million to close the program. It's up to Congress to decide whether to act on that request or to keep funding the agency.

Amid the disruptions, in Western North Carolina, AmeriCorps Project Conserve is celebrating its 20-year anniversary and recruiting for the 2025-2026 service year. The program places members with conservation organizations to support environmental efforts like habitat restoration, trail building and supporting citizen science, and 2024-2025 members mobilized to support Helene recovery efforts.

Many other programs in Appalachia are still actively recruiting. CAC AmeriCorps in East Tennessee works to alleviate poverty and improve public lands. AmeriCorps placements with the Christian Appalachian Project repair homes and provide other services in Eastern Kentucky. The AmeriCorps Foster a Grandparent Program in multiple states connects with those 55 and older to serve as role models and mentors to children in need. In West Virginia and Western Maryland, the Appalachian Forest National Heritage Area AmeriCorps program supports rural cultural heritage and tourism. — *By Kayla Masterman*

Indigenous Organization Acquires Land on Proposed Federal Prison Site in Kentucky

A controversial proposed prison site in Letcher County, Kentucky, is facing new barriers thanks to a community-based Indigenous organization and new suggested budget cuts from the U.S. Department of Justice.

In 2024, after years of community opposition, the federal Bureau of Prisons approved and authorized plans to build the prison on a 500-acre reclaimed mountaintop removal coal mine in Roxanna. Now, the U.S. Department of Justice might be reversing course, issuing a June budget request to rescind $500 million for the proposed prison.

Further complicating the issue, the Appalachian Rekindling Project, an Indigenous woman-led community building and land restoration group, purchased a 63-acre plot within the currently designated boundaries of the proposed facility. The group purchased the property with support from Building Community Not Prisons, a grassroots coalition of local and national members working to oppose the proposed prison.

Opponents of FCI/FPC Letcher distribute yard signs at an event hosted by Concerned Letcher Countians in March 2024. Photo by Willie Dodson

The Appalachian Rekindling Project is considering various land restoration initiatives, including reintroducing native animals like bison. The group is also establishing an intertribal Indigenous center.

Appalachian Voices, which publishes The Appalachian Voice, has previously criticized efforts to plan and build the prison in Letcher County using federal funds intended for coal mine cleanup and economic development, and reported on local opposition to the prison. — *By Abby Hassler*

Six Virginia Parks Add All-Terrain Wheelchairs

Virginia State Parks launched a pilot program in September 2024 with all-terrain wheelchairs, providing those with mobility impairments the opportunity to access and enjoy outdoor areas. Parks with all-terrain wheelchairs have specific trails that accommodate them. The chairs are free and open to the public but must be reserved 48 hours in advance.

Kris Gulden and Park Manager Lance Elzie demonstrate the all-terrain wheelchair. Photo: Virginia State Parks

So far, there are six ATWs, all funded by Virginia State Park license plate purchases, one each at Claytor Lake, Mason Neck, New River Trail, Powhatan, Shenandoah River and York River state parks.

Mason Neck State Park Manager Lance Elzie explains the goal is to make the park and the trails as accessible as possible. So far, the response has been encouraging, with some visitors driving nearly 4 hours for an event because the park's all-terrain wheelchairs made it possible for them to fully enjoy and access the experience.

Overall, Elize says, "the program is going really well." — *By Kayla Masterman*

Invasive Fire Ants Spread in Southern Virginia

State and federal authorities have set up state and federal quarantines for fire ants in more than 30 Virginia cities and counties in hopes of slowing down the spread and managing the threat posed by the invasive species.

These quarantines regulate human activity that could unintentionally contribute to the fire ants' spread. For example, businesses in quarantined areas shipping to locations outside of those areas must follow U.S. Department of Agriculture-approved treatment and shipping options. The regulations aim to reduce the impact caused by imported fire ants, including the damage to crops and harm to wildlife.

Fire ants were first detected in Virginia in 1989. Initially, their spread was limited. Since 2017, they have been expanding in the state, particularly in southern Virginia. The warming climate has attracted the insects. — *By Kayla Masterman*

Museum Exhibition Features Contemporary Native Artwork about Indigenous Mounds

What are Indigenous mounds? How are they significant today? And how should people best care for them?

These are some of the themes explored in a new exhibition, "Homelands: Connecting to Mounds through Native Art," at the McClung Museum of Natural History and Culture at the University of Tennessee, Knoxville. The opening sign reads, "Mounds are a visible embodiment of Indigenous Peoples' connection and relationship to the land."

"'Homelands' brings attention to the cultural and spiritual importance of Indigenous mounds, including the one on UT's campus," says Ellen Lofaro, director of repatriation at UT Knoxville.

Unlike more traditional archaeology-centric approaches — including the muceum's previous exhibition that "Homelands" replaces — this exhibition showcases contemporary artwork from 17 Native artists.

"When people keep using the framework of archeology, [it] keeps putting Indigenous peoples in the past," says Lisa King, co-curator and associate professor of English at UT, who brought the initial idea for an exhibition about mounds to the museum in 2019.

"Homelands" features art from four of the 11 Native nations with ancestral ties to UT land: the Cherokee Nation, the Coushatta Tribe of Louisiana, the Eastern Band of Cherokee Indians, and the Muscogee (Creek) Nation. To ensure the process was collaborative, each of the tribal nations selected co-curators, who in turn, selected artists to represent them.

The first placard in the exhibit reads, "When we see mounds today, we witness Indigenous Peoples — past, present, and future." Photo by Abby Hassler

"The exhibition centers the voices of Native co-curators, who emphasize that mounds are sacred places still important to Indigenous communities today," Lofaro says. "'Homelands' explains why respecting and protecting these sites is essential."

Museum visitors will experience a range of art media — from a painting reimagining Picasso's "Guernica," which explores the devastation of colonialism, to an intricate turkey-feather mantle.

Ultimately, King hopes the exhibition will emphasize the "continuity of connection" to land and how, even though Native nations were forcibly removed, "the connection is still very much here."

"If you've ever been curious about what do mounds mean, if you've ever been curious about what happened after removal, if you want to know what Indigenous peoples are doing now, come see the exhibition, because 'Homelands' is going to give you a story that you probably haven't heard," King says.

The exhibition will run through December 2027. — *By Abby Hassler*

Want to learn more about the museum exhibit, Indigenous mounds and repatriation efforts at the University of Tennessee? Visit AppVoices.org/homelands to read a longer version of this article!

Economic First Responders: CDFIs, the Unsung Heroes of Appalachian Financial Services

Just when Julie Wilkins was ready to quit the food service industry, she saw a new path ahead: owning a restaurant.

Haney's Restaurant, which she helped establish and poured her heart and soul into as a manager, was up for sale. Wilkins' mentor, who owned the space, encouraged her to purchase it, but she could not obtain a small business loan due to her poor credit score. And then she began to run out of time.

"I could not wait for them to make me jump through the many hoops that most of those lenders put you through," says Wilkins.

Shortly before the deadline to purchase the property expired, Wilkins connected with Mountain Bizworks, a community development financial institution, or CDFI, based in Asheville, North Carolina. Mountain Bizworks helped her access funding and make her dream come true.

A few years later, Wilkins' staff is serving up her favorite chicken-fried chicken, meatloaf and other Southern comfort food in a restaurant that now bears her name: Julie's Place.

"Mountain Bizworks was a godsend," says Wilkins.

CDFIs like Mountain BizWorks are place-based, mission-oriented credit unions, banks, loan funds, venture capital providers or microloan funds that support economic growth and stability in traditionally underserved or overlooked communities.

"That's a designation by the U.S. Department of the Treasury," says Christine Laucher, strategic partnership manager and southwestern regional manager at Mountain BizWorks. Qualifying CDFIs must direct 60% of their financing to specific regions or targeted populations, such as low-income communities or specific ethnic or racial populations.

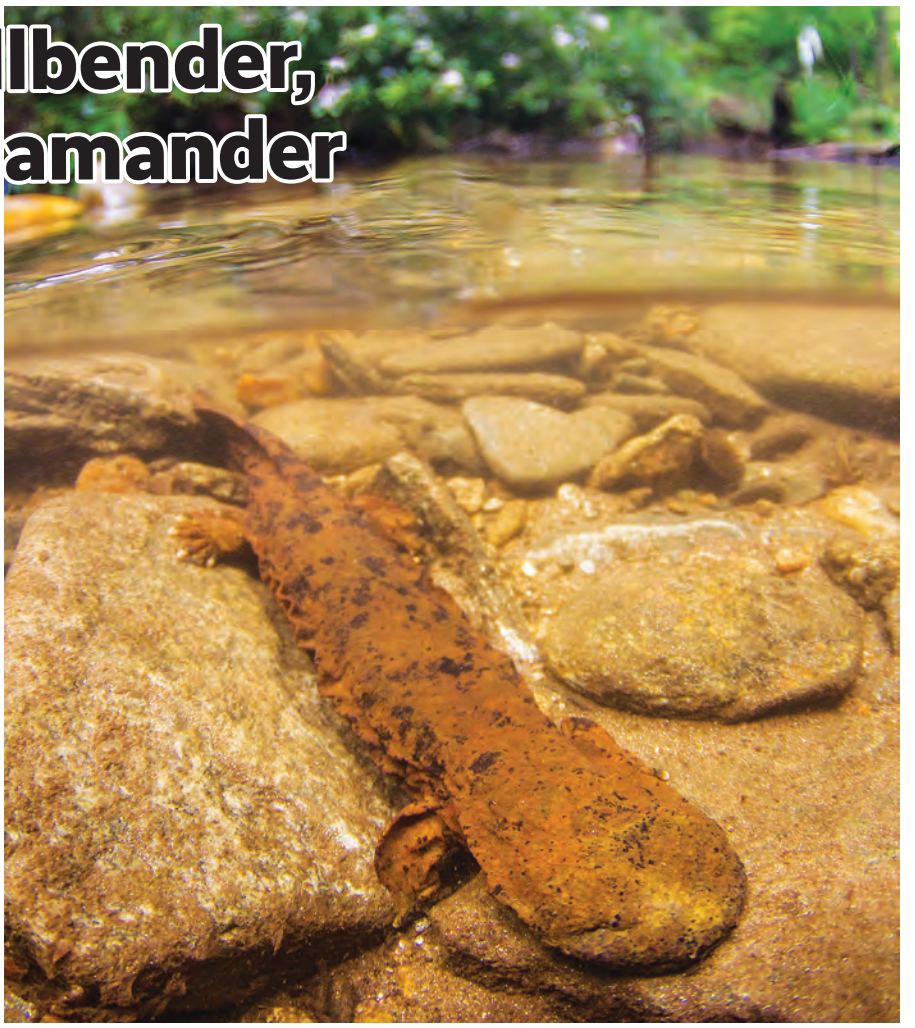
Laucher shares that CDFIs were designed to "fill in the capital gap" for individuals and businesses that have difficulty accessing traditional financing. From affordable housing projects to personal debt consolidation, CDFIs can help turn a "no" into a "yes" for those who need it most.

"CDFIs are necessary," says James Caudill, managing director of Redbud Financial Alternatives, a CDFI located in downtown Hazard, Kentucky. "If we want to make our rural communities better, then we're a pivotal part and cog in that wheel of making it happen."

Photo by Julie Wilkins

To learn more about community development financial institutions and their role in Appalachia — and a potential threat to a key funding source to the industry — read a longer version of this story online at appvoices.org/cdfi. — *By Abby Hassler*

A Call to Protect the Hellbender, Appalachia's Largest Salamander



Hellbenders require clean water to survive. Photo by Jacob Loyacano/Shutterstock.com

By Kayla Masterman

The Eastern hellbender, the largest aquatic salamander in North America, is eligible to receive federal protection under the Endangered Species Act. In December 2024, the U.S. Fish and Wildlife Service issued a proposal to classify the hellbender as endangered. This classification would increase protections for the species and require federal agencies to ensure conservation efforts.

At press time in July, the agency was reviewing public comments and had not specified a timeline for finalizing the rule.

The Eastern hellbender dwells in the flowing streams of Appalachia, from Southern New York to Northern Georgia. Adult hellbenders can weigh more than 3 pounds and live for at least 30 years. They typically have a grayish or reddish-brown coloration and a flattened body, short legs and paddle-like tails.

They help maintain ecosystem balance, according to Michael Gangloff, professor of freshwater conservation biology at Appalachian State University in Boone, North Carolina.

"They require clean water and stable, clean substrates, so they are an excellent indicator of water quality," he says. "We know that if our rivers and streams have hellbenders, they are probably pretty healthy streams."

According to the North Carolina Wildlife Rescue Commission, hellbenders disappear when waterways become overloaded with silt or chemicals. For hellbenders to survive, the water must be highly oxygenated.

"One of their evolutionary adaptations to exist in fully aquatic environments as adults is that their skin allows them to breathe," says Ridge Graham, North Carolina program manager for Appalachian Voices, the organization that produces this publication.

He explains that the colder the water is, the more oxygen it can hold.

"There are some places where it's just getting warmer, and the oxygen potential is lost in the water," Graham says.

"When there's a federally listed endangered species, whenever there's a big construction project like a dam or a pipeline or anything that impacts the water where the species is, it puts up a check on that development, and [the developer has] to prove that it won't harm the species," says Graham.

Many states have categorized the hellbender as a species that needs some level of protection. According to the Virginia Herpetological Society, hellbenders are classified as endangered at the state level in Illinois, Indiana, Maryland and Ohio. They're considered rare in Georgia and listed as a species of concern in New York, North Carolina and Virginia. In Missouri, they're on the watch list, and in Tennessee, they're considered in need of management.

Hannah Woodburn is the High Country watershed outreach coordinator with MountainTrue, a Western North Carolina environmental organization. She explains that hellbender populations have declined up to 70% in the last decade.

Compounding effects are causing the species to decline, including high amounts of sedimentation in the streams, habitat loss, and changes in water quality and stream temperatures. Hellbender populations are also decreasing due to dams, water pollution from industry and farming, deforestation, oil and gas development, residential growth and mining.

The federal endangered listing would allow more funding for research and protection for the species, especially after Hurricane Helene, according to Woodburn. She explains that Andy Hill, High Country regional director and Watauga Riverkeeper at MountainTrue, was helping with search and rescue efforts after the storm and saw dozens of dead hellbenders.

Woodburn and her team have been out on the river a lot this spring and summer working on surveys.

"We have been encouraged to find older adults and some young that likely survived the storm," Woodburn says.

She adds that it will likely take a few field seasons to understand how hellbenders are recolonizing and how populations have changed since Helene.

Woodburn explains that when trees and plants along the riverbank are lost, the temperature of the water rises and it is not able to hold as much oxygen. It is also easier for pollutants like large amounts of sediment to seep into the water, which affects the water quality.

Maintaining river health for these creatures will, in turn, benefit humans inhabiting the area.

"Theoretically, if we are protecting a species that needs clean water and habitat, then that should benefit us," Gangloff says. "It is such a unique and unusual animal, and the people who are lucky enough to see one in the wild, they never forget it." ◆

Hellbent on Fun Facts!

- Hellbenders primarily eat crayfish and fish but may also consume insects and even other hellbenders, including their eggs.
- On average, adults are 12 to 20 inches long.
- These salamanders breathe through their skin, which contains numerous folds to increase oxygen absorption.
- Breeding occurs in September and October.
- Females deposit around 200 to 400 eggs at a time.
- Afterward, males chase away females and remain inside the nest to protect the eggs until they hatch in November.

Protected Paths: Trails Through Public Lands

By Kayla Masterman

From national parks to wilderness areas and national forests, federal public lands offer a range of recreational opportunities and an immersive experience in nature. Whether a waterfall stroll, a ridgetop trek or a deep-forest escape, these trails demonstrate the diversity, beauty, and significance of federally protected public lands. This series features lesser-known trails in Appalachia's public lands.

Kentucky

Rough Trail #221 — Red River Gorge

Length: 15.4 miles | Difficulty: Hard
Land type: National Forest

Deep in the Red River Geological Area, Rough Trail #221 lives up to its name. This backcountry route, located near Pine Ridge, Kentucky, takes hikers through creek crossings, sandstone ridges and steep elevations. Notable features include access to Gray's Arch, a natural sandstone arch, and intersections with other trails. The 15.4-mile out-and-back trail is known for its steep ascents and descents, giving hikers a challenging experience.

Managed by the U.S. Forest Service, this trail lies within the Daniel Boone National Forest, which encompasses more than 708,000 acres in Eastern Kentucky.

Photo courtesy of Kentucky Hiker Project

Virginia

High Top Peak Trail — Shenandoah National Park

Length: 3 miles | Difficulty: Moderate
Land type: National Park

Rising to 3,587 feet, Hightop Mountain is the highest peak in the South District of Shenandoah National Park. Hikers ascend 935 feet of elevation in 1.5 miles to arrive at the rocky summit and views of the Shenandoah Valley. The trail begins at milepost 66.7 on Skyline Drive and follows a stretch of the Appalachian Trail.

Shenandoah National Park covers over 197,000 acres of Virginia's Blue Ridge Mountains. As a national park, it is dedicated to protecting biodiversity and ensuring public access. Visitors can enjoy over 500 miles of hiking trails and nearly 80,000 acres of designated wilderness within the park.

