

FREE

The Appalachian VOICE

April / May 2017

Hitting the Trail

- ▶ More hikers than ever are traveling the Appalachian Trail
- ▶ The science of trailbuilding

The Problems with Pipelines

Fracked-gas pipelines would deepen the region's reliance on fossil fuels

Also Inside: Leave it to Beavers | Budget Blowback | Refuge and Restoration at Laurel Fork

Appalachian VOICE



A publication of
AppalachianVoices

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About the Cover



During a late spring 2015 hike along a portion of the Appalachian Trail at Roan Mountain State Park, D. Rex Miller came across this flame azalea blooming beside the trail.

"Via section hikes, I have walked the southernmost 800 miles of the AT, and this view of the trail winding through Engine Gap and over Round Bald brought back pleasant memories," he says. "The trail always offers natural beauty, quiet introspection, the sense of accomplishment at completion of a hike — and innumerable photographic opportunities."

View more of his work at drexmillerphotography.com

A note from our team

As of this writing, federal regulators are poised to approve two massive interstate gas pipelines proposed in Appalachia. A final environmental review for the 300-mile Mountain Valley Pipeline could be published any day. And the federal public comment period for the 600-mile Atlantic Coast Pipeline is drawing to a close.

These projects and dozens of others like them jeopardize our region. The Mountain Valley and Atlantic Coast pipelines alone would cost a combined \$9 billion to construct. These costs would be borne predominantly by us, on our electric and heating bills.

But the unintended costs could be much worse. Our neighbors would see pipeline easements forced upon their properties through eminent domain. Ecosystems would be starkly fragmented, and construction could severely damage stream water quality, private drinking wells and habitats of protected species.

The costs are not just borne by locals. All Americans would pay for these pipelines as permanent tree removals destroy treasured views. And citizens of every nation would pay, as the combined life-cycle greenhouse gas emissions of these two pipelines would be roughly equivalent to building 46 new coal-fired power plants.

So we are at a crossroads. Studies show that our region doesn't need the additional infrastructure to supply our electricity and that the industry is overbuilding. Wind and energy efficiency are the cheapest energy resources, while the cost of solar installations has dropped over 60 percent the last 10 years. We can protect both our natural heritage and our wallets by demanding clean energy and robust energy efficiency

A note from our executive director

As you may know, Appalachian Voices and partners are committed to opposing multi-billion dollar investments in destructive and unnecessary fracked gas pipelines that would tear through the forests, farms and communities of our region. Below, our Virginia team members Lara Mack and Peter Anderson provide their perspective on these important battles. Read more about the pipelines beginning on the centerspread.

For the future, *Tom*
Tom Cormons, Executive Director

programs. Or we can sit quietly while some companies and regulators pursue business as usual.

Appalachian Voices and our partners are determined to fight for a clean energy economy. We are committed to pushing our elected officials, regulators and energy companies to make massive investments in sustainable resources, rather than in another fossil fuel.

Stand with us. Tell your elected officials and your energy providers that you want investments in wind, solar and energy efficiency. Tell them you want the clean air, land, water and jobs that they bring. Our voices can be heard well beyond the voting booth in November. We look forward to hearing yours.

For our communities,

Peter & Lara



Peter Anderson
VA Program Manager



Lara Mack
VA Field Organizer

GET INVOLVED environmental & cultural events

Annual Spring Nature Festival

April 21-23: Enjoy a weekend of seminars and guided walks that highlight the wonders of natural history. Warriors' Path State Park. Kingsport, Tenn. Call (423) 239-8531 or visit tinyurl.com/warriors-path-nature-festival

Boone in Blossom

April 21-23: This festival includes live music, workshops on healthful living, yoga and more! \$40-60. Butler, Tenn. Visit gatiproductions.com/boone-in-blossom.html

Earth Day

April 22: Look for events near you to celebrate our planet, or join the March for Science in Washington, D.C. or one of many regional marches. Visit marchforscience.com

Outdoor Expo

April 22: Spend the day exploring the abundance of outdoor recreational activities available in Southwest Virginia. Free. Radford, Va. Call 540-639-9313 or visit swvaoutdoorexpo.com

Mother Jones Birthday Party

April 29: Join the West Virginia Mine Wars Museum in celebrating Mother Jones' 180th birthday! Explore the prominent labor organizer's legacy

with trivia and games. Birthday cake included! Free. Matewan, W.Va. Call (304) 546-8473 or visit wvminewars.com

People's Climate March

April 29: March for climate, jobs and justice! And if you can't get to the nation's capital, find a march near you. Free. Washington, D.C., and across the country. Visit peoplesclimate.org

Black Mountain Wildflower Weekend

May 5-7: Join the Pine Mountain Settlement School to celebrate the rare wildflowers of Black Mountain. \$125-225. Pine Mountain, Ky. Call (606) 558-3571 or visit pinemountainsettlementschool.com/events.php

SWVA Solar Fair

May 9: Join the Solar Working Group of Southwest Virginia for hands-on projects, presentations, music and more! Read more on page 26. Free. Wise, Va. Call (276) 679-1691 or visit swvasolar.org/solar-fair

SWVA Economic Forum

May 10: Come learn how your business, organization or community can help revitalize the economy of Southwest Virginia. \$25-35. Wise, Va. Call (276) 679-1691 or visit tinyurl.com

See more at appvoices.org/calendar

com/swva-econ-forum

Appalachian Trail Days

May 19-21: Celebrate the Appalachian Trail and its hikers with a parade, festivities and food. And stop by the Appalachian Voices table! Damascus, Va. Free. Call (276) 475-3831 or visit traildays.us

Friends of the WNC Fundraiser

May 25: Event includes a film screening, silent auction, meet-and-greet with nature center animals and more. Asheville, N.C. \$25. (828) 259-8092 or visit wildwnc.org/event/wild-on-film

Mountain Music Festival

June 1-3: Combine outdoor adventures in the New River Gorge — like whitewater rafting and mountain biking — with a weekend of live music. Minden, W.Va. \$85 for advance single-day tickets, weekend passes vary. Call (877) 382-5893 or visit mountainmusicfestwv.com

Seedtime on the Cumberland

June 2-3: This festival of traditional mountain music and arts features live performances, dances, film screenings, art and more. Whitesburg, Ky. Call (606) 633-0108 or visit seedtimefestival.org

Study Reveals Threats to Southeast Freshwater Biodiversity

By Adrienne Fouts

A new study released by the Tennessee Aquarium Conservation Institute and the University of Georgia River Basin Center documents the diversity of freshwater life in the Southeast and the importance of improving the region's watersheds.

The lakes, rivers and streams of the southeastern United States are a "hotspot for freshwater biodiversity," according to the December study. They contain almost two-thirds of the nation's fish species, over 90 percent of the nation's types of mussels and nearly half of the world's crayfish species.

However, human development and insufficient conservation efforts have

threatened the region's watersheds. Freshwater aquatic animals outside the Southeast receive approximately 35 to 52 times more federal funding per species than those in the region, according to the study. In addition, there is comparatively little federally protected land in the Southeast — only about 3.5 percent of the study's focus area.

Researchers identified the highest-priority watersheds in the region based on the number of species they contained, the animals' conservation status and how widespread they were. Watersheds in northern Alabama and middle to lower Tennessee were determined to be the most vulnerable. The study also proposed increased overall funding for conservation.

Judge Rules in Favor of Nuclear Waste Shipments

By Carl Blankenship

In February, a federal judge ruled against a lawsuit filed by a coalition of environmental organizations attempting to prevent liquid nuclear waste from being shipped from Canada to South Carolina.

Carolina Public Press reported that the route for the shipments is unknown and will remain secret as part of federal policy on nuclear waste shipments.

In the opinion, Judge Tanya Chutkan struck down the environmental groups' attempts to submit evidence and instead relied on the court's experts, saying there appeared to be differing opinions from specialists.

The decision to eliminate outside evidence prevented the environmental groups from using statements from scientific experts on the issue.

The groups filed the suit in August of 2016 arguing that the Department of Energy should produce an additional Environmental Impact Statement. The plaintiffs wanted the project to be halted until the statement was produced.

Nature, a weekly international science journal, reported the facility originating the waste was responsible for a large portion of the production of a tracer used in medical scans. The facility shut down at the end of 2016.

Watauga County Launches Seed Library

By Adrienne Fouts

Following the example of other seed libraries in Appalachia such as those in Berea, Ky., and Abingdon, Va., the Watauga County Public Library and Blue Ridge Women in Agriculture launched the Watauga Seed Library in Boone, N.C., on April 1.

Seed libraries offer community members the chance to receive free seeds to grow in their personal or community gardens. The Watauga Seed Library will offer open-pollinated seeds donated by companies and by dedicated "seed-savers," who save seeds from their gardens

to share in the library.

Dave Walker of Blue Ridge Women in Agriculture says the Watauga Seed Library is a place to preserve heirloom fruits and vegetables that have adapted to the Appalachian region, as well as the stories and recipes associated with them that have been passed down through generations.

"We want to introduce people to new plant varieties that have developed in our area and to give a cultural context," Walker says. "Food and place are really connected. A seed library is a physical space that can bring a lot of things together: the seeds, the people, the stories."

DuPont to Pay \$671 Million in Chemical Leak Settlement

By Adrienne Fouts

DuPont and its spin-off The Chemours Company agreed in February to pay \$671 million to settle thousands of lawsuits regarding the leak of a toxic chemical used to make Teflon from their plant in Parkersburg, W.Va.

Around 3,550 personal injury claims were filed beginning in 2001 after the leak of perfluorooctanoic acid, also called PFOA or C-8, allegedly contaminated the Ohio River and local water

supplies. A panel of scientists convened by DuPont determined that the chemical was linked to six diseases: kidney and testicular cancer, ulcerative colitis, thyroid disease, pregnancy-induced hypertension and high cholesterol.

Both DuPont and Chemours denied any wrongdoing, saying in a statement that DuPont had not used C-8 at the plant in over a decade. The class-action lawsuit included citizens in the Parkersburg area and surrounding water districts affected by the leak.

Trout Delivered to Gatlinburg After Wildfires

In early March, the Tennessee Wildlife Resource Agency stocked streams in the Gatlinburg and Pigeon Forge area with roughly 3,000 trout from a Middle Tennessee hatchery. During the devastating fall 2016 wild-

fires in East Tennessee, about 30,000 fish were killed at Gatlinburg's fish hatchery and trout raceways, where fingerling fish are raised until they can be placed in nearby streams. — Molly Moore

Annaliese From Off
a novel

A story of love and greed set in the north Georgia mountains in 1900 as lumbermen raced to scrape the last virgin timber off the hillsides. Gold on a stump, they called the forests. Annaliese called them cathedrals.

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Tennessee Advances Partial Privatization of Fall Creek Falls State Park

By Molly Moore

The state of Tennessee is moving forward with plans to privatize the facilities at Fall Creek Falls State Park. The plan calls for demolishing and rebuilding the inn, conference center and dining amenities. A private company would also eventually operate the park's cabins and golf course.

The privatization process was put on hold in early March, and as of press time the state had not reopened the bidding process. During a State Building Commission meeting on March 23, the commission was given more control over demolition and construction of park buildings to address some of the concerns about the plan.

State Rep. John Ray Clemmons told the Chattanooga Times Free Press that the changes didn't go far enough. "I would consider it nothing more than

putting lipstick on a pig, because outsourcing and privatizing our state parks are absolutely unacceptable."

Officials at the Tennessee Department of Environment and Conservation support privatization, pointing to falling occupancy rates and the need for improvements at the facility. The Tennessee State Employees Association, one of the opponents of the plan, has suggested using state funds to renovate the facilities instead of selling them. Park employees and local officials have also expressed concerns about how outsourcing and layoffs at the park would affect the area's rural economy.

Fall Creek Falls State Park, situated on the Upper Cumberland Plateau, is Tennessee's largest and most-visited state park. In addition to hiking and biking, park activities include boating, fishing, swimming and golf.

Help Wanted to Find Spotted Skunk

The Kentucky Department of Fish and Wildlife Resources is asking community members to help document a rare species of skunk in eastern Kentucky.

The "spotted skunk" is a protected species with a distinctive fur pattern, not to be confused with the common striped skunk. The department is asking the public to share photos and locations of spotted skunk sightings on the agency's Facebook page. According to the department's social media post, they have few documented observations and need more. — Adrienne Fouts



Courtesy of KY Dept. of Fish and Wildlife Resources

Southwest Virginia Residents Hold Healthcare Forum

By Melody Reeves and Chuck Shuford

"From 2001 to 2008, medical expenses were the leading cause of bankruptcies in the U.S., and health insurance premiums for family policies increased by 78 percent while the cost of living rose 17 percent," began Dr. Raymond Feierabend, professor emeritus at the James H. Quillen College of Medicine at East Tennessee State University.

Feierabend was speaking at an educational forum Feb. 22 on the potential impact of repealing the Affordable Care Act, also known as Obamacare.

Over 130 residents from Southwest Virginia attended the public forum at Mountain Empire Community College in Big Stone Gap, Va. The event was sponsored by We Care SW Virginia, a local group of citizens advocating for affordable, high quality health care for all.

Other presenters included Jim Dau, director of Virginia AARP; Beth Davies, director of the Addiction Education Center in Pennington Gap, Va.; and Stephen Sanders, director of Appalachian Citizens' Law Center in Whitesburg, Ky. Together, the speakers made the case that universal health insurance coverage with access to affordable, comprehensive health care is a key component of any economy that adequately sustains its citizens.

The panelists explained the impact of both the ACA and potential repeal

proposals on Medicare, black lung benefits and rural health care. Based on a 2016 bill to repeal and replace the ACA, nonprofit think tank the Urban Institute determined that an estimated 685,000 Virginians would have lost insurance coverage by 2019.

Following the presentations, audience members gave testimony and asked questions. A retired coal miner with black lung disease stated that while not perfect, the ACA offered the best hope so far for those seeking black lung benefits. Under the ACA, it is easier for coal miners who have spent at least 15 years working in the coal industry to get those benefits than it was before the law.

Ron Short, a resident of Duffield, Va., told how his nephew, who had no health insurance, had gone to the emergency room several times with severe stomach pain and received only pain medication. After receiving insurance through the ACA, his nephew went through a battery of tests that revealed he had cancer. "This is what people face every day," said Short.

We Care spokesperson Peggy Mathews said that the purpose of the forum was to help people understand how the ACA affects them and inspire them to communicate any concerns about changes to the health care law to their federal senators and representatives.



APPALACHIAN STATE UNIVERSITY

2017 WORKSHOP SERIES

	<p>May 6 Inspecting and Designing Photovoltaic Systems for Code-Compliance</p> <p>May 12 Affordable Zero Energy Ready Homes</p> <p>May 15-19 Introduction to Photovoltaic System Design & Construction</p> <p>June 2 Small Wind Energy Hands-on Workshop</p>	   
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For details, registration, & more workshops:
energy.appstate.edu millerjm1@appstate.edu 828-262-8913



SWVA Solar Fair



May 9, 2017 from 5-7 pm

Presentations, music, food and demos to grow your skills and have fun. Plus hands-on projects, inflatables, cotton candy, and information about the new Solarize Southwest Virginia home solar program!

David Prior Convocation Center at Uva-Wise in Wise, VA
www.swvasolar.org

Stick around for the SWVA Economic Forum at Uva-Wise on May 10. More information at tinyurl.com/swva-economy

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Remembering Carol Judy

By Willie Dodson and Bonnie Swinford

Carol Judy of Roses Creek, Tenn., passed away from cancer in the early morning hours of Feb. 24, 2017. She died at home, surrounded by the love of family and friends.

I've always been fond of explaining to folks who Carol Judy was by simply stating her email address, emphasizing every word in it: Forest Granny (at) Rise Up (.net). Carol Judy was an activist, an agitator, an educator and an organizer.

