

The Appalachian VOICE

15 years in print and still **FREE**

August / September 2012

CHANGING CURRENTS

Navigating the Demands on Our Water in an Increasingly Thirsty World

ALSO INSIDE: The Mighty Mussel • A Cold Summer for Coal • Blueberry Years

Hidden

TREASURES



Special Insert Part 2

EDITOR..... *Jamie Goodman*
 MANAGING EDITOR.....*Brian Sewell*
 ASSOCIATE EDITOR.....*Molly Moore*
 DISTRIBUTION MANAGER.....*Maeve Gould*
 GRAPHIC DESIGNER.....*Meghan Darst*
 LEAD EDITORIAL ASSISTANT.....*Jessica Kennedy*
 ONLINE & COMMUNICATIONS ASSISTANT.....*Anna Norwood*

DISTRIBUTION VOLUNTEERS: Alison Auciello, Heather Baker, Becky Barlow, Jere Bidwell, Blue Smoke Coffee, Rebecca Booher, Charlie Bowles, Cindy Bowles, Lynn Brammer, Jane Branham, Steve Brooks, Carmen Cantrell, Alex Carll, Charlie Chakales, Shay Clanton, Chris Clark, Patty Clemens, Theresa Crush-Warren, Beth Davis, Detta Davis, Deborah Deatherage, Lowell Dodge, Nels Erickson, Lauren Essick, Emma Ford, Dave Gilliam, Scott Goebel, Lisa Goodpaster, Bruce Gould, Michael Grantz, Gary Greer, Kelly Griffin, Tim Guilfoile, Sharon Hart, Susan Hazlewood, Cary and Karen Huffman, Tim Huntley, Pamela Johnston, Mary K., Amelia Kirby, Rose Koontz, Frances Lamberts, Justin Laughlin, Carissa Lenfert, Sean Levenson, Susan Lewis, Loy Lilley, Debra Locher, Joy Lourie, Gail Marney, Lee Martin, Mast General Store, Kathy McClory, Kim Greene McClure, Jay McCoy, Rich McDonough, Mike McKinney, Steve Moeller, Dave and Donna Muhly, Dennis Murphy, Catherine Murray, Cabell Neterer, Dave Patrick, Janet Perry, Bronwyn Reece, Martin Richards, Carol Rollman, Kristin Rouse, Vicki Ryder, Debbie Samuels, Steve Scarborough, Gerry and Joe Scardo, Craig Schenker, Kathy Selvage, Brenda Sigmon, Leah Smith, Sarah Smith, Jennifer Stertz, Mike Wade, Nora Walbourn, Bill Wasserman, Jim Webb, Dean Whitworth, Amy Wickham, Graham Williams, Barbara Williamson, Diana Withen, Gabrielle Zeiger, Ray Zimmerman

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

2nd Edition
Managing your Woodlands
 A Guide for Southern Appalachian Landowners
 Produced by: Appalachian Voices

Our handbook on forestry management gives you the knowledge and resources you need to make smart decisions about your forest and become a better steward of your land.

Now with a Free DVD "Landowner's Guide to sustainable Forestry" from the Model Forest Policy Program

To get your FREE copy: Sign up at: appvoices.org/reenergizing
 OR contact: 1-877-APP-VOICE or forestry@appvoices.org

A Note from our Executive Director

Dear Readers,
 Clean water is as American as apple pie — and it takes a lot of water to grow an apple. I prefer that water to be clean. But dirty industries and their friends in Congress continue to put that basic right at risk.

Why would anyone purposefully threaten one of the most basic requirements for life?

The likely answer is profit. Mining companies spend millions each year lobbying in our state legislatures and on Capitol Hill for the "right" to use Appalachia's streams as dumps. But valley fills related to mountaintop removal mining aren't the only danger. The injection of coal slurry underground and in surface impoundments and coal ash disposal also pose massive threats to groundwater.

Thanks largely to efforts by Appalachian Voices and our partners in The Alliance for Appalachia, the congressional representatives of more than 85 million Americans have signed on as cosponsors of the Clean Water Protection Act, legislation designed to protect our waterways from mining waste by restoring the language of the Clean Water Act. Appalachian Voices is also taking the lead in holding coal companies legally accountable for routinely and flagrantly violating the laws that protect our waters.

We don't do this for profit. We do it to ensure that Appalachian families have the right to clean water, now and in the future. You can help us achieve that goal. Become a member of Appalachian Voices today. Help us win.

For the mountains and rivers,

Willa Mays



Across Appalachia

Environmental News From Around the Region

Partnerships Protect Western North Carolina's Rare Aquatic Ecosystems

By Brian Sewell

Public and private groups working together to protect land in Western North Carolina are making sure that the region's aquatic ecosystems and the rare plants and animals found in them are also preserved.

The Box Creek Wilderness, a newly designated state Significant Natural Heritage Area, encompasses 3,300 acres along the McDowell-Rutherford county line.

Collaboration between a conservation-minded landowner, Foothills Conservancy of North Carolina, and the N.C. Department of Environment and Natural Resources' Natural Heritage Program led to the private tract's protection.

A Morganton-based land trust, Foothills Conservancy identified the value of the area long ago. Serving as an ecological bridge between North Carolina's Mountain and Piedmont regions, the area harbors a number of imperiled species, including the gray-



The South Mountain gray-cheeked salamander is a Globally Critically Imperiled species found in Box Creek Wilderness and is one of several local species which occur nowhere else in the world. Photo Courtesy of Foothills Conservancy of North Carolina

cheeked salamander and Broad River stream crayfish, and serves as corridor for migratory birds.

Perennial streams lace the tract, including Box Creek, a primary tributary of the Second Broad River which supplies drinking water to residents of Rutherford County before joining the Broad River as it flows into South Carolina.

According to ecologists Kevin Caldwell and Lloyd Raleigh, the Box Creek Wilderness contains more than 30 miles of perennial streams, at least

90 low-elevation seeps, 20 identified rare vegetation communities, and more than 80 Natural Heritage Program Rare and Watch List species.

In a time when it is difficult to find public funds for land protection, Susie Hamrick-Jones, Foothills Conservancy's executive director, praises the foresight of landowners like Tim Sweeney, the CEO of Epic Games in Cary, N.C., who owns the Box Creek Wilderness tract.

"Tim's a great example for other landowners," Jones said. "He saw opportunity in our area and understood the value of the lands that we've been looking at for so long."

Jones said that most conservation occurs on private land and that government and non-profit funds cannot permanently protect all of North Carolina's important natural areas.

In the mountainous counties to

the north and west of the Box Creek Wilderness, a project proposed by the U.S. Fish and Wildlife Service seeks to protect some of the last remaining examples of Southern Appalachian bogs, isolated wetlands scattered across Western North Carolina that are biodiverse hotspots.

According to the FWS, mountain bogs provide food and shelter for game birds such as rails, ruffed grouse, turkey, and wood duck, and serve as breeding habitat for many species of amphibians, especially salamanders, of which the Southern Appalachians have the greatest diversity in the nation.

Where it is feasible, the FWS will allow wildlife observation, photography, education, and interpretation in bog areas currently closed to the public. The agency has already reached out to private landowners who have expressed interest in protection efforts.

For more information visit foothillsconservancy.org and fws.gov/southeast/mountainbogs.