Photo by At Ease Design

West Virginia

Fork Mountain Trail #236 — Monongahela National Forest

Length: 21.2 miles | Difficulty: Hard
Land type: National Forest

Traversing the Cranberry Backcountry, the Fork Mountain Trail winds through hills between the North and South forks of the Cherry River for just over 21 miles. The route loosely parallels the North Fork on high ground, intersecting with the Falls of Hills Creek Trail, which is home to the second-tallest waterfall in the state. It ends at the Cranberry Mountain Nature Center near Cranberry Glades and the Cranberry Wilderness. This trail is near Richwood, West Virginia, a town historically shaped by the coal and timber industries that is looking toward a future with more ecotourism.

The trail goes through a remote section of the Monongahela National Forest, coming close to a Forest Service road currently used for mining operations — an area of conservation concern for Appalachian Voices and others.

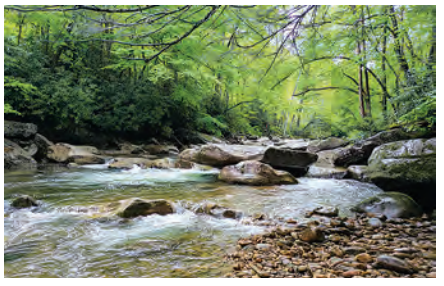


Photo by Willie Dodson

North Carolina

Goshen Creek Section: Mountains-to-Sea Trail — Blue Ridge Parkway

Length: 3.1 miles | Difficulty: Moderate
Land type: National Park

Starting under a Blue Ridge Parkway bridge, the Goshen Creek section of the Mountains-to-Sea Trail near Boone, North Carolina, winds through rhododendron bushes and hardwood trees. Hikers make their way up rocky paths and shallow creek crossings. This segment of the trail features gentle terrain but some rocky spots and minor hill climbs. This section ends with a peaceful finish in a wide-open meadow, perfect for catching your breath.

The Mountains-to-Sea Trail is North Carolina's official state hiking trail, spanning 1,175 miles from the Smoky Mountains to the Outer Banks. This section of the trail is on Blue Ridge Parkway land, a part of the National Park Service. The trail is managed by a partnership between the NC Division of Parks and Recreation, Friends of the Mountains-to-Sea Trail and local nonprofit groups.

Photo by Kayla Masterman

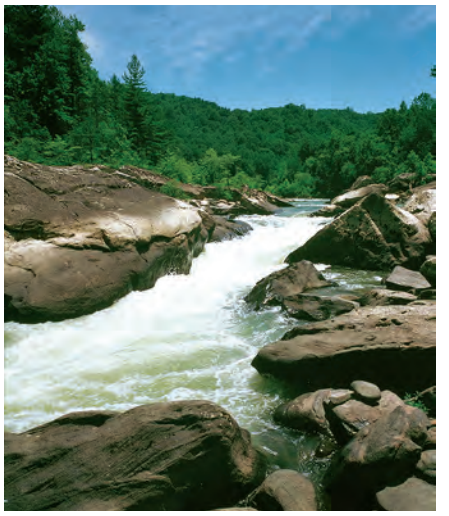


Photo courtesy of National Park Service

Tennessee

Angel Falls Rapid Trail — Big South Fork

Length: 4 miles | Difficulty: Easy | Land type: National River & Recreation Area

The Angel Falls Rapid Trail follows an old roadbed along the Big South Fork of the Cumberland River. This gentle hike takes hikers through the Cumberland Plateau's hardwood forests. The path leads to the Angel Falls Rapids, which flow through huge boulders. Despite the gentle grade, the trail features all-around views upstream and downstream on the Big South Fork River. This trail is accessible for all skill levels.

Big South Fork is a federally protected National River and Recreation Area that straddles Kentucky and Tennessee. Managed by the National Park Service, the area protects 125,000 acres of gorges, rivers, canyons and more. ◆

Do you know the difference between a national forest, park, wilderness area and recreation area?

National forests are federally managed public lands overseen by the U.S. Forest Service and are designed for multiple uses, including recreation, wildlife habitat, conservation and resource development such as logging, grazing and mineral extraction. This multi-use mandate differs from national parks, which are managed by the National Park Service with a primary focus on preservation and public enjoyment. Wilderness areas, which can exist within national forests and parks, are protected under the Wilderness Act of 1964 as undeveloped and largely untouched landscapes. National recreation areas are housed under the National Park Service and balance recreation access with conservation of natural resources. No matter the type of land, visitors are encouraged to follow "Leave No Trace" principles to help protect these diverse public places.

Rural Virginia Community Defeats Massive Gas Plant and Data Center Proposal

By Jen Lawhorne

On Oct. 18, 2024, Amanda Wydner saw a rezoning request listed in her local paper. Balico LLC sought to develop 2,200 acres of rural land in Pittsylvania County, Virginia, for a massive gas power plant and huge data center complex of 84 buildings.

"It was literally more than I could take in," she says, adding that the rezoned land proposal came all the way to her front yard and driveway.

Wydner, who has spent most of her life living in Pittsylvania, immediately began receiving calls from other concerned neighbors.

Community members acted quickly to mobilize opposition to Balico's plans, which would transform their rural locale into an industrial park. They were distressed over the prospect of clearing agricultural land, the amount of noise and air pollution from the project, construction traffic, and the draining of local water resources to cool gas plant and data center components.

Within days of the newspaper announcement, yard signs and banners were in the works. Residents were making copies of maps to show the extent of Balico's plan while placing phone calls to county leaders.

Wydner and a group of people, including residents Lexi Shelhorse and Amy Walker, came from different political backgrounds but were connected through their love of land and identity as small-town Americans, and they were motivated to protect their rural community.

"I'm proud to live in Pittsylvania County because it represents the best of small-town America — where a strong sense of community, traditional values and neighbors helping neighbors still mean something," Shelhorse wrote in an email.

"When it comes to quality of life, water and air — it should be on everyone's platform, no matter what side of the spectrum you are on," Amanda Wydner says.

"I had never been involved in a fight like this," Amy Walker says. "This was new territory for me."

Walker is a professional in marketing and applied her skills to create flyers, place newspaper ads, write press releases and administer the Coalition for the Protection of Pittsylvania County Facebook page, which became a valuable tool in their fight.

Balico's proposal to build a 3,500-megawatt gas-fired power plant in the Chalk Level community of Pittsylvania — which would be the largest ever built in Virginia — started to sink in.

Mill Creek Community Church in Chatham, Virginia, displays a banner on its lawn opposing Balico's proposal. Photo by Jessica Sims

Wydner found aerial photos of a similar 3,750-megawatt plant in West County, Florida, which is as big as 166 football fields. In 2022, it was ranked as the 29th dirtiest power plant in the country.

Word on the street began to circulate that community opposition was forcing the county planning commission and board of supervisors to reject the Pittsylvania County proposal, and Balico withdrew its project. But in November 2024, the company resubmitted an application that was reduced in scope, requesting to rezone 760 acres of land for a dozen data centers with a "dedicated power source," leaving the size of the proposed gas plant unchanged.

Organizer Amanda Wydner speaks with community members in Pittsylvania County, Virginia. Photo by Amy Walker

At the same time, Balico began building up its own support by enlisting local business leaders to endorse its promises of job opportunities and tax revenue. This created deep divisions in the community, according to organizers.

The opposition did not back down, and residents continued to pack the monthly board of supervisors meetings. Shelhorse, Walker, Wydner and two other community members retained the nonprofit law firm Southern Environmental Law Center to represent them.

SELC partnered with Harvard University researchers, who released a study analyzing the public health impacts of the Balico proposal. The report indicated that Balico's gas plant would release high levels — 326.53 tons — of particulate matter 2.5, a dangerous form of air pollution, while potentially causing $31 million in healthcare costs annually.

The situation came to a head prior to the April 15 county board of supervisors meeting, when Balico suddenly requested to once again withdraw its application. After hearing hours of powerful public testimony against Balico's proposal, the county voted to reject Balico's request to withdraw and, in a separate 6-1 vote, denied the company's plan altogether.

"I felt like the board really heard the people," Shelhorse says. "They really understood how projects like this have to be considered carefully, because you can't undo industrial development."

Since defeating the Balico proposal, Pittsylvania residents have three new potential fossil fuel projects coming their way: A section of Mountain Valley Pipeline's Southgate extension is proposed to start in their county, as would the proposed Southeast Supply Enhancement Project and Power Express pipelines from Transco.

Opponents agree that being involved in updating the county's comprehensive plan, which will guide the county's development and operations for the next 20 years, is a way to steer Pittsylvania in the right direction.

"It's time to lean in and engage in the process," Wydner says. "We are going to make the effort for the future, a trajectory of reasonable growth while maintaining the culture." ◆




Repairing Our Region After Helene

By Molly Moore

By the time Hurricane Helene, then a tropical storm, smashed into the southern Appalachian Mountains last September, rivers were already full and slopes were saturated. Over three days, 12 counties in the Carolinas received more than 18 inches of rain — and Yancey County, North Carolina, was struck by over 30 inches. Gale-force winds swept across the mountains and knocked out power and communications networks, with some locations clocking gusts over 100 mph.

The onslaught, which cut a swath from Florida to Virginia, decimated human infrastructure and reshaped the landscape and waterways across a large region in Appalachia, including portions of Georgia, the Carolinas, Tennessee and Virginia.

More than 250 lives were lost as a result of Helene, making it the deadliest storm to hit the United States since Hurricane Katrina nearly 20 years ago. Trained search and rescue crews, thousands of volunteers, and organizations across the region joined local residents to help one another, with much assistance coming from far beyond Appalachia. Even as the outpouring of support from neighbors and strangers buoyed spirits, the grief, loss and trauma of the catastrophic event also left a mark on residents across the impacted region.

Appalachia is no stranger to severe flooding, but the scale of damage from more than 2,000 landslides, extensive forest blowdowns, and crippling road destruction set Helene apart. Nearly a year later, heavy downpours continue to cause flooding in new locations as water adapts to a changed landscape.

A steep cost

Ten months after the storm, the long process of repairing and rebuilding continues for many residents and businesses.

The housing crisis was already acute before Helene, and repairing homes and finding alternative options has been an especially difficult part of recovery. In North Carolina, the storm damaged nearly 74,000 homes and destroyed almost 9,000 more.

After the Federal Emergency Management Agency's initial emergency payments went out, FEMA assistance for homeowners and renters trickled out slowly. The limits for the amount of aid FEMA can give to individuals — set by Congress — are often inadequate to cover the costs of needed repairs to an individual's property. And some homeowners waited months for insurance companies to even inspect their damage, which is a necessary step to qualify for FEMA assistance.

Compounding the economic damage, Helene arrived just as the crucial fall tourism season was getting underway. Even businesses lucky enough to escape direct harm were impacted by widespread power and water outages, displaced workers and destroyed roads — some routes still remain closed as of July. More than a third of 1,155 Western North Carolina businesses surveyed in February and March projected revenue loss of over 50%.

Yet many businesses that were inundated by Helene's waters or winds have since rebuilt and localities are enthusiastically encouraging people to support homegrown institutions with their dollars.

Finding funding

Just before Christmas, Congress approved $100 billion in recovery funding for Helene and other disasters. It also replenished the Small Business Administration's disaster loan program, which had exhausted its funds less than three weeks after Helene struck.

In a December press release celebrating the bill's passage, the office of Sen. Thom Tillis, R-N.C., noted that, in addition to assistance from FEMA, it expected the state to receive $9 billion in federal assistance from other departments for needs that included road and bridge repair, drinking water infrastructure and payments to farmers.

By March 31, the North Carolina government and federal agencies had directed $5.95 billion to the state for recovery, with $4.1 billion coming from the federal government. Second quarter 2025 data for the state, which would also reflect funding from state legislation passed in April, was not available as of press time.

But just because federal dollars are directed to a state doesn't mean it's immediately making a difference on the ground. State and local governments often must develop plans for how to spend the money, which are then reviewed and approved by the federal agency responsible for the funding before projects can proceed.

Onward

A warmer atmosphere holds more moisture, and scientists expect the changing climate to bring more intense rainfalls to Appalachia. An international group of scientists estimated that climate change increased the amount of rainfall during Helene by 10% and made its three-day rainfall total 70% more likely. We can hope that Appalachia never sees a storm like Helene again in our lifetimes, but it's wise to prepare.

Even as our team prepared this annual print edition for press, people in multiple states, including in Central North Carolina, were still reeling from recent flood events, and we neared the three-year anniversary of devastating flooding in Eastern Kentucky.

On the following pages, we explore a few of the many dimensions of disaster recovery in our region, with a focus on the aftermath of Helene. Communities and individuals are putting one foot forward at a time — and taking action to protect one another and our region if the unimaginable happens again. ◆

Get Involved:

Appalachian Voices, the organization that publishes The Appalachian Voice, is partnering with communities to lay the groundwork for a stronger, more connected and prepared region. Sign up to receive information about and opportunities to participate in our work! Visit appvoices.org/readiness

Photos above, left to right: *Debris piles littered Marshall, N.C., prior to a massive debris removal effort. Destroyed road and power lines along the Cane River in Yancey County, N.C. Photos by Jimmy Davidson. A Watauga County resident posts a plea for help on a light pole in Boone, N.C., after the storm destroyed his home and woodshop. Photo by Lou Murrey. Debris lines a parking lot at the Folk Art Center along the Blue Ridge Parkway. Photo courtesy of National Park Service. Volunteers help clean up GB's Spice House, a Watauga County restaurant that has not reopened. Photo by Lou Murrey*

Community Resilience Hubs Take Root in Western North Carolina

By Abby Hassler

Mira Brown was working as an assistant engineer on a tugboat off the coast of Puerto Rico when Hurricane Helene hit her small community in Yancey County, North Carolina.

For a couple of days, she couldn't get in contact with her family, dialing every phone number she knew in the area but getting the same disconnected error message. Finally, a stranger, an amateur radio operator in Statesville, called her to say that he received a message that her family was safe.

"I was relieved, but that's when I really started to worry," Brown says about realizing how bad the situation was.

Less than a week after the storm, she was able to reach the area, bringing medications and other necessary supplies. Brown and her neighbors set up a relief hub out of Piney Hill Baptist Church. From the church, they were able to distribute food, water and gasoline.

Initially, the hub relied on gas-powered generators, but the cost and limited fuel availability became a cause for concern. Brown and others connected with the team at Footprint Project, a natural disaster recovery nonprofit based in New Orleans, who supplied them with solar-powered generators.

"We used [them to power] the community Starlink for the duration of the time the power was out, which was huge," Brown says, emphasizing that having reliable communication access with the outside world powered by solar was not just important, but life-saving.

Even after the power grid came back online, the church continued to use a backup solar generator to provide power redundancy in the event of more outages. When one of Brown's neighbors suffered a heart attack, he was able to use the hub's Starlink to call for air medical services.

"Having that communication here was critical," she says. "If every road had their own little community center, that would be — that would be ideal, that would be amazing. With a reliable communication hub, with some kind of [power] backup — like, that's security."

Neighbors as first responders in times of crisis

The people of Central and Southern Appalachia are no strangers to the devastation caused by flooding. However, for many, the widespread severity of Hurricane Helene was a wake-up call, as it was the first time so many critical lifelines failed simultaneously, from the loss of roads to communications due to grid vulnerabilities that had previously been untested at this magnitude.

"We think that people are going to come for us," says Will Heegaard, founding director at Footprint Project, explaining that many hope that federal agencies will be "rappelling off ropes" to come to their aid.

Even though Heegaard's team was one of the early external aid organizations to arrive after the storm, he explains that in those first 48 to 72 hours, neighbors are generally a community's primary first responders.

"The biggest resource you have in a terrible time is your neighbor," says Catherine Hebson, recovery program manager at Footprint Project. "There is a chunk of time before anyone is there, where it is you and your neighbors and the things you had in your house prior to the storm."

For communities to become more resilient in the wake of future storms, Heegaard and Hebson emphasize that it's critical to identify strong, local organizations and leaders and outfit them with tools — like sustainable technologies — they need to be successful.

Solar panels installed outside of Piney Hill Baptist Church. Photo courtesy of Footprint Project

Footprint Project Founding Director Will Heegaard and Program Director Jamie Swezey load solar panels and other sustainable equipment into a trailer in North Carolina. Photo courtesy of Footprint Project

"The more we can get resources down to the grassroots level, the more likely they'll be well utilized, and more people will be saved in future storms," Heegaard says.

Equipping neighbors with sustainable technologies

Founded in 2018, Footprint Project deploys sustainable technologies to address rapid response and long-term recovery needs. These technologies include small portable solar power stations for charging mobile devices, and larger solar and battery storage-powered microgrids that generate and store energy, operating independently from a centralized electrical grid.

Since Hurricane Helene, the nonprofit has raised and committed over $1 million in funding and renewable response equipment for areas impacted by the storm, with 95% of its support dedicated to North Carolina. As of April 2025, the nonprofit had provided more than 400 portable solar generators, 25 mobile solar microgrid trailers, 40 palletized solar microgrid systems, and other necessary technologies.

Additionally, through its WNC Free Store, Footprint has donated over 14 kilowatts of solar panels and nearly $30,000 in renewable technology components in the region. Overall, Footprint Project estimates it has directly supported hundreds of individuals and community hubs and thousands of people indirectly.

Footprint Project distributed this renewable equipment to fire departments, mutual aid distribution hubs, faith-based institutions, community centers, nonprofit organizations and displaced individuals. In the crucial first few weeks after the storm, these systems improved communication, boosted quality of life and saved money.

In Pensacola, North Carolina, a distribution hub called Camp Miller was established in response to the storm's devastation. The hub distributed 60,000 meals and 50,000 gallons of fuel in its first 100 days. Camp Miller was able to power much of its operations with solar panels loaned by Footprint Project, eliminating the need to run generators 24/7.