Carol was also a root digger, carefully tending scattered patches of ginseng and other medicinal herbs along the densely wooded hollers and hillsides surrounding her Tennessee home. Carol practiced and taught a slow, patient, stewardship-based approach to foraging and cultivating wild and wild-simulated medicinals. She taught plant identification and forest understory stewardship and management workshops across the region.

Carol was a mother, a grandmother and a dear friend to many. She cared deeply for her people, and stayed focused on involving

others — especially young people — in the work of building community resilience.

Throughout the '80s and '90s, Carol traveled internationally as part of the Rural Development Leadership Network, the National Congress of Neighborhood Women and numerous other projects lifting up rural women and other disenfranchised populations. During the same time, she organized locally in Claiborne County, Tenn., with the Woodland Community Land Trust and the Clearfork Community Institute.

Over the past decade, Carol worked closely with Mountain Justice and other anti-mountaintop removal coal mining organizations in the region. She was a treasured and revered elder to a generation of young organizers, herbalists and righteous mischief-makers.

Hear Carol Judy share her thoughts in a video interview with Felix Bivens of Empyrean Research at tinyurl.com/empyrean-caroljudy



Anything Will Give Up Its Secrets if You Love It Enough

By Chris Smith and Asa Gardner Smith

For several years, Carol had heard stories of our family's land in Rockcastle County, Ky. In May of 2016, she came for a visit.

Along the hike down our rutted out driveway, we pointed out patches of lady's slipper, bird's foot violet, showy orchis and hawkweed. Carol greeted them as friends. We stopped at the cave spring for a drink and to visit the sole ginseng plant the poachers had missed the year after we left. She started exploring the forest floor. "There's one!" she said, and cradled it like a baby bird. "Well, there's another," she said, as a matter of fact. She kept going, counting in all about 15 plants that had, until that moment, been completely invisible to us.

We took her to the rock house waterfall and told her about an elusive patch of goldenseal. On the way back, she wandered off trail, turned around and said, "What about this yellowroot patch here?" Again, she had made the invisible visible. She told us we'd better start harvesting that patch regularly, or it would start to disappear like that other one.

We remember how much Carol loved the mountains and the waters, the plants, and everything that lives here. We are so thankful for the time we had to learn from her how to grow that love within ourselves. And we will never forget that day when we got to experience that magic of silent communion with our land, with the life on it, and with our dear friend.

A Tribute to Carol Judy by Adam Hughes

I'll never forget driving to Lexington, Ky., with Carol for a public hearing on the Stream Protection Rule in September 2015. The hearing was held in a gymnasium, and Carol signed up to testify later than the rest of our group.

By the time she was finished, we had gathered outside to debrief. I saw her hunting for us through a window, but by the time I navigated the heavy glass doors, she had already stepped on the descending escalator.

"Carol! We're up here!" I called. She looked back, grinned, turned around, and started climbing up against the elevator's descent! She was already about

a third of the way downstairs; she had to hustle, but progress was still slow. She started laughing, tickled by the petty mischief of what she was doing.

The commotion alerted a security guard, who called on her to stop. "Just go to the bottom," he barked. "Come on, act your age." Naturally, this encouraged her to climb faster, and she shot him a naughty smile when she reached the top and rejoined our group.

That was one of the most wonderful things to know about Carol Judy. She'd never act the way a man in uniform would demand.

Top, Carol Judy carries branches of flowers in Bell County, Ky. Photo by Joanne Golden Hill.

Left, Carol was known for connecting with youth and building strong intergenerational bonds. She stands with Asa Gardner Smith during a visit to the Smith family land. Photo by Chris Smith.

Right, Carol Judy and Joanne Golden Hill collect a sample of water in eastern Kentucky to test for water quality. Photo courtesy of Joanne Golden Hill.

A Tribute to Carol Judy by Miranda Brown

This woman, Carol Judy, showed me so much that is to be the foundation of my future, perhaps all of our futures. She embodied love, sincerity, presence, generosity, passion and intention. She never took me for what I projected on the surface, but called me out of myself, reassured me of my own nature.

Carol always called me a singer and an herbalist, even when I had naught to show for it. I carry her spirit and will listen for her guidance as I fulfill my own life. Carol always probed down to the core of who and what was important to me, and reminded me. Tonight, she reminds me again.

What a blessing to have spent some time with this force of nature. Rest in peace, nestled in the love that so many of us have for you, like the roots that lie nestled in the soil.

Leave it to Beavers

By Adrienne Fouts

From cutting down trees to flooding forests and fields, few animals are as influential on their surrounding environment as beavers. After being trapped for their fur to near-extinction in North America by the early 1900s, beaver populations were reintroduced across the continent and are now thriving, continuing their vital role in maintaining wetlands and supporting aquatic life — while occasionally being a nuisance to landowners.

Beavers are sometimes called “nature’s engineers,” and for good reason. By building lodges and dams as their homes, they physically alter the landscape to suit their own needs, similar to humans.

Lodges serve as houses for beaver families and are typically made of sticks, mud and rocks. To protect a lodge from predators, beavers build dams to flood an area, which creates a beaver pond upstream, surrounding the lodge with water. An underwater tunnel leads to the inside of the lodge, where dry chambers above the water level allow the beavers to safely live. As aquatic mammals, beavers are adept at maneuvering in water, so beaver ponds allow them to swim to nearby trees for food rather than having to travel more slowly across dry land.

Beaver ponds serve another vital purpose: attracting and supporting a variety of wildlife. Beavers have a large influence on other species in an ecosystem. The freshwater wetlands that beavers help create and maintain are among the most biologically rich in the world, especially in the southeastern United States, and can support many threatened or endangered species of fish, crayfish and other aquatic life.

Even dried ponds, called beaver meadows, provide a habitat for plants and wildlife long after the beavers have abandoned the area, according to Michael Fies of the Virginia Department of Game and Inland Fisheries. The nutrient-rich soil that was once



A beaver swims in Tomahawk Pond in Virginia's George Washington National Forest, above. Photo by Steven David Johnson. At left, a beaver lodge sits in a pond in the Laurel Fork area of Highland County, Va. Photo by Al Bourgeois.

at the bottom of a beaver pond grows different kinds of vegetation than the surrounding forest. Fies says that in the national forests of western Virginia, the U.S. Forest Service is interested in protecting beaver meadows because they recognize the value of those habitats.

Not everyone is interested in keeping beavers around, however. Despite all the benefits that they bring to natural areas, beavers can also cause problems when their activities conflict with humans. To obtain food and materials for lodges and dams, beavers will often cut down valued trees on people's property.

“Other times it's flooding issues,” Fies says. “Beavers are very adept at changing their habitat, which is what makes them unique, but their dams can result in the flooding of farmers' fields and state roads.”

Most states in Appalachia have a beaver trapping season between November and the end of March, varying slightly from state to state. In some cases, landowners are permitted to trap or hunt beavers year-round if they are causing issues on their property.

Beavers cause fewer harmful side effects in the mountains than they do in

lower-elevation, large river systems in the Southeast, where they are more common, according to Fies. In the Piedmont of North Carolina, state wildlife officials have stepped up efforts to manage the beaver population after a study by Appalachian State University biology professor Michael Gangloff and one of his students found that beaver dams were threatening an endangered mussel species.

“The mussels need flowing water and high oxygen levels to survive,” Gangloff says. “And beaver dams actually change the physical and chemical properties of the water, so there is a lower oxygen concentration.”

In the streams of the Appalachian Mountains, though, beavers are less likely to be a problem in the ecosystem

Beaver Basics

- The largest rodents in North America, full-grown beavers weigh around 60 pounds.
- Family size can range from two to 12 or more beavers living in the same den.
- Beavers' large front teeth never stop growing; their constant gnawing on wood wears the teeth down and prevents them from growing too long.
- In the 1950s, the Idaho Fish and Game Commission wanted to relocate beavers from residential areas to the middle of a roadless wilderness area. So wildlife officials put 76 beavers into small wooden boxes, strapped them to parachutes and dropped them out of airplanes into the forest. All but one of the beavers survived the fall. Watch footage at tinyurl.com/beaversfly.

because of lower population levels and naturally higher oxygen levels in the water, according to Gangloff. Instead, they help increase fish biodiversity and provide wetland habitat for numerous other animals, including frogs, snapping turtles and waterfowl such as wood ducks and herons.

Despite the headaches that they can cause landowners and wildlife officials, beavers play a vital role in natural areas throughout Appalachia and North America. With their human-like methods of building and changing their environment, it is inevitable that beaver and human activity will often clash. Society has come a long way since nearly trapping beavers into extinction, however, and hopefully humans will continue to work toward living in harmony with these clever and industrious animals. ♦



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Following the White Blaze

Nearly 70 years after the first thru-hike, more hikers than ever are traveling the Appalachian Trail

By Lorelei Goff

The year was 1948. Earl Shaffer, a young WWII veteran from Pennsylvania, put on his worn boots, packed his U.S. Army issue rucksack, and set off alone for a roughly 2,000 mile journey from Georgia to Maine, hoping to walk off the depression that had dogged him after the war.

It's been 69 years since Shaffer made that first documented thru-hike of the Appalachian Trail. The news that he completed the trek earned him the nickname of "The Crazy One" and raised public awareness of the trail. He later thru-hiked it two more times, first in 1965 and again in 1998, on the 50th anniversary of his first hike.

In the years since Shaffer's hike, the number of people attempting thru-hikes has increased. After the release of the movies "Wild" and "A Walk in the Woods" in 2015, the number of registered thru-hikers rose dramatically from 1,968 in 2015 to 3,133 in 2016. The Ap-

palachian Trail Conservancy, a nonprofit organization that protects and maintains the trail, estimates the total number of visitors to the trail at 3 million annually.

Benton MacKaye, a forester, author and conservationist who envisioned a footpath through the length of the Appalachian Mountain Range, first proposed the Appalachian Trail in 1921. Construction began soon after and was completed in 1937. The trail meanders through woodlands, meadows and windswept balds, over a course that covers roughly 2,189 miles through 14 states with nearly 500,000 feet of elevation gains and losses. It received the National Trails System Act's first National Scenic Trail designation in 1968.

Volunteers developed and, to a large degree, continue to maintain the trail. Managing a trail the size of the AT requires a network of over 30 Appalachian Trail Clubs and half a dozen Appalachian Trail Crews in a cooperative management system that includes the National Park Service, the U.S. Forest Service, government agencies in 14 states and the Appalachian Trail Conservancy.

Over-loved

Even with all those folks pitching in to help, maintaining a trail with that much traffic is a challenge and the growing pains are evident. According to the Appalachian Trail Conservancy, the negative impacts of overcrowding include exceeding the capacity of outhouses and shelters,

trash issues, and damage to springs, streams and vegetation.

Jo Swanson and her trail partner Bart Houck, known by their trail names of "Someday" and "Hillbilly Bart," made the first thru-hike of the much younger, partially completed Great Eastern Trail in 2013. Swanson had previously section-hiked the AT from north to south in 2009 and 2010. She says the AT is "over-loved" and that practicing Leave No Trace principles — such as not leaving trash behind, minimizing campfire impacts and staying on the trail — and good hiker behavior can lessen the impact of high traffic on the trail. Swanson is particularly concerned about hikers going off trail to avoid the long zig-zags up a mountain.

"People were cutting switchbacks and going straight up the mountain and creating these pathways for erosion," says Swanson. "They think, well, it's just me so it doesn't matter if I just walk up the mountain. But with thousands of people out on a trail, it makes a huge difference."

Good Times & Good Will

Not all of the impacts from increasing traffic on the trail are damaging. One mutually beneficial change is the impact

Top, a stunning sunset over the Great Smoky Mountains in Tennessee. Photo by Jonathan Riley, courtesy of the Appalachian Trail Conservancy.

Participants in a Leave No Trace Master Educator Course, left, learn to care for healthy landscapes while making as little impact as possible. Photo courtesy of the Appalachian Trail Conservancy

the growing number of hikers and the communities along the trail have on each other.

The Appalachian Trail Conservancy's Appalachian Trail Communities program promotes sustainable economic growth in towns and counties along the AT. The program also aims to benefit the growing hiking community while protecting the trail as a natural and cultural resource. There are currently over 40 Trail Communities along the AT.

Franklin, N.C., became the first Appalachian Trail Community in 2010. Bill Van Horn is a member and former chairperson of the Franklin Appalachian Trail Community Committee. He says the trail and the town's designation as a Trail Community bolsters the local economy.

"From about the middle of March until about the third week in April, if you were to stand outside of Franklin where the AT crosses Highway 64, you'd have 50 thru-hikers a day walking across Highway 64," Van Horn says. "Having 50 extra folks in town in bedrooms, eating at restaurants and hitting the supply stores is a good thing."

The committee worked with the local Macon County Transit to develop a twice-daily shuttle during peak thru-hiking season that transports hikers 11 miles from the Highway 64 crossing to

continued on next page



Traversing the Smoky Mountains on a thru-hike. Photo by Kaiha Bertollini



White Blaze

continued from previous page

the town center.

Another popular Trail Community is Damascus, Va., nicknamed "Trail Town USA" and famous for its Trail Days festival. Now in its 31st year, Trail Days brings nearly 10,000 visitors to Damascus, population 800. In turn, the town spends \$11,000 per day to put on the event and brings in 50 Port-a-Johns to accommodate the crowd. This year's festival will be held May 19-21.

"It's just an amazing event," says Tim Williams, chairman of the Appalachian Trail Days Committee and vice mayor of the town. "It's like a family reunion or a homecoming."

Daniel "Spot" Codispoti has thru-hiked the AT five times. Although he forgoes the shelters for the solitude of camping in his tent alone, he says he's noticed that the trail and shelters have been crowded in recent years, detracting from the wilderness experience.

He plans to thru-hike it again in 2017, and this time he'll use a flip-flop strategy recommended by the trail conservancy to avoid crowds and reduce pressure on the trail. He'll start his thru-hike in his home state of Pennsylvania and go north to Mount Katahdin, Maine, the northern terminus of the AT. Then he'll take a bus back to Pennsylvania and go south to Springer Mountain,



Daniel "Spot" Codispoti, a five-time Appalachian Trail thru-hiker, smiles in front of a hostel in Erwin, Tenn. Photo courtesy of Daniel Codispoti

Ga., the southern terminus.

Besides flip-flop itineraries, the Appalachian Trail Conservancy is asking hikers who are starting from Springer Mountain to avoid leaving on the most popular departure dates: April 1, March 1, March 15, and the Spring Equinox. The organization also offers a voluntary registration program that allows hikers to plan their hike to avoid the crowds.

As the trail has become more popular over the decades, there have been some positive impacts that only come with time and growth. Besides the increased number of shelters and outhouses, trail maintenance has increased, including the visibility of the AT's famous white blaze.

"In the '60s and '70s, and even the late '90s, I would get lost sometimes because there were just no white marks in certain places," says Codispoti. "Now, there are white marks everywhere. It's easy to follow."

"A lot of the bogs or small creeks never had bridges," he adds. "You could almost guarantee getting wet feet almost every day. Today, that hardly ever happens."

One thing that hasn't increased much over the years is the crime rate on the trail. Jordan Bowman, public relations media specialist with the Appalachian Trail Conservancy, says the number of reported incidents are relatively low in comparison to a city of the



The inaugural Conservation Leadership Corps crew learned how to protect the AT and surrounding resources. Photo courtesy of Appalachian Trail Conservancy

same population as the AT.

A greater safety concern is illness. According to the trail conservancy's website, there is a higher likelihood of being exposed to norovirus in an overcrowded shelter area or contracting Lyme Disease from ticks on the trail than being a victim of crime.

Codispoti says what bothers him most isn't crime.

"I guess I first noticed it in '11," he says. "The amount of smartphones on the trail and the people using the technology to hike the trail, it changes the trail in a bad way for me."

"A lot of times in the past, if I came up to a shelter or anywhere where there was a young person sitting there, they would at least say 'Hi,'" he continues. "You'd have a talk. Many times I've come up on somebody and they have their head buried in their phone or they have earplugs in their ears and they just give a little wave of their hand or they acknowledge your presence. They're not rude, but you don't engage in any conversation. That's a disappointment."