INSIDE THIS ISSUE

Regulars

- Across Appalachia 3-4
- Hiking the Highlands 6
- Naturalist's Notebook 7
- This Green House 16
- Coal Report 18
- Opinions and Editorials 20
- AV Book Club 21
- Inside AV 22
- Get Involved! 24

ON THE COVER



A doe crosses a calm Abrams Creek in the Great Smoky Mountains National Park. Photo by Brian Shults, facebook.com/brianshultsphotography

Special Center Pull-Out



Hidden 2012 Treasures

In part two of our summer guide, we turn to the wet and wild treasures of Appalachia, seeking the top places to splash, fish, paddle, dip your toes or just bask in the glory of a mountain waterfall. Don't forget your river sandals!

CHANGING CURRENTS

It's becoming increasingly clear that we should be worried about water. In this issue we navigate the narratives surrounding how we use and abuse this most fundamental human need.

- Extreme Weather, Climate Change and our Relationship to Water..... p. 8
- The High Cost of Energy on Water..... p. 9
- Underground Controversy: Fracking's Impact..... p. 10
- Buried Blackwater: Revealing Coal's Dirty Secret..... p. 10
- Clean Water Warrior: Rick Handshoe..... p. 11
- Evolution of a Cattle Farm..... p. 12
- In Search of Healing Waters..... p. 13
- The Value of Running Water..... p. 14

Recognizing Renewable Opportunities

Kentucky could realize 34 percent of its energy demand from renewable sources by 2025, a new study shows. Authored by West Virginia-based Downstream Strategies and Kentucky-based Mountain Association for Community Economic Development, the report found that solar photovoltaic and combined heat and power, the simultaneous generation of mechanical power and thermal energy used for heating and cooling, comprise the two greatest sources of undeveloped renewable energy in the state.

The report specifies that while these renewables aren't able to replace the amount of energy generated by centralized fossil fuels, existing resources and technologies would provide enough energy development to provide significant economic and environmental benefits. Among them would be more stable energy prices, fewer subsidies, increased efficiency, and reduced costs for infrastructure, pollution control, and new facilities. During an interview with Kentucky News Connection, lead study author Rory McIlmoil said that increased use of distributed renewables would minimize power outages while creating jobs. To read the study, visit downstreamstrategies.com/projects.html

Support for Livable Communities

In conjunction with the U.S. Environmental Protection Agency and U.S. Department of Agriculture Rural Development, the Appalachian Regional Commission announced federal technical assistance aimed at helping seven Appalachian communities achieve the goals of a "livable community." ARC defines a rural "livable community" in Appalachia as a place with thriving town centers, protected working lands and natural resources, economic opportunities, and affordable transportation and housing choices. The grants were awarded to: Connellsville, Penn.; Brownsville, Penn.; Uhrichsville, Ohio; Independence, Va.; Spruce Pine, N.C.; Williamson, W.Va.; and Salamanca, N.Y.

Tennessee's Urban Money Trees

A study by the U.S. Forest Service found that trees in urban areas of Tennessee contribute a total of \$80 billion in environmental benefits. By analyzing tree size and chemical composition, researchers were able to quantify the average amount of carbon storage and its value based on the estimated social costs of carbon dioxide emissions — over \$350 million. Researchers also estimated that the urban forest provides over

\$204 million each year in pollution removal and \$18.4 million in annual additional carbon sequestration. Comparing the value of summertime shade to the inconvenience of winter shade, researchers revealed that trees provide a net energy savings benefit of \$66 million.

Almost Bike-Friendly, West Virginia

West Virginia, the state that ranked 48th by the League of American Bicyclists' for bicycle-"friendliness" this year, is implementing a Statewide Bicycle Connectivity Plan to improve the state's two-wheeled transportation opportunities. Planners hope to connect existing trails among different regions of the state and also provide access to trails in other states. West Virginia currently has 375 miles of former railbed that are converted to bike and pedestrian paths, and more are planned through this initiative, which is funded by a federal grant to the state's Department of Transportation. The steering committee for the bike plan held public hearings this spring, and the committee's recommendations are expected to be released in August.

Find out more about the proposed bike paths and submit comments at transportation.wv.gov

North Carolina Lawmakers Fumble Over Fracking Vote

By Brian Sewell

After Gov. Bev Perdue vetoed a controversial bill to legalize hydraulic fracturing in North Carolina, both the state Senate and House allowed little time for debate before voting to override the block.

In the Republican-led House of Representatives, the veto override created controversy when it succeeded by one mistaken vote. Rep. Becky Carney, a Democrat from Mecklenburg County who had been vocal in her opposition to

legalizing fracking, accidentally voted with Republicans to override the veto when she pressed the wrong button.

Upon realizing her mistake, Carney immediately asked to be allowed to recast her vote. Although allowing lawmakers to change an accidental vote is routine practice, the chamber's rules do not provide members a second vote if it affects the outcome.

The legislature's next task is to appoint the members of the N.C. Mining and Energy Commission represent-

ing the range of residents' views who will develop regulations of fracking intended to protect North Carolinians' health and the environment. Only two of the 15 members of the commission are required to have conservation backgrounds by the bill, but even this simple precept is proving controversial.

A red flag was raised when Ray Covington, the co-founder of North Carolina Oil and Gas, which manages mineral rights leases for landowners in return for a share of future profits, was

appointed to positions meant for conservationists by House Speaker Thom Tillis. Watchdog groups and concerned residents are calling for Covington's replacement, citing an obvious conflict of interest.

Considering state lawmakers' handling of the process to bring fracking to North Carolina so far, some residents worry that the state is already putting oil and gas interests ahead of their own.

EPA Mandates Sewage Repairs in Chattanooga

Following an 18-month lawsuit, federal regulators have set a 15-year deadline for the city of Chattanooga, Tenn., to complete approximately \$250

million in sewer system repairs aimed at reducing the amount of untreated, raw sewage entering the Tennessee River. The court order also requires Chattanooga to pay a \$476,400 civil penalty, implement a green infrastructure plan

to divert stormwater runoff, and undertake a \$800,000 stream restoration to improve water quality in a creek tributary. Customers of the Chattanooga system, both within and beyond city limits, will pay for much of the sewer repairs through rate increases.

Rare in the Wild But Thriving Online

Finding out which endangered plants and critters live where has never been easier. This summer the Fish and Wildlife Service launched a nationwide, interactive online map that allows users to search for endangered wildlife by state, county, and species. The site doesn't just list plants and animals — it provides engaging multimedia that highlights the struggle of species like the Kentucky arrow darter or Swamp pink herb, and tells stories about partnership projects and rare endemic species. Visit: fws.gov/endangered

Greenbacks for White Nose

White nose syndrome, a disease that has killed an estimated 5.5 million bats since 2006, is now in 19 states and four Canadian provinces. In July, the Forest Service announced that 30 states will receive Endangered Species Recovery funds to address the problem, totaling nearly \$1 million for state natural resource agencies to fund surveillance and monitoring of caves and mines where bats hibernate. Appalachian states receiving funding to fight the disease include Kentucky, Ohio, North Carolina, Pennsylvania, Tennessee, Virginia and West Virginia. White nose syndrome is named for the white fungus that appears on the noses of affected bats, and the disease has spread to at least six species. Learn more at: whitenosesyndrome.org

1% FOR THE PLANET MEMBER

Coffee With A Soul.