"It was an elegantly simple solution to an endlessly complex problem," says Brian Delane, a member of the leadership team for CAMP NAONE, an organi-

Continued on page 26

Southwest Virginia Communities Prepare for Future Storms

By Rance Garrison

When you round the curvy roads in Dungannon, Virginia, the old depot still stands in the middle of town, a reminder of a time when passenger trains still ran like clockwork through the Appalachian hills. Inside the depot, old historical paintings line the wall, and a portrait of President Franklin Delano Roosevelt overlooks the room, where rows of tables and folding chairs are set up for community gatherings and meetings.

At the depot, a series of listening sessions were held in 2024 and 2025, where residents came together to discuss ways for the community to build its ability to bounce back from natural disasters and other environmental and economic challenges.

These sessions were hosted by Appalachian Voices, the publisher of this newspaper, as part of its Community Strong initiative to partner with five Southwest Virginia communities to build resilience and revitalize their local economies. The work was supported by a grant from the Environmental Protection Agency that the agency terminated in February. Appalachian Voices is seeking to restore the grant, and meanwhile continuing to work with the five communities to develop projects.

In Dungannon, the plan includes transforming the historic depot into a resilience hub. A resilience hub is a place, such as a community center or school, that helps people stay safe and supported during emergencies such as floods or power outages. They provide emergency supplies, access to shelter and power, and a place to gather.

The necessity for these hubs across Southwest Virginia has become more apparent in recent years as the region has repeatedly been hit hard by floods. Many communities in addition to Dungannon are moving forward with plans for resilience hubs — proposals for hubs in Clinchco and Dante also came out of the Community Strong initiative.

Left: Plans for a future resilience hub are in the early stages at the former Stickleyville Elementary School in Lee County. Photo by Andie Waugh
Above: Former Dungannon Mayor Debra Horne, pictured at an Appalachian Voices' Community Strong listening session. She was instrumental in laying the foundation for Dungannon's current resilience planning. She passed away in spring 2025. Photo by Michael Chassereau

Appalachian Voices has been partnering with Dungannon to find the financial resources to make building upgrades at the historic depot — including a solar system with battery storage. The plan is for the panels to be built on a new canopy covering the playground behind the depot, providing both shade and electricity.

Dungannon community member Beth Bingman says that the electricity from the solar and battery storage is "the most important thing for people who have health devices."

Bingman is proud of the leading role that Dungannon residents are taking in making the town more resilient and believes it can serve as a model for other rural Appalachian communities.

"Here, there's been a lot of community efforts around a lot of things over the years," Bingman says. "It's the kind of thing where people here in the neighborhood hear, 'Oh, this is happening, and this is what it's going to mean.'"

In Clinchco, the community is considering several different locations that could serve as a resilience hub. Clinchco is also one of 10 localities participating in a state program called the Virginia Energy Resilience Study, which works with communities to measure their energy resilience and help identify practical, long-term solutions to reduce energy-related vulnerabilities.

The University of Virginia's College at Wise was awarded the EPA's Change Grant in 2024 to conduct resilience hub planning in Southwest Virginia, but the Trump administration cancelled the grant in 2025. UVA Wise is still planning resilience projects in Carroll and Dickenson counties, and hopes to extend that planning to other communities in the future.

With climate change predicted to bring more intense rainfall events to Central Appalachia, Southwest Virginia communities are likely to face worsening natural disasters. Resilience hubs are one of the main ways that communities can come together to weather the storm. ◆

During the Community Strong listening sessions, the town of Dungannon settled on the town's historic depot as a site for developing a local resilience hub. Photo by Rance Garrison

Neighbors Helping Neighbors

Regional mutual aid groups are stepping into a critical role in community-led disaster relief

By Lou Murrey

When Hurricane Helene tore through the Southern Appalachian Mountains, already swollen rivers rose out of their beds to wash away homes, roads, bridges and entire communities. Saturated soil cleaved from the mountain, causing devastating and deadly landslides that blocked or destroyed roads and made it hard for anyone to get in or out.

Communities across large swaths of Western North Carolina found they were cut off from the world.

"It was surreal," says Madison County resident Matthew Wallace. "It didn't take long to realize that there was no help coming, at least in those first few days. We were really all we had."

Wallace is a member of Rural Organizing and Resilience, or ROAR, a mutual aid group based in Madison County, North Carolina, that formed in 2017. ROAR sprang into action as soon as the waters began to recede.

Neighbors helping neighbors is common in Appalachia and throughout human history. "Mutual aid" is a more specific term for people helping each other based on shared needs and resources rather than relying on formal institutions and systems.

"Once ROAR members were able to make contact with each other, we quickly organized a meeting, and within 24 hours, we had a mutual aid hub up and running in order to start gathering and distributing supplies," Wallace says.

For days and weeks after the storm, ROAR members and volunteers were among those working relentlessly in Madison and the surrounding rural counties to distribute supplies, send out crews to cut trees and clear debris, make wellness checks, and deliver firewood to people without heat or electricity.

Wallace shares that ROAR's approach to mutual aid goes beyond meeting people's physical needs to help address what he describes as "root causes of inequality" such as race and income level.

Mutual aid projects like ROAR foster community and solidarity and build a shared understanding of why people don't already have what they need. These networks are growing across the region in response to disasters.

In June 2025, ROAR received its solar-powered trailer from Footprint Project, a natural disaster recovery nonprofit. Photo by Matt Wallace

The 2022 floods in Eastern Kentucky

In July 2022, two years before Helene, severe flooding struck 14 counties in Eastern Kentucky. Quickly, those in impacted areas discovered that communities self-organizing relief efforts was the fastest way to get people what they needed.

Willa Johnson of Neon, Kentucky, lost almost everything when the waters rose.

"It was chaotic because I was moving, and so I lost so much that I would not have lost otherwise," says Johnson. "It was packed up in boxes on the floor ready to be moved out."

Johnson, who has been organizing mutual aid efforts in the wake of disasters in Appalachia for over a decade, suddenly found herself needing to lean on those networks of support.

"When the 2022 flood happened, it hit my house, it hit my church, it hit my work, it hit my son's school and so I just had no foundation underneath me," she says. "Mutual aid is what kept us alive."

In the aftermath of Hurricane Helene, ROAR set up a mutual aid hub to accept donations and distribute supplies to those in need in Marshall, N.C. Photo by Matt Wallace

Disaster relief poured into the region from churches, service organizations, and the state and federal government. But, according to Johnson, the immediate support for gas money, supplies and groceries came through Eastern Kentucky Mutual Aid. This aid network started in 2020 in response to the economic hardships exacerbated by COVID-19. When the 2022 floods hit, EKY Mutual Aid had grown and was able to mobilize quickly — organizing supply drives, fundraising for people who lost everything and organizing volunteers to help with clean up.

"It's hard to talk about, because it is hard to explain that it feels dramatic looking back," Johnson recalls. "But the truth is we lost everything, and we couldn't access grocery stores; it was huge for me and my kid. You're so in the dark, you're so confused, you're so overwhelmed, and then there is someone there offering this small amount of help, which may seem small in the grand scheme of things, but it's those small amounts of help that stabilize you in the initial days."

Johnson describes a strong sense of community, solidarity and reciprocity that emerges in times of crisis. This community-forward approach is what makes mutual aid different from traditional forms of disaster relief.

"So much of disaster relief feels like it is caught up in red tape that it leaves you feeling really frustrated, and it leaves you really stranded and scared," Johnson says." With mutual aid, help comes without the red tape and just offers resources. It's like there is a better sense of community and ability to adapt."

The long, storied history of mutual aid in Appalachia

Whether it is called mutual aid or not, communities coming together to take care of each other is nothing new. Mutual aid historically arose in marginalized communities as they created ways to survive systems designed to exclude and oppress them. In the United States, Black mutual aid societies emerged during slavery to pay for burials, food, shelter, legal defense and education of enslaved and freed Black people. In Appalachia, geographic isolation and poverty have long gone hand-in-hand with heavy resource extraction, causing residents to rely on kin networks to survive.

"It might be called something else, but the ethos of taking matters into your own hands and caring for your friends and neighbors, especially in the face of government abandonment, has a long tradition here stretching back generations," says Matthew Wallace of ROAR. "It's how people survive."

Laura Saunders, a member of the mutual aid group Holler2Holler based in Virginia's New River Valley, shares Wallace's sentiments when she talks about how the group responded to the disastrous flooding event that struck parts of West Virginia, Eastern Kentucky and Southwest Virginia in Febru-

Continued on page 27

Snapshots of Disaster Recovery

West Marion Resilience Hub is ‘not your grandma's community center’

West Marion Inc. is the first and only Black-led nonprofit in McDowell County, North Carolina. In collaboration with the city of Marion, the nonprofit is working to transform the historic Mountain View School building into the West Marion Resilience Hub to create a more resilient and equitable future for the community.

“It is not your grandma's community center,” says Paula Swepson, executive director of West Marion Inc.

Mountain View School, a public high school for Black students, closed its doors in 1966 after the racial integration of McDowell County Schools. In 2024, the abandoned building was donated to West Marion Inc.

According to a feasibility study for the project, the 54,000-square-foot facility “will serve as an emergency refuge and provide essential services such as healthcare, childcare and workforce development, focusing on historically disadvantaged communities in West Marion.” The hub will also feature climate-resilient infrastructure, such as solar panels, electric vehicle charging and other energy-efficient solutions.

While the vision for the space predates Hurricane Helene, the storm’s devastation in Western North Carolina further instilled the need for a resilience hub.

“People wouldn't be still sleeping in tents,” Swepson says. “They wouldn't be worried about getting evicted.”

Currently, West Marion Inc. is accepting donations and working with funding partners to raise over $800,000 for the project’s pre-development work.

The West Marion Inc. team poses at a community event for the West Marion Resilience Hub. Several of Swepson’s board members attended Mountain View School before it shut down in 1966. Photo by Dayna Reggero

“If anybody can do it and make it work, we can,” Swepson says. “We just need our friends and our allies and our funders and everybody to just come together and help us make this dream come true.” — *By Abby Hassler*

‘Nobody is coming to save us:’ Building McDowell County, West Virginia, after February floods

Before February, the worst floods to hit the town of Welch in McDowell County, West Virginia, were in 1977, followed by 2001 and 2002. But now, the new benchmark for horrible flooding will be Feb. 15, explains resident Rev. Brad Davis.

Davis was living in the parsonage of the United Methodist Church along the Tug Fork River — the main level had never flooded since the church was built in 1950. But by 6 p.m., Davis moved his car to higher ground. At 7:30 p.m., he threw his cats in carriers and left because the waters were knocking on his front door.

“This flood was apocalyptic in its truest Biblical sense,” Davis says.

Months later, McDowell County is still struggling to rebuild.

“Nobody is coming to save us — not the federal government, not the state government, not the local government,” he says. “Nobody is coming to save us. It's going to be us.”

State and federal support did trickle into the area, but Davis explains that there could have been a “much more robust response.”

“How do we, as an under-resourced, underfunded community to begin with, begin to grapple with … the massive challenge of rebuilding after a flood?” he asks. “And particularly, when we're not getting a lot of help to begin with?”

Davis isn’t optimistic about the future, but he does see glimmers of hope in the “sheer stubbornness of the people.”

“We shouldn't be here,” he says. “This place should already be a ghost town — but yet, we keep persisting.” — *By Abby Hassler*

← *The Tug Fork River in Welch, W.Va., after the February floods. Local and regional organizations and mutual aid networks provided support in McDowell County and other impacted communities. Some people, like Big Stone Gap, Va., resident Lauren Albrecht, came from out of state to deliver supplies and assist. Photo by Lauren Albrecht*

‘A creative renaissance:’ Recovery in the River Arts District of Asheville

Historic flooding from Hurricane Helene devastated up to 80% of the vibrant River Arts District of Asheville, North Carolina, located along the French Broad River.

Floodwaters damaged or destroyed more than 300 artist studios, impacting over 750 working artists, explains Jeffrey Burroughs, a fine jeweler and president of the River Arts District Artists, a membership organization.

“The River Arts District is more than a collection of studios,” Burroughs says. “It’s a living, breathing creative community. Seeing it underwater was overwhelming. But almost as quickly as the shock set in, so did action.”

Immediately, RADA and the nonprofit RADA Foundation sprang into action, organizing cleanups, salvaging artwork, holding community meetings, fundraising, helping artists find temporary workspaces, distributing stipends and building partnerships to further amplify long-term recovery efforts.

Burroughs highlighted new initiatives like the RADA Outpost, a temporary downtown retail space for displaced artists, and the new Community Catalyst Award, which offers targeted grants to key district studios and leaders.

As of press time in July, 350 artists are back in action. The upper portion of the district, nicknamed Upper RAD, is fully reopened, while a few spaces have reopened closer to the river, or Lower RAD.

For Burroughs, what is happening is more than recovery, “it’s a creative renaissance.”

“We’re not just rebuilding — we’re reimagining,” they continue. “And we hope others will join us in shaping what comes next." — *By Abby Hassler*

Organizations band together to help with long-term recovery in Cocke County, Tennessee

Three rivers — the Pigeon, Nolichucky and French Broad — run through Cocke County, Tennessee. Catastrophic flooding of these rivers from Hurricane Helene damaged or destroyed hundreds of homes and businesses throughout the county. Residents estimate long-term recovery will take several years.

"We have 349 families impacted in our county to varying degrees," says Deborah Bahr, executive director of Clean Water Expected in East Tennessee, or CWEET, a local grassroots environmental organization.

Established in 2006, CWEET has spent decades building relationships and working to protect the region's riverways. Alongside local partners, CWEET immediately had boots on the ground after the storm, delivering supplies and establishing a resource hub.

"Everybody was affected in some way or knew somebody that was affected," Bahr says. "So we were constantly trying to be aware of [what organizations] had what and how we could pull it all together, so we could eliminate redundancies and be more efficient."

These efforts evolved into the nonprofit Cocke County Long Term Recovery Group. Bahr sits on the board of directors, while Laurie "Spring" Duckett, CWEET's community organizer, serves as the group's executive director. Additionally, Bahr serves as the chair of the nonprofit's natural resources committee.

Top: A road in Cocke County before and after Hurricane Helene. Photos courtesy of CWEET. Left: First United Methodist in Cocke County, Tenn., partnered with Appalachia Service Project to support long-term recovery work, including hosting summer camps to support construction projects. Photo by First United Methodist

"We are working with state, federal and county agencies, academics and allied nonprofits to create a plan for riparian zone restoration," Bahr explains about the strips of land along the edges of waterways. "We know there's going to be more floods. We know we're primed for a fire. So, we've got to figure out how to rebuild our riparian zone." — *By Abby Hassler*

On the road to recovery for the Virginia Creeper Trail

Hurricane Helene devastated numerous beloved public lands and recreational areas in Central Appalachia, including the popular Virginia Creeper Trail, a main economic driver for the town of Damascus.

Despite promising recent updates, the timeline for major restoration and eventual completion for portions of the picturesque rail-to-trail path remains uncertain.

Of the 34-mile multi-use trail stretching from Abingdon to Whitetop Station, Virginia, the upper 18-mile portion from Damascus to Whitetop in the Mount Rogers National Recreation Area is closed until further notice.

Out of the trail's 47 iconic railway trestles, 31 were severely damaged or destroyed. The U.S. Forest Service owns and manages this part of the trail.

In addition to the devastation on the trail itself, a 1.5-mile portion of Route 58 between Damascus and Konnarock was destroyed, preventing rebuilding crews from accessing parts of the trail.

In May, Virginia Gov. Glenn Youngkin announced that the Virginia Department of Transportation had restored this section of Route 58 several months ahead of the initially anticipated schedule — a key step in gaining access to more remote parts of the trail.

In June, the Forest Service announced it had begun initial debris removal, which should take until the end of July. The agency has not announced a timeline for completion.

"The good news is there's movement — and we're moving forward," says Lisa Quigley, executive director of the Virginia Creeper Trail Conservancy. "That's a huge relief for everyone."

Bikers can visit and enjoy the first stretch of the trail from Abingdon to Damascus, which reopened quickly following the storm. "It's a beautiful section of the trail," Lisa Quigley says. "Now, it's not the same as coming from Whitetop to Damascus. Nobody should think it is. But that doesn't mean it doesn't come with its own unique qualities." Photo by Jimmy Davidson

In the meantime, enthusiasts can visit and enjoy the lower stretch of the trail, or the "Start to the Heart" from Abingdon to Damascus, which reopened quickly following the storm.

Want to stay updated about the Creeper Trail's recovery? Visit recovery.vacreepertrail.org. — *By Abby Hassler*

The Long Trail Back: Public lands recovery after Hurricane Helene

By Abby Hassler

Central and Southern Appalachia is rich with public lands and waterways cherished by residents and visitors. From family camping trips at Roan Mountain State Park to scenic cruises along the Blue Ridge Parkway, the region is brimming with beautiful trails, parks and rivers where people make memories that they never forget.

When Hurricane Helene swept through the region, many of these beloved natural areas were devastated, resulting in billions of dollars in damages and countless hours of recovery work. Landslides wiped out roadways and bridges, downed trees blocked trails and debris washed into rivers.

Thanks to dedicated federal, state and local partners and untold numbers of volunteers, many public lands have reopened. Yet ten months after the storm, there are still areas that remain fully or partially closed due to ongoing work and concerns for visitor safety.

Public lands representatives and advocates are encouraged by the substantial progress made to date. Simultaneously, current and looming federal budget cuts and policy changes have made already arduous land restoration work even more challenging — a reality that may continue for the foreseeable future.