Swanson thinks technology is a big part of why thru-hiking has boomed.

"It's a lot easier for hikers to share their experiences now, sending pictures home, posting on social media and blogs," she says. "I think that outreach makes long-distance hiking seem achievable for a lot of people."

Codispoti says one important thing has stayed the same: the community of people and the good will they share along the trail.

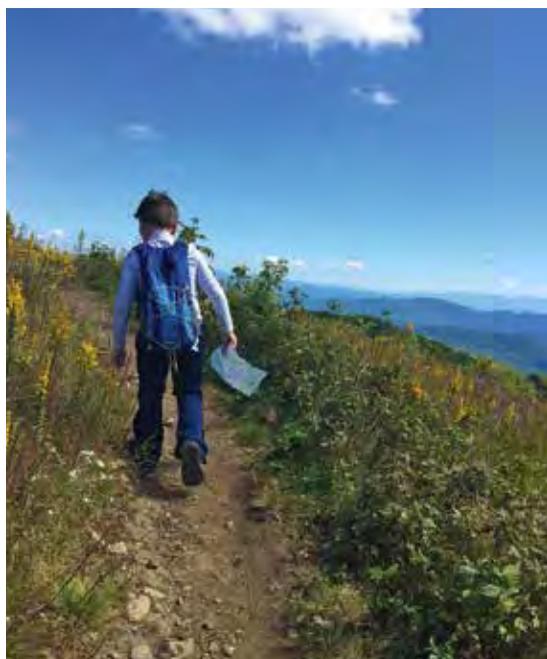
"I think that's one of the big reasons why I go back," he says.

Seek and Ye Shall Find

Kaiha "Wild Card Ninja" Bertolini found that good will, along with connection and purpose, when she thru-hiked the AT in 2016. She'd never heard of the trail until she met a thru-hiker in December of 2015. She quit her job in advertising, borrowed some gear and hit the path.

"I was at a crossroads in my life," she says. "I turned 30 and I was like, 'I'm going to die one day and I don't

continued on next page



A young hiker enjoys a day out on the Max Patch Loop Trail near Asheville, N.C. Photo courtesy of the Appalachian Trail Conservancy

31st annual Trail Days Festival
May 19-21, 2017
Damascus, Va.
traildays.us
Celebrate The Journey
2017 Appalachian Trail Days
Music, hiker parade, workshops, vendors, camping and more!

Pipeline Construction Would Scar Appalachian Trail Vistas

By Kevin Ridder

For generations, thru-hikers have come from far and wide to view the Appalachian Trail's grand vistas. Many of those views, however, could be marred for future hikers.

The 300-mile Mountain Valley Pipeline and the 600-mile Atlantic Coast Pipeline, two proposed natural gas pipelines that are scheduled to begin construction later this year if approved, would bore underneath the Appalachian Trail and require temporarily clearing as much as a 200-foot-wide right-of-way in some areas.

The proposed routes for both 42-inch pipelines would also cut through national forests. For the Federal Energy Regulatory Commission to approve these routes, the U.S. Forest Service would need to make fundamental changes to each forest's Land and Resource Management Plan.

Andrew Downs, regional director of the Appalachian Trail Conservancy, worries this would start a nationwide trend of tweaking forest protection plans for every new development.

"Changing or undermining that level of protection unnecessarily affects the entire national trail system," Downs



This visual simulation of the view from Angels Rest, an overlook along the Appalachian Trail in Virginia, shows the view without (left) and with (right) the proposed Mountain Valley Pipeline. Simulation prepared by Hill Studio for the Appalachian Trail Conservancy

says. "That would allow for all sorts of future projects to come in and have a negative impact. It's a slippery slope."

"There is also a suite of a dozen or more prominent vistas along the trail where [the Mountain Valley Pipeline] would negatively affect the landscape," Downs continues. "It would affect the experience of a hike along the Appalachian Trail for a long time."

Affected vistas include Angel's Rest, Dragon's Tooth, Wilburn Valley Overlook, Kelly's Knob and the Audie Murphy Monument.

Maury Johnson, a member of several Mountain Valley Pipeline opposition groups in Monroe County, W.Va., whose land would be crossed by the pipeline, is particularly worried about how the construction will affect Peters Mountain (read more on page 18).

"When they were building the Appalachian Trail in the '20s, they literally took a 22-mile detour to the top of Peter's Mountain so they could see the vista to the west," Johnson says. "If this project gets approved, you'd be able to see the pipeline for about 30 miles snaking toward you, coming across this wonderful view."

Visual and environmental impacts like these only get worse when combined with the Atlantic Coast Pipeline, Downs says. If approved, the project would cross the Appalachian Trail near the border of Virginia's Augusta and Nelson counties.

"No effective cumulative impact analysis has taken into account both of these projects in terms of the Appalachian Trail," Downs says. "Both pipelines in their draft environmental

impact statement said that the other pipeline was going to contribute to cumulative impacts, but they refuse to analyze those impacts."

According to Downs, the planning process for the Mountain Valley Pipeline's proposed route through Virginia and West Virginia hardly followed best practices, which he said was unusual behavior compared to

other large-scale energy projects he's worked with.

"At no time in their analysis have they utilized a correct centerline for the trail," Downs says, referring to the path of the Appalachian Trail, which regularly shifts to more sustainable and scenic locations. "As a result they've got a pretty terrible route that includes significantly avoidable impacts to the Appalachian Trail. Not only is that ridiculous, it was also completely preventable. They could've just sat down with us in September like [the Federal Energy Regulatory Commission] told them to and gotten that information."

Mountain Valley Pipeline, LLC, has not responded to a request for comment. ♦

White Blaze

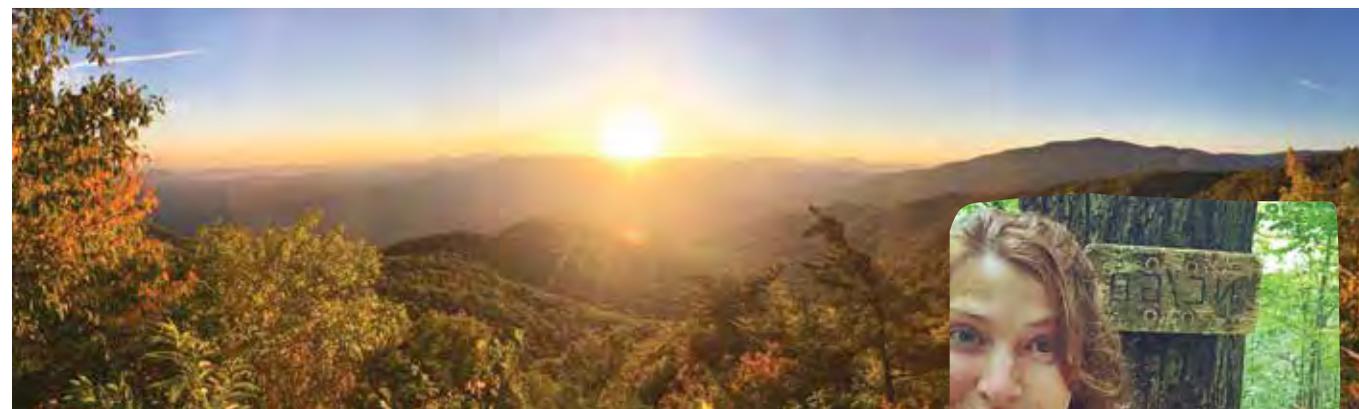
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care about anything that I'm doing.' In 2010 I was assaulted by men in the army. After that, I had a very hard time reconnecting not only with myself and my own personal strength, but also being able to see the world is still kind and good."

"I needed to know that still existed," Bertolini continues. "The Appalachian Trail taught me how to connect with the world again."

Codispoti says most people who thru-hike the AT are looking for something.

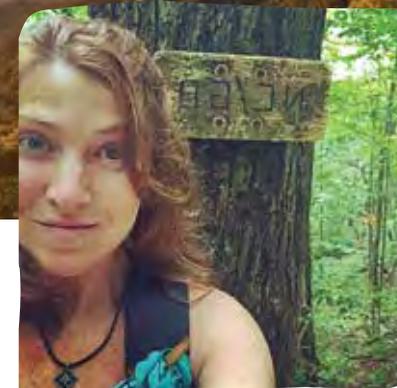
"Some of them are working out issues or problems," he explains. "Some of them are just looking for a great experience and some are there for a goal, like trying to set records. I know I'm looking for peace and quiet and the experience of the woods. I like the simplicity of it."



"It's just a simple path through the woods and yet it does a lot of different things for different people," he says.

Whatever growing pains the trail

may be experiencing as it enters its seventh decade, one theme remains constant. From Earl Shaffer who walked off the trauma of war as the first person to thru-hike the Appalachian Trail, to the thousands who will set out on their own treks this year, no one who makes the journey is ever the same again. ♦



The rewards of trail life include awe-inspiring vistas, such as this one from Mount Crawford in the Smoky Mountains, top. Inset, snapping a selfie on the trail. Photos by Kaiha Bertolini

Hiking the Highlands

Refuge, Restoration and Radio Silence at Laurel Fork

By Chris Robey

In the northwest corner of Highland County, Va., there is a secluded, stream-furrowed valley unlike anywhere else in the state. Here, clear waters amble among remnant stands of red spruce. The high-pitched calls of northern saw-whet owls echo among the restless boughs, while snowshoe hares duck in and out of the understory and northern flying squirrels den in the old cavities left by wayward woodpeckers.

Located in the Warm Springs Ranger District of the George Washington and Jefferson National Forest, the Laurel Fork Special Management Area was once a priority candidate for the protective status of a wilderness designation. Resistance from local landowners, however, stalled these efforts.

Despite this, Laurel Fork offers some of the best opportunities for solitude in the state — a quality enhanced by its proximity to the National Radio Astronomy Observatory, just a crow's flight south and over the border in Green Bank, W.Va. Here, astronomers utilize the world's largest fully steerable radio telescope to search for signs of extraterrestrial life.

The popular astronomer Carl Sagan wrote that the energy received by all the radio telescopes on Earth is dwarfed by a single snowflake striking the ground. To protect the radio observatory's sensitive instruments from electromagnetic interference, which could drown out these impossibly faint signals, the Federal Communications Commission established a 13,000 square-mile National Radio Quiet Zone. Laurel Fork,



Maintaining trails along Locust Spring Run often involves removing fallen trees, left. After the trail work is complete, above, the path is again clear for hikers. Photos by Lauren D'Amato

it so happens, sits smack in the center of this zone. Wifi and radio use in the immediate area is restricted, and cell phone towers are few and far between.

For those seeking solitude, this radio silence is part of the attraction, according to Warm Springs District Ranger Elizabeth McNichols. "In my mind, it really enhances the experience," she says. Freed from the buzzes and pings that punctuate the livestream of smartphone-dependent living, a hiker's thoughts may wander along with their feet.

Twenty-eight miles of trails wind among Laurel Fork's myriad tributary runs. Many follow old narrow-gauge railroad beds where, almost a century ago, steam engines carted men with crosscuts and axes into the woods each morning and emerged laden with timber at day's end. In their absence, a clarifying, restorative silence reigns.

This past fall, I served as the assistant leader with a trail crew for Southern Appalachian Wilderness Stewards, a regional conservation nonprofit. Over nine days, five other young seasonal staff and I, wielding the same hand tools the 20th-century logging crews once used, removed 65 fallen trees, cleared brush and painted blazes along eight miles of trail, dug over a dozen drainage features, and improved trail visibility at numerous stream crossings along a 12-mile loop of trails. Though the entire loop is a worthwhile hike, you need only walk the 3.5-mile Locust Spring Run Trail to gain a sense of the area's history.

Locust Spring Run

On the long, windy drive out to the trailhead at Locust Springs Day Use Area, you may notice signs reading "NO

PIPELINE" posted by the roadside. At one point, the proposed route of the Atlantic Coast Pipeline ran just a few miles south of Laurel Fork. Dominion Energy moved its proposed route even further south after the Forest Service issued a letter expressing concerns over the pipeline's potential effects on sensitive local habitats. Despite this change, the pipeline will still cross nearly 16 miles of George Washington and Jefferson National Forest in the state, including sensitive habitats.

From the picnic area, the trail delves

for a mile and a half through stands of red spruce transitioning into red pine. The path is easy underfoot — the old railroad bed is preserved in the trail's gentle grade. You may notice a series of ditches spaced at intervals along the trail — or, if we did our job well, you may walk right over them without a second thought.

The field crew did the majority of our drainage work along this stretch. The ditches are meant to divert rainwater off the trail, slowing the process of erosion.

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Locust Spring Run

Length: 7 miles (3.5 in, 3.5 out)
Difficulty: Moderate
Directions: From the intersection of US 220 and US 250, head west on US 250 for about 23 miles, passing into West Virginia, to the junction with WV 28. Turn right and go about 6.5 miles to the Locust Springs Picnic Area sign, then turn right.
Contact: Call Warm Springs Ranger District (540-839-2521) or visit tinyurl.com/locustspringrun

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The Science and Synergy of Trailbuilding

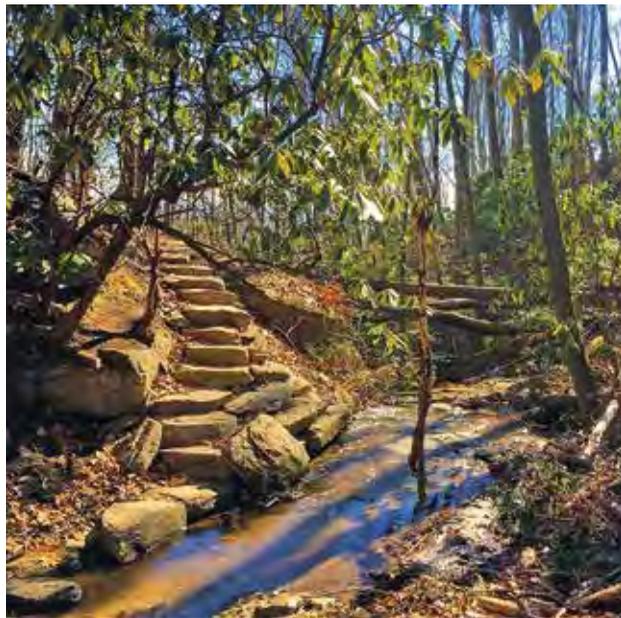
By Lorelei Goff

Peter Barr loves his job. Who wouldn't love to get paid to hike?

Barr is the trails and recreational lands coordinator for the Carolina Mountain Land Conservancy, an organization that preserves land and protects natural areas from development. He designs, builds, maintains and promotes trails on the conservancy's land in Henderson and Transylvania counties in North Carolina, as well as parts of the surrounding counties. According to Barr, trailbuilding has changed significantly over the last decade or two.

Trails used to be located mainly on old logging roads, game trails or walked-in paths that weren't designed for heavy outdoor recreation use and often resulted in ecological damage. Steep trails were prone to soil erosion. And hikers, bikers and horses widened the trail and trampled vegetation when trying to avoid areas where standing water accumulated during wet conditions. Because it's unlikely the damage can be completely arrested or restored, instead of repairing old trails they are often rerouted and built sustainably.

"Trails can cost up to several hundreds of thousands of dollars, and they're now starting to be seen as facilities, like



Stairways, when built sustainably, add to the durability and beauty of a trail. Photo courtesy of Carolina Mountain Land Conservancy

a playground or campground, because they're highly engineered and there's science behind them," Barr explains.

The Science

Barr breaks trail science down to physical sustainability, social sustainability and ecological sustainability.

Physical sustainability considers how long the trail will last and the amount of maintenance it will require. Water management is a big concern, so Barr designs slight but constant changes in elevation into the trail. That prevents water from gathering momentum over long stretches and washing away soil.

Another strategy, called curvilinear design, creates constant curves that slightly change direction while following the terrain of the landscape. By cooperating with the features of the land this way, water is naturally shed from the trail because it prefers to follow a straight line.