BLUE SMOKE
coffee roasting company
appalachia
MEDIUM ROAST

Greenlife • Whole Earth Grocery • Dandridge General Store
NOC Great Outpost • NOC Wesser General Store
Purple Mountain Natural Foods • West Village Market
Honeymoon Bakery • Harvest Moon Cafe
New Moon Gallery • Candler Park Market • Savi Urban Market

Hand Roasted To Order | **100% Organic, Fair Trade & Shade Grown Beans** | Free Shipping!

Order at BlueSmokeCoffee.com

10% of Sales Donated to Environmental & Humanitarian Causes

Music from the Mountains

WMMT FM 88.7
EST. 1985 WHITESBURG, KY
MOUNTAIN COMMUNITY RADIO
WWW.WMMTFM.ORG

Listener-supported radio offering a diverse mix of music & informative programming for the heart of Appalachia.



- MOUNTAIN HARD WEAR
- patagonia
- OSPREY
- KEEN
- Chaco
- Columbia
- THE NORTH FACE

MAST GENERAL STORE

SINCE 1883

Valle Crucis • Boone
Waynesville • Hendersonville
Asheville, NC • Knoxville, TN
Greenville • Columbia, SC
MastGeneralStore.com

Stop dreaming... start doing! Nature renews, invigorates and inspires, so put on your hiking shoes, fill your water bottle, grab your camera, and strap on your pack. Get out and breathe some fresh mountain air. The Mast Store has all you need to create some outdoor memories including guide books, backpacks, tents, fleece, outerwear, gadgets, stoves, and over 100 years of experience on the trail.

Hiking the Highlands

Abrams Falls Trail

A Jaunt to a Jewel of the Smokies

By Stephen Otis

The Abrams Falls Trail has historical nuances you won't find just anywhere.

Located in the Cades Cove area of the Great Smoky Mountains National Park in Tennessee, the trail, creek and falls are named after a historic leader of the Cherokee Nation, Chief Abram; a short side trail leads to Elijah Oliver's house, the first settler of Cades Cove circa 1818.

It has a reputation in the world of adventure as well, earning a spot on *Backpacker Magazine's* list of the 10 most dangerous hikes in the country. Of course, if you are a local like me, and you like to hike the trail for its moderate footpath along the serene Abrams Creek — replete with wild river otter and fly-fishing aplenty — you may find yourself scratching your head wonder-



The trail to Abrams Falls is listed as moderately difficult but includes three narrow log bridges, so the park service recommends sturdy hiking shoes. Photo by Kid Cowboy

ing what wild encounter led the good people at *Backpacker Magazine* to put the trail on their list of perilous paths.

Maybe it is the strong storm waters that often surge over the nearly 20-foot falls, the same waters that took the life of 19-year-old William Diefenbach in 1993. He was swept downstream and drowned trying to ford Newt Prong.

Maybe it is the countless injuries that occur from the young and the bold attempting to jump off the falls' slippery perch, not noticing the shelf of rock just below the surface at the base. Or the copperheads and moccasins that like to perch in the clefts of the basins.

Maybe, but all in all, Abrams Falls is one of the most pristine and beautiful hikes in the Smokies with one of the most impressive watering holes you will ever see. Of course, the Great Smoky Mountain National Park encourages those who visit to avoid swimming for aforementioned reasons. Dangerous? Maybe, if you're the kind of person who attracts danger. Beautiful? Most



GREAT SMOKY MOUNTAINS NATIONAL PARK

Don't be fooled by Abrams Falls' serene surroundings—this pretty cascade features powerful water, and the pool at its base has a reputation for an undertow. Photo by Jenny Pansing

GETTING THERE — From Gatlinburg, Tenn.: Enter the park and drive west to the Cades Cove Loop. Once on the loop, stop at road marker 10. Turn off the main loop onto the gravel road, which leads to signs and a wooden bridge marking the trailhead.

LENGTH AND DIFFICULTY — 2.5 miles; moderate; practice waterfall safety

WEBSITE: nps.gov/grsm/index.htm

INFO: (865) 436-1200

certainly. Worth a visit? Most definitely.

To the falls and back, the trail traverses five miles, much of it creek-side, providing the sounds of mountain water like a constant symphony. Along the way, there are a bevy of places to stop for a picnic or to just step off the trail and search for salamanders. The watering hole at the end of the 2.5-mile trek enjoys the constant spray of Abrams Falls. Named after Chief Oskuah (later changed to Abram) of the Cherokee Nation, here the strength of these great people who roamed these free and sacred lands is preserved.

The drive to the trailhead brings you through the historic Cades Cove Loop with wildlife grazing in open valley fields, where deer roam like cattle and bear and other wildlife are commonly sighted. It is a place stuck in a slow and steady time in our nation's history, heck, before that even, to a time before we started recording time.

If one is so inclined, the other side of Abrams Falls, although little-publicized, is the area's true beauty.

Scattered with small loop trails and split-offs, a backpacker can get lost in here for days. Void of crowds and with many opportunities for bear sightings (and late night visits), quiet adventure abounds. The park has done a great job in clearing good campsites and rigging state-of-the-art bear hangers for food. This is the part of Abrams where you will most likely find river otters and very, very nice fish dangling on the end of your spray line. If you wade in these waters, you can see eight-inch rainbow trout hanging out in the current like they're having an afternoon meeting.

Three days here, and you will emerge a better, leaner, more brightly lit man or woman.

Stephen Otis is the co-author of "A Road More or Less Traveled," a narrative about hiking the Appalachian Trail from Maine to Georgia, recently awarded runner-up in the New York Book Festival. Read reviews and order the book at Amazon.com.

Naturalist's Notebook

Appalachian Mussels: Our Living Freshwater Filters

By Jesse Wood

When settlers first waded through Appalachian streams hundreds of years ago, freshwater mussels practically paved the riverbeds.

In the early 1900s, the aquatic creatures were so abundant that thousands of pearl hunters flocked to the forks of the Holston and Clinch rivers in Tennessee hoping to strike it rich. Of course, the pearl rush didn't last forever. When the Tennessee Valley Authority completed the Norris Dam in 1936, the downstream mussel population in the Clinch River Valley was decimated.

Dams, the introduction of exotic species, and water pollution — including chemical spills, water treatment plants and prior land use upstream, be it logging, coal mining or agriculture — have all threatened these filter feeders over the past century. According to the Virginia Department of Game and Inland Fisheries, seven percent of the freshwater mussel fauna in the United States is extinct and another 50 percent require special protection under the U.S. Endangered Species Act.

Through all the turmoil, the inland mussel population in the United States — and Appalachia in particular — is unmatched around the world. DGIF estimates that nearly one-third of the 1,000 species of freshwater mussels exist in the United States, and Appalachia has a "lion's share" of this diversity residing in the southeastern drainages of the Ohio, Tennessee, Cumberland and Mobile rivers. In fact, the Tennessee River basin alone has more species than Africa, and more than China and Europe combined.

Tom Blount, the Chief of Resource Management for the Big South Fork National River and Recreation Area of the Cumberland River watershed and Obed Wild and Scenic River of the Tennessee River watershed, said the diverse mussel population of Appalachia stems

from the geological age of the area and the high number of organisms that have evolved in the region.

"The Appalachians as a whole is one of the greatest bio-diverse areas in the country if not the world, and our aquatic resources reflect that," Blount says.

Megan Bradley, the southwest Virginia freshwater mussel recovery coordinator with the Aquatic Wildlife Conservation Center, attributed Appalachia's mussel diversity to historically stable streams and river basin isolation.