Current state of public lands recovery

Public lands are outdoor areas, such as forests, parks, trails or lakes, that are managed by federal, state and local agencies like the National Park Service, U.S. Forest Service, North Carolina Division of Parks and Recreation or towns and county governments.

Hurricane Helene severely damaged national park and forest lands, including Great Smoky Mountains National Park's Cataloochee Valley — portions of which reopened in April after extensive restoration work — and the Blue Ridge Parkway.

"By far the most heavily impacted park is the Blue Ridge Parkway," says Jeff Hunter, Southern Appalachian director of the National Parks Conservation Association, a nonprofit that advocates for the national parks system.

Much of the scenic 469-mile route has reopened, including all Virginia roadway. But as of July, 157 miles remain closed in North Carolina due to extensive damage from at least 57 landslides, widespread downed trees and other causes, according to the park service. The park service has not announced a definitive timeline for project completion and reopening.

Beyond the Blue Ridge Parkway, significant recovery work continues in Western North Carolina, where the storm damaged more than 190,000 acres of national forest land, according to the U.S. Forest Service.

Dana Hodde, public affairs specialist for the National Forest in North Carolina, states that the agency and its partners have cleared 227 miles of trails in the particularly hard-hit Pisgah National Forest Appalachian Ranger District, which accounts for 70% of the district's trails.

Wild South volunteer Cameron Morrell uses a crosscut saw to clear a fallen oak tree on the Leadmine section of the Linville Gorge Trail in Linville Gorge Wilderness. Photo by Christen Welfel, Wild South

MountainTrue hosts land-based and on-the-water cleanup events for the French Broad, Watauga, Green and Broad rivers. Photo by Jack Henderson

"Disaster recovery is often a lengthy process involving review, planning and the rebuilding of resilient forests and infrastructure," Hodde explains.

When reopening areas to the public, Hodde explains that the agency considers several factors, including "search and rescue access, wildfire risks, public safety and coordination with other agencies and partners."

"It is critical that visitors respect closures," Hodde says. "These areas may be hazardous, and entering can divert valuable time and resources from recovery efforts."

In Virginia, the Forest Service manages the upper portion of the popular Virginia Creeper Trail, which falls within the Mount Rogers National Recreation Area in the George Washington and Jefferson National Forests. In June, the agency announced that initial debris removal work had begun, although a timeline for project completion remains uncertain. The lower portion of the trail is open.

Hurricane Helene closed several state parks across North Carolina, Tennessee and Virginia. As of mid-July, the majority have reopened entirely or with partial closures.

Only one, Mount Mitchell State Park in Yancey County, North Carolina, remains fully closed until further notice. David Crockett Birthplace State Park in Limestone, Tennessee, is closed, but it recently reopened its Crockett Shoals Overlook Trail. That park is also holding meetings to inform the public about its future, and visitors are encouraged to verify closure information before arrival.

Public lands highlight: Caution, detours and closures along the Appalachian Trail

The Appalachian Trail traverses through 14 states, six National Park Service regions, eight national forests and many other national and state public lands along its 2,197.4-mile route, according to the Appalachian Trail Conservancy, the nonprofit that manages the trail with the National Park Service and other public and private sector partners. Sections of this National Scenic Trail along the Tennessee-North Carolina border were hit particularly hard by Hurricane Helene.

"It took a tremendous amount of effort," says Ann Simonelli, director of communications at ATC, about the work of volunteers, professional crews, federal agencies and many others to "get the trail to where it is today."

Roughly five miles of the Appalachian Trail remain closed by the Forest Service at Iron Mountain Gap in North Carolina for continued storm debris removal. ATC shares that the anticipated completion timeframe for this salvage logging operation, which involves removing fallen trees for timber sales,

Continued on next page

Public Lands Recovery

Continued from previous page

is fall 2025.

"Once that project is done, then the ATC and the trail clubs will go in with volunteers to help to reestablish the trackway," says Simonelli, emphasizing the need for trail rebuilding work due to the impact of the heavy machinery and logging equipment.

In the meantime, hikers can use the Iron Mountain Gap detour route. Hikers will also need to use the Nolichucky River detour after Hurricane Helene destroyed the Chestoa Pike Bridge in Erwin, Tennessee.

Simonelli explains that, regardless of official closures and detours, open does not mean "smooth sailing" and that hikers should remain cautious and pay attention to the latest trail conditions.

"There are sections of the trail that are open, but they might be more challenging to navigate because of the damage left by Helene," Simonelli says.

Simonelli relays that the ATC is hearing a lot of gratitude from 2025 hikers as they travel through damaged sections of the Appalachian Trail that are now back in operation thanks to the support of dedicated volunteers and paid crews.

"Every single tree had to be cut by someone," emphasizes Simonelli, highlighting how complicated it can be to clear hundreds of downed trees.

"It's very humbling to see how far and how much work and how much commitment people have put into this beloved natural resource," continues Simonelli.

Community partnerships key to recovery progress

Many community, nonprofit and volunteer partners have stepped up to assist federal and state agencies in recovery efforts, says a Forest Service employee who spoke on the condition of anonymity due to fear of retaliation for speaking candidly.

"It's a small miracle," the source says about the number of trails cleared, recreation areas reopened and other restoration work, highlighting that the work completed to date, with assistance from local partners, serves as a "point of pride" for forest workers.

"I think it speaks to our dedication as public employees and our willingness to be self-sacrificing for the mission of the agency," they continue.

In North Carolina, Wild South, a nonprofit dedicated to protecting public lands, has logged approximately 9,000 hours of recovery work and recruited 400 volunteers for storm recovery efforts. Initially, their work involved damage assessment in partnership with the Forest Service, explains Kevin Massey, executive director of Wild South.

Wild South's chainsaw team (left to right: Ben Shaw, Nick Massey and Taylor Hilgeman) lend a hand rerouting a section of the Mountains-to-Sea Trail near Table Rock in response to Hurricane Helene. This section was next to, but outside of, the Linville Gorge Wilderness, so chainsaw use was permitted. Photo by Jonathan Massey, Wild South

"That was a lot harder than it sounds," Massey says. "Access was difficult, with roads cut by landslides, trails buried under thousands of trees or washed away by floods or landslides. What's interesting is how quickly we were able to accomplish the task."

Thanks to existing relationships with community organizations, Forest Service personnel in the Grandfather Ranger District of Pisgah National Forest were able to survey nearly 300 miles of trails in just a few weeks, explains Massey.

"Even seasoned sawyers have been challenged during recovery from Helene," Massey says. "The hurricane twisted and bent and piled trees in ways that most sawyers have not experienced."

For river recovery, the nonprofit MountainTrue is collaborating with

Continued on page 27

Debris Removal in Waterways Causes Concern

As the region recovers from Hurricane Helene, cleanup of debris in rivers has become an unanticipated point of tension in North Carolina and Tennessee amid a vast debris removal project that has included lakes, roadsides and private properties. While there is agreement regarding the need for some debris removal in public waterways, there is disagreement about how much should be removed and at what cost.

Local river advocates were initially eager for help from the federal government to remove large debris piles, cars, parts of buildings and other trash from waterways. But in some cases, the resulting work included more damage — crushing fragile aquatic life and riverbed habitat with heavy machinery and removing live vegetation from banks.

Others wanted to see more extensive removal due to concerns that trees left in the river will pose a hazard to recreational users, exacerbate future flooding or damage bridges.

Debris removal is typically organized through the U.S. Army Corps of Engineers and funded through the Federal Emergency Management Agency, but the work is contracted out to disaster recovery companies. FEMA guidance dictates that only storm-related debris removal will be reimbursed.

However, contracts often base payments on the weight or volume of debris removal, which incentivizes contractors to remove the largest, heaviest types of debris. The result, according to numerous firsthand accounts, is that companies routinely remove logs that predate the storm, root balls that stabilize riverbanks, and even live trees. This removal can damage habitats and make river banks prone to erosion. At the same time, smaller man-made trash has often been left behind.

Erica Shanks, the Green Riverkeeper at MountainTrue, oversees a cleanup crew working on the lower stretch of the Green River in Polk County, North Carolina. She reports that the crew has removed over 13,000 pounds of trash after federal contractors completed their debris removal.

On the New River, a contractor's haul includes live greenery. Photo submitted

"The Army Corps moved quickly and efficiently to clean up the mess from Hurricane Helene, but moving fast with little oversight allowed them to cut a lot of corners and in some cases do significant ecological damage to our waterways," says Hartwell Carson, clean waters director at MountainTrue, a Western North Carolina-based nonprofit.

Finding a balance between protecting human life and infrastructure and protecting healthy river ecology is challenging. Advocacy groups suggest taking time to create site-specific work plans, including hydrologists or ecologists in work crews, and basing contracts on length of river cleaned, rather than amount of debris removed, to better protect healthy waterways and result in more effective debris removal. *— By Erin Savage*

Appalachia's Funkiest Fungi

By Jimmy Davidson and Kayla Masterman

Mushrooms are kind of weird, right? They're not plants, and they're not animals, though they are more closely related to animals than plants. They sit in a kingdom all their own — the fungi kingdom.

A mushroom is actually the fruiting body of a generally much-larger organism made up of mycelium — a network of threadlike cells that live in a medium like soil or wood. These threads exchange nutrients and help break down organic material in the process. Mushrooms form to drop spores so the fungi can reproduce. While often unseen or overlooked, fungi are an essential component of virtually every terrestrial ecosystem.

The southern Appalachians are an incredibly biodiverse region, and fungi are a substantial part of that mix. The Smokies All-Taxa Biodiversity Inventory has identified 3,988 species of fungi just in Great Smoky Mountains National Park. Scientists have estimated the actual tally could be as high as 20,000 species.

We've selected 10 of the weirdest of the weird fungi. Hopefully you can find and appreciate some of these beautiful and fascinating local residents in your neck of the woods.

NOTE: Never consume a mushroom (or anything else you find in the wild) that you haven't confidently identified with an expert!

Green Elfcup *Chlorociboria aeruginascens*

The fruiting bodies of the green elfcup are are small and easy to miss at just 1 to 5 millimeters in diameter, but you may have seen one of the distinctive features of this fungus — its mycelium stains the wood it colonizes (often oak) a vivid blue-green or teal color that is rarely found in nature.

Photo: Chuck Sutherland

Most green in nature comes from chlorophyll, which is unstable and breaks down. This makes the stained wood from *Chlorociboria* one of the few long-lasting, non-plant-based green materials in the wild. Even among fungi, most pigmentation is brown, orange, red or purple, making this color genuinely unique.

The staining is due to a pigment called xylindein, which is incredibly stable, both chemically and in light exposure. Xylindein-stained wood has been prized for centuries in decorative wood work. Because xylindein is stable and naturally derived, researchers are exploring its use in organic solar cells, natural dyes and eco-friendly wood stains.

Violet Coral Fungus *Clavaria zollingeri*

The violet coral fungus is a rare fungus found in wooded areas and grasslands of the Appalachian region. Its vivid purple branches resemble coral and can reach nearly 4 inches tall. It is often located near mossy areas and hardwood trees. Though eye-catching, it's best for admiring, not eating. Notably, this fungus contains lectins, which can cause certain cells, like white blood cells, to stick together. Scientists use lectins in medical tests and research due to this ability.

Ecologically, the violet coral fungus plays an important role by breaking down dead plant matter, helping to recycle nutrients in the forest. Delicate and otherworldly, this unique fungus quietly helps keep ecosystems healthy.

Photo: Jimmy Davidson

Dead Man's Fingers *Xylaria polymorpha*

Photo: DanielGuzmanDuchen via Wikimedia Commons

Xylaria polymorpha gets its name "dead man's fingers" from its eerie, finger-like fruiting bodies that rise around 1 to 3 inches tall. When fully developed, it can be found poking up through moss, leaf litter or at the base of dead trees and shrubs, resembling a zombie-like hand reaching up from under the ground. This fungus can be found on buried deadwood of broadleaved trees, particularly beech trees and stumps. By breaking down the wood it inhabits, it leaves behind a nutrient-rich material that other creatures like insects can eat.

In springtime, immature *Xylaria* often develop a whitish to bluish coating made up of asexual spores that help them spread and colonize decaying wood. As they mature, *Xylaria* also produce sexual spores as they continue to break down dead trees and recycle forest nutrients.

Stalked Puffball-in-Aspic *Calostoma cinnabarinum*

Stalked puffball-in-aspic are some of the strangest-looking fungi in the Appalachian forest. Typically found in summer and fall in moist woods, they initially grow underground, but then they emerge as they mature. Their fruiting bodies have bright reddish-orange spore sacs on the ends of whitish stalks, and their heads are covered in a jelly-like "aspic" substance that is thought to help protect the spores from insects and keep them moist while developing. The Latin name *Calostoma* means "beautiful mouth," after the openings at the tops of the spore sacs that look like red alien lips.

These fungi form symbiotic relationships with oak trees, exchanging nutrients with the tree roots through their underground mycelium.

The species ranges from Massachusetts to Florida, but is most commonly found in the Appalachian Mountains, occurring with more frequency at higher elevations. There are some reports of consumption for traditional folk medicine use, but in general, they are considered inedible.

Photo: Jimmy Davidson

Lion's Mane *Hericium erinaceus*

Photo: NCBioTeacher, CC0, via Wikimedia Commons

Lion's mane (*Hericium erinaceus*) is one of the more well-known mushrooms, thanks to its choice edibility and growing presence in supermarkets. Lion's mane appears as fuzzy or hairy white blobs, growing on the sides of living or dead trees. Many people like to eat them, often substituting them for crab meat, though others find them slightly bitter.

Like its equally interesting cousins, bear's head tooth (*Hericium americanum*) and coral tooth fungus (*Hericium coralloides*), lion's mane is also well-known for its bioactive compounds that have potential medicinal benefits. Researchers have found these compounds can stimulate nerve growth factor synthesis, potentially supporting cognitive function, which could be important for mitigating diseases like Alzheimer's or Parkinson's. Studies also suggest potential in treating gastrointestinal disorders such as gastritis and inflammatory bowel diseases, and in fighting gastric and colorectal cancers.

Bleeding Tooth Fungus *Hydnellum peckii*

Common names for this fungus either evoke disgust and fear (bleeding tooth, devil's tooth) or pleasantness and deliciousness (strawberries and cream). However, it is not considered palatable, due to its acrid taste and rough texture. Its main claim to fame is its strange appearance, with a white to pinkish cap exuding bright red droplets, resembling a "bleeding" surface. It also has shaggy "teeth," or basidia, underneath the velvety cap that are specialized structures for producing spores.

In his original description of the fungus, American mycologist Howard J. Banker wrote, "odor of hickory nuts, strong." The fungus is often found under conifers in acidic soils, and its mycelium sometimes extends beyond the site of the fruiting bodies, as far as 11 feet away. It is a rare find in Appalachia, but quite striking if you are lucky enough to come across a fresh one.

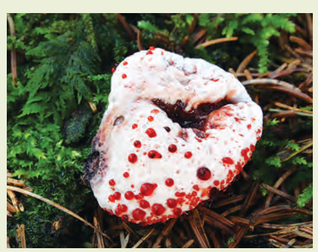


Photo: Holger Krisp via Wikimedia Commons

Hemlock Varnish Shelf *Ganoderma tsugae*

Photo: Jimmy Davidson

Commonly known as hemlock reishi or lingzhi, hemlock varnish shelf are shiny, fan-shaped fungi popular among herbalists and closely related to the Asian reishi mushroom, Ganoderma lucidum. Found from May through November, hemlock varnish shelf mushrooms typically grow on dead or dying Eastern hemlock trees, of which there are an increased number thanks to the invasion of the woolly adelgid insect. In Chinese, "lingzhi" translates to "spiritual mushroom" or "divine mushroom," reflecting its traditional medicinal use. In Japanese, reishi means "ten-thousand-year mushroom," highlighting its association with longevity and healing.

Native to the Appalachian Mountains and commonly found, these mushrooms are treasured for their medicinal properties. Their coloring ranges from red to reddish-brown or orange and has a distinct gradient across the cap. The reishi mushroom is valued for its potential health benefits, including supporting the immune system, enhancing cognitive function, decreasing inflammation and even supporting cancer treatment. However, it should be used sparingly, and doses depend on factors such as age and weight.

Lobster Mushroom *Hypomyces lactifluorum*

Don't let the name fool you, lobster mushrooms aren't true mushrooms. They are a result of a parasitic fungus, Hypomyces lactifluorum, that infects mushrooms like *Russula* or *Lactarius*, transforming them into a bright orange, seafood-scented edible alternative to shellfish.

Photo: Jimmy Davidson

Found in temperate conifer forests in late summer and fall, the lobster mushroom gets its name from its orange and reddish color that resembles the shell of a lobster crustacean. Not only is the coloring similar, but so is the taste! This incredible transformation in the appearance, texture and flavor of the host mushroom makes it a fascinating edible shapeshifter.

As always, don't consume a mushroom if you aren't 100% certain that it is safe. And if you are new to lobster mushrooms, use caution — as with shellfish, some people experience allergic reactions to them.

Eastern American Jack O'Lantern *Omphalotus illudens*

Woe to anyone who mistakes these beautiful orange mushrooms for chanterelles. The latter are a prized edible, but eating jack o'lantern mushrooms can make you violently ill, thanks to their toxicity. Symptoms can last for up to two days and sometimes require hospitalization. The main way to distinguish the two species is that jack o'lanterns are generally larger at maturity and have true, blade-like gills, whereas chanterelles have false gills — but never eat a mushroom you haven't confidently identified with an expert.