"Even if the distance is only a mile in a straight line, we'll often times utilize a trail that may take up to three miles to be sustainable," Barr explains. "Both of these features, the rolling trail with grade reversals and the curvilinear design, they actually make for a more interesting and enjoyable user experience, too. When you're kind of going up and down constantly, just a tiny little bit, and you're curving through the forest, it appears more natural."

Additionally, an almost imperceptible slope toward the outside of the trail across the direction of travel directs water away. Trail armoring, a labor-intensive method to create a more durable walking surface, uses rocks or hand-crushed gravel to minimize damage in portions of trails near streams or areas that tend to naturally hold water.

While physical sustainability man-



Shrimper Khare positions rocks to armor the trail tread on CMLC's new Weed Patch Mountain Trail. Photo courtesy of CMLC

ages water and erosion, social sustainability uses psychology — knowing and embracing what the user will most likely want to do — to manage the behavior of trail users and protect the landscape.

"Sometimes the trails are multi-use, for hikers and bikers and equestrians," says Barr. "So in the design, you want to give each user the experience they're looking for while also maintaining the integrity of the sustainable trail principles. I design mountain bike trails often times for the experience, because mountain bikers like a trail that's fun to ride and is very dynamic."

"Hikers, pedestrians, are very much destination-oriented," he adds. "They want to get to the top of the mountain, or they want to get to the waterfall, or they want to get to the rock outcropping to see the scenic view."

Balancing the motivations of trail users requires a bit of give and take. These preservation efforts form the third trail goal, ecological sustainability.

"We're building a trail at Young's Mountain in Rutherford County, N.C., right now, and also another mountain called Weed Patch Mountain," says Barr. "Those two trails traverse a very rocky landscape where we know there to be the presence of green salamanders, a rare species. The trails visit some of the rocky outcroppings to provide scenery for the user and a view, but avoids other rock outcroppings [to protect green salamander habitat]. It's a means of concentrating the impact."

The Synergy

According to Barr, there can be great synergy between trailbuilding and conservation, as well as good science.

Besides constructing trails on their

continued on next page

Helping Hands Trail crews behind the scenes

By Lorelei Goff

The Appalachian Trail Conservancy coordinates six trail crews and 31 trail clubs. The crews take on large-scale trail rehabilitation and construction while trail clubs handle much of the day-to-day maintenance. Other organizations that help maintain trails in the region include the U.S. Forest Service and nonprofit groups The Wilderness Society and the Southern Appalachian Wilderness Stewards.

Chris Robey, author of the story beginning on page 11, signed up as a SAWS crew member while he was still in college. He'll serve as a crew leader during his fourth season this year. Each season, which runs from mid-May to

mid-August, begins with two weeks of training about tools, land stewardship and Leave No Trace outdoor conservation ethics. Robey calls it a "blitzkrieg introduction" to what seasonal trail crew life is like. Then the work begins.

"On the very first day of the hitch, you'll backpack in four to five miles carrying almost 100 pounds of gear on your back, in addition to tools," Robey says. "The work doesn't stop until almost when you go to bed at night. It continues like that for the entire hitch."

Still, he says, it's a lot of fun.

"You get to know each other really well," he says. "You have inside jokes. You get to spend your time with very passionate people."

Working on a trail crew isn't without

danger. Robey tells the story of getting caught in a sudden thunderstorm out on a trail. The crew ditched their tools and hunkered down. Robey saw a blinding flash of lightning and heard a whipping sound, like something crashing through the trees above him, as lightning struck about 50 feet away.

That didn't stop Robey from going back. He says the benefits far outweigh the risks.

"At day's end you have a real sense of what you accomplished," he says. "You can see the immediate and physical results of all the toil that you put in that day. But more importantly, you're having an actual impact that's going to last long after you've stepped foot out of that area."

Trailbuilding

continued from previous page

own property, Carolina Mountain Land Conservancy constructs trails on property owned by partner organizations and agencies, and also on private land with public trail easements.

The decision to build is usually driven by the goal of linking two or more existing trails together, or connecting a protected property in one place to a protected property in another. Making it happen requires cooperation among all involved, including donors from public and private sectors. Trails are the catalyst for that synergy.

When it became evident that a trail route Barr was scouting would have to go around a cliff on private property, the conservancy sought a donation of the land from the owner for an easement granting a perpetual public right-of-way for the use of that trail. The landowner saw the value of a publicly accessible trail on the already conserved land and agreed.

"Conservation will support trails ... and [a trail] also makes conservation more attractive to funders," says Barr. "If we're protecting a piece of land and we let the funders know that it's likely to have a public access and trails component, that particular land protection project becomes more attractive and more desirable to fund. On the flip side, land with trails on them have a greater sense of urgency to protect the land surrounding that public access."

Synergy is vital in the construc-



Volunteer Bob Carlson helps Carolina Mountain Land Conservancy clear an overgrown corridor. Photo courtesy of CMLC

tion process as well, which can involve professional contractors, volunteers and the Youth Conservation Corps — a program that employs 15 to 18-year-olds through the U.S. Forest Service, the National Park Service and Fish and Wildlife Service. Crews use machines, including mini-excavators as small as two-and-a-half-feet wide, and hand tools.

"Sometimes that's entirely by machine," Barr says. "Sometimes that's entirely by hand. Sometimes it's a combination, where we'll have the mini-excavator do the digging, heavy lifting and moving of rock, but then we'll have a hand crew come behind to finish the trail by compacting the tread, cutting the vegetation, cutting the roots, outsloping the trail, and getting it to the point that a user could walk on it."

However serene and carefree the trail experience may feel, creating those simple paths through the woods is more complex than meets the eye. ♦

Laurel Fork

continued from page 11

Though structurally simple, most trail features are incredibly labor intensive. Hours of struggle and strife go into building something expressly intended to be invisible to the average hiker's eye. Our work should preserve the illusion that you're walking a path worn by years of boot-shod feet tracing the most pragmatic path over the land.

Eventually you will come to the intersection of Locust Spring Run and Buck Run Spur. From here, the trail veers right and braids itself with the creek. As you press further, note the sudden transition to northern hardwood forest, characterized by the occurrence of sugar maple, black cherry, yellow birch, northern red oak, red maple and sweet birch.

The young hardwoods loom tall and thin above you, taking on a cathedral aspect, their long branches supporting the canopy like flying buttresses. It is shadier, more subdued. Rusted engine parts, twisted railroad ties, bent wheels and axles jut from the ferns and moss, artifacts of bygone logging days. Reckless logging radically altered the forests here. These northern hardwoods dominate where red spruce once stood, suggesting periods of unchecked wildfires and erosion following the turn-of-the-century timber frenzy.

Rhododendron grows thick near Locust Spring Run's terminus. If you plan to stay the night, there are a number of campsites right along Laurel Fork. The namesake of the largest, most popular campsite, Slabcamp, is immediately clear. Past pilgrims have stacked slabs



The SAWS trail crew working on Laurel Spring Run stand near the trailhead on the first day of the project. From left: Matt Baker, Lauren D'Amato, Sina Varshaneh, Chris Robey, Emily Rose and Kathleen Murphy.

of smooth shale from the creek beds into armchairs and hearths. Though it's as close to a luxury suite as you'll find in a potential wilderness area, don't follow their example by stacking more — the local aquatic life will thank you for not disrupting their home.

While Laurel Fork's trails were our workplace, Slabcamp was our home. The stream's gentle voice coaxed us awake each morning and lulled us to sleep each night. During our breaks, we'd ease back onto our packs and gaze up through the shifting boughs. In our free time, we'd wander the streambeds and scramble up the cobbled slopes, suddenly kids again. Some nights, we lounged around a roaring fire and read Game of Thrones and poems by Wendell Berry aloud to one another. Other nights, we swapped ghost stories or, content after a long day's work, sat silent and reflective, gazing up at the star-studded night sky.

Just a ways south, over the next few ridges, astronomers confronted the roaring silence of deep space, hoping for a sign that we're not alone in the void.

At Laurel Fork, the silence presses close like a soft blanket. Those looking outward may cast their hopes with the scientists at the radio astronomy observatory. Here, one comes to look inward. ♦

BUILDING BETTER SPONSORED BY



An Adverse Climate for Energy Efficiency

What are the implications for energy efficiency now that we have a president who dismisses the relevance of science and appears to think that the future lies in dirty fuels and more pipelines to deliver them?

The implications are clear. It is going to be an uphill battle during this administration to keep programs and initiatives aimed at reducing carbon emissions alive. The proposed budget from the current administration reduces or eliminates support for programs such as Energy Star, the Department of Energy's Weatherization Assistance Program

and the Clean Power Plan, among others.

The good news is that you don't need government approval to improve the energy efficiency of your home and reduce your home's carbon emissions. For many homeowners, the simplest way to make a substantial, immediate impact on their carbon footprint is to increase the efficiency of the home they live in. Instead of participating in a "pollute for profit" economy, you can support a cleaner, more sustainable future.



The client who worked with Sunny Day Homes to build this well-insulated and airtight house was motivated by a desire to have a home with low energy use and low operating costs.

ABOUT SUNNY DAY HOMES: Sunny Day homes is a small, family-owned general contracting firm that has been incorporated since 1997. They built the first certified green home in North Carolina's High Country

in 2008 and have been advocating for non-toxic, environmentally responsible and energy-efficient building ever since. Call/text (828) 964-3419 or visit sunnydayhomesinc.com

The Problems with Pipelines

The proposed Atlantic Coast and Mountain Valley pipelines loom large in the minds of many residents of Appalachia. Beginning in Harrison County, W.Va., the Atlantic Coast Pipeline would span nearly 600 miles, through West Virginia, Virginia and North Carolina.

The Mountain Valley Pipeline begins one county to the north, in Wetzel County, W.Va., and meanders across West Virginia into Virginia, where it connects with the Transcontinental Pipeline, also known as Transco, in Pittsylvania County, Va.

The Federal Energy Regulatory Commission is reviewing applications for both projects and has released its draft environmental impact studies. The public comment period for the Atlantic Coast Pipeline was scheduled to end April 6. The public comment period for the Mountain Valley Pipeline ended in December 2016 and the agency's final environmental impact statement could be released any day. Thirty days after the final environmental impact statement is released, FERC can approve or deny the pipeline developer's application. If approved, the developer must get water and air permits, but is granted

eminent domain authority. An approval can be challenged in court, but it might not halt construction from moving forward.

These pipelines are two among many new projects or expansions of existing pipelines that are racing to the Appalachian Basin to carry fracked natural gas from the Marcellus and Utica shale formations to market. The Atlantic Sunrise Project is slated to reverse the flow of the Transco Pipeline, which now runs from Texas to New York City, so that Appalachian gas could flow south for export, and add additional pipe to the system. The

WB Xpress project would expand existing pipelines in both Virginia and West Virginia, and the list goes on.

This map shows a selection of the types of sites that would be affected if the Mountain Valley and Atlantic Coast Pipelines are approved by FERC and constructed. Destruction of forested areas and personal property and risks to water, air and safety would follow the routes of all the proposed pipelines coming out of the Appalachian Basin.

Read more about these and other proposed gas pipelines on the following pages.

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The proposed path of the Atlantic Coast Pipeline is marked in orange above, with yellow lines indicating the survey corridor. Buckhannon-Upshur High School sits to the east — the center of the high school is 2200 feet from the pipeline, within the evacuation zone.

In the event of an explosion, April Pierson-Keating of Mountain Lakes Preservation Alliance says, "The traffic would be probably blocked and the kids in the high school would be blocked inside with no way out, because there's only one road in and out."

A state police barracks also sit between the pipeline and the high school. To the south, the pipeline would also pass by the booster pump for the municipal water system that supplies area towns and firefighters.

"Homeland Security says things like police barracks and the pump station can't be within the evacuation zone, which is 2 miles," says Kevin Campbell, a retired local firefighter and EMT. Campbell says the state and local authorities "just make the assumption that Dominion knows what they're doing."

"So the citizens have got to question everything. And the citizens gotta make enough noise that people take notice and do something. So far we've gotten them to take a little bit of notice but nobody's doing anything."

Screenshot of Dominion Atlantic Coast ArcGIS interactive map, reference zone 28-29. View the map at tinyurl.com/dom-acp-interactive



According to the Federal Energy Regulatory Commission's Draft Environmental Impact Statement, the Mountain Valley Pipeline "would permanently impact about 886 acres of contiguous interior forest" in West Virginia and 359 acres of contiguous interior forest in Virginia.

Many of the plants and animals that depend on the forest would be impacted by the pipeline's construction and presence. "Species that require large tracts of unbroken forest land would need to seek suitable habitat elsewhere," states the FERC document.

The draft statement also concluded that the proposed pipeline would likely have an adverse affect on three endangered species: the Indiana and Northern long-eared bats and the Roanoke logperch fish.

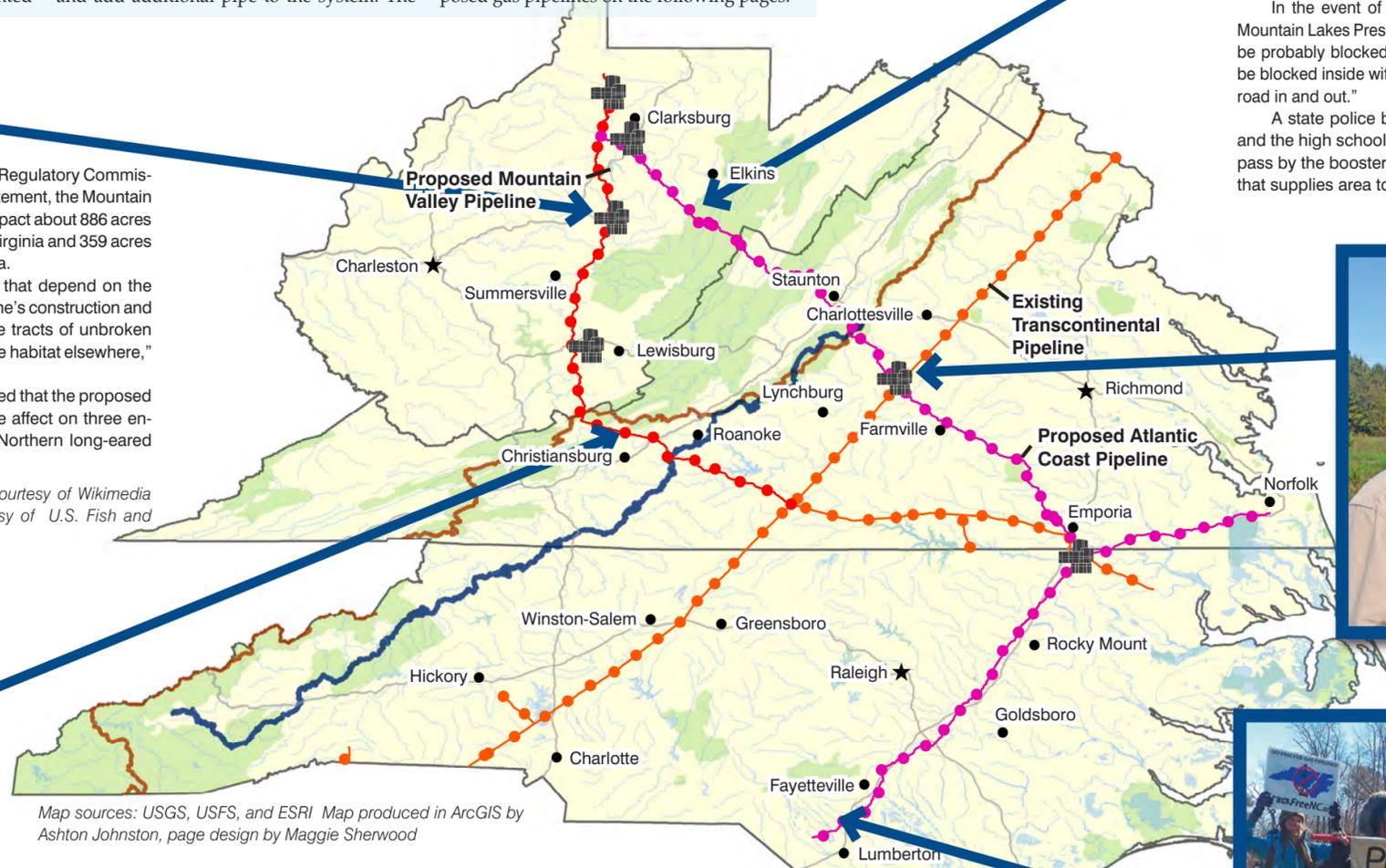
Forest photo by ForestWander.com, courtesy of Wikimedia Commons; Indiana bat photo courtesy of U.S. Fish and Wildlife Service



The pipelines also threaten to damage numerous cultural and historical sites along their paths. Nestled in Giles County, Va., the Greater Newport Rural Historic District is one such site. The district contains more than 700 buildings of historical significance documenting rural life in the late 18th through early 20th century. Important buildings include a cabin from the late 18th century, several homes from the early 19th century and a smelting furnace dated to 1871.