"The habitats had been fairly stable for a long time [with] a fair amount of bedrock that kind of keeps the streams from moving around as much," Bradley says. "Some of the diversity comes from the fact that things have been isolated for a long time."

Currently, sedimentation is the greatest concern regarding mussel populations, which prefer flowing water. "We are modifying land adjacent to streams so much that it's leading to a lot of sediment going into streams, clogging the substrate," she says. "If mussels are under really fine particles, they suffocate."

The two-part shell creatures are the freshwater equivalent of marine clams and oysters. They can be as small as a thumbnail or as large as a dinner plate. Mussels can live to be 100 years old. Their longevity makes them good water-quality indicators, and siphoning actions that filter bacteria, algae and other small particles make them one of the few animals that improve water quality.

"They are good indicators [of water quality] because they are more sensitive than almost anything in the stream," Bradley says, adding that mussels are used by the EPA to set water standards for ammonia.

Mussels are also important because as filter feeders, they repack nutrients for other small organisms in the streams, Bradley says, adding that mus-

sels are food sources for fur-bearing mammals such as muskrats, otters, raccoons and minks, and if the water flow is low, birds.

Following a 1998 disaster where a tanker truck overturned and spilled 1,350 gallons of rubber accelerant into a tributary of the Clinch River, killing more than 18,000 mussels, the Aquatic Wildlife Conservation Center was formed. The center, which currently houses 300 adult mussels spanning 22 species, focuses on actively propagating mussels to return to regions where they either declined or disappeared completely. Since its formation, thousand of juveniles, ranging in age from one month to nine years old, have been raised by the organization.

Back in the Big South Fork, Blount says the number of species has increased by 20 percent in the past five years, with six mussel species added through artificial propagation and relocation. The park is cooperating with other agencies in Tennessee, Kentucky and Virginia to maintain a free-flowing water system that will keep mussels and other organisms from extinction.

The life-cycle of the mussel is "one of the most complex and interesting in the animal world," according to DGIF, and this complicates the propagation process. Instead of seeking out a mate,



Flexing our mussels: The inland mussel species of Appalachia are unmatched around the world, with the Tennessee River basin alone containing more varieties than China and Europe combined. Photo courtesy of Aquatic Wildlife Conservation Center

mussels must use the river current to reproduce. Eventually, the fertilized eggs "piggyback," as Blount explains, to a specific host species and live as a parasite before becoming a juvenile mussel.

When asked what makes the mussel an amazing creature, Blount spoke of this "adaptive" life-cycle but also mentioned the mussel's resilient ability to withstand fluctuating water levels — from creek-like flows to floods — all the while filtering the water.

In the end, Blount says, mussels belong to a diverse ecological community. If these sensitive freshwater bivalves suffer, other species such as fish, insects, otters and muskrats will suffer as well.

- 🕒 Delicious Deli-Style Sandwiches
- 🕒 Homemade Soups
- 🕒 Vegetarian Fare
- 🕒 and Much More!



240 Shadowline Drive, Boone, North Carolina
(828) 262-1250 • www.Peppers-Restaurant.com

RealComfortFood

JOIN US FOR A FRESH TAKE ON NEO-SOUTHERN COMFORT FOOD & INTERNATIONAL FAVORITES

CANYONS
HISTORIC RESTAURANT AND BAR

WWW.CANYONSBR.COM

RESERVATIONS SUGGESTED FOR PARTIES OF FIVE OR MORE
BLOWING ROCK'S GREEN BUSINESS OF THE YEAR 2010

ALL ABC PERMITS • DAILY 11AM UNTIL • HWY 321 • BLOWING ROCK, NC • 828-295-7661

Sunday Jazz BRUNCH
11am-2:30pm

Changing Currents

Climate Change, Extreme Weather and Our Relationship to Water

By Brian Sewell

There is no doubt that we are worried about water. We accept that, as both a human right and requirement, any threat to this precious but limited liquid deserves our attention.

Last year, when Gallup conducted its annual poll to gauge Americans' foremost environmental fears, nearly 80 percent responded that they are "greatly concerned" with the pollution of rivers, lakes and reservoirs, the pollution of drinking water, and the maintenance of the nation's supply of freshwater for household needs, compared to only half responding with concern about global warming. But after years of increasingly extreme weather, it's becoming clear how related the two really are.

Consider one of the many recent anecdotes of inaction on global warming. Just days after the North Carolina state legislature passed a widely mocked bill that outlaws the science used to predict future sea level rise, the U.S. Geological Survey announced that the Atlantic coast is disappearing three to four times faster than the rest of the world's coastlines. State lawmakers, and the coastal developers that backed the blatantly anti-science bill, may have missed the memo.

But as the seas rise, so does the nation's concern for the future of the climate. More than 70 percent of Americans peg climate change as the culprit that has contributed to extreme weather in the past month, including wildfires that redefine "wild," a devastating drought and a record-breaking heatwave. NBC meteorologist Doug Kammerer himself made the news by saying bluntly during a forecast, "If we did not have global warming, we wouldn't see this."

Don't want to take the weatherman's word for it? The data presented in the National Oceanic and Atmospheric

Administration's Climatic Data Center's "State of the Climate" report speaks for itself. According to the report, in June of this year, 170 all-time high temperature records were broken or tied — some topping 110F. By the beginning of July, 56 percent of the United States was suffering from drought and more than a dozen states, including Kentucky, Tennessee and West Virginia continued to see significantly below average rainfalls.

All in all, the first half of 2012 was hotter and drier than any year since weather data was first recorded in 1895. Even if the heat hasn't kept you indoors, the abrupt storms are likely to.

Take the wind storm known as a "derecho" that wreaked hurricane-like havoc on several states in the Midwest and mid-Atlantic. The storm arrived without the typical warning signs as families prepared to celebrate the Fourth of July. It left millions without power and, especially in parts of West Virginia, without clean water.

As it is with all life, water is at the center of these extremes.

The worst conditions of the widespread drought remain concentrated in the Midwest Corn Belt, where a large percentage of the world's corn is grown. Stunted crops have caused the U.S. Department of Agriculture to slash projections by 12 percent, which in turn has spiked prices.

Farmers aren't the only ones after water. In some parts of the U.S., privatized water rights are going to the highest bidder. Earlier this year in



A majority of Americans believe that climate change has contributed to recent extreme weather, such as the destructive wind storm known as a "derecho" in June (above). Understanding the links between climate change, extreme weather and the threats they pose to freshwater is essential to developing a responsible relationship with our most valuable resource. Photo courtesy National Weather Service

Colorado, companies that provide water for hydraulic fracturing outbid farmers for water rights traditionally used to irrigate their fields. As drilling operations and drought-induced demands increase, there is just not enough to go around.

Climate change and threats to water are two sides of one coin that's spinning out of control. The side effects of burning fossil fuels tend to render drinking water undrinkable. Sea level rise leads to saltwater intrusion that threatens low-lying aquifers. Hotter, drier summers deplete rivers, and warm winters suppress the snow.

Despite the challenges to creating a responsible relationship to water, there is a bright side. Every day, more people wake up and face the need to address our water woes. They come to realize that by understanding and respecting the resource we have, businesses, farmers and families position themselves to succeed in a water-stressed world.