Photo: Jimmy Davidson

Some of the toxins in jack o'lanterns that aren't great for your digestive system show promise for use in anti-cancer drugs.

The mushrooms are generally found in shaded areas from June to November and typically grow in clusters on the trunks, stumps and roots of decaying hardwoods, especially oak trees.

Jack o'lantern mushrooms are also bioluminescent — when seen in pitch dark, they emit an eerie greenish glow.

Fluted Bird's Nest Fungus *Cyathus striatus*

Bird's nest fungus gets its name from its unique look: cup-shaped structures that contain spore-filled sacs called peridioles, resembling nests full of eggs. The outer layer has a very efficient way of spending a rainy day. When raindrops fall into the cup, the peridioles, or "eggs," eject out and travel several feet. The force of the launch breaks open the "eggs" and releases an adhesive cord that can attach to nearby wood, where it can reproduce.

These fungi are commonly found from late summer to fall in areas with woody debris and can even be found in backyard gardens. Although they are not poisonous and are not regarded as dangerous to plants, animals or people, they are considered inedible. Bird's nest fungi are not to be mistaken for devil's urn (*Urnula craterium*), which has a larger cup-like shape and appears in early spring. *Photo: Mantonature/Shutterstock.com*

Grazing in the Sun

Enterprising farmers pair agriculture with solar power

Sheep graze and enjoy the shade under solar panels on a farm in Virginia. "Our animals are thriving out there," says Jess Gray, CEO of Gray's LAMBscaping. Photo by Jess Gray

By Abby Hassler

Before a solar developer came to town, Cody Moore was a heavy equipment diesel mechanic and hobby cattle farmer in Washington County, Tennessee.

He enjoyed his job but had always hoped that he could make a go of scratching out a living in full-time agricultural work.

Today, the 27-year-old husband and father of two is a full-time farmer grazing sheep on more than 400 acres of land across five solar sites owned by Silicon Ranch Corporation, a solar developer that operates 25 similar projects across five different states. Moore expects his flock of close to 300 ewes to double in size by next year.

"I never thought that I would be grazing sheep at a solar site," Moore says. "If it weren't for these solar farms, there would be no way I could do this. It would not pencil in for me to have been able to quit my job and be able to farm. There's just no other way."

Moore is involved in agrivoltaics, which is the practice of using land for both agricultural and solar energy production. Unlike single-use solar fields, agrivoltaics involves traditional ground-mounted solar arrays where panels are elevated or spaced out to allow for crop production, pollinator habitats or grazing. It also includes solar technology installed on or around greenhouses.

Agrivoltaics' dual-use approach allows both industries to coexist on the same parcel of land and is rising in popularity. The industry's most comprehensive study comes from the InSPIRE project at the National Renewable Energy Laboratory. According to the InSPIRE agrivoltaics map at the time of publication, 604 sites across the United States represent 10.3 gigawatts and 65,332 acres — figures that have nearly doubled since 2020. That means solar sites on current working farmland are creating enough power for more than a million U.S. households.

Most solar development isn't happening in Appalachia — California, Texas, Florida and other sunnier states are still leading the charge, according to the U.S. Energy Information Administration. However, agrivoltaics advocates in the region believe that when done well, the co-location of renewable energy and agriculture can offer numerous environmental and economic benefits for Appalachian communities.

In 2024, Silicon Ranch Corporation practiced agrivoltaics on close to 13,000 acres, with seven partners on 25 different sites across five states. Photo by Cody Moore

Solar grazing: Empowering farmers, one flock at a time

Many agrivoltaic projects in the U.S. involve sheep grazing, where shepherds like Moore — either contracted by solar developers or hired internally — use their flock to control vegetation.

"It's no different than you would hire someone to mow your yard," says Eric Bronson, owner of James River Grazing Company. "I just happen to do some of it with sheep."

Bronson grazes sheep on a nearly 2,000-acre, 175-megawatt site in Charles City, Virginia. He is also the Mid-Atlantic senior Smart Solar specialist for American Farmland Trust, a nonprofit with the goals of protecting farmland and farmers and promoting environmentally sound farming practices in Appalachia and the rest of the country.

He grew up in Virginia and returned to the region after college, where he managed a small cattle operation but had difficulty accessing land. Like many farmers, Bronson also worked an off-farm job for nearly a decade before a solar facility opened up near him, and he jumped at the chance to get into agrivoltaics. Like Moore, he says he would be unable to farm full-time without solar.

"I think Appalachia is in the perfect position when we look at agrivoltaics," Bronson says. "One thing that's unique about the Appalachian region is when we look at Southwest Virginia, where the bulk of sheep production happens in the state, it has the highest density and number of sheep and producers. That's where we would like to see people be able to harness these opportunities."

Gray's LAMBscaping, owned and operated by Jess and Marcus Gray in Chatham, Virginia, manages thousands of acres of agrivoltaic projects across the state, working with major organizations and utility companies, including Dominion Energy.

"We're practicing this idea of making [land] better than before we got there," says Jess Gray, who serves as the company's CEO. "When it gets returned to farmland, it's going to be thriving farmland. We're putting in more than we're taking out. And I wish more people would recognize that dual-use solar is a fantastic idea because we're getting clean energy but also taking time and almost letting the field be fallow again."

Over time, sheep improve the soil they graze on through natural fertilization, depositing rich nutrients back into the soil, explains Jess Gray.

"We are changing the soil in a good way and a super positive way," she says. "We're giving back what it needs."

Sheep grazing opportunities can also take "some of the volatility out of the agricultural market," says Moore. Farmers can count on a steady income stream from solar companies for vegetation management and then sell their sheep. It also gives farmers the chance to diversify into new income streams.

"It's about getting people to understand that agriculture changes, and it's supposed to change," Jess Gray says. "It doesn't have to look the way it did when your grandparents started farming."

However, not every farmer was as keen as Moore, Bronson or Gray when presented with the opportunity to enter the solar grazing space. Around a decade ago, Johnny Rogers, owner of Rogers Cattle Company, was leasing his pasture-based livestock farm in North Carolina when his landlord decided to build a 30-acre solar array on the property.

Continued on next page

Grazing in the Sun

Continued from previous page

"Originally, what I thought was going to be a bad situation actually turned out to be a significant part of our farming enterprise from a revenue standpoint," says Rogers, who now also serves as the program coordinator for North Carolina State University Extension's Amazing Grazing Program and sits on the advisory board of the American Solar Grazing Association. "The sheep are getting paid to graze that grass."

Land use concerns and misinformation

As renewable energy demand has increased in recent years, the large-scale deployment of solar energy presents concerns about land use and sustainable land management practices, particularly on high-quality agricultural land.

Ashish Kapoor, senior energy and climate advisor at Piedmont Environmental Council, a Virginia conservation nonprofit, cautions that the tension between prime agricultural lands and the renewable energy transition "runs pretty deep" and emphasizes the need for farmer-first approaches.

"Dual use is two things together," Kapoor says. "Thoughtfully developing projects from the agricultural side will be critical at the small and large scale for agrivoltaics to be something that's viable and is accepted."

Bronson acknowledges that anyone in agriculture is aware of that tension point around land use. At the American Farmland Trust, he and others on his team serve as a middle ground between solar and agriculture to facilitate "smart solar" solutions and help equip farmers with the tools they need to be successful in the space.

"We have to evaluate each project on its own merits because solar is not this giant monolithic thing that's spreading across the landscape," Bronson says. "I think it's really important that the public knows that continued agricultural production on [land with solar arrays] is possible. And we can signal to our elected officials that this is important to us."

Additionally, Jess Gray has been surprised to encounter a lot of misinformation and anti-solar sentiment from the public, including those who believe no farmers should be building or participating in solar.

"What frustrates me is nobody ever took the time to talk to the farmer," Jess Gray says. "Some families have been slugging away for generations, and they're in debt to their eyeballs. Solar provides an opportunity to potentially provide for their family or lift generational debt. It's hard not to weigh that out."

Jess Gray works hard to showcase the opportunities that come with agrivoltaics and the importance of uplifting rural voices and inviting them into the conversation.

"It's a really welcoming, open industry," says Jess Gray. "Let's build those local economies that we've neglected and moved [on] without them. Let's give them tools [so] they can be successful."

By Moore's estimate, skyrocketing property values in his region have made the odds of a farmer purchasing land and keeping it in agricultural production "slim to none."

"It's important for people to realize that although a family farm might be being sold and a solar company might be purchasing it, it gives young people like me the opportunity to participate in agriculture," Moore says. "This gives me the opportunity to feed my family doing what I love."

"I can't farm a subdivision," Moore jokes.

Future opportunities with agrivoltaics

Beyond sheep grazing, there are plenty more agrivoltaic applications and opportunities for farmers, developers and landowners alike.

Allison Wickham, founder of Siller Pollinator Company, receives nearly half of her company's revenue from pollinator services for solar installations. The Charlottesville-based company also offers beekeeping classes and sells beekeeping equipment.

"I will boldly say that solar is probably the best opportunity for native pollinators that we have seen in a very long time," Wickham says. "It's this amazing, nonpartisan environmental effort to increase the percentage of native flowers that we have out there, which is just good for everybody. It's good for the land, the site, the bugs, the birds and the people."

Wickham also oversees one solar site that installed honeybee hives,

"We can be producing clean energy and simultaneously retaining the agricultural character of this land," said Allison Wickham, founder of Siller Pollinator Company. "Beekeeping is a verified, bona fide agricultural activity. Having a legitimate honey production operation on-site keeps the land agricultural." Photo by Allison Wickham

which the U.S. Department of Agriculture defines as domesticated livestock. Wickham says the practice faces a harder uphill climb than sheep grazing due to misunderstandings about the level of risk for solar workers near hives and how to implement this form of agrivoltaics. Despite this slow start, she is hopeful of some rising interest from the solar industry.

"It will present opportunities for beekeepers, produce food on-site and improve the local ecosystem," Wickham says. "It's a win-win-win."

Another project in Northern Virginia is exploring the possible benefits of agrivoltaics. Piedmont Environmental Council is installing 42 solar panels at its Community Farm at Roundabout Meadows in Loudoun County to explore the feasibility of crop-based agrivoltaics and inform future policy and projects. The panels will be spaced out and raised 6 feet to allow for both raised-bed and in-ground crop growth underneath.

Led by Kapoor, the project should be completed later this year and serve as a demonstration site that local farmers, nonprofit organizations, developers and policymakers can visit to see how communities can retain rural character, continue agricultural activity and provide clean energy — all at once.

"We want to share very clearly and openly and in ways that are not intimidating for folks that are thinking about these projects themselves," Kapoor says. "People can start thinking about, at least in our region, that juxtaposition of agriculture and solar in a different way, and that can then inform agrivoltaics, small and large, in a productive way in the next five years." ◆

Facing a Funding Fight

The president shared his budget priorities. Now Congress decides.

By Appalachian Voices staff

Under the U.S. Constitution, Congress is the branch of government that writes laws and decides how to spend money, and the president is responsible for spending money in accordance with those laws. Presidents share their spending priorities with Congress and the public in the form of a proposed budget. Then, it's up to Congress to decide whether or how to act on the president's requests and the requests of their constituents (that includes readers like you).

In May, President Donald Trump issued his annual funding proposal, requesting a $557.4 billion budget for non-defense items and $892.6 billion for defense. This excludes separate, mandatory funds included in the "One Big Beautiful Bill" that he signed July 4. At press time in July, Congress was developing government spending bills known as appropriations, which may or may not reflect the president's wish list.

Below, we take a look at some of Trump's proposals for Fiscal Year 2026 that have a disproportionate impact on the air, land, water and local economies of Appalachia. Find more proposals online at appvoices.org/thevoice, and read about funding related to miner safety and preventing black lung on page 21 and AmeriCorps on page 3.

Key

X = President Trump proposes eliminating this agency or program

*Fiscal Year 2025: Oct. 1, 2024-Sept. 30, 2025 | Fiscal Year 2026: Oct. 1, 2025-Sept. 30, 2026

Appalachian Regional Commission

2025* appropriation: $200 million
Trump's 2026* request: $14 million

What it does: The Appalachian Regional Commission promotes economic development in partnership with state governments across 423 counties in 13 Appalachian states. ARC programs address many aspects of life, including infrastructure, workforce development, housing and education. The proposed cut would effectively eliminate ARC's ability to award critical grants.

X Department of Energy Office of Clean Energy Demonstrations

2025 appropriation: $50 million
Trump's 2026 request: $0, eliminating the office and cancelling $3.7 billion in previously allocated funding.

What it does: OCED's mission is to work with the private sector to test new energy technologies at a usable scale and accelerate their deployment and market adoption, including projects in rural or remote areas and on current and former mine land.

X Economic Development Administration

2025 appropriation: $68 million
Trump's FY 2026 request: $30 million for administering already-awarded grants as the agency closes.

What it does: The EDA provides grants and technical assistance to communities to build the necessary public infrastructure that can lead to private investment, create plans to diversify their local economies, and prepare for and recover from the economic impacts of natural disasters.

Environmental Protection Agency Brownfields Program

2025 appropriation: $25.7 million
Trump's 2026 request: $12.8 million

What it does: "Brownfields" are sites where hazardous substances or pollution prevents the reuse or redevelopment of that site — like in the case of abandoned former industrial sites, gas stations or old buildings with lead paint or asbestos, or places where oil and gas have been stored. This program provides grants to clean up and redevelop those brownfield sites.

EPA Enforcement

2025 appropriations: $375.4 million
Trump's 2026 request: $191.7 million

What it does: The EPA's original mission is to protect health and the environment. It is responsible for holding companies accountable for protections such as limits on chemicals that companies can release into the air and water, and pesticides that can be used on our food and sold in stores, and other health protections.

X EPA Wetland Program Development Grants

2025 appropriation: $14.1 million
Trump's 2026 request: $0

What it does: This program's goal is to increase the amount and quality of wetlands. Funds support state and tribal governments in developing programs for wetland preservation and management. Wetlands protect human health and safety by absorbing floodwaters, controlling erosion, filtering pollution and improving water quality.

X Low-Income Home Energy Assistance Program

2025 appropriation: $4.1 billion
Trump's 2026 request: $0, eliminating the program and rescinding $100 million in previously allocated funding

What it does: LIHEAP provides limited financial assistance to low-income people to pay their energy bills. This program helps prevent deaths and illnesses related to hot and cold temperatures and helps protect people who rely on refrigerated medications or health equipment that requires electricity.

National Park Service Operations

2025 appropriation: $2.89 billion
Trump's 2026 request: $1.99 billion

What it does: 332 million people visited the more than 433 units managed by the NPS in 2024, including monuments, national parks, recreation areas, historic sites and other designations. The park service is charged with protecting and maintaining these natural and cultural sites and facilities for the public.

Office of Surface Mining Reclamation and Enforcement

2025 appropriation: $116 million
Trump's 2026 request: $101 million

What it does: OSMRE is responsible for ensuring coal mines are operated and cleaned up in accordance with federal law to protect people and the environment. In many areas where states or tribes don't have their own mining programs, OSMRE reviews mine permit applications and enforces health and safety requirements.

U.S. Department of Agriculture Rural Utilities Service

2025 appropriation: $8 million
Trump's 2026 request: $0 (the program would continue to operate with $10 million in carry-over funding)

What it does: The Rural Utilities Service provides financing for infrastructure improvements in rural communities, including electric power, telecommunication and broadband, and water and waste treatment.

X U.S. Fish and Wildlife State and Tribal Wildlife Grant Program

2025 appropriation: $72 million
Trump's 2026 request: $0 (the program would continue to operate with $59 million in fees and other funding sources while closing out the fund for future use)

What it does: This program provides funding to support state and tribal efforts to conserve rare or declining fish and wildlife populations. The program has prevented numerous species from declining to the point that they become eligible for Endangered Species Act protection.

X U.S. Forest Service State, Private, and Tribal Forestry Program

2025 appropriation: $283,500
Trump's 2026 request: $0 (the program would continue to operate with $969 million in fees and other funding sources while closing out the fund for future use)

What it does: This program provides technical and financial assistance to landowners and resource managers to

Continued on page 29

Miners and Advocates Push for Better Black Lung Benefits and Protections

By Annie Jane Cotten and Rance Garrison

On a rainy May afternoon, nearly 20 members of the Southwest Virginia Black Lung Association Chapter II gathered in Big Stone Gap to discuss the black lung crisis, which has been rising among Appalachia's coal miners, often at younger ages.

The Black Lung Association provides a support network for miners and their families who have been impacted by black lung disease, with a focus on securing more robust protections, health care and compensation for affected workers. At the May meeting, members discussed how potential further reductions to federal mine safety agencies could affect those currently working in the mines.

When a miner is diagnosed and is approved by the Department of Labor for the black lung program — a complicated process involving doctors and lawyers — they and their dependents are entitled to medical and financial benefits. But these benefits have not kept pace with rising inflation.

Despite their limitations, these funds are a vital lifeline to miners and their families struggling to pay the bills.

"If we did not have that money, that 1,100 and some dollars, we would not be able to survive. There's no way," says Vonda Robinson, vice president of the National Black Lung Association, whose family receives benefits because her husband has black lung disease.

Benefit levels are currently tied to the federal employee pay scale rather than the real cost of living, which often means benefits don't keep up with inflation. Inflation rose by 8% in 2022, but the annual benefits increase the following January was only 4%.

Miners and advocates have repeatedly lobbied Congress for legislation, such as the Black Lung Benefits Improvement Act, that would tie benefit levels to cost of living adjustments annually. The bill has been introduced multiple times since 2014, but despite widespread public support from coalfield communities, it has not yet been enacted into law.