The proposed route of the Mountain Valley Pipeline would cross through this and other historical districts.

Photo at left by Jerry & Roy Klotz, MD, courtesy of Wikimedia Commons. Above, photo of Greater Newport Rural Historic District courtesy of VA Dept. of Historic Resources



Map sources: USGS, USFS, and ESRI Map produced in ArcGIS by Ashton Johnston, page design by Maggie Sherwood

- Proposed Compressor Stations
- Proposed Atlantic Coast Pipeline
- Proposed Mountain Valley Pipeline
- Existing Transcontinental Pipeline
- Nearby Cities
- State Capital
- Interstates
- Rivers
- Appalachian Trail
- Blue Ridge Parkway
- Federal Lands



At Whispering Creek Farm in pastoral Buckingham County, Va., Carlos Arostegui grazes 36 Jersey dairy cows on 134 acres. If constructed, the Atlantic Coast Pipeline would cut through his back pasture on its way to a proposed compressor station roughly a mile from his home. Compressor stations emit a host of air pollutants and are linked to health problems. The 53,784-horsepower Buckingham compressor station would connect the ACP to the Transco Pipeline.

Arostegui was born in Cuba and lived in five U.S. states before he and his wife bought their farm. They recently finished paying for perimeter fencing, but the pipeline right-of-way would cut through the pasture. "It wasn't until I came here that I felt like I'm not passing through anymore," he says. "I'm home. So I'm going to fight to keep it."

Photo by Molly Moore



Beginning on March 4, dozens of community members began a two-week walk following the 205-mile route of the proposed Atlantic Coast Pipeline across Eastern North Carolina. The pipeline ends in one of the state's poorest counties, Robeson.

Robeson County is also home to many of the Lumbee Tribe, a Native American population that has been recognized by the state since 1885, but which is still seeking federal recognition.

The pipeline would run through historic lands owned by tribal members of several nations. It would end in Pembroke, N.C., the cultural, economic, and political center for the Lumbee.

According to U.S. Census data, 30.6 percent of the population of Robeson County is living in poverty. Like so many counties along the proposed route, Robeson can ill afford the risks that come with the pipelines.

Photo of ACP Walk participants courtesy of NC Alliance To Protect Our People And The Places We Live (Stop The Pipeline)

Who Profits from the Pipelines?

By Elizabeth E. Payne

Utility giants such as Dominion Energy and Duke Energy explain their interest in building new pipelines by pointing to their need for more natural gas to replace retiring coal plants.

But one doesn't have to scratch too far beneath the surface to find another explanation.

"The way the regulatory system is set up at the moment," says Lorne Stockman, senior research analyst at Oil Change International, "companies are incentivized to build new infrastructure and create over-capacity."

Oil Change International is a research and communications group that advocates for the switch to renewables while highlighting the true costs of fossil fuels. The group has produced several recent reports that help put the Atlantic Coast and Mountain Valley pipelines in context.

"It comes down to what makes the most money for the companies involved, and the regulatory system is not set up to reward Dominion and Duke for efficiency savings," says Stockman. In other parts of the country, such as Massachusetts, incentives are more climate-friendly. "[The regulatory system there] doesn't reward them for load growth or increasing generation, but they are rewarded for improving efficiency."

While the corporations stand to benefit from tax breaks and are assured a profit, the environmental and safety risks of the pipelines will be absorbed by the communities they pass through and by everyone affected by the rapidly changing climate.

"Everyone's vying to get their project in because they know the industry is overbuilding. And everyone wants their pipeline committed as soon as possible."

Won't the pipelines create jobs?

For some, the promise of new jobs is a major selling point of the pipeline projects. But any large-scale employment during construction is short-lived, and these jobs may or may not go to local residents who need them.

Projected long-term employment

numbers for operating the pipelines and compressor stations are significantly lower than during the construction phase.

Compare this with jobs in the solar sector: employment in Virginia is strong, North Carolina is booming and West Virginia has a lot of room for growth.

	Atlantic Coast Pipeline	Mountain Valley Pipeline
Length	600 miles	301 miles
Cost	\$5 to \$5.5 billion	\$3.5 billion
Total annual metric tons of GHG emissions	67,591,816, equivalent to 20 coal plants or 14 million vehicles	89,526,651, equivalent to 26 coal plants or 19 million vehicles
Land expected to be cleared	4,208 acres	4,856 acres
Perennial waterbodies crossed	676	361

Sources: Oil Change International reports on the greenhouse gas emissions expected from the Atlantic Coast and Mountain Valley Pipelines (Feb. 2017); Federal Energy Regulatory Commission's Draft Environmental Impact Statements for the ACP (Dec. 2016) and MVP (Sept. 2016)

Are these projects needed?

Even if more natural gas is needed to replace retiring coal-fired plants, as many industry experts argue, does that mean that we need more pipeline construction?

It's hard to make that case when so much capacity in existing pipelines is going unused.

Pipeline developers

Percentage of Natural Gas to be Sold to Subsidiaries

Atlantic Coast Pipeline	86%
Mountain Valley Pipeline	100%

must demonstrate to the Federal Energy Regulatory Commission that they have customers for the gas and thereby show a need for the natural gas being shipped. For both the Atlantic Coast and Mountain Valley Pipelines, the vast majority of the gas will be sold to subsidiaries of the parent companies building the pipelines.

"In situations in which a pipeline developer contracts with an affiliate company to ship gas through a new pipeline, this is strong evidence that it is doing so because of the financial advantage to the parent company from building the pipeline, but not necessarily that there is a need for the pipeline," according to a recent report by the Institute for Energy Economics and Financial Analysis.

Source: Report by Institute for Energy Economics and Financial Analysis (April 2016)

National average capacity utilization

54%

State average capacity utilization

Virginia	23%
West Virginia	33%
North Carolina	37%

Why the rush to build the pipelines?

The companies building the Atlantic Coast and Mountain Valley Pipelines stand to profit from these infrastructure projects. When granting permits, the Federal Energy Regulatory Commission guarantees

the companies building the pipelines a profit by authorizing them to adjust their rates on transporting gas. At the same time, the partnerships financing the pipelines — such as Dominion Mid-

Pretax return on investment granted by FERC to pipeline projects
up to 14%

Federal taxes owed by the partnerships behind these projects
0

stream Partners, which has indirect ownership of the Atlantic Coast Pipeline, and EQT Midstream Partners, a lead partner in the Mountain Valley Pipeline project, are not required to pay federal taxes.

According to the New York Times, Duke has paid no total income tax between 2008 and 2015. Guaranteed profits and low tax rates are just two of the benefits the tax codes grant companies in the energy sector.

How would pipelines affect the climate?

Under the previous administration, the United States worked with other nations to set a path toward limiting the severity of climate change, first in Copenhagen and later in Paris.

The United States proposed to reduce its greenhouse gas emissions significantly over the coming two decades. Toward that end, the Obama administration issued standards that would have cut methane emissions nearly in half.

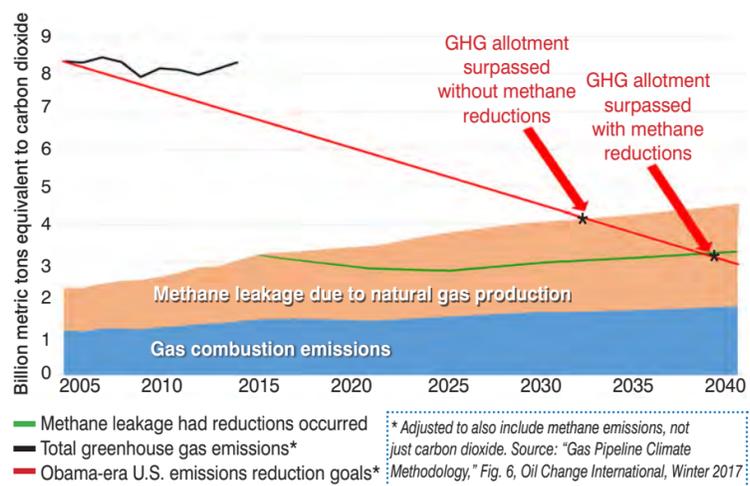
Over a 20-year timeframe, methane is nearly 86 times more powerful as a warming agent in the atmosphere than carbon dioxide. One of the major sources of methane emissions is the production of natural gas.

A recent study by Oil Change International indicates that if current projections hold true, the United States would exceed its entire greenhouse gas targets

just through its dependence on natural gas, and particularly from the boom in production from the Marcellus and Utica shale formations. This ominous forecast included the Obama administration's reduction in methane emissions — which Congress and President Trump have since overturned. That means that methane emissions from gas production are projected to exceed the country's entire allotment for greenhouse gases even sooner.

Energy needs can be met with existing pipelines coming out of the Appalachian Basin. But as companies rush to extract more natural gas, the overall capacity could soon be reached. According to the study, "If no new takeaway capacity is built, production of around 116 trillion cubic feet of potential gas production from now through 2050 would be avoided."

Projected U.S. Greenhouse Gas Emissions from Natural Gas vs. Obama-Era Climate Targets



Pipelines Spark Safety Concerns

By Dan Radmacher

"The area was lit up as if it were daylight for miles around."

"It incinerated everything in its path."

"It sounded like a Boeing 757. Just a roar. It was huge. You just couldn't hear anything. It was like a space flight."

"It looks like a bomb went off. As far across my windshield as I could see was just a massive fireball."

As these accounts from incidents around the nation vividly illustrate, the explosion of a natural gas pipeline is an earth-shattering event.

Flames shoot hundreds of feet up into the air, generating intense heat and incinerating anything — and anyone — in its path. One 2012 explosion near I-77 in West Virginia melted the interstate. In 2000, a pipeline explosion in New Mexico killed 10 campers.

The Federal Energy Regulatory Commission dismisses citizen concerns about the potential for explosions in the Draft Environmental Impact Statement for the Atlantic Coast Pipeline with this: "Because the pipeline would be constructed and operated in accordance with federal regulations and federal oversight, we conclude that constructing and operating the pipeline facilities would not significantly impact public safety."

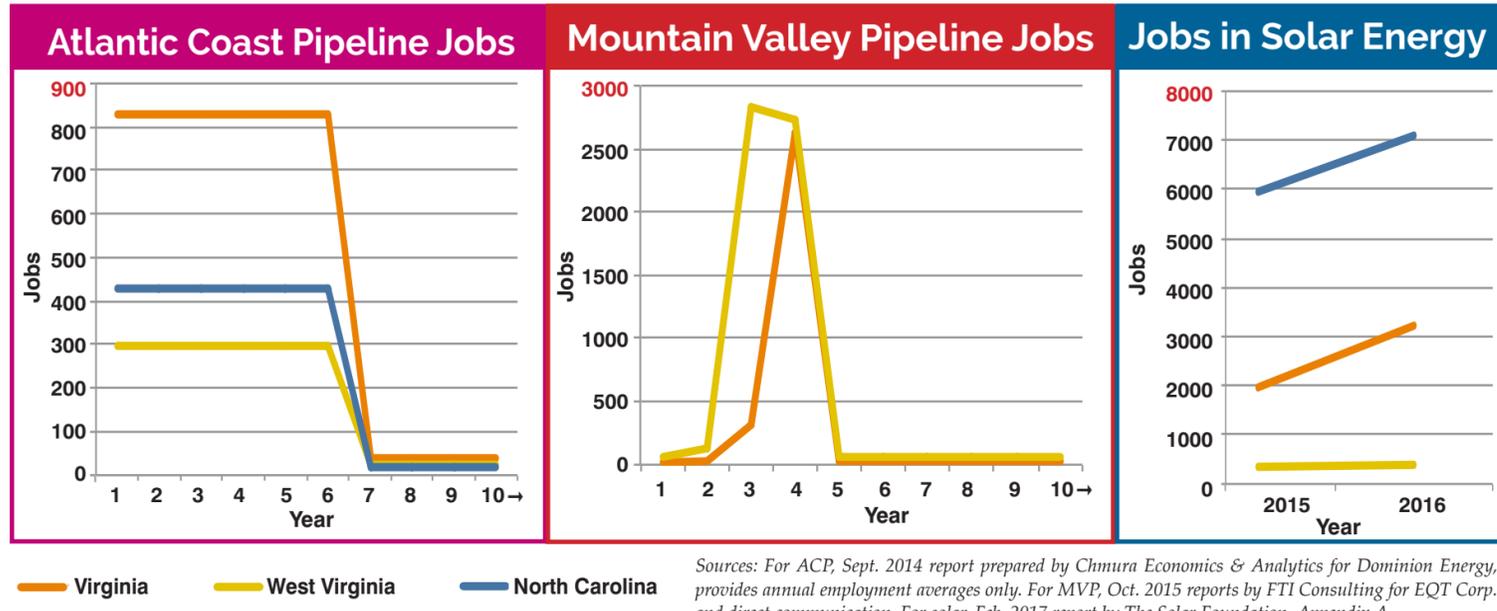
But despite federal regulations and oversight, pipeline explosions are anything but rare. According to the Pipeline Hazardous Material Safety Administration, there were 301 "significant

incidents" involving pipelines in 2016, resulting in 16 fatalities and 80 injuries and resulted in \$285 million in property damage nationwide. That was not an unusual year.

Both the Pipeline and Hazardous Materials Safety Administration and industry groups say pipelines are the safest way to transport products like natural gas. But pipeline incidents are on the rise. In an April 2016 report, the Institute for Energy Economics and Financial Analysis found there were more incidents from pipelines built in the 2010s than in any of the seven previous decades. They examined the average annual number of incidents per 10,000 miles of gas transmission lines and reported that pipelines installed in the 2010s had incident rates comparable to those built before 1940.

FERC defines "high consequence areas" as locations "where a gas pipeline accident could do considerable harm to people and their property." In the draft environmental impact statements for both pipelines, the agency noted 16 "high consequence areas" for the Mountain Valley Pipeline, and identified 51 for the Atlantic Coast Pipeline, but did not tally the number of people who live in those areas.

For 42-inch pipelines like the Mountain Valley and Atlantic Coast pipelines, FERC has calculated the "potential impact radius" or blast radius for an accident as any location within 1,115 feet of a failure point. The evacuation zone extends 3,583 feet in any direction, for a total diameter of 1.4 miles. ♦



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SUNDAY, JUNE 18TH
WATAUGA COUNTY GARDEN TOUR
2 PM - 5 PM

SATURDAY, JULY 15TH
ASHE COUNTY
2 PM - 6 PM

SUNDAY, JULY 16TH
WATAUGA COUNTY
2 PM - 6 PM

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In the Pipelines' Paths

Environmental effects of proposed pipelines could damage special places

By Dan Radmacher

It's not an easy hike up to the top of Peters Mountain, which straddles West Virginia and Virginia. Unlike some Appalachian mountains, there aren't roads that can get you part of the way up. But the hike is worth it, say those who spend a lot of time on the mountain.