The scourge of the energy and extractive industries has undoubtedly taken a toll. But Appalachia's abundant waters — emerging modestly from the mountains and harboring aquatic ecosystems galore — remain a resource to be revered. From the foothills to the highest peaks, the sound of rushing wa-

ter is never far away. Listen closely and you'll hear reminders of water's worth.

In This Issue

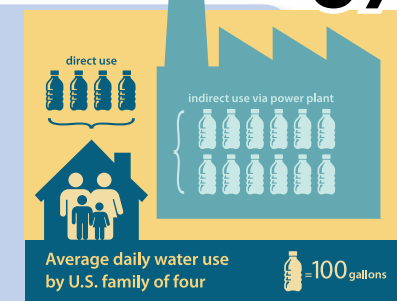
We recognize and respect water's role in our lives, and this issue of *The Appalachian Voice* is dedicated to just that. Beginning on the following page, read about the impact energy production and extractive industries have on water. Travel to Kentucky on p. 11 and meet Rick Handshoe, who has taught himself how to fight for water quality in his community. Learn how Guille Yearwood is incorporating water protection into his cattle farming style on p. 12. Hear how one group uses fly-fishing as a way to heal physically and psychologically wounded veterans on p. 13. And on p. 14-15, survey the economic impact of our region's mighty rivers.

If you're like us, your favorite swimming holes, rivers and spots beckon during the summer. In our special center-spread pullout we explore some of our region's opportunities for water-centric recreation. Don't miss the special feature on Appalachia's picturesque paddle trails, a refreshing way to enjoy our waterways while educating a new generation about protecting them.

The High Cost of Energy on Our Water

By Jamie Goodman

1 THIRSTY FOR POWER Keeping U.S. power on requires 43 billion gallons of freshwater per day — more water than 140 New York Cities would use. Nuclear power use 25 to 60 gallons per kilowatt hour (not including high volumes of water required for uranium mining and processing), and coal-fired power plants need 20 to 50 gallons of water per kilowatt hour (not including high volumes of water used in mining, processing and storing coal waste). That means that to power a typical U.S. home for a month, which according to the U.S. Energy Information Administration averages to 958 kilowatt hours, it takes at a minimum 19,160 gallons of water per month to keep your lights on. That's a lot of lawn watering.



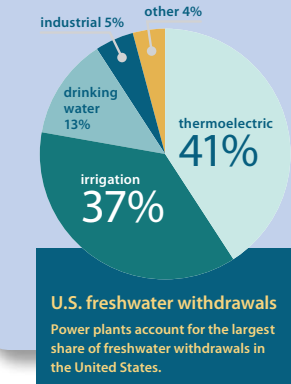
American industries are thirsty for fresh water, and our electrical generation has by far the biggest cup to fill. Close to half of the water withdrawn from our rivers and lakes is destined to cool power plants fueled by coal, uranium and natural gas among others. A fair portion of the water siphoned into the plants is "consumed" or evaporates into thin air. The rest is ejected back into lakes and rivers as much as 17° F hotter, where it can be detrimental to the ecology of the waterway.

Not all alternative sources are exempt from this enormous thirst — biofuel, touted as a possible replacement for more polluting materials, uses almost as much water as coal. But other renewable energies, including passive solar, wind and even solar thermal, lack the insatiable thirst of their fossil fuel cousins.

As drought rages across half of the country this year, and many cities have imposed restrictions on lawn watering and car washing, the power industry continues to drain adjacent waterways. And ironically, coal plants cannot continue to withdraw water when hot water ejected from the plant pushes the temperature beyond a certain limit — meaning that power facilities are forced to shut down some or all of their output at a time when air conditioning and other needs create the greatest demand.

Water pays a steep price to meet our energy demand. Below we walk you through five of the highest costs energy exacts on our water system, using information provided by the Union of Concerned Scientists.

2 WITHDRAWAL SYMPTOMS In the southeastern United States, power plants account for two-thirds of all withdrawals of freshwater, draining an average of 40 billion gallons of water from lakes and rivers every day for purposes such as cooling. In many cases, only a fraction of that water will be returned to the water source, while the plants lose or "consume" large amounts of the withdrawn water to evaporation — a typical 600-megawatt coal-fired power plant consumes more than 2 billion unrecoverable gallons of water each year from nearby lakes, rivers, aquifers or oceans.



U.S. freshwater withdrawals. Power plants account for the largest share of freshwater withdrawals in the United States.

3 WHAT GOES IN... A large coal or nuclear power station with once-through cooling can easily draw in more than 500 million gallons of water from a river or lake every day. The consequences on both ends can be dire for wildlife — older systems can devour aquatic life, sucking in eggs and larvae, and trap adult fish and larger wildlife on suction pipe intake screens. The dozens of power stations that withdraw water from the Great Lakes for cooling kill an estimated 100 million fish and 1.28 billion fish larvae annually.



...COMES OUT HOT After being used to cool the generators, water that is discharged back into the river or lake is dirtier and hotter than when it entered the plant — by an average of 17° in the summer. Half of all coal plants report releasing water in the summer at peak temperatures of 100°F or more. This thermal pollution can stress or kill fish and other wildlife. In Lake Norman, N.C., massive dieoffs of striped bass in 2004, 2005 and 2010 were ultimately attributed to hot water discharge from the lake's two power plants.

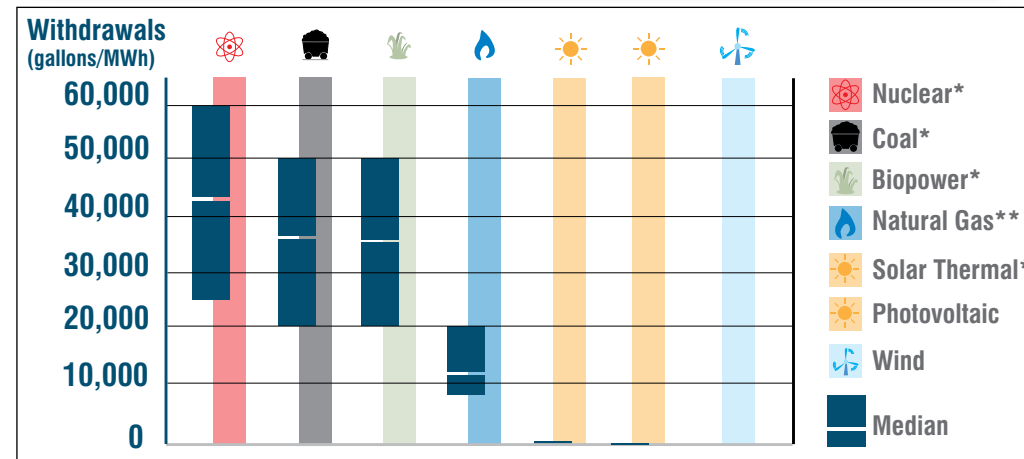
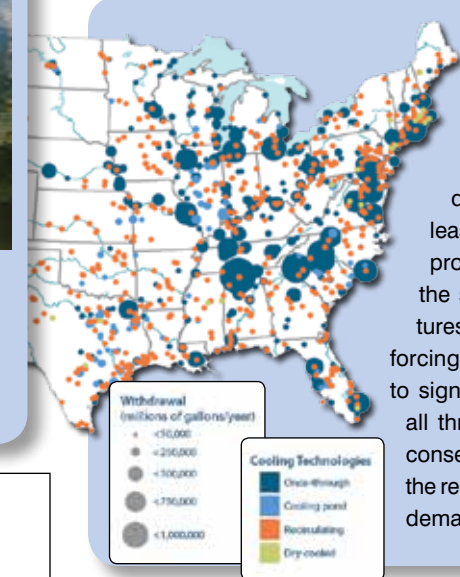


Chart courtesy of Union of Concerned Scientists, modified by Appalachian Voices to reflect Southeastern energy sources

* Based on once through cooling system; ** Combined Cycle; *** Recirculate & dry cooled combined



4 HIGH AND DRY

Since 2004, drought stress has led at least a dozen power plants to temporarily reduce their power output or shut down entirely, and prompted at least eight states to deny new plant proposals. During prolonged heat in the summer of 2010, water temperatures in the Tennessee River hit 90°F, forcing the Browns Ferry nuclear plant to significantly cut the power output of all three of its reactors for nearly five consecutive weeks — all while cities in the region were experiencing high power demand for air conditioning.