According to Judy Riffe, a miner's widow and a member of the Wyoming County Black Lung Association in West Virginia, it's critical to pass the legislation not only for retired miners who have been diagnosed with black lung, but also for young miners who are still working, even after a diagnosis.

"They know they can't survive on the current benefits," Riffe says. "They have families to raise. So they keep working for as long as they can, even when it hurts them."

This year, local governments in Kentucky, Ohio, Pennsylvania, Virginia and West Virginia have passed resolutions calling on Congress to raise black lung benefit levels and tie them to inflation. Appalachian Voices, the publisher of this newspaper, and regional Black Lung Associations have followed the lead of Appalachian Citizens' Law Center and other community leaders in introducing these resolutions.

So far, these resolutions have received warm receptions by county boards and other local government leaders, and more are expected. ◆

Judy Riffe, the surviving widow of a miner who had black lung disease, sat down to speak with Appalachian Voices at a Black Lung Association meeting in May. Photo by Annie Jane Cotten

Appalachian Voices staffer Quenton King (center) catches up with black lung nurse Debbie Johnson (left) and Black Lung Association Vice President Vonda Robinson (right) during a conference in West Virginia in May 2025. Photo by Annie Jane Cotten

Federal Cuts and Delays Hamper Mine Safety Efforts

Coal mining exposes miners to harmful silica and coal dust, each of which can lead to black lung. Last year, a new silica dust rule was issued by the Mine Safety and Health Administration under President Joe Biden's Department of Labor. The rule requires coal companies to reduce respirable dust in the workplace, monitor dust levels more frequently, and provide free periodic health exams for miners. The rule also updates old, ineffective standards for personal protective equipment like respirators.

President Donald Trump is requesting $40 million in budget cuts at MSHA, which will make it more difficult for the rule to be implemented. The agency also rescinded job offers for nearly 100 new mine inspectors earlier this year. In April, MSHA announced that it would delay enforcement of the new silica rule.

The silica rule's implementation isn't the only challenge facing miners and health advocates. The National Institute for Occupational Safety and Health and its Coal Workers' Health Surveillance Program provides free, confidential black lung screenings and support to clinics across the nation. This past April, Health and Human Services Secretary Robert F. Kennedy, Jr., dismissed most NIOSH staff.

In May, some NIOSH employees returned to work following public and congressional pressure, but a key division within NIOSH developing a real-time silica dust monitor remains closed.

"The actions we've seen this year indicate a blatant disregard for coal miner safety and well-being," says Appalachian Voices Government Affairs Specialist Quenton King. "Cutting long-standing, vital programs isn't how we take care of the people who've kept the lights on."

Citizen Air Monitoring Network Grows Stronger in West Virginia's "Chemical Valley"

Individual and organizational efforts are giving Appalachians more information about the air they breathe

By Joe Severino

Kathy Ferguson's family had always attributed her grandfather's health issues to air pollutants from the nearby rubber plant.

A longtime resident of Institute, West Virginia — a small, unincorporated town just west of Charleston on the Kanawha River — Daniel L. Ferguson suffered from cancer of the larynx later in his life. Kathy Ferguson remembers how when she was a child, her family members would discuss the mysterious black residue they would often find caked on their cars. She also remembers two environmental emergencies stemming from leaks at local factories.

The nearby Union Carbide plant, now owned by Dow Chemical, has long been a mainstay in Kanawha Valley, nicknamed "Chemical Valley" for the many petrochemical plants situated along the valley floor and Kanawha River.

For more than 75 years, it's also been a major source of environmental hazards for local communities.

Residents of Institute, the only majority-Black census tract in all of West Virginia, have long been exposed to disproportionately high levels of air and water pollution. The risk of cancer near the Dow Chemical plant is 36 times higher than the U.S. Environmental Protection Agency's acceptable level, according to a ProPublica analysis. Other health issues are also prevalent in Institute — right next door to the plant.

In 1985, more than 100 residents near the then-Union Carbide plant were treated for eye, throat and lung irritation after a gas leak that garnered national attention. It came on the heels of a Union Carbide plant gas leak in Bhopal, India, just months before, which killed more than 2,000 people.

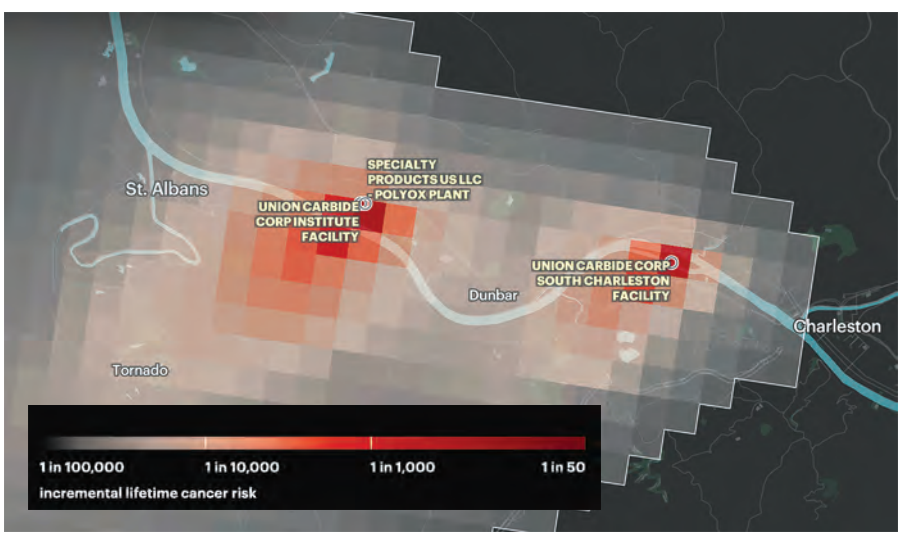
Pam Nixon, an Institute resident and former environmental advocate for the state Department of Environmental Protection, said her sickness resulting from the 1985 leak turned her into the activist she would become over the next 40 years.

"All I could think of was, [the death toll in Bhopal] was something that could have happened in Institute," Nixon says.

Ethylene oxide, a cancer-causing chemical used by the Dow Chemical plant to make antifreeze, has been linked to increased risk of diseases like breast cancer, leukemia and lymphoma. Short-term exposure can lead to respiratory and skin irritation.

Kathy Ferguson, now a prominent community advocate one generation younger than Nixon, has picked up the torch and made environmental justice one of her top priorities.

Top: A PurpleAir monitor on the back porch of West Virginia Citizen Action Group's office in Charleston. Below: Tanks from Institute's Dow Chemical plant peek through the trees behind West Virginia State University's campus. Photos by Joe Severino



Map displays the incremental lifetime cancer risk near sources of industrial emissions. Map and analysis by ProPublica, 2018

"Our health outcomes are tied to the quality of our land, water, air," she says.

Monitoring air quality

West Virginia Citizen Action Group, a civic engagement organization active since the 1970s, is one of a few community groups taking matters into their own hands. Through the strategic placement of PurpleAir monitors — devices that track and record levels of certain common airborne pollutants — the group is building a network of citizen air monitoring sites and volunteers throughout Kanawha County. PurpleAir monitors provide real-time data on a publicly available interactive map to track by-the-minute changes in air quality.

Morgan King, climate and energy program manager for WV Citizen Action Group, explains that her organization has helped place 41 air monitors around the state over the last couple of years. These monitors stretch from places like Lewisburg and Davis, where there is little nearby industry affecting typical air quality, to multiple neighborhoods throughout the Kanawha Valley.

According to King, they plan to place 30 more this summer. Four of the group's PurpleAir monitors are in Institute. They have placed 15 total monitors throughout the Kanawha Valley.

Appalachian Voices, the regional nonprofit organization that publishes The Appalachian Voice, has also been collecting data with community partners from its own PurpleAir monitors since late 2023 as part of the Upper South and Appalachia Citizen Air Monitoring Project, or USACAMP. In West Virginia, those partners include Coal River Mountain Watch, a grassroots environmental organization in a community affected by coal mining, and the Institute Pinewood West Dunbar Sub Area Planning Committee, a community development organization focused on infrastructure and other community assets in Institute and surrounding communities.

More than 60 USACAMP monitors are currently installed at sites across Kentucky, Pennsylvania, Tennessee, Virginia and West Virginia. In the Mountain State, these monitors are dispersed throughout coal-mining areas in McDowell and Raleigh counties, with additional monitors in Beckley and Institute. Data from these monitors is being collected over a three-year period and analyzed against the federal standards for fine and coarse particulate matter, or PM2.5 and PM 10, respectively.

The goal of the project is to evaluate particulate matter levels in communi-

Continued on next page

Citizen Air Monitoring

Continued from previous page

ties where the EPA is not actively collecting its own data.

Projects like the USACAMP and WV Citizen Action Group's air monitoring network will give the public a better understanding of air pollutants in their neighborhoods in real time, according to King. A few years ago, many people in West Virginia could not find local information, as the state Department of Environmental Protection's current ambient air quality monitoring network only covers portions of 12 of the state's 55 counties. Though PurpleAir devices are less precise and reliable than the more expensive and complicated equipment used by regulators, West Virginians can now view the nonprofit organizations' monitors publicly.

A vital step in growing WV Citizen Action Group's air monitoring network will be storing this data and finding ways to use it effectively, King explains. Currently, they do not have enough data to track air quality trends over time. Once they acquire sufficient data, advocates will have a clearer picture of which neighborhoods and regions are most affected by air pollution.

King points to the success of citizen use of "methane sniffers," which are small tools that the public is using to point inspectors in the right direction when looking for gas releases coming from unplugged wells. The West Virginia Department of Environmental Protection lists 16 oil and gas inspectors who are responsible for monitoring more than 100,000 wells.

Similarly, WV Citizen Action Group wants the community air monitoring network to help track air pollutants.

Facing headwinds

Community air monitoring has barriers in a place like West Virginia. PurpleAir sensors retail for nearly $300 and require a stable internet connection. In a rural state where average household incomes are some of the lowest in the nation, organizers said there are financial and logistical hurdles to expanding this program.

The West Virginia Manufacturers Association has also sought to thwart community air monitoring as these projects take form. Industry lobbyists have worked in the West Virginia statehouse in recent years to craft legislation barring any official use of this data, including as evidence in lawsuits and regulatory enforcement.

Left: Warne and Kathy Ferguson in the early 2000s. Photo courtesy of Warne and Kathy Ferguson. Right: Pam Nixon tables at an event in the early 2000s. Photo courtesy of Pam Nixon

Mountain State Spotlight, an investigative news outlet in West Virginia, reported the Manufacturers Association worked with the Chemours Company to lobby for this legislation. Chemours operates a chemical plant in Belle, a small town about 20 miles upstream from Institute.

The bill failed to pass in 2024, with some lawmakers citing concerns that the attempt to bar courts from considering community air monitoring data violates the equal separation of powers amongst the legislative, executive and judicial branches of government. In 2025, proponents of the anti-community air monitoring bill agreed to drop the provision restricting courts, but the legislation failed to pass for the second year in a row.

Passing down knowledge

Back in Institute, Ferguson describes her efforts in recent years to inform the area's newer residents of the risk of air pollutants. Over the past couple of decades, the town has lost much of the "old guard," Ferguson says, and new families have moved in without knowing much about Institute's history.

"Institute was a very homogeneous place," she says. "It just wasn't really that kind of community anymore."

Ferguson explains that concerns about the environment can be tough to relay to working-class families who are trying to just put food on the table.

"I think there is a lot of resistance and a lack of capacity to really be interested in this issue beyond just knowing. Folks in West Virginia, across the board, irrespective of race, are dealing with bread and butter issues," she says. "To have this other thing that you can't see — it's easy to sort of ignore it."

People are generally appreciative of her advocacy, Ferguson adds. But the conversation usually ends there.

"It's one of those things where unless something really happens, folks are okay to just know, and not do," she says.

Ryan Kirkpatrick, 22, is one of the Generation Z environmental advocates working in West Virginia. A lifetime resident of nearby Charleston and current student at West Virginia State University, Kirkpatrick said he became aware of the issue of air pollutants in Institute at a young age. He went door-to-door in the community conducting surveys about health outcomes, and found that nearly every person either had cancer themselves, had a relative with cancer, or had a relative who had died in recent years of cancer.

"I related to them," says Kirkpatrick, whose mother suffers from Crohn's disease, which has been linked to chemical air pollutants.

Kirkpatrick said his mother attended an alumni event at West Virginia State University years ago to find a half-dozen classmates were also suffering from Crohn's disease. WVSU, a historically Black university, is adjacent to the chemical plant.

He is also concerned about severe flooding worsened by a warming atmosphere. Kirkpatrick has volunteered with flood recovery efforts in the past, and comments that there is a "hopeless" feeling when helping children and families sort through the remains of their water-ravaged homes. But he thinks it's important to keep doing the work necessary to fight climate change and air pollution that started generations ago.

Kathy Ferguson's father, Warne Ferguson, and Mildred Holt were two community icons Pam Nixon named most essential to first bringing awareness to the environmental racism happening in Institute. Nixon thanked "the old guard" that came before her — principled advocates who championed their community throughout their lives, reminding naysayers that Institute was a thriving community and college town long before the Union Carbide plant moved in.

"The community and the school were there before the facilities moved there. That community has been around for 140-plus years," Nixon says.

As for solutions, Ferguson supports legislation that would put a moratorium on new chemical or energy plants in Institute. She argues that addressing the air quality and negative health outcomes that have come from these plants is far more critical than any jobs a new facility would create.

Additionally, Kirkpatrick believes financial compensation should be directed toward Institute residents who have suffered from cancers and other diseases linked to increased air pollution.

Community air monitoring is one big step in the right direction toward keeping chemical companies honest with their neighbors next-door, according to Nixon.

"We still have to be vigilant in holding the companies accountable for what they're doing when they're working within our communities," she says.

Citizen air monitoring in the Mountain State could be more important than ever, as West Virginia Gov. Patrick Morrisey has deemed data centers the critical centerpiece of his economic development agenda. These data centers, which are largely unregulated and require copious amounts of energy and fresh water, also release air pollutants into nearby neighborhoods. ◆

East Tennessee Nonprofit Welcomes First-time Homebuyers into Affordable, Energy-efficient Home

By Abby Hassler

Shawn O'Brien and Nicole Yacura knew they wanted to move to Knoxville, Tennessee, but needed to find the right home. After touring 12 houses with their real estate agent, they couldn't get one off their minds: Candora House.

"We saw four houses after this [one]," O'Brien says. "I didn't really think about them. I liked this house the first time I saw it."

Candora House is the nickname for the city's third solar home built by the local nonprofit SEEED, which stands for Socially Equal Energy Efficient Development, through its Green Construction Program. According to SEEED, the home is net positive, or "built to produce more energy than it consumes annually," and is part of the nonprofit's larger mission to build "energy-efficient, affordable housing that not only supports the environment but also empowers the local community."

"We're in the works to do seven more houses [like the Candora House]," says JD Jackson, SEEED's chief operating officer, at a ribbon-cutting ceremony for the home. "We're thinking of ways to push the envelope, to make these houses as energy efficient as possible, and to help the environment, not to hurt the environment."

SEEED's vision is to build healthy and regenerative communities where all can thrive, focusing on sustainability, personal development and equity. Through its Green Construction Program, SEEED pays young people in Knoxville to learn sustainable construction skills by working on each of their energy-efficient home projects.

"It feels like part of the bigger plan," says Jerome Johnson, co-founder and project manager of the Green Construction Program at SEEED. The bigger plan, Johnson shares, is "fulfilling our purpose."

"The Earth doesn't have hands or feet; we do. We use our hands and feet to do the things that it can't," he continues.

O'Brien and Yacura's new three-bedroom, two-bath home features a 16-panel solar array with battery storage, an electric vehicle charging station, and 2×6 advanced wood framing on its exterior walls to boost insulation. The house also has low-energy LED lighting, energy-efficient appliances and a high-efficiency heat pump water heater, which is projected to save the homeowners $600 annually. Additionally, contractors used a new kind of low-carbon concrete for the driveway, which contains 31% less carbon dioxide than standard mixes.

Homeowners Shawn O'Brien and Nicole Yacura cut the ribbon on their net-zero solar home alongside representatives from SEEED, Oak Ridge National Laboratory and other partners. Photo by Abby Hassler

"I work in civil engineering in the energy industry," O'Brien says. "I'm happy I can support a project that's going for net zero."

The home was made possible thanks to monetary and technical support from Oak Ridge National Laboratory, Aslan Foundation, CEMEX/Ready-Mix USA and UT-Battelle. To inform future projects, the homeowners will share energy savings data with SEEED and key partners.

Kashif Nawaz, section head for building technologies research at ORNL, explains the home serves as "an excellent framework to really improve the technology on a smaller scale, which eventually can be deployed on a much larger scale."

"We've just got to do this about a million more times, and I think we'll be making a dent," remarks UT-Battelle CEO and ORNL Director Stephen Streiffer.

The demand for these homes is growing. While SEEED waited months for buyers for their first two homes, the nonprofit sold "Candora House" before the building was complete, which Jackson calls "divine intervention."

"[O'Brien and Yacura] never owned a home before," Jackson says. "That's what we look for: low-to-moderate income families, first-time buyers. They were just so delighted to get into the house. And they appreciate it."

Access to affordable housing in the United States is an important issue, shares Streiffer.