"It is a special, beautiful transitional zone between Virginia and West Virginia," says Kim Kirkbride, a self-employed bookkeeper who lives in Giles County, Va. "By the time you get there, it feels like you're in another place, in a different realm. It makes me realize all the things that aren't important. It's so magnificently beautiful."

Dana Olson, a physician who lives at the base of the mountain on the West Virginia side with his wife and mother-in-law, agrees. "It's incredible, a wonderful, magical place," he says. Getting to the top is a steep hike that takes maybe an hour. "It's an 'Almost Heaven' kind of place, for sure."

It's a huge mountain for this region, 52 miles long with elevations above 4,000 feet. The Appalachian Trail follows its ridgeline for several miles between the Celanese Corporation's industrial plant in Narrows, Va., and the Peters Mountain Wilderness Area.

That stretch of mountain is also where the Mountain Valley Pipeline company wants to cross with its 42-inch natural gas pipeline — a possibility that has many outraged.

"This pipeline will transform 'Almost Heaven' into 'Almost Hell,'" says



This photo was taken on Peters Mountain, close to where the proposed Mountain Valley Pipeline would cross the Appalachian Trail. A hiker standing here would see the pipeline right-of-way traversing a ridge to the left. Photo courtesy of Roanoke Appalachian Trail Club

Olson. "Now, hikers along the AT stop and ponder life. They can camp in a meadow up there where you can see five or six counties in Virginia and West Virginia. Instead of that, this will be a place to just get through. It will turn into something that's a threat and a danger."

The pipeline crossing will harm both views and water quality, opponents say. "The mountain is just alive with water," says Olson, who recently found a spring by the Appalachian Trail near the top of the mountain. The draft environmental impact statement tends to gloss over such concerns, saying Mountain Valley has planned mitigation measures such as set-backs and vegetation screens to resolve such issues.

"Like all of our mountains the pipeline is proposing to cut through, Peters Mountain is full of water and layers of rock that filter that water," Kirkbride says. Multiple springs bubble up out of the mountain, and one even serves as the municipal water source for Lindsie, W.Va. "Even if that spring isn't right next to the pipeline, we don't know how everything flows in the mountain," says Kirkbride. "It's hard to say who's going to suffer damage when the pipeline leaks."

Even without a leak, the pipeline construction and maintenance will impact water quality. The pipeline will traverse the mountain's steep slopes, and the permanent 50-foot right-of-way will be stripped of most vegetation. This will lead to sedimentation issues, according to geologist Pamela Dodds. She wrote a report on the problem submitted to FERC by Roanoke County. Opponents also worry about what the pipeline will do to viewsheds.

"Views of Peters Mountain will be affected, and views from Peters Mountain will be affected," says Kirkbride. "The

Columbia Gas pipeline is only 8 inches in diameter and cuts over and down Peters Mountain near Narrows. It's a huge scar. It's hard imagining something that's almost six times that size."

Crossing Landscapes and Waterways

These two major pipelines proposed to pump natural gas from the fracking fields of northern West Virginia and southwestern Pennsylvania to the East Coast would be huge construction projects, stretching for hundreds of miles and carving a swath through national forests, wetlands, over and down steep ridges, through private property and public attractions, and across both the Blue Ridge Parkway and the Appalachian Trail.

The Mountain Valley Pipeline would start in Wetzel County, W.Va., and snake down through the Mountain State before crossing Peters Mountain into Virginia, where it would join the Transcontinental Pipeline in Pittsylvania County.

The Atlantic Coast Pipeline would start in Harrison County, W.Va., and wind through the state, cutting through the Monongahela National Forest before crossing into Virginia. From there, it would slice southeast through Virginia before dividing, with one arm headed to Norfolk, Va., and the other headed southwest across the North Carolina Coastal Plain.

Both the Atlantic Coast Pipeline and the Mountain Valley Pipeline will cross West Virginia's Greenbrier River and several of its tributaries. That concerns many people, including Lew Freeman, chairman and executive director of the Allegheny-Blue Ridge Alliance, a coalition of organizations that came together to oppose the Atlantic Coast Pipeline.

"Several of the Greenbrier River tributaries the Atlantic Coast would

cross are native brook trout streams," he says. "Native trout are a little bit like a canary in the coal mine for the mountains. If they cannot breed successfully in a location, that tells you there's something wrong with the water quality and that maybe you have sediment issues."

The Atlantic Coast Pipeline will also impact the James River in Virginia, crossing under the river near James River State Park. Many of its tributaries are also in the pipeline's path. "Virtually all of the major rivers that form the James are affected," says Freeman. "We're talking the potential for serious water quality problems."

This is exacerbated by the karst topography in Bath, Highland, Augusta and Pocahontas counties, according to Freeman. Karst topography is landscape made up by limestone and other soluble rocks, which creates a network of underground drainage systems and caves. "The water recharge areas for wells and springs, including the springs that form the headwaters of the James and Cow Pasture rivers, are susceptible to disturbance underground," he says. "Groundwater and the water sources for hundreds, maybe even thousands of people who depend on well and spring water will be put at risk."

Freeman is also concerned about the miles of ridgeline the pipeline will run along. In order to achieve the necessary 125-foot construction right-of-way on these narrow ridgelines, Freeman says that for half a mile, the pipeline company will have to cut 25 to 50 feet of elevation from the top of the mountain.

"It would become a very visible scar, and then there's the challenge of what to do with all the rubble. This would destroy the vistas that are so significant

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Active Resistance

Pipelines are spreading but residents are fighting back

By Elizabeth E. Payne

Deep beneath the soils of West Virginia, Ohio, Pennsylvania and New York — in what is known as the Appalachian Basin — the Marcellus and Utica shale formations are home to much of the natural gas reshaping the United States' energy sector.

In order to get to market, the gas is wrenched from the earth using hydraulic fracturing, or fracking, in which a brew of pressurized chemicals, water and sand is shot into the earth, cracking the bedrock so the gas can be loosened for extraction.

Where fracking goes, earthquakes, poisoned wells and releases of the potent greenhouse gas methane have followed.

Once collected and processed, the natural gas is then pumped through a circulatory system of pipelines, beginning with capillary-like gathering lines that flow from the wellheads to collection sites and ending with a network of large arteries that channel the gas hundreds, even thousands, of miles to power plants and export facilities.

Where pipelines go, disrupted landscapes, explosions, spills and erosion have followed.

For nearly a decade, gas extraction in the Appalachian Basin has been booming. The proposed Mountain Valley and Atlantic Coast Pipelines in Virginia, West Virginia and North Carolina would become two new arteries in an already crowded, and growing, field. But up and down the Eastern Seaboard, community members have joined together to fight against this expanding fossil fuel industry.

In the Belly of the Beast

West Virginia lies at the heart of the natural gas expansion, and its residents bear a heavy burden in the rush to build pipelines.

"We're facing a lot more than just the ACP and the MVP here in West Virginia," says Autumn Leah Crowe, program director at West Virginia Rivers Coalition, an environmental nonprofit. "We also have the Leach, the Rover, the Mountaineer XPress, the WB XPress,



and a new one, the Eastern Panhandle Connector."

Crowe's list includes seven proposed projects by four groups of energy partners. These projects would require at least \$17 billion to build nearly 2,000 miles of pipe radiating out from the Appalachian Basin. And her list only includes those pipelines West Virginia Rivers Coalition is focused on. There are more.

Across the state, residents are standing up to resist the expansion of the pipelines. April Pierson-Keating is co-founder of Mountain Lakes Preservation Alliance, an environmental advocacy group that promotes clean water through clean energy and a just, sustainable economy. She is also a native West Virginian who voices her opposition to the pipelines loudly.

Like Crowe, one of her primary concerns is water, and she's frustrated that so little is being done to protect this resource.

"West Virginia is a water-producing state. We have the headwaters of 46 rivers. And 14 states get their water from us," says Pierson-Keating. "So, we have a duty to protect the water for everyone downstream. And we don't even take it seriously to protect the water for ourselves."

The Atlantic Coast Pipeline is also slated to run right by the high school in Pierson-Keating's town. She's written about it — including a letter to President Obama — and spoken with her local officials and the media, but still the school lies near the path of the proposed pipeline. (See map in center spread.)



The Stand is a non-violent anti-pipeline encampment in Lancaster, Penn., along the proposed route of the Atlantic Sunrise expansion project. Photo by David Jones. Bulldozers clear land for the Stonewall Gas Gathering Pipeline, which now channels natural gas from wellheads in West Virginia to a larger pipeline. Photo courtesy of Mountain Lakes Preservation Alliance

are just gonna last one year till the pipeline is ran."

This farmer has seen a son move out of state and has lost a daughter to cancer, which he believes was caused by the

chemicals used in a fracked well near her house. Despite this, he's felt pushback from his community for his opposition to the pipelines. But he's not staying silent, and his words carry the weight of wisdom hard won.

Because of the compressor station near his house, "when it snows, it snows black," he says. "It used to be a very pretty state."

Standing Against the Pipelines

In rural South Central Pennsylvania, resistance efforts are focused on the \$3 billion Atlantic Sunrise project. It would allow the nearly 1,800 mile Transcontinental Pipeline, which currently runs from south Texas north to New York City, to run in the other direction as well. The pipeline, also known as Transco, would transport the natural gas pumped from the Appalachian Basin to the Gulf, presumably for export.

According to Tim Spiese, a member of the community action group Lancaster Against Pipelines, the project will also build what Transco describes as a nearly 200-mile "shortcut" between existing pipelines that "crosses every

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Family photos of life on Bent Mountain include images of harvests and orchards. Courtesy Marie Henry

Active Resistance

continued from previous page

tributary that feeds the Susquehanna River.”

On Feb. 3, the Federal Energy Regulatory Commission approved the new pipeline, now many residents of Lancaster County are preparing to take a stand.

“Our hope is that when they do start building the pipeline there will be such a huge groundswell of opposition to this that it’s going to create the energy we need to have industries pull away,” Spiese says. “That’s our hope.”

The group has established an encampment, called The Stand, on a piece of farmland in the path of the pipeline. About 10 people are currently living there, and dozens more come out for events and training.

“Non-violent mass action’ is what we’re calling it, and we are likening it to what happened in the Civil Rights era and even women’s suffrage,” says Malinda Clatterbuck, also a member of Lancaster Against Pipelines. “We really believe that the only way we will stop this is through



Doug Doerrfeld is one of the community members who went door-to-door educating residents of a neighborhood along the route of a proposed natural gas liquids pipeline. Photo by Suzanne Tallichet

the power of people coming out in mass numbers to help bring about an awareness and a change in how people are thinking about what’s happening here.”

“We’re doing this work to stop a pipeline,” says Clatterbuck, who has faced intimidation for her outspoken opposition to the project. “But I feel like the bigger picture here, what we’re really fighting against, is this unjust system that has allowed corporations to become

Pipelines’ Paths

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for this area, harming the tourist attraction and inviting serious erosion and sediment into nearby waters.”

Bent Mountain At Risk

Unlike Peters Mountain, Bent Mountain, Va., is not remote or isolated. It’s a small community of about 800, scattered across an upland plateau bisected by U.S. Route 221. When the Mountain Valley Pipeline shifted its route away from Floyd, Va., Bent Mountain came into its crosshairs.

The pipeline would come up over the steep Poor Mountain and cut through Bent Mountain’s forests, springs, wetlands and headwaters before crossing the Blue Ridge Parkway and heading south into Franklin County.

There are a lot of “No Pipeline” signs in yards around Bent Mountain, but Kathy Chandler may be one of the most fired-up opponents. The pipeline



The Mountain Valley Pipeline’s right-of-way on Poor Mountain would be visible from this Blue Ridge Parkway overlook. Photo courtesy of Roberta Bondurant

would cut right across the property where she and her husband make their home, and a narrow private road she and others use to get to their homes would become an access road to the pipeline during and after construction.

She has even found the survey process upsetting. “It is an invasion of privacy,” she says. “These surveyors don’t seem to realize they’re in someone’s home, in someone’s yard. We just have bigger yards around here.”

Her big yard includes three springs that flow together to join Mill Creek,

personhoods and have more power over the destruction of communities than those communities have the power to protect themselves against it and protect their health and safety. And that’s what’s gotta change.”

Southern Exposure on the Pipelines

Further south, there is still more resistance to pipelines carrying natural gas from the Appalachian Basin into Georgia and Florida.

The Sabal Trail is a 515-mile pipeline stretching from the Transco line in Alabama, across Georgia and down to central Florida. The \$3.2 billion project by Spectra Energy Partners, NextEra Energy, Inc., and Duke Energy is 78 percent complete, according to the Associated Press.

John Quarterman, the Suwannee Riverkeeper and president of the WWALS Watershed Coalition, has been pushing back against the Sabal Trail Pipeline in southern Georgia and northern Florida since 2013.

He has found that opposition to

which flows into Bottom Creek and then into the Spring Hollow Reservoir, one of the main sources of drinking water for Roanoke County. Chandler worries about the impact to the springs from the pipeline and the access road. “Our water is your water,” Chandler says.

She and local activist Roberta “Bert” Bondurant worry about the pipeline’s impact on Bent Mountain’s many wetlands, including forested wetlands, in its path. They also worry about the people.

Bondurant — a board member of POWHR (Protect Our Water, Heritage, Rights), a grassroots coalition fighting the pipeline — has gotten to know many of the elderly residents of Bent Mountain, many of whom grew up in the community when thriving orchards provided its economic lifeblood. Several of these residents have property in the pipeline’s path, Bondurant said. “Somehow, they managed to go around the expensive subdivision, though,” she says.

eminent domain — the taking of private property for public use — and the desire to protect streams and rivers cross party lines.

“You’d be surprised how many reclusive, right-wing, rural landowners really do not like this pipeline,” he says. “As one of them said to me, ‘You know, if caring about the wildlife and fishing and hunting and the waters means I’m an environmentalist, then I’m an environmentalist.’”

Quarterman is pushing for legislation to better protect water resources and is pursuing penalties against pipeline companies when violations are discovered. He also advocates for divesting from the companies that fund the pipeline and for expanding investments in solar energy and other renewables.

“Solar power doesn’t use any testing water, doesn’t use any cooling water and also doesn’t require any eminent domain,” he says.

Resistance in the Tarheel State

Along the banks of the Dan River in Rockingham County, N.C., an unproven power company wants to build a natural gas power plant.

continued on next page

Bondurant and Chandler studied the area’s history, and Chandler became friends with Jack Hale, an 85-year-old retired pilot whose grandfather owned 200 acres along Mill Creek and Green Hollow. They used what they’ve learned to submit arguments to the Federal Energy Regulatory Commission, which has permitting approval authority for the pipelines and conducted a public comment period for its Draft Environmental Impact Statement in late 2016.

Olson, the Monroe County physician, doesn’t hold out much hope for FERC denying the project, though. “The public is spending thousands and thousands of hours reading through these applications and asking questions and trying to get clarifications,” he says. “But FERC is funded by the people it regulates, and as far as I’m concerned, the gas industry is a ventriloquist and FERC is Charlie McCarthy [the ventriloquist dummy]. It’s like we the people who live nearby are just in the way. We’re nothing but noise to them.” ♦

Active Resistance

continued from previous page

According to the company’s website, NTE Energy is developing three projects in Ohio, Texas and in Cleveland County, N.C., and is in earlier stages with two other projects — one in Connecticut and this one in Rockingham County. None of the projects are complete.

Buck Purgason, a local resident and member of the advocacy group Good Stewards of Rockingham, is worried about this plant, particularly its impact on the beleaguered Dan River, which experienced a coal ash spill in 2014 and is now slated to provide the water needed to cool the proposed gas plant.

According to Purgason, cooling the plant will likely require between 1.7 and 5 million gallons of water from the river each day.

“This is water for a gas-fired plant that we don’t need,” he says. “That’s the main issue for me. And we’re trying to get more solar, renewable, and get off fossil fuels and [leave] them in the ground. And they’re building all these plants, and it’s gonna be fracked gas that they’re burning.”