5 RESOURCEFUL RENEWABLES

Not all renewable energy sources are created alike. Certain renewable technologies, such as wind turbines and solar photovoltaic, generate electricity with essentially no water at all. Some sources, such as bioenergy, geothermal and concentrated solar panels (a.k.a. solar thermal), use more water, but still less than more intensive sources such as coal and nuclear. Energy-efficient measures to reduce the amount of electricity we use — through efficient appliances, weatherizing buildings, and dialing back heat and air conditioning — not only saves money and reduces emissions, but also eliminates the corresponding water use.

Buried Blackwater Revealing Coal's Dirty Secret

By Brian Sewell

No one knows exactly when the industry began injecting coal slurry, the toxic, semi-solid waste that remains after mined coal is washed, into networks of abandoned mine shafts throughout Appalachia. But it was some time after a disaster on a cold morning in 1972, when 132 million gallons of blackwater erupted from a poorly constructed dam and washed away communities along Buffalo Creek, that the disposal of slurry largely went underground.

The coal industry may have thought they found a safe alternative to the slurry ponds they hid in the hills like the one that failed on Buffalo Creek. But a secret this dirty never stays buried.

"Over long periods of time, we're talking about billions of gallons," says Mat Louis-Rosenberg of the West Virginia-based Sludge Safety Project, a watchdog

group for communities near coal slurry disposal sites. "We're talking about oceans of this stuff underground."

Today there is mounting evidence that injecting coal slurry underground has poisoned groundwater, caused community-wide contamination and shortened the lives of residents young and old who simply wanted to drink their water or bathe.

Creating A Case Against Slurry

In the past decade, the growing concern surrounding slurry has led to increased interest in the scientific and medical communities. Residents were confident the opaque, gray and brown water that they collected from their wells was contaminated by slurry, but they would need to prove it in order to stand up to the coal companies.

In 2004, Dr. Ben Stout, a stream



For decades, coal slurry was unregulated and little was known about where it was being dumped. In two major lawsuits, West Virginians demanded the coal companies be held accountable for years of community-wide contamination and disease likely caused by slurry poisoning their wells. Photo by Vivian Stockman, ohvec.org

ecologist and professor of biology at Wheeling Jesuit University, met with residents in Mingo County who complained of health problems, including miscarriages and birth defects, kidney and liver failure, cancer, intestinal lesions and nervous system disorders, among others. He agreed to study their well water quality and when he arrived, one thing was already on everyone's mind.

"Their number one question in eight different communities in southern West Virginia was, 'What is in coal slurry?'" Stout says.

Testing water samples from fifteen wells within two miles of the Sprouse Creek Slurry Impoundment near Williamson, W.Va., Stout found instances of contaminants such as lead and arsenic that exceed drinking water standards.

In his report, Stout wrote that the water quality in the area was "unquestionably poor" and that it may present a "chronic health hazard to families exposed to wells." Stout concluded that the water was unsafe for drinking or

Continued on page 17

Underground Controversy: Fracking's Impact on Clean Water

By Jessica Kennedy

Nearly all types of conventional energy have their fair share of controversy, and hydraulic fracturing, or fracking, to extract natural gas is no different. This highly-profitable process continues to spread while many people call for stricter regulations and more research into its potential consequences.

Fracking now produces one third of all the natural gas in the U.S. Abundant and affordable, electricity generation from natural gas-fired power plants was equal to that of coal-fired plants. But its cheap cost comes with questions — studies suggest that fracking and the wastewater it produces pose threats to groundwater and surface water.

Clear Problems, Unclear Explanations

In the regions where fracking takes place, such as the Marcellus Shale formation that underlies much of Appalachia, personal anecdotes abound of flammable tap water, explosions, spills



A fracking rig and operation stands among forests and fields in Bradford County, Penn. The state has been a hotbed of fracking activity and controversy over the exact impact of fracking on groundwater. Photo by Bob Warhaver

and other water contamination.

In 2009, Dimock, Penn., took the spotlight of the fracking discussion when residents reported drinking water contamination and a water well explosion. The U.S. Environmental Protection Agency took over the investigation and found high levels of methane in many of the drinking water wells.

Although methane can cause dead-

ly explosions or health problems if inhaled in large quantities, methane in drinking water is not poisonous, and the EPA announced that the water was safe to drink. A study by Duke University found that there are naturally occurring pathways that methane might travel through to reach drinking water supplies, but a study in the journal *Ground Water* used computer modeling to show that these natural pathways are exacerbated by fracking.

In a 2011 study in Pavillion, Wyo., the EPA found a slew of chemicals in samples from two deep wells drilled to monitor groundwater, including benzene, a known carcinogen. Benzene is used in petroleum distillates, which are frequently used in fracking fluid. Residents were told their water was no longer safe. Studies have also shown that the ce-

ment casing used in wells can be faulty or deteriorate over time, allowing the fluids in the well to leak out into the surrounding rock layers and into groundwater.

Dealing With Wastewater

Tim Lucas, director of marketing communications for Duke's Nicholas School of the Environment, says it's hard to know fracking's exact impact on water since there is no baseline sampling in many places where it's done. Without water testing before fracking operations began, it's hard for individual citizens or groups to prove that their water problems are caused by fracking.

Wastewater, or flowback water, contains not only the fracking fluid that was injected into the well, but often other contaminants brought up from underground during the fracking process like radioactive materials and heavy metals. Wastewater can easily contaminate groundwater, and it must be properly disposed of, which requires significant

Continued on page 21

Clean Water Warrior: Lessons from the Front Lines

By Molly Moore

For Rick Handshoe, the trouble started in the mid-nineties, when coal mining began near his father and sister's homes and his sister lost use of her well.

Since then, six wells — including the one dug by his ancestors — have dried up or been contaminated with explosive levels of methane on property that's been in his family for over 200 years. Handshoe's problems accelerated when mountaintop removal coal mining reached his hollow in the mid-2000s — now his homeplace is surrounded on three sides by massive surface mines and polluted water.