"The fact that we're contributing to this [house], that it is built with modern technology that incorporates cool features — and will be a good house to live in, an easy house to live in, and an affordable house to live in — is just great to see," Streiffer says. ◆

SEEED Executive Director and Founder Stan Johnson (right) and Chief Operating Officer JD Jackson (left). Photo courtesy of SEEED

Founded in 2009, SEEED's mission is to provide "pathways out of poverty for young adults through career readiness training, environmental education and community engagement." In February 2025, The Appalachian Voice spoke with SEEED leaders about the nonprofit's vision, recent wins, workforce development programs and passion for environmental stewardship. Visit appvoices.org/seeed to read the Q&A!

People vs. Pipelines

Perspective from a farm in East Tennessee

By Holley Evergreen Roberts

Patricia Smarsh of Wartburg, Tennessee, recalls growing up on a 100-acre farm that grew tobacco, corn and hay, and included a herd of cattle, pigs and chickens.

"That childhood that I was raised in made me who I am today, even though I tried to bypass it out of college and go to the big cities," she says. "But now there's no place like having the trees, fields and creeks."

Smarsh and her husband, Jeffrey Gilliam, now own their own 6-acre plot of land in the area, but it's threatened by the Ridgeline Pipeline, a proposed methane gas project from Enbridge Inc.

"When the Enbridge rep came to the door wanting signatures for a survey, that's how we found out," Smarsh says.

The Enbridge representative informed them about a small easement from 1949, back when land deeds were handwritten. Prior easements like these can give pipeline companies broad leeway to add new infrastructure, and these provisions are not always clear to landowners.

"We did not know it was going to be such a big pipe and that it was going to be methane," she says.

The couple is deeply concerned about the impacts the pipeline could have on their well water and the diverse flora and fauna around them, among other threats the pipeline poses. One of Smarsh's many concerns is the family's trees.

"We've got a couple of 70- to 80-year-old crepe myrtles out here along the driveway, and they're just beautiful," she says.

When the Enbridge representative asked multiple times why she couldn't just do away with them and plant new ones afterward, Smarsh said she told them emphatically, "because we'll never see a tree like that again in my lifetime!"

Gilliam adds, "Yeah, they act like our trees and our property ain't nothing, you know? There's resources on the Earth to provide everything we need without having to destroy the Earth and ourselves for it," he says, "but they can't make money off of it."

Smarsh described Enbridge's process of dealing with landowners as wearing people down until they give in to the company out of exhaustion.

The Tennessee Valley Authority is behind Enbridge's pipeline because TVA wants to use the gas for a new power plant at its Kingston site. The couple would rather see "alternative types of truly more environmentally friendly options."

Their advice for people facing similar offers from companies like Enbridge is: "If you don't understand [their offer], ask questions. Don't rush in. If you can't get your questions answered, ask for help."

They implore the decision-makers at TVA and Enbridge to practice "open heartedness and good communication, and take a minute to stand in others' shoes ... and think about the generations to come."

Smarsh adds, "[The] Lord made this planet for us to live on, you know, and it's alive itself. So, I mean, if we continue down this path, you're not only killing the planet, but you're killing us, too." ◆

Patricia Smarsh and Jeffrey Gilliam stand in front of their crepe myrtles. Photo by Abby Hassler

'Pipeline companies try to plow over Appalachian land owners'

Patricia Smarsh co-authored an opinion piece published in Knox News about interacting with Enbridge.

"We and many of our neighbors implore others whose land is threatened not to be charmed. It can seem appealing to accept an offer of a few thousand dollars, especially when many of us are barely making it financially, but Enbridge and their subsidiaries do not have our best interests in mind ... Do not take any verbal claims at face value, and do not sign anything without first seeking counsel."

Read the full piece ⟶

TVA Pursues Multiple Methane Gas Power Plants and Pipelines

The Tennessee Valley Authority is planning the biggest methane gas buildout of any utility this decade. TVA has proposed nine new gas power plants since 2020, and the three largest of them — Kingston, Cumberland and Cheatham — would each involve new pipelines to be constructed by multibillion-dollar pipeline corporations.

The 122-mile Ridgeline Pipeline would be built and operated by East Tennessee Natural Gas LLC, owned by Enbridge Inc. The pipeline would feed a new gas plant that TVA is planning outside of Kingston, Tennessee, to replace its retiring Kingston coal plant. Ridgeline would cross eight Tennessee counties and cross waterways over 400 times. Construction on the Ridgeline pipeline could start as soon as this year. Appalachian Voices, the organization that publishes this newspaper, has appealed the air permit issued for the gas plant's construction by the Tennessee Department of Environment and Conservation and is part of a separate legal challenge to TVA's decision to replace the Kingston coal units with a new methane gas plant.

The Cumberland and Cheatham pipelines, and the gas plants they would feed, are all part of TVA's plan to replace its retiring Cumberland coal plant. TVA has contracted with Kinder Morgan to construct these pipelines.

Construction has begun on the Cumberland pipeline, and Appalachian Voices is involved in a legal challenge to the Federal Energy Regulatory Commission's issuance of a Certificate of Public Convenience and Necessity for the project. Appalachian Voices is also part of a lawsuit challenging TVA's compliance with the environmental review process for the new gas plant in Cumberland City.

The Cheatham project timeline isn't clear. TVA hasn't finalized the environmental review and decision-making process required by federal law. Meanwhile, significant community opposition in Cheatham County has drawn attention from officials in the Trump administration.

Community advocates argue that these gas projects aren't necessary because there are more affordable, cleaner and safer ways to generate power that don't pollute air, threaten water or take residents' land for pipeline companies to profit from. — *By Jen Lawhorne*

Attendees outside the first open house that TVA held in Cheatham County in June 2023. Nearly 400 people showed up. Photo by Angie Mummaw

Community Resilience

Continued from page 9

zation formed out of Camp Miller. "We didn't need a lot of resources to run the camp, so we could then deploy those resources to the community."

At Piney Hill Baptist Church, Brown was able to secure dozens more solar generators from an international aid organization after the initial donation from Footprint Project prompted the community's interest in renewable power. Before the storm, solar wasn't something many of Brown's neighbors considered investing in as an energy source.

"I had so many conversations with people who were just really excited about [solar]," says Brown, highlighting widespread concern not to be "caught" again without power for an extended period of time. "While those [initial] resources provided a really important stop-gap after the storm, it's also provided really good information for people about what solar can do and what role it might play in their lives."

The need for long-term community resilience hubs

Countless community disaster relief hubs, such as Camp Miller or Piney Hill Baptist Church, sprang up in the wake of Hurricane Helene. But after rapid aid has been delivered and the long, arduous process of rebuilding has begun, the question remains of how Western North Carolina and other regions of the country can better prepare for future disasters. Some organizations are looking to establish long-term community resilience hubs to serve as safety nets for residents in both good times and bad.

In an ideal scenario, these hubs would be equipped with renewable infrastructure, such as solar microgrids, to maintain reliable access to electricity in the event of grid outages. This power reliability would ensure continued access to critical communications equipment, electric well pumps or filtration devices for clean drinking water, as well as provide safe spaces to distribute food, hygiene products, clothing and medical supplies.

"I think the storm certainly drove home the need for more resilience in our energy system and more localized energy resilience to respond to large-scale disasters that impact the grid on such a broad level," says Autumn Long, director of the Appalachian Solar Finance Fund. Appalachian Voices, the nonprofit organization that publishes The Appalachian Voice, serves as the fiscal sponsor for the fund.

The Appalachian Solar Finance Fund and Appalachian Voices are collaborating with Footprint Project, Invest Appalachia and other partners to promote long-term recovery and community resilience in Western North Carolina. This partnership includes financing support for the deployment and installation of permanent solar and battery-powered microgrids. Additionally, Appalachian Voices is working to help individuals and local leaders improve their disaster preparedness.

"Whenever we talk to local community partners about building an energy-resilient emergency hub for their community, they are like, 'Yes, we need that, we want that, we see the value in that,'" explains Long.

Despite regional support, outfitting existing buildings as resilience hubs poses numerous challenges. Busy rural leaders often have limited capacity to undertake these projects, and there can be a lack of on-the-ground technical expertise. Most notably, the work requires funding. Looming federal cuts and changes to federal tax credits for solar projects could make cost barriers even more prohibitive.

Due to difficulties sourcing fuel for gasoline generators, Footprint Project helped Piney Hill Baptist Church install solar panels to power its Starlink. Photo courtesy of Footprint Project

Celo residents worked with Footprint Project and Atomic Solar to install solar panels on their community center. Photo by Molly Moore

"It takes a lot of money to build these projects," says Long, highlighting the need for creative funding solutions that don't leave communities with undue financial burdens. "That's why we're helping communities combine grant funding with low-cost repayable capital and federal, state and local incentives to build projects that provide long-term cost savings while strengthening local resilience."

'If we have another outage, we'll be ready'

In Green Mountain, North Carolina, Double Island Volunteer Fire Department deals with frequent power outages during the winter months, and it lost power for several weeks following Hurricane Helene. Footprint Project donated a mobile solar microgrid to support the station in providing long-term housing for out-of-state volunteers who assisted with rebuilding efforts for three months.

"In these rural communities, the fire stations were doing all the hard, gruesome labor required of them after Helene," explains Footprint Project's Hebson.

To serve as a future community resilience hub, the fire station is now planning to install a 10- to 12-kilowatt solar microgrid with 20 kilowatt-hours of battery storage. The hope is not only to provide steady power in times of crisis but also to enhance the fire station's efficiency and lower its electricity costs during normal operations.

Footprint Project is providing the majority of the equipment through donations from manufacturers and distributors within its network. To avoid dipping into internal savings for the upfront cost of the installation, the fire station is pursuing a 0% unsecured bridge loan from Invest Appalachia. The station will repay the loan monthly but with no additional interest or fees.

Another North Carolina resilience hub project is located in Celo, a rural cooperative settlement in Yancey County. Celo suffered significant flooding and lost many community-owned spaces, including its food co-op. In addition to other sustainable resources, Footprint equipped the Celo Community Center with a solar microgrid trailer to lessen its dependence on gasoline-powered generators. They used the system for over a month until grid power was restored.

Now, the Celo Community Center is collaborating with Footprint, a local solar developer and other partners to install a 9.6-kilowatt solar array and 20 kilowatt-hours of battery storage. Much of the solar equipment is donated, and the future resilience hub is receiving a grant from the Appalachia Funders Network's Appalachian Helene Response Fund. The Appalachian Solar Finance Fund is a member of the funders network.

"I think it probably will more or less zero out our electrical loads — that'll save us quite a bit of money over the course of the year," says Gred Gross, building manager of the Celo Community Center. "And, of course, if we have another outage, we'll be ready." ◆

Mutual Aid

Continued from page 11

ary of this year.

When two days of heavy rains led to flash floods, West Virginia's Mingo, Mercer and McDowell counties were the hardest hit — all places already dealing with economic, environmental and infrastructure problems after decades of natural resource extraction. Members of Holler2Holler already had a network in place in those counties from years of fighting the Mountain Valley Pipeline. They were able to quickly contact folks to see what resources were needed and where people were not being reached.

For Saunders and the rest of the members of Holler2Holler, fighting the pipeline and continually pushing back against negative regional stereotypes, had taught them that they could not wait for relief. Community was their best option.

"These regions have been in need of support long before these disasters started increasing in frequency, and there's already a great network here of people who are tuned in to each other and listening and paying attention," Saunders says. "And what does that look like in a moment of acute crisis, but also longer-term when people are looking away?"

The survival work that ROAR, Holler2Holler and other mutual aid groups in Appalachia are doing in the aftermath of floods, fires, tornadoes and other disasters is critical. But all three groups also point to limitations, especially with sustaining and funding the work.

Many mutual aid groups emerge organically in a moment of crisis as informal community groups, which allows them to adapt and meet people where they're at. It also means that most of the time, they are not equipped to receive large financial donations and most relief funding goes to charities and churches with the infrastructure to fundraise. Additionally, once the immediate crisis is over, the work can be hard to sustain with just volunteers.

"I don't think these deficiencies are inherent to the principle of mutual aid, it's more due to how we currently go about it in our current capacities and mostly volunteer-run efforts," Wallace adds.

Despite the challenges, people in mutual aid networks are sharpening their skills after every event.

"I feel like after every disaster I see this network grow and get better," Johnson says. "It is unfortunate that we have to keep doing it, but now I am in contact with folks throughout the entire region.

Now it's like this entire mobile network that is shifting resources and knowledge throughout the region," Johnson adds. "We're becoming a well-oiled machine that crosses state lines in a way that nothing else seems to be doing, and it's constantly evolving and growing."

Even as disasters caused or made worse by climate change become more frequent and as looming budget cuts and reductions in federal infrastructure spending become cause for anxiety, Wallace finds hope in the relationships ROAR has built.

"We feel so much more connected to our community and other groups doing this work," he says. "It is a really wonderful feeling to know when the time comes, we really can have each other's backs, no matter what the world throws at us." ◆

Public Lands Recovery

Continued from page 15

federal and state agencies, as well as local volunteers, to clear debris from the French Broad, Watauga, Green and Broad rivers in North Carolina and Tennessee.

"Where the storm was most heavily damaging, we've definitely diverted resources toward trying to do more [work] related to clean-up or repairs or water quality," says Jack Henderson, French Broad paddle trail manager at MountainTrue, who has been a driving force in coordinating river clean-up efforts before and after Hurricane Helene.

Since the storm, MountainTrue has received a "groundswell of interest" from volunteers who want to help, Henderson says. To date, the nonprofit has organized 64 clean-up days that included 1,100 volunteers who have removed 275,000 pounds of garbage. MountainTrue was also able to hire paid work crews who have been averaging around 8,000 pounds of garbage removal each week since March. In July, the nonprofit announced a $10 million partnership with the state of North Carolina to hire more paid cleanup workers and grow its network of volunteers.

'Chaos across the board'

Looking ahead, long-term wildfire risks from downed trees, coupled with worries about the scale of salvage logging and the rise of invasive species on disturbed lands, are causes for concern. But beyond these ecological risk factors, other critical threats are coming from inside the house: the federal government.

From significant reductions in agency staffing to environmentally antagonistic bills in Congress, some public land advocates are apprehensive about what the future holds for public lands and their continued restoration after Hurricane Helene.

"It's just chaos across the board," says the anonymous Forest Service employee, emphasizing that there is little stability or direction from the top of the federal agency down to regional leadership.

The source's program lost a majority of its staff during the mass federal probationary employee firings in February. After a court injunction blocked these firings, some Forest Service employees were reinstated. But the damage was done. The anonymous employee explains that changes in staffing are a part of government work, but what they haven't seen before is this "deeply insulting means of firing employees."

"[The fired employees] were out there, day one, responding to Hurricane Helene in the most dangerous conditions you can imagine, and they were treated incredibly poorly," the source says. "If all of that was not overturned, then I would have probably quit. It was so shameful."

Overall, their district lost roughly 40% of its staff to federal buyouts. Some of those essential administrative employees had been with the agency for decades.

"There was a really high loss of institutional knowledge when these departures would happen so quickly," the source says. The remaining employees, even those already overburdened with high-level Helene recovery priorities, have had to share administrative duties like contract procurement. In addition, new restrictions made it the responsibility of a random selection of staff in emergency management roles to handle all purchases for the district, even buying gas for chainsaws and cleaning supplies — a move the employee criticized as hampering efficiency.

In early July, the U.S. Supreme Court lifted a lower court injunction that had paused mass terminations of federal workers. The Forest Service had not initiated new mass firings as of press time in July.

The Forest Service employee shared their perspective that, moving forward, the biggest challenge facing public lands recovery is the mental health of those tasked with doing the grueling, ongoing work, all while losing staff and navigating ever-changing federal policies.

"We will continue to lose people because of how bad morale is," the employee warns.

There are ways for members of the public to help. To support protected public spaces, the National Park Conservation Association's Jeff Hunter encourages people to consider "rolling up their sleeves and volunteering." Additionally, he recommends that people become "storytellers" to their elected officials about why these areas are so important to them.

"I would ask people to be really specific [with members of Congress] about why parks are important to them," Hunter advises. ◆

Salvage logging involves the removal and sale of timber from downed trees after a natural disaster or disturbance. The Forest Service notes its usefulness in reducing the threat of fuel for wildfires and its economic benefits. But some conservationists also have concerns over how these projects are done. In an April article by Katie Myers for Blue Ridge Public Radio, Will Harlan of the Center for Biological Diversity expressed concern over whether the Forest Service is currently providing enough oversight to make sure companies aren't logging healthy forests near designated salvage sites. Josh Kelly of MountainTrue emphasized the opaque nature of some salvage operations and how the process can even increase fire risk by removing logs that trap moisture and keep the forest floor from drying out.

Gas Buildout Continues Across Southeast

A massive buildout of methane gas infrastructure in Virginia, North Carolina and Tennessee continues to work through multiple planning, permitting and construction processes with more than a dozen new methane gas plants and hundreds of miles of new pipelines in various stages of development.

Electricity demand is widely expected to grow over the next few years largely due to increased demand from new data centers and manufacturing, but a July report from London Economics International commissioned by Southern Environmental Law Center argues that projections based on data center growth are highly uncertain in part because they ignore realities like the global availability of semiconductor chips.

North Carolina

In North Carolina, Duke Energy's latest Carbon Plan — a required document outlining how the utility will meet the state legislature's 2050 carbon-neutrality goal — pushed back interim deadlines to reduce emissions by 70% by 2030. Instead of moving away from fossil fuels, Duke is proposing 9 gigawatts of new methane gas generation by 2035.