As the plans to build the plant move forward, Purgason continues to participate in the public comment periods, speak with the press and organize community opposition. “It’s an uphill battle, but there’s a lot of people’s lives gonna be impacted for a little bit of peak power.”

The Atlantic Coast Pipeline is also the focus of growing resistance to gas infrastructure in North Carolina.

Thousands of North Carolinians have submitted comments against the ACP and communities are reaching out to other states and one another to fight against the pipelines.

For two weeks in March this year, community members walked along the proposed 205-mile route across the Coastal Plain of the state traveling from the Virginia border south through the low income, minority and agricultural communities that would be impacted by the pipeline.

The “Walk To Protect Our People And The Places Where We Live” culminated in a spring equinox ceremony lead by

members of the Lumbee tribe at the North Carolina Indian Cultural Center.

(For more on the walk, see center spread.)

The pipeline would end in Robeson County, whose population is nearly 40 percent Native American, primarily members of the Lumbee tribe, according to N.C. Policy Watch, a news outlet of the N.C. Justice Center.

A Victory from the Bluegrass State

Citizen resistance to a natural gas project in Kentucky led to a victory against the industry.

Since 2004, Suzanne Tallichet has been a member of Kentuckians For The Commonwealth, a community-based organization fighting for social justice, and has held several leadership positions with the group.

Three years ago, she heard about a dangerous project headed to her home of Rowan County. Energy giants MarkWest and Kinder Morgan planned to reverse the flow of nearly 1,000 miles along the Tennessee Gas Pipeline. This 70-year-old pipeline was designed to carry natural gas from the Gulf region to New York City and Boston, but under the new proposal it would transport natural gas liquids from the shale fields in Ohio towards the Gulf.

Natural gas liquids, such as ethane, propane and butane, are marketable byproducts produced when processing natural gas. They are used for making plastics and as heating and transportation fuels. They are also extremely flammable.

Tallichet contacted the local newspaper, The Morehead News, which ran a series of articles and editorials about the project. She also organized with other community members to participate in local government and go door-to-door in impacted neighborhoods to educate residents about the potential risks.

“I don’t know of a single person who has said, ‘I don’t know what you people are worried about. There’s nothing wrong. Hey, it might create jobs,’” Tallichet says. “As a matter of fact, that’s a huge problem, it doesn’t. If it created jobs,



The outlet for the water used to cool a proposed gas-fired power plant would enter the Dan River about 250 feet upstream from the canoe access. Photo by Buck Purgason



This map shows the network of pipelines existing as of August 2016. The proposed pipeline projects would be in addition to this tangled web. Map courtesy of U.S. Dept. of Transportation, Pipelines and Hazardous Materials Administration

there might be a little contention. But there’s no contention because it creates no jobs for us.”

“And yet we take all the risks,” she adds. “No benefits, all the risks. And when people heard that, that did it.”

Rowan is one of six counties along the route that has passed a resolution against the pipeline. As of press time, the project was stalled, and many residents are breathing easier.

“I certainly hope that this pipeline stays dormant,” says Tallichet. “I mean, people talk about environmentalists being radical. That clean water and clean air is a radical notion ... What’s radical is to take an old pipeline, reverse the flow of the material and then throw in the volatility [of natural gas liquids].”

The Fight Continues

As pipeline after pipeline moves closer to construction and completion, community members across the country continue to push back against them.

“Local people can make a differ-

ence, that’s energizing,” says Tallichet.

Malinda Clatterbuck, who is fighting the Atlantic Sunrise pipeline in Pennsylvania, agrees.

“We want to do what we can, with mass numbers of people, to say ‘we in the community say this isn’t right,’” she says. “The laws are against us. And the industry has so much power. And regulatory agencies are against us because they’ve been influenced by industry. But we the people, who are bearing the brunt of this damage, are saying it’s not okay.”

To follow these stories, go to our online version at appvoices.org/thevoice for links to each organization’s website. ♦

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Appalachia's Political Landscape

Budget Blowback

White House blueprint takes aim at the environment and assistance to low-income Americans

By Brian Sewell

On March 15, President Donald Trump took the stage at a rally in Nashville, Tenn. Befitting the campaign-style event, he opened with familiar, crowd-tested applause lines.

"It's patriotic Americans like you who make this country run, and run well," the president told his supporters. "All you want is a government that shows you the same loyalty in return."

The next morning, the White House would unveil the blueprint of its proposed 2018 budget, giving Americans a first look at the administration's priorities in fiscal form. At the rally that evening, in between pledges to build a border wall and save the coal industry, Trump promised that his budget would "shrink the bloated federal bureaucracy."

When the document was released, its vision of America and the role of the federal government was hardly recognizable. The "America First" budget — as it has been coined by the White House — would offset a \$54 billion boost to the military and national security by cutting the same amount from domestic, non-defense spending. Nearly 20 agencies and dozens of programs would be axed altogether.

Responses flooded in from politicians and advocacy groups of every stripe. Some criticized the administration's disregard for public support of

the arts and sciences, including medical research. Other reactions focused on the irony that Trump wants to eliminate programs that benefit Americans in the areas that helped him win the White House. The budget would wipe out decades-old anti-poverty programs and newer efforts to create jobs in communities that are struggling economically, like many in Appalachia and the Rust Belt.

On the day after the blueprint's rollout, the front page of West Virginia's largest newspaper, the Charleston Gazette-Mail, led with the headline "Trump's budget slams West Virginia." The Roanoke Times ran an editorial titled "Trump backhands Appalachia" that reflected on the region's support for the president and mused, "Trump has an odd way of returning the favor."

Although Congress controls federal spending, the White House's so-called "skinny budget" is the clearest picture congressional lawmakers have yet of the president's priorities. It could have been something positive for Trump to stump on. But a few days after the Nashville event, when the president held an almost identical rally in Louisville, Ky., he decided not to mention it.

Appalachia Loses Out

Some of the blueprint's uncompromising cuts to programs in rural areas raised the question: where did

these ideas even come from? In February, the Heritage Foundation, a think tank with close ties to the Trump administration, put forward its own wish list for the federal budget. Both the official blueprint and Heritage's "Blueprint for Balance" prescribe many of the same cuts and provide similar justifications for them.

"Heritage was the number one source," Stephen Moore, a Heritage Foundation economist who advised the Trump campaign, told The Washington Post. "That was partly because there wasn't a lot of time. They decided 'we will get rid of this, and get rid of that.'"

One puzzling cut in the White House blueprint that can't be traced back to any of Trump's numerous promises is the elimination of the Appalachian Regional Commission, an economic development agency that invests in workforce training and infrastructure needs like broadband. The Heritage blueprint also calls for doing away with it. While the White House does not explain why the commission is on the chopping block, the Heritage Foundation describes it as "duplicative carve out" that "diverts federal funding to projects of questionable merit."

Members of Congress were quick to defend the commission and its ac-



Many regional news outlets focused on how proposed budget cuts could affect Appalachia. Photo courtesy Charleston Gazette-Mail

complishments. Rep. Hal Rogers (R-Ky.) called the proposed cuts "draconian, careless and counterproductive."

"Today, nearly everyone in the region has access to clean water and sewer, the workforce is diversifying, educational opportunities are improving and rural technology is finally advancing to 21st-century standards," Rogers said in a statement. "But there is more work to be done in these communities."

Since October 2015 alone, the Appalachian Regional Commission has

continued on next page

Budget Blowback

continued from previous page

invested more than \$175 million in 662 projects throughout the region. Around \$75 million of that has supported initiatives to diversify local economies that have long relied on coal mining and now hope to attract new industries.

The Coalfield Development Corporation in West Virginia received a grant to scale up its workforce development model and expand to other counties. The group Friends of Southwest Virginia is using commission funds to create community access points along the New River that will enhance the region's ecotourism industry. Those projects and hundreds of others are projected to create or retain thousands of jobs and leverage nearly \$142 million in private dollars into the region's economy.

Around the same time, coal production in eastern Kentucky fell to a level not seen since the Great Depression, Appalachian states shed thousands of coal mining jobs and the nation's three largest coal companies fell into bankruptcy, largely due to the growth of natural gas and the falling demand for coal globally.

Trump won 400 out of the 420 counties in which the Appalachian Regional Commission operates partly on the promise that he'll "bring the coal industry back 100 percent," which policymakers and energy experts accept is an impossibility. The president's congressional counterparts are ready for him to expand on his message to Appalachia.

"It's true that the president won his election in rural country," Rep. Rogers told Reuters. "I would really like to see him climb aboard [the Appalachian Regional Commission] vehicle as a way

to help us help ourselves."

Climate and Energy in the Crosshairs

Even many expected cuts are deeper than anticipated. It comes as no surprise that a candidate who called the U.S. Environmental Protection Agency "a disgrace" would target the agency's resources in addition to rolling back environmental rules. But the blueprint calls for gutting EPA funding by nearly one-third and eliminating approximately 3,200 positions, making it the hardest hit of any federal agency.

EPA initiatives ranging from the Chesapeake Bay restoration program to the Clean Power Plan would be zeroed out. Funding for the enforcement of federal environmental laws like the Clean Water Act and Clean Air Act would be reduced with the unrealistic expectation that states would pick up the slack.

According to an analysis by the North Carolina Sierra Club, federal dollars pay for almost half of the state's multi-million responsibilities under the Clean Water Act, Clean Air Act and Safe Drinking Water Act. If North Carolina or any other state lost those funds, it would likely weaken programs that, in some cases, have also been cut by state budget-makers.

The EPA's work to research and respond to climate change is also targeted, as is the climate-related work of other agencies including the U.S. Department of Energy, the National Oceanic and Atmospheric Administration and NASA. When asked about the reason for those cuts during a White House press briefing, Office of Management and Budget Director Mick Mulvaney said "we consider that to be a waste of your money."

In another ironic twist related to the coal industry and its future, the

White House wants to cut the Energy Department's Advanced Research Projects Agency-Energy and the Office of Fossil Energy, which researches carbon capture technologies — the closest America has to anything resembling "clean coal."

A week after the budget was announced, 35 Senate Democrats wrote a letter to their colleagues calling the Trump administration's pledge to protect clean air and water "meaningless," considering the proposed cuts to the EPA.

"There is already bipartisan agreement that President Trump's harmful budget will be a nonstarter in Congress," Sen. Tim Kaine (D-Va.), who added his name to the letter, said in a statement.

"Dead on Arrival"

In a time of historic political polarization, the unpopularity of ideas in the blueprint transcends the partisan divide. Weeks before all the details were known, as rumors swirled about massive cuts to foreign aid and diplomacy, Sen. Lindsey Graham (R-S.C.) described the White House's budget as "dead on arrival."

According to a March poll by Quinnipiac University, most Americans would be fine with that — for any number of reasons. Sixty-seven percent of respondents oppose cuts to federal climate research and environmental programs. Nearly three-quarters of those polled are "somewhat concerned" or "very concerned" about climate change and 59 percent say the United States should do more to address it.

"When it comes to cutting Public TV, the arts, after school programs and scientific research to improve the environment, it's a stern 'hands off' from voters," said Tim Malloy, assistant director of the Quinnipiac University Poll, in a release announcing the results.

Uncompromising Cuts

The Appalachian region would take a hit if cuts to numerous national programs that benefit rural or low-income Americans were to go into effect. The following are just a few of the agencies and programs not mentioned in this article that would be eliminated.

- Corporation for Public Broadcasting, which supports nearly 1,500 locally owned public radio and television stations nationwide.
- The Corporation for National and Community Service, which funds AmeriCorps and other national service initiatives.
- Legal Services Corporation, which provides legal aid to low-income Americans.
- The Energy Department's State Energy Program, which assists states in improving energy efficiency and expanding renewable energy.
- The Energy Department's Weatherization Assistance Program, which makes grants to state and local governments to provide home weatherization services to those in need.
- The Department of Health and Human Services's Low Income Home Energy Assistance Program, which helps families afford their energy bills and minor energy-related home repairs.
- The Department of Treasury's Community Development Financial Institutions Fund grants, which leverages private capital by investing in economic development in communities where it's most needed.

The White House will send its full 2018 budget to Congress later this spring. In the meantime, Congress must address federal spending for the rest of this year before the current resolution to continue funding the government expires on April 28. But, when it comes to Trump's brazen approach, the White House's budget office Director Mick Mulvaney says "folks who voted for the president are getting exactly what they voted for." ♦

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115 TH CONGRESS: Below are recent congressional bills and amendments on environmental issues and how central and southern Appalachian representatives voted. To see other recent votes, or for congressional representatives outside of the five-state area, visit congress.gov. ● = pro-environment vote ✗ = anti-environment vote ○ = no vote	Kentucky			Tennessee			North Carolina			Virginia		West Virginia				
HOUSE	T. Massie (R) KY-04	H. Rogers (R) KY-05	A. Barr (R) KY-06	P. Roe (R) TN-01	J. Duncan (R) TN-02	Fleischman (R) TN-03	S. Desjardais (R) TN-04	V. Foxx (R) NC-05	P. McHenry (R) NC-10	M. Meadows (R) NC-11	T. Garrett (R) VA-05	B. Goodlatte (R) VA-06	M. Griffith (R) VA-09	D. McKinley (R) WV-01	A. Mooney (R) WV-02	E. Jenkins (R) WV-03
H.J. Res. 69 nullifies a Dept. of Interior rule relating to restrictions on the non-subsistence take of wildlife in National Wildlife Refuges in Alaska, such as a rule against killing hibernating bears, and prevents similar rules in the future. 225 AYES 193 NOES 12 NV PASSED	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
H.R. 1009, the OIRA Insight, Reform, and Accountability Act, expands the powers of the Office of Information and Regulatory Affairs, which is housed within the Executive Office of the President, granting OIRA the ability to review regulations from independent federal agencies. 241 AYES 184 NOES 4 NV PASSED	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
SENATE	M. McConnell (R)	R. Paul (R)	L. Alexander (R)	B. Corker (R)	R. Burr (R)	T. Tillis (R)	T. Kaine (D)	M. Warner (D)	J. Manchin (D)	S. M. Capito (R)						
H.J. Res. 69 nullifies a Dept. of Interior rule relating to restrictions on the non-subsistence take of wildlife in National Wildlife Refuges in Alaska, such as a rule against killing hibernating bears, and prevents similar rules in the future. 52 AYES 47 NOES 1 NV PASSED	✗	✗	✗	✗	✗	✗	●	●	●	✗						

Coal Ash Storage and Cleanup Problems Continue Across the Southeast

By Elizabeth E. Payne

Many North Carolina residents living near Duke Energy coal ash ponds are weighing their options for getting access to clean drinking water. In February, residents of Rowan County met to consider both municipal water and filtration systems for their wells. Duke is required by state law to provide a safe, permanent solution.

The company is also offering residents \$5,000 if they promise to not sue the company in the future. Duke is also seeking rate hikes to transfer the cost of coal ash cleanup to ratepayers.

Madison and Eden, N.C., have upgraded their local water treatment facilities because of bromide in their water that

originated from the Belews Creek coal ash impoundment ponds. When bromide is mixed with chlorine, it creates a cancer-causing agent.

A bill working its way through the Virginia legislature could establish a one-year moratorium on coal ash pond closures while other options are studied. The original Senate Bill 1398 included the moratorium, which was then removed by the House of Delegates but reinstated by an amendment by Gov. Terry McAuliffe.

The Virginia House also removed language that would have required the state Department of Environmental Quality to consider the findings of environmental assessments before issuing closure permits.

Many who oppose the cap-in-place closure of the ash ponds at Virginia's

Possum Point Power Station support the moratorium, which would give regulators more time to study the situation.

The General Assembly will consider the governor's amendment again in April.

In Georgia, residents are pushing back against the disposal of out-of-state coal ash in their landfills. But none of the related bills before the state's legislature made it out of committee.