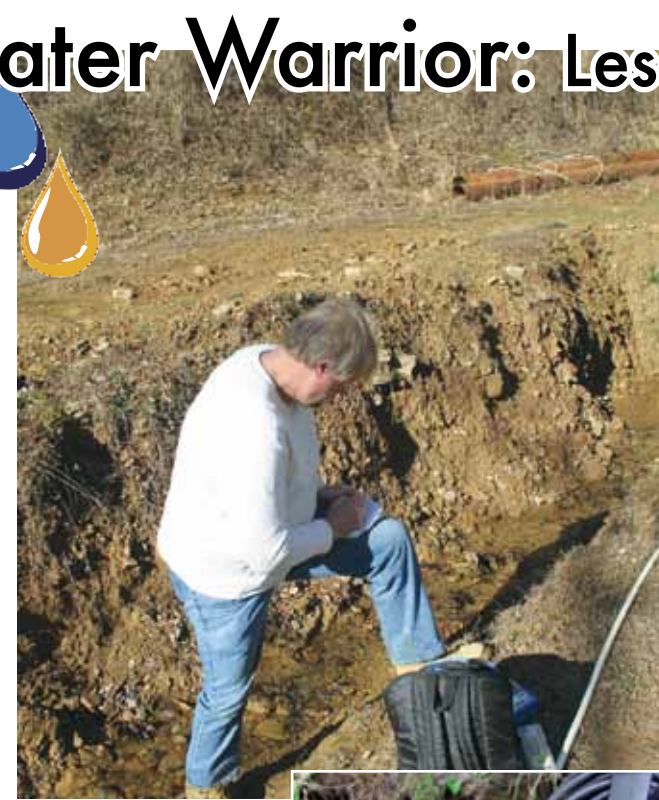
Things are getting worse. Over the past few months, seeps of toxic water spouted from the slope 500 feet above his home, and Handshoe discovered a landslide near the top of the mountain. He worries that the mountain might tumble down around him, and since January he's been seeking answers.

The federal Office of Surface Mining has said Handshoe doesn't face imminent danger. But he isn't giving up. A self-taught watchdog with 20 years of experience, he's picked up a few techniques.

1. Seek authority

Handshoe planned on building his dream house on a piece of family property along Raccoon Creek, a shaded brook where he caught minnows as a child, and passing down that home to his daughter. Now nothing lives in the stream — when one of his neighbors added creek water to a stocked fishing pond, he said that the water "boiled the fish alive." Handshoe is removing his bow-hunting stands from the property because his doctor advised him not to eat anything that might have drunk water on his land.

After years of back-and-forth with regulators, the mountaintop removal mine at the creek's headwaters installed a treatment pond for mine discharge.



Rick Handshoe (above) tests the conductivity and pH of a stream adjacent to his home in January. Photo by Molly Moore. In May, a water quality reading on one of the seeps that popped up on Handshoe's property revealed a pH of 2.72 (right), which is slightly less acidic than lemon juice. Photo by Eric Chance



Still, Handshoe has documented a number of occasions where water the color of orange juice fills the creek.

Frustrated with agency responses that ranged from tepid to non-existent, Handshoe joined anti-mountaintop removal activists for a sit-in at the Kentucky capitol in February 2011. Governor Beshear toured the creek that spring, though his visit wasn't a cure-all. Handshoe reported more pollution violations in the creek following the governor's visit.

Not one to back down, Handshoe also attributes some successes — such as getting the coal company responsible for his dad's lost wells to pay his water bills — to one-on-one audiences with members of Congress and high-ranking state and federal officials.

Handshoe says going up the chain of command takes time and tenacity, but he's found it hard to get state and federal agencies to enforce the law without speaking to the person in charge.

2. Persistence Pays

A lively perennial stream rushes down the mountainside two feet from the exterior wall of Handshoe's daughter's bedroom. The stream appears as a blue line on U.S. Army Corps of Engineers maps, and the restrictions surrounding surface mining near perennial streams have protected a portion of land immediately behind Handshoe's home from mining. But that creek wasn't always on the map.

Handshoe meticulously documented stream flow through summer drought and winter cold for two years before the Army Corps acknowledged the unnamed creek's existence. "They'll name it Two Years Long or something like that, because of how long it took me to do that," he jokes.

3. Document, document, document

"Pictures don't lie," Handshoe says. "When the dust is rolling and the water's orange and the water's gray, you don't have to say anything. The pictures tell the stories."

In addition to his trusted camera, Handshoe owns the same water testing equipment as state inspectors, and he tests his water weekly for conductivity — a measure of how water conducts electrical current that can indicate the presence of pollutants — and pH, which measures the level of acidity. His water tests on the seeps that formed above his home this spring showed a conductivity level of 4,200 — far above the 500 that the U.S. Environmental Protection Agency says indicates an impaired Appalachian stream.

If Handshoe gets results like that, his allies help pinpoint the problem. Appalachian Voices, the publisher of this newspaper, sent water from the seeps to an independent lab in May and

found several heavy metal exceedances, including levels of aluminum 100 times greater than fresh water standards.

"After you get beat to death here a few times you learn to collect enough evidence and say, 'You guys have to do your job, and I'm proving that you're not,'" Handshoe says.

4. Friends Matter

Rick Handshoe isn't the only resident of his hollow whose life has been changed by the toxicity of his surroundings. Lowell Shepherd has lived alongside Raccoon Creek since 1967 and remembers when kingfishers flocked to the creek and he dug freshwater "bowls" in his yard for his dog. Like Handshoe, he now waits for rain instead of watering his garden with the creek. Since 2011, Shepherd has monitored a rain gauge and kept careful records to help Handshoe corroborate the amount of rainfall with his testing results and coal company discharge reports.

Shepherd's reason is the same as Handshoe's. "I'd hate to see everything destroyed in this area where I've lived my whole life," Shepherd says.

5. Be Proactive

Handshoe doesn't see a good outcome arising from his current troubles. Regardless of whether or not the toxic seeps and slope instabilities are attributed to the coal mines above his home, the place where he hoped to live is damaged. But his struggles have given him a clear message.

"It's hard to get people to understand that you need to be testing and documenting your good water," he says. "The more documentation you have, whether its mining, or drilling gas wells, oil wells, you need documentation that that water was good. That's where they really can pound you. They'll just say, 'Well, the water never was good there.'"

"You may not think that you're doing any good, but it may be 10 years before that data's needed," he continues. "I can guarantee that at some point someone will be thrilled that I jumped out and ran down to a hollow [to test water] right below their house."

Evolution of a Cattle Farm

Meeting the Needs of Cows and Streams

By Jessica Kennedy

After nearly 30 years of practicing continuous grazing on his cattle farm in rural Virginia, Guille Yearwood transformed his farming style to better serve his cattle and the environment.

Yearwood, owner of Ellett Valley Beef Co. in Christiansburg, Va., had settled into farming the way most land grant universities teach. He farmed in the “conventional high-input way,” using chemicals, herbicides, pesticides and fertilizer to increase grass production, and employed continuous grazing, a system in which his cattle stayed on one pasture throughout the grazing season.

“Sustainable alternatives were presented to me about six years ago, and I embraced that,” he says.

Yearwood made the leap to rotational grazing, a system in which he moves his cattle frequently between several smaller pastures. That switch essentially eliminated Yearwood’s need for fertilizer.

“What I found over the years as you use [fertilizer] is that it requires more and more fertilizer every year to produce the same amount of crop,” Yearwood says. “The more you use it, the more expensive it gets because more is required.”

Yearwood says grass production increased by 40 to 50 percent as soon as

he began the new grazing pattern. His cows have more abundant and better-quality grass to eat, and Yearwood no longer has to worry about fertilizer runoff from his fields to the water system.

“What I’m trying to do is grow healthy beef in a sustainable fashion that does not require a lot of input,” he says.