In addition, Williams Companies is working through the regulatory process as it seeks to expand its Transco pipeline system, proposing a 54-mile pipeline, which would also run through Southern Virginia, and associated gas compressor stations.

Mountain Valley Pipeline is also moving forward with its proposed Southgate extension, which would run very close to the Transco expansion, also crossing the Virginia/North Carolina border.

Virginia

In addition to MVP Southgate and the Transco expansion, several other gas expansions are planned in Virginia, as the state's largest power company, Dominion Energy, received permission from the state to lean into fossil fuels despite a Virginia law that mandates a transition to clean energy by mid-century.

Dominion argued that new gas plants are needed to meet a projected increase in demand driven largely by power-hungry data centers. But experts testifying before the State Corporation Commission on behalf of Appalachian Voices, the organization that publishes this newspaper, pointed out that Dominion may be grossly overestimating data center growth. Testimony showed that even if electricity demand increases significantly, Dominion can still reliably serve its customers by investing in battery storage and other clean resources — meeting state requirements without any new gas.

Community opposition continues to grow against many of Dominion's proposed projects, including the 944-megawatt methane gas plant the utility wants to build at the site of the Chesterfield Power Station.

TVA imploded the Bull Run coal power plant's smokestack on June 28. The smokestack spewed a final blast of toxic dust over Claxton, Tenn., where its unscrubbed fly ash poisoned the air for decades before a 2011 Clean Air Act settlement. The power plant ceased operations in 2023. Photo by John Todd Waterman

Tennessee

The Tennessee Valley Authority's board of directors is currently in a state of flux. At the beginning of President Donald Trump's term, the board already had three vacant seats on its nine-seat board. Trump fired three members, leaving only three members — two short of the quorum necessary to make key decisions for the TVA. In July, Trump nominated four new directors — none of whom have strong backgrounds in energy — who will need Senate confirmation.

The TVA's long-term plan for meeting energy needs over the next 25 years has been on hold since the board lost its quorum in April.

The Tennessee Valley Authority is proposing to expand electricity generation from methane gas at an aggressive rate, which is detailed on page 25. *— By Dan Radmacher*

Law Slashes Renewable Energy, Offers Benefits to Coal and Gas

On July 4, President Donald Trump signed into law H.R. 1, the "One Big Beautiful Bill Act," a budget reconciliation package with sweeping impacts on many issue areas, particularly health and the environment.

The legislation slashes healthcare and food assistance programs while repealing clean energy tax credits and subsidizing the fossil fuel industry. This is expected to result in higher energy and healthcare costs for most Americans and risk electricity blackouts.

The law also guts the Inflation Reduction Act — landmark legislation passed in 2022 to tackle the climate crisis by moving the U.S. toward cleaner energy, less pollution and more affordable electricity.

The law is expected to increase household electric bills by phasing out energy tax credits for the energy resources that are able to come online most quickly — solar and wind — as well as energy efficiency. These incentives sparked a clean energy boom in the country and added more affordable energy to the power grid. Ending the incentives will cancel projects, reduce energy generation capacity overall and increase reliance on higher-cost fossil fuels, according to reports. Researchers predict the new law will increase electric bills as much as $400 a year within a decade.

Notably, the new law phases out the tax credits for wind and solar projects for schools, businesses, churches, and utility-scale projects over the next two years. The renewable energy credits will be more difficult to access due to new, complicated restrictions that prohibit the credits for projects that use materials or equipment from certain foreign countries, such as China, Iran, North Korea and Russia. While some energy companies express support for the restriction, they have also voiced concern that the requirements as written in the law are unrealistic and too complex to navigate.

Homeowners and communities working to upgrade energy efficiency will see tax credits for electric heat pumps, efficient windows and energy audits end by the year's close. Rooftop solar tax credits will also stop at the end of 2025, seven years earlier than under the IRA. The bill also rescinds funds that would finance clean-energy projects as well.

Another provision in the new law gives tax credits to U.S. firms producing metallurgical coal, which is largely exported overseas for use in foreign steelmaking.

Other incentives and shortcuts for oil and gas companies include repealing royalties for methane extracted from federal land and waters, mandating more oil and gas lease sales, and gutting the Environmental Protection Agency's methane emissions reduction program. The law also allows project developers to pay a fee to expedite the environmental review process and directs agencies to set a fee that fossil fuel companies could pay to avoid environmental litigation. *— By Jen Lawhorne*

EPA Plans to Roll Back Air and Water Protections

Last spring, the U.S. Environmental Protection Agency announced its intention to roll back dozens of vital environmental health protections, calling it the "biggest deregulatory action in U.S. history."

The rollbacks would weaken or eliminate rules mandating reductions in greenhouse gas and other air pollution emissions, including mercury, from power plants. It would also loosen restrictions on wastewater discharges from the plants. Current federal requirements to clean up old coal ash dumps not covered by previous rules could also be eliminated.

And, rather than wait for the normal, deliberate rule-changing process, the EPA announced that coal-burning power plants could get an immediate exemption from many of these rules by simply sending an email to the White House.

The agency has also said it will revisit its own 2009 scientific finding that increasing man-made greenhouse gas emissions endangered public health and welfare. If the agency reverses that finding, it would limit EPA's legal authority to regulate those emissions.

A 2024 measure that tightened baseline air quality standards for fine particulate matter, known as soot, could also be reversed. EPA Administrator Lee Zeldin also promised to end the Good Neighbor Plan, a policy to reduce cross-state emissions that the EPA previously estimated could prevent 1,300 deaths annually.

The EPA also announced plans to rescind and reconsider limits on four different types of PFAS "forever chemicals" in drinking water, including one commonly known as GenX. The agency is keeping but delaying the Biden administration's limits on two common types of PFAS.

Zeldin added four new mandates to EPA's original core mission to protect public health and the environment: help make America more "energy dominant," shorten the environmental permitting process, restore auto jobs and make the United States the world's leader in artificial intelligence.

Zeldin also announced significant staffing cuts — saying levels would be reduced to what they were in the 1980s, which could mean the loss of thousands of jobs. The administration fired or reassigned hundreds of EPA staff who worked on protecting members of the public, particularly the most disadvantaged, against discrimination and pollution. The EPA also plans cuts to the Office of Research and Development, which provides scientific analysis about the risks of environmental hazards.

In June, hundreds of EPA employees signed a public letter accusing the Trump administration of politicizing the EPA and ignoring both science and the law by abdicating its statutory responsibilities. More than 140 of the employees who signed their names publicly were notified days later that they were suspended pending an investigation of the letter. — *By Dan Radmacher*

Citizens' Ability to Get Help with Mine Problems in Jeopardy

Established in 1977, the federal Ten Day Notice rule allows individuals to ask federal regulators to investigate and intervene when a coal mine is causing an environmental problem that state regulators have failed to adequately address.

The rule was briefly weakened by the first Trump administration and then largely restored by the Biden administration. In 2024, 14 states sued the Office of Surface Mining Reclamation and Enforcement in an effort to gut the rule. Appalachian Voices, the publisher of this newspaper, along with our partners intervened in this case to defend the rule.

After President Donald Trump returned to office, his administration started a process to rewrite the rule yet again in order to make it harder for community members to alert authorities to a problem. The administration also asked the court to pause the ongoing litigation until the rewritten rule is final, and the court will consider that request in August.

"For decades, this rule, in more or less its current form, has helped residents of coal mining communities ensure that their corporate neighbors do not pollute the air and water," says Appalachian Voices Coal Impacts Program Manager Willie Dodson. "The administration's rewrite of this rule will do nothing but eliminate protections for everyday people in order to benefit those who profit from destructive, polluting, reckless coal mining practices." — *By Rance Garrison*

Groups Challenge South Fork Coal's Actions in West Virginia

In West Virginia, South Fork Coal Company has been hauling coal through the Monongahela National Forest since 2022, after telling state officials that it would not do so. The company is using Forest Service roads for hauling coal and equipment, which the Forest Service authorized without doing legally required environmental assessments.

The company, which declared bankruptcy in February 2025, has been cited for more than 140 environmental violations since 2019. These violations occurred overwhelmingly in the Cherry River watershed, a habitat for the endangered candy darter fish and a vital headwater of the Gauley River, a cornerstone of the region's tourism economy.

A federal judge allowed two legal actions to move forward against the company, allowing conservation groups to challenge coal hauling through the Monongahela National Forest. The ruling lifts a bankruptcy-related pause and revives lawsuits and appeals aiming to stop illegal mining operations.

Conservation groups are taking legal action to stop South Fork Coal Company's environmental harm to the Cherry River and the national forest. The plaintiffs are the publisher of this newspaper, Appalachian Voices, as well as West Virginia Highlands Conservancy, Allegheny-Blue Ridge Alliance and others, represented by Appalachian Mountain Advocates and the Center for Biological Diversity. — *By Rance Garrison*

Federal Funding Cuts

Continued from page 20

help sustain forests and grasslands, protect communities from wildfires, understand and manage invasive species, provide educational programs and restore ecosystems after fires.

US Forest Service Staffing
FY 2025 appropriation: $389 million
Trump's FY 2026 request: $256.7 million

What it does: The Forest Service staff manage 193 million acres of public land, including forests, grasslands, rangelands and aquatic resources. The staff provide technical and financial assistance to state and tribal forestry agencies and conduct research related to land management, plants and animals, such as invasive species and endangered species. They also manage recreation resources.

US Geological Survey Water Resources Mission Area
FY 2025 appropriation: $291 million
Trump's FY 2026 request: $230 million

What it does: The USGS Water Resources Mission Area works with state and local partners to monitor, assess, research and deliver information on streamflows. It is responsible for deploying and maintaining expensive streamgages that alert communities of rising water levels and can help prevent loss of life during floods.

FEMA Building Resilient Infrastructure Communities Grant Program
FY 2025 appropriation: $256 million
Trump's FY 2026 request: $50 million

What it does: BRIC provides grants to help local governments prepare for natural disasters by supporting projects that reduce risks to human life and infrastructure while reducing the cost of future disaster recovery. ◆

Nonprofits and Local Governments Go Solar

Now the federal government is ending tax credits that supported these and similar projects

There has been a wave of new investments in solar power over the past few years due to tax credits for clean energy projects from the Inflation Reduction Act of 2022. Those credits will be ending as a result of passage of the Republican reconciliation bill in early July.

These benefits have been especially important in Appalachian communities hit hard by the coal industry's decline and rising energy costs. Incentives like the investment tax credit and energy communities bonus, as well as a provision that allows tax-exempt entities like churches and local governments to use the credits, helped turn some long-term goals into reality.

But provisions in the "One Big Beautiful Bill Act" will phase those incentives out. Projects that begin construction by the end of 2027 will still have some eligibility for the credits, but depending on when work begins, they may be subject to restrictive foreign-sourcing limitations on materials and equipment that will make many projects ineligible for the credits.

The projects highlighted in this article come from an April 2025 report about the impacts of the tax credits across Appalachia.

Learn More --->

The panels these students helped install at Tri-County Career Center will save the center $16,000 annually for 25 years. Photo courtesy of Tri-County Career Center

Leslie County Animal Shelter, Kentucky

Anna Carey manages the Leslie County Animal Shelter in Kentucky and is often looking to lower the shelter's costs. When the nonprofit Mountain Association offered to help install solar panels, she didn't hesitate to accept. "It just makes economic sense," Carey says.

The project cost was $112,500, but with grants from The Nature Conservancy and the Appalachian Solar Finance Fund, along with federal tax credits, the shelter installed a 35-kilowatt system with almost no out-of-pocket cost. The system, which switches to battery storage during peak energy consumption hours, will save the county at least $5,000 annually.

Buncombe County, North Carolina

After Hurricane Helene devastated Buncombe County, Jeremiah LeRoy shifted from the county's sustainability officer to recovery officer — but his work in clean energy hasn't stopped. The county has committed to 100% renewable energy for county operations by 2030 and the entire community by 2042. Buncombe County was able to access $1 million in tax credits to support 7 megawatts of solar installations on schools, libraries and county buildings.

"As a local government, we have seen a massive hit to our revenue because of Helene," LeRoy says. "And so to be able to receive a million dollars, it's a real blessing."

Tri-County Career Center in Nelsonville, Ohio

When Tri-County Career Center needed a new roof, Superintendent Connie Altier discovered that integrating the roof project with solar would allow the cost of the new roof to be covered by clean energy tax credits. Tri-County qualified for a 10% bonus credit on top of the IRA's standard 30% credit because Athens County meets federal criteria for high fossil fuel employment and high unemployment. The installer estimates the system will save the center at least $16,000 annually for 25 years.

Students in Tri-County's electrical trades program assisted with installation, gaining hands-on experience. The project finished ahead of schedule, and the installer hired two students full-time.

Top: A Buncombe County middle school with solar panels. Courtesy of Pisgah Energy. Bottom: Solar panels on top of Leslie County Animal Shelter in Kentucky. Courtesy of Mountain Association

First Presbyterian Church in Oak Ridge, Tennessee

Chartered in 1945 to serve the growing Oak Ridge community, First Presbyterian Church unanimously approved a $120,000 solar project in 2023. This project involved installing a 19.2-kilowatt rooftop photovoltaic system atop two church buildings. The project received a 30% tax rebate through the IRA and a $23,570 grant from the Appalachian Solar Finance Fund. The system is expected to provide $70,388 in lifetime savings.

"God gave us limitless energy from the sun," says Dan Terpstra, former co-chair of the church's Property & Maintenance Committee. "Our biblical mandate to care for creation compels us to use it for the good of the planet."

Four Seasons YMCA in Tazewell County, Virginia

In Virginia's Pocahontas coalfield, the Four Seasons YMCA is now 97% solar-powered, thanks to an over-five-year effort by CEO Shawn Durham and the center's board of directors. The IRA provided the coalfield community with an extra 10% bonus credit on top of the 30% investment tax credit, helping make the project possible. With local electricity rates up 46% in recent years, the system is expected to save the YMCA tens of thousands of dollars annually. The savings will support health programs, financial assistance and a community garden.

Just For Kids Child Advocacy Center in Beckley, West Virginia

When Just For Kids Child Advocacy Center moved into a former bed-and-breakfast in Beckley, West Virginia, Executive Director Scott Miller looked to solar to reduce costs. In 2023, the nonprofit installed a $28,000 solar array for $500 thanks to IRA tax credits plus grants and donations. The 14-panel ground array will power 100% of the building's electricity for at least 25-30 years, saving over $32,487 across its lifespan.

"With the [IRA] passing, one of the things that's happened for nonprofits and churches is that they can take advantage of the same tax credits that businesses have taken advantage of for years," says Thomas Ramey, a solar evaluator for Solar Holler and son of a coal miner, who worked on the project.

Those tax credits are now ending sooner for all projects. ◆

Report authors include Chelsea Barnes, Sarah Dean, Lara Howell and Abby Hassler. Kayla Masterman contributed to this piece.

Inside Appalachian Voices

Strong Communities. Healthy Environment.

For nearly 30 years, Appalachian Voices has been bringing people together to protect the land, air, water and communities of Central and Southern Appalachia and advocate for a healthy environment and just economy in our region. We drive change by working hand in hand with our neighbors to prepare for and rebuild from climate disasters, preserve our natural areas and build a clean energy economy.

We amplify local voices.

We listen, learn and help the people of Appalachia gather — often in broad coalitions — to plan for and defend their local communities by:

- Standing behind resiliency efforts and clean energy projects
- Ensuring residents don't bear the rising financial cost of corporate data centers
- Advocating for sustainable energy abundance

We honor Appalachia's resilient and independent spirit.

The people of Appalachia are resilient, independent and hardworking. When Hurricane Helene devastated our towns and rural areas, we rallied together to help each other. From disaster aid to a just energy transition, Appalachian Voices is:

- Working with communities to plan for and rebuild from climate disaster
- Educating residents about clean energy solutions that are lower cost and more reliable during extreme weather
- Attracting clean energy investments to our region to save money for public institutions, faith centers, businesses and farms
- Working with local schools to create solar apprenticeships and other learning opportunities

We right past wrongs and confront new harms.

We fight for the rights of coal communities, including miners and their families, and against harmful practices that destroy ecosystems and endanger communities. We are:

- Monitoring and protecting Appalachia's air and water quality
- Fighting for miners and their families struggling with black lung disease
- Holding accountable those responsible for abandoned zombie mines
- Supporting projects to heal land from coal extraction
- Combating coal industry encroachment on public land

GET INVOLVED: Stay informed about environmental and energy issues in Appalachia and the Southeast! Find out about events and ways to make your voice heard on issues that matter.

AppVoices.org/SignUp

We fight for a healthy future.

We're committed to elevating local support for clean energy and sustainable economies — and opposition to exploitation by the fossil fuel industry — from county seats to state capitals to Washington, D.C. This means:

- Fighting against rollbacks of commonsense environmental regulations
- Supporting frontline communities and landowners as they resist harmful pipeline and gas plant projects
- Pushing back against dangerous and polluting proposals in our region
- Protecting and restoring the health of the land and native species like the candy darter and the Guyandotte River crayfish

Residents of Celo, N.C., installed solar panels on their community center in July with the support of multiple nonprofits and a local solar company. The building was a gathering place and supply hub in the aftermath of Hurricane Helene. The solar panels and battery storage system will cut the center's electricity bill and keep the power on during future grid outages. Read more about resilience hubs like this one on page 9. Photo by Molly Moore

The Appalachian Voice

164 S. Depot Street
Boone, N.C. 28607
appalachianvoices.org

Non-Profit
Organization
US Postage Paid
Permit No. 294
Boone, NC