Of particular concern is a plan to bury 10,000 tons of coal ash daily in a landfill in Wayne County. At least some of this ash would come from a Duke Energy site in North Carolina. The company that operates the landfill only needs a permit from the U.S. Army Corps of Engineers to build a rail yard large enough to accept this much ash before proceeding.

In Kentucky, a rule that would remove most of the state's oversight in permitting coal ash ponds is moving forward. As currently written, companies would not need permits before building sites, and complaints could only be raised after violations have occurred. Utility companies may have influenced the changes to the rule, according to WFPL, Louisville's NPR news station.

And in an Alabama victory, a landfill company dropped a \$30 million defamation suit against residents of Uniontown who raised concerns about health problems that occurred one a nearby landfill began accepting coal ash.

Newsbites

Coal Tax Credits Vetoed in Virginia

In late February, The Roanoke Times reported Virginia Gov. Terry McAuliffe vetoed a bill that would have reinstated tax credits for coal companies in the state.

McAuliffe has vetoed similar legislation for the past three years. He cited research showing that the decline of Virginia's coal industry was unaffected by state tax credits.

Coal Ash Byproduct Found in Fish

A study by Duke University found elevated levels of selenium, a coal-ash byproduct, in fish from three North Carolina lakes. The lakes are still affected by coal ash waste even after the shutdown of the power plants that polluted them, according to a Duke University journal article.

Coal Mines Opening

Bloomberg reported that a handful of new coal mines are opening amidst optimism over the rising price of metallurgical coal, the variety used in steelmaking. Corsa Coal Corp. plans to hire 70 to 100 employees for a new mine in Pennsylvania, according to The Tribune-Democrat.

N.C. Wind Farm Opens

North Carolina's first commercial-scale wind farm is operational in Pasquotank and Perquimans counties. The \$400 million project was installed by Avangrid Renewables and includes 104 wind turbines, each 50 stories tall. The wind farm generates enough electricity to power 60,000 households.

State Dept. Approves Keystone XL

The state department issued a permit for the Keystone XL pipeline project to move forward in Montana, South Dakota and Nebraska.

The decision is a reversal of an Obama administration policy that had blocked the project.

Reversing Climate Change Policies VA County Bans Fracking, Maryland Close Behind

By Elizabeth E. Payne

On March 28, President Trump signed an executive order reversing much of the progress President Obama made towards addressing the realities of climate change. With this action, Trump ordered the U.S. Environmental Protection Agency to abandon the Clean Power Plan, reopened federal lands for coal mining and eliminated the requirement that federal agencies consider climate impacts in their decision-making.

The Clean Power Plan would have limited the carbon dioxide emissions permitted from coal-fired power plants. But the regulation was held up in court and never enacted.

Trump was surrounded by coal miners when he signed the order and said the change would put miners back to work.

But increased dependence on natural gas and mechanization of the indus-

try, not the unenforced regulation, has led to the loss in coal jobs, according to a number of experts such as Michael E. Webber, the deputy director of the Energy Institute at the University of Texas.

Even Trump supporters doubt how much this can help. "I really don't know how far the coal industry can be brought back," said Robert E. Murray, chief executive of Murray Energy, after the signing.

The executive order did not comment on the United States' commitment to the Paris climate agreement signed in August 2016. But the new steps outlined in the order made clear that the current administration has abandoned efforts to meet those emission reduction targets.

The Paris agreement set a goal for keeping the rise in global temperatures well below 2 degrees Celsius, the level at which some of the most disastrous impacts of climate change would take effect.

Solar Jobs on the Rise

In 2016, a record number of jobs were created to make, sell and install solar panels across the United States, according to a new report by The Solar Foundation. There were 260,077 jobs in the solar industry last year, representing a nearly 25 percent increase from the year before.

According to the Solar Energy Industry Association's 2016 U.S. Solar Market Insight report, North Carolina nearly doubled its solar jobs in 2016, becoming the No. 2 ranked solar-producing state in the nation, following California.

In Chattanooga, Tenn., EPB — a municipal utility — has started construction on Solar Share, the city's first community solar project. Customers can buy into the project at several levels and get credit on their bill based on the energy generated by the panels. Once complete, the project will provide enough energy for about 200 homes.

And the N.C. Utilities Commission will hear challenges brought by solar developer O2 EMC alleging that Duke Energy has denied them access to the energy grid. — Elizabeth E. Payne

In February, Augusta County, Va., voted six to one to become the first county in the commonwealth to ban fracking.

Also known as hydraulic fracturing, this shale gas extraction process involves injecting a mixture of chemicals, sand and water into wells at high pressure to create fissures underground. Scientists have linked fracking to water contamination, air pollution and earthquakes.

Virginia code allows localities to prohibit or restrict fracking as part of their authority to determine land use. King George County approved restrictions on the practice in August 2016.

Further north, the state of Maryland had all but finalized a fracking ban at press time in late March. A bill to prohibit fracking had passed the state House 97 to 40 with bipartisan support on March 10.

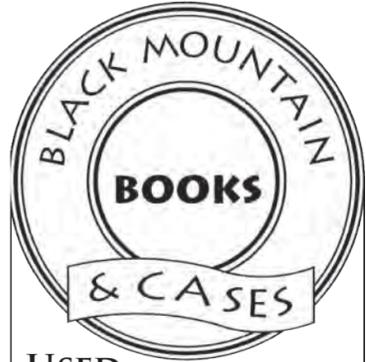
The following week, Maryland Gov. Larry Hogan, a Republican, called for a ban. "The possible environmental risks of fracking simply outweigh any potential benefits," he said during a news conference.

On March 27, the state Senate approved such a bill with a 35 to 10 vote. The ban would replace the state's current moratorium on the practice and make Maryland the second state to institute a prohibition on hydraulic fracturing.

W.Va. Coal Slurry Spill

On March 23, water and chemicals used to wash coal leaked into a tributary of the Coal River in Boone County, W.Va. The slurry was from an Alpha Natural Resources processing center. Local municipal water systems were temporarily affected.

Photo by Erin Savage /Appalachian Voices



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Mine Safety, Water Quality Targeted in W.Va. Bills

By Elizabeth E. Payne

A proposed bill, S.B. 582, would significantly diminish the state's authority to regulate and enforce safety standards in coal mines. Critics say it undoes years of legislative progress toward protecting miners.

"It's breathtaking in its scope," Davitt McAteer, a mine safety expert, told the Charleston Gazette-Mail.

Among other changes, the industry-backed bill reduces the number and limits the scope of visits by state safety inspectors, limits the ability to cite violations unless "imminent danger" can be proven and targets individual employees rather than mine operators and companies when violations are discovered.

Another bill that changes how the West Virginia Department of Environmental Protection measures water pollution passed

through the state Senate on March 28 and is awaiting the governor's signature. The current rules are based on the amount of pollution that can be allowed in a waterway during the lowest seven-day water flow over a ten-year period. The new bill, H.B. 2506, would set levels based on average stream flow.

The new regulation would allow more pollution to be permitted in waterways and was lobbied for by industry groups.

The state DEP also removed language from its permitting process that protected communities from noise and light pollution near compressor stations and other facilities. The change was undertaken at the request of the West Virginia Oil and Natural Gas Association.

Coal companies owned by Jim Justice, now the state's governor, owe the state \$4.4 million in unpaid back taxes.

Retired Miners Face Possible Loss of Benefits

In early March, more than 22,000 retired miners received letters from the United Mine Workers of America Health and Retirement Funds warning them that their health benefits would expire at the end of April, unless lawmakers intervened.

Congress passed a four-month extension of benefits for retired miners in December 2016. Lawmakers representing coal-producing states are threatening

to delay White House nominees and trigger a partial government shutdown to prevent those benefits from expiring, according to the Charlotte Observer. In January, Senate Majority Leader Mitch McConnell introduced a bill that would make the benefits permanent. Sen. Joe Manchin (D-W.Va.) has threatened to delay the U.S. trade representative nominee unless McConnell brings the bill to a vote by the end of April. — Adrienne Fouts

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Get Out the Sunscreen
Solar is coming to Southwest Virginia

The Southwest Virginia Solar Fair on May 9 in Wise, Va., will celebrate the upcoming solar development in Southwest Virginia and bring an emerging and exciting effort full circle.

In May 2016, at the Southwest Virginia Economic Forum, citizens and area leaders discussed how solar energy could be developed locally to create jobs and build and retain wealth in our region.

Those conversations were the seeds of what has become an action team called the Solar Workgroup of Southwest Virginia. Co-convened by Appalachian Voices, UVa Wise and People Incorporated, and facilitated by Dialogue and Design Associates, the goals of the Solar Workgroup include supporting high-visibility and high-impact solar energy installations to meet energy demand and spur economic development, even in the heart of coal country.

With international companies eyeing Wise County for solar projects, the Solar Workgroup agrees that the region has the potential to become a solar industry hub. With solar now employing nearly twice as many people in the U.S. as coal, oil and natural gas combined, many in the region think solar development could be the key to revitalizing the economy with high-paying local job opportunities.

At the Solar Fair, people will have the opportunity to meet SPARC-E, Mountain Empire Community College's off-the-grid, 5,000-watt, mobile solar system built by students. They will also have a chance to get an up-close and personal view of solar energy systems and see how they work.

The Empty Bottle String Band, a local favorite, will be performing live and amplified by solar power. For the kids, we'll have an inflatable bouncy house powered by solar energy and other free, fun games. And we'll announce the winners of our \$500 solar mini-grants contest for middle and high school students. The Solar Fair is also the launch pad for the



Above: The Empty Bottle String Band will perform at the Solar Fair on May 9.

Left: Representatives of Mountain Empire Community College in Big Stone Gap discuss the mobile solar trailer behind them known as SPARC-E (solar powered alternative clean energy). Photo by Christine Gyovai

Two N.C. Counties Make Energy Efficiency History

Two counties in western North Carolina — Yancey and Mitchell — are the first in the United States to pass resolutions supporting the development of an "on-bill financing" program for energy efficiency improvements by their electric utility.

Both counties are served by French Broad Electric Membership Corporation. The resolutions, proposed by Appalachian Voices, express support for French Broad developing a program that provides its members with the upfront cost of home energy upgrades, which the member repays through a monthly charge on their electric bill. The upgrades would save enough energy to

reduce the member's average bill, even with the repayment charge, and the program would be accessible to renters and low-income households.

In addition to relieving the burden of energy costs and improving the quality of living for residents, such a program would also stimulate local economies.

The Yancey County Commission was the first to pass the resolution on February 13. There is a great need for energy efficiency in Yancey County. According to the U.S. Census, 77 percent of the county's occupied housing stock is more than 25 years old. Additionally, nearly one in every six households in Yancey County live in poverty. A study

conducted by Accounting Insights found that county residents living below 50 percent of the poverty line spent an average of 44 percent of their income on energy costs.

The Mitchell County Commission passed its resolution on March 6. The county faces similar housing conditions, poverty rates and energy cost burdens as Yancey County.

Together, Yancey and Mitchell counties make up almost half of French Broad's membership. Madison County, home to another 34 percent of the electric cooperative's members, is scheduled to consider the same resolution on April 18.

French Broad currently offers an

Solarize Wise residential solarization program, a collaborative effort of the Solar Workgroup to make it cheaper and easier for homeowners, small businesses and farmers to install solar power in Wise County.

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on-bill financing program for mini-split heat pumps, but has not implemented a more comprehensive and inclusive energy efficiency financing program, despite support from community stakeholders.

The resolutions in Yancey and Mitchell counties show that community leaders believe that addressing energy costs is an important part of strengthening local economies and improving the lives of local residents, and that French Broad could play a central role in achieving those goals.

To get involved, contact Lauren Essick at (828) 262-1500, or via email at Lauren@appvoices.org.

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Nature's Stewards
Susan Tyree & Kent Walton

By Molly Moore

Susan Tyree and Kent Walton's home is nestled in Franklin County, Va., with a view of the Blue Ridge Mountains from one window and Cahas Mountain, the county's highest point, from another.

The couple share a deep and sincere appreciation for trees, nature and Appalachia's environment as a whole. "Nature is not something outside of us, we are nature," Kent says.

Perhaps it's not surprising that with their strong environmental and activist ethic, Kent and Susan are among the longest-running Appalachian Voices members. Kent was living at the Light Morning intentional community near Floyd, Va., in the '90s when he met Appalachian Voices founder Harvard Ayers, and Kent became an early subscriber to The Appalachian Voice.

The couple are both Quakers and are involved with the Quaker Earthcare Witness network, which addresses ecological and social issues. As part of that network, Kent is working to develop ways for people who have investments in stocks and mutual funds identify and screen out fossil fuel companies.

"They say, 'think globally, act locally.' We can certainly apply that to climate change," Kent says.

He and Susan are also firmly opposed to the Mountain Valley Pipeline and others like it — not only for the climate impacts, but for the effects they would have on the land and waterways.

Forest fragmentation and water quality are among Susan's top concerns.

"We all need to remember that if we keep the water healthy it's for everyone, it's for the children and the future generations," she says.

Susan grew up in the mountains outside of Roanoke, Va. Her parents planted hundreds of trees on their steep parcel of land, including roughly 30 species of apples and peaches that were all raised organically. She describes her mother as an activist, and Susan herself became passionate about nature at a young age. "It just seemed the only logical thing to try to preserve nature and therefore the diversity and all the beneficial things that come from being able to walk in nature," Susan says.

She is an artist and focuses on natural themes in her pottery. Susan also serves as an interpreter at the Blue Ridge Institute Farm Museum in



Ferrum, Va., where she reenacts daily life on an 1800s farm and teaches kids about traditional homestead games.

Kent also traces his connection to the natural world to childhood and recalls his father walking the field and crumbling the soil between his hands. As a child, Kent would run outside when he was distressed and find solace by finding a tree to climb or sit beneath.

For the past 28 years he's worked as an arborist in the Roanoke Valley and Smith Mountain Lake area. In addition to addressing practical concerns with trees, he says, "I'm trying to take care of [the trees] like they took care of me."

"You need to get out in nature and let nature heal you from all the cynicism," he continues. "It's the antidote to the knowledge of what we're doing to the environment."

Gathering Voices Against the Pipelines

Throughout the Federal Energy Regulatory Commission's public comment period for the proposed Atlantic Coast Pipeline's Draft Environmental Impact Statement, we worked with partners and grassroots groups across three states to gather thousands oral and written comments from concerned citizens about the inadequacy of the DEIS.

Even if pipelines are approved by FERC, states also have to grant water quality permits. The West Virginia Dept. of Environmental Protection held public hearings on the Mountain Valley Pipeline's water permits earlier this year, and we helped collect citizen comments. We'll continue to put pressure on our state decision-makers throughout the process. To stay informed about the latest steps you can take, join our email list at appvoices.org/sign-up.



Appalachian Voices is committed to protecting the land, air and water of the central and southern Appalachian region. Our mission is to empower people to defend our region's rich natural and cultural heritage by providing them with tools and strategies for successful grassroots campaigns.

Organizational Staff

Table listing organizational staff including Executive Director Tom Cormons, Director of Philanthropy Susan Kruse, and various program and communications staff members.

Board of Directors

Table listing board members such as Kim Gilliam, Dot Griffith, Bunk Spann, and Christopher Scotton, along with advisory council members.



The Appalachian Voice

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A beaver swims in Tomahawk Pond in Virginia's George Washington National Forest. As "nature's engineers," beavers have a huge impact on their environment, cutting down trees, building dams and flooding land to protect their lodges. This provides a welcome habitat for wildlife such as fish and waterfowl, but often gets beavers in trouble with unappreciative landowners. Read more on page 7. Photo by Steven David Johnson

Renew your commitment to protecting Appalachia for future generations

Appalachian Voices is a nonprofit, grassroots organization working to protect the central and southern Appalachian mountains from serious environmental threats and to advance a vision for a cleaner energy future.

Your donation also helps support The Appalachian Voice, which delivers critical news about issues that affect Appalachia. Help us continue to bring you in-depth stories and the latest news about our air, land, water and communities — and The Voice will be delivered straight to your home.

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