Yearwood’s farming transformation began when he came across Joel Salatin’s book, “Salad Bar Beef.” Like many Appalachian farmers, Yearwood raised cattle to sell to feedlots, but Salatin’s book discussed selling rotationally-grazed, grass-fed beef directly to the consumer.

Several years before his transition to grass-fed beef, Yearwood decided he had seen enough damage to the creeks by his cattle. He contacted the Natural Resources Conservation Service in Virginia to begin work with them on a Best Management Practices program to fence his cattle out of the North Fork of the Roanoke River. This spring, Yearwood participated in another program to fence his cattle out of wetland areas.

Yearwood pursued these projects to conserve his streams, but by working with the NRCS, he was able to provide an environmentally-friendly watering system that his cows could easily access. The NRCS paid for 75 percent of the cost of the fencing, well drilling and under-

ground water piping, making it affordable for Yearwood. With rotational grazing, it was necessary to get water to each paddock, and the NRCS worked with Yearwood to make that possible.

“When you take [the cows] out of that environment, everything else seems to thrive, from the riverbanks to different types of fish, crawdads, turtles, frogs, all of that stuff,” Yearwood says.

But it’s not just the wildlife that returns to the streams; there is a visual difference in the cleanliness of the water.

“When I was pumping water out of the creek [to water the cattle], when our neighbors’ cattle would get in the creek, I would see a wave of dark green water come through,” Yearwood says. “You could easily see that there’s a lot of bovine fecal matter going into that stream.”

According to a Grazing Practices Report from North Carolina State University, feces and urine from animals can carry pathogens that get into the water and can be passed to other animals. Cattle are also rough on riverbanks, causing excess sediment to be released into the river.

“You want some sediment entering your river,” says Robert Creed, a biology professor at Appalachian State University. But drastic increases can cause habitat loss for animal and plant species.

According to Creed, proper stream management can push the stream back to good health, but it takes a long time.

“Any time you start to reduce those effects, you’re going to improve water



Guille Yearwood’s cattle wander through a pasture. Over the years, Yearwood has made changes to raise better, more profitable beef and decrease his farm’s negative impact on the environment, including many streams and creeks on his property. Photo by Austin Hall

quality in terms of sediment levels by letting that bank stabilize with vegetation and reducing erosion of sediment into the stream,” Creed says. “But it takes time. It may take 15, 20, 30 years before those effects start.”

Yearwood says a vast majority of cattle in his area still have access to creeks and streams.

“There are more people who are beginners getting into farming who are doing things like I do — sustainable type grazing,” Yearwood says. “The people who’ve been in the business longer as a whole do it as they always have with continuous grazing — no grass management involved.”

But Yearwood is not the only one doing this program through the NRCS or one of the many other similar programs funded by the local, state or federal government to keep livestock out of waterways. Tom Greene, district conservationist at the Christiansburg Service Center, says more people want to participate in these programs than they have funding for.

“We get something like \$12-14 million in Southwest Virginia, and we have way more applications than we have money to cover,” Greene says. “There’s always a backlog of applicants out there.”

Hidden Treasures

Welcome to the third installment of our exploration of some of the most beautiful, off-the-beaten-path places in the Central and Southern Appalachian Mountains. In this issue, we hand picked some water-related hot spots perfect for late summer days: hikes, waterfalls, swimming holes and everything in between. Hang on to this pull-out section as a guide to areas that are perfect for dipping your toes, or your whole self, into the water.

By Jessica Kennedy and Anna Norwood

Kentucky Dog Slaughter Falls

Located in the southern part of Daniel Boone National Forest, this waterfall is much more beautiful than its name implies. Slip away from the crowds and concrete of the popular Cumberland Falls and find yourself walking through forests of rhododendrons and wildflowers to the smaller but equally gorgeous 15-foot Dog Slaughter Falls. You might even find yourself alone, as the trail is not for beginning hikers. Depending on the season and water level, Dog Slaughter Falls pools into a small swimming hole at the bottom.

The falls itself is located amidst cliffs and boulders, and if you’re not afraid of getting wet you can walk behind the waterfall. But be careful, the trails around the waterfall are strenuous and not for people with weak ankles or knees. Anglers may be able to make a catch on the same hike, as the stream is stocked each year with rainbow trout. In addition to the Cumberland Falls access, the falls can be accessed from a trailhead off Forest Service Road 195. — JK

More Info: Located near Corbin, Ky. Visit: fs.usda.gov/recarea/dbnf/recreation/recarea/?recid=39652

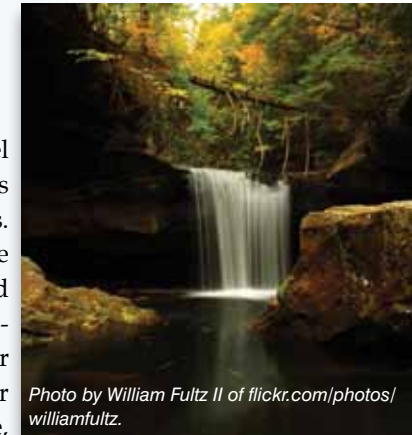


Photo by William Fultz II of flickr.com/photos/williamfultz.

Red River

At a length of 97 miles, the Red River has something for everyone; the upper portion is perfect for intermediate and advanced paddlers with stretches of class II and III rapids, while the gentler middle section provides a scenic class I paddle or a beautiful place to fish. The best water levels are in spring and fall.

Both sections of the river offer floaters impressive views of Kentucky’s Red River Gorge, so allow plenty of time to enjoy a riverside perspective of the mountains. The Gorge is known for its boulders, sandstone cliffs and unusual rock formations. Camping is allowed on the Daniel Boone National Forest land on the south side of the river.

A battle to “Save the Red River Gorge” began in the 1960s and lasted for several decades. The Red River Gorge was the star of Wendell Berry’s novel “The Unforeseen Wilderness,” published in 1971 to deter the Army Corps of Engineers from damming it to create a lake. In 1993, a section of the river was designated as National Wild and Scenic River, the first in Kentucky. The gorge is home to many species of birds, plants and wildlife, and floating down the river can provide a rare glimpse at some of these fascinating plants and animals. — JK

More Info: Located in Daniel Boone National Forest, Ky. Visit: byways.org/stories/74560



Photo by Phillip Riggins

West Virginia Smoke Hole Canyon

Tucked away in the Monongahela National Forest, Smoke Hole Canyon is unlike any place you’ve ever visited. The South Branch of the Potomac River is sandwiched between North Mountain and Cave Mountain, creating a half-mile deep canyon with nearly vertical walls.

No one is certain where Smoke Hole got its name. Some say that Native Americans used the canyon for smoking meat, while others assume the name comes from the misty fog that frequently lies on the river. Smoke Hole Canyon’s long and varied history involves Native Americans, the American Revolution, Civil War and rumors of moonshine distilleries.

Boaters might argue that the best way to experience this astonishing place is to paddle the river. Kayaking and whitewater canoeing provide the best options to see sections that are set aside for non-motorized recreation and wildlife habitat. The Big Bend Campground is located nearby, where the stream is gentler and more popular for tubers and less experienced paddlers. For those able to make the journey, however, Smoke Hole Canyon is a must-see. Whether you prefer fishing, hunting, hiking, canoeing or camping, Smoke Hole has it all. — AN

More Info: Located in the Monongahela National Forest. Visit: fs.usda.gov/recarea/mnf/recreation/hikingrecarea/?recid=9916&actid=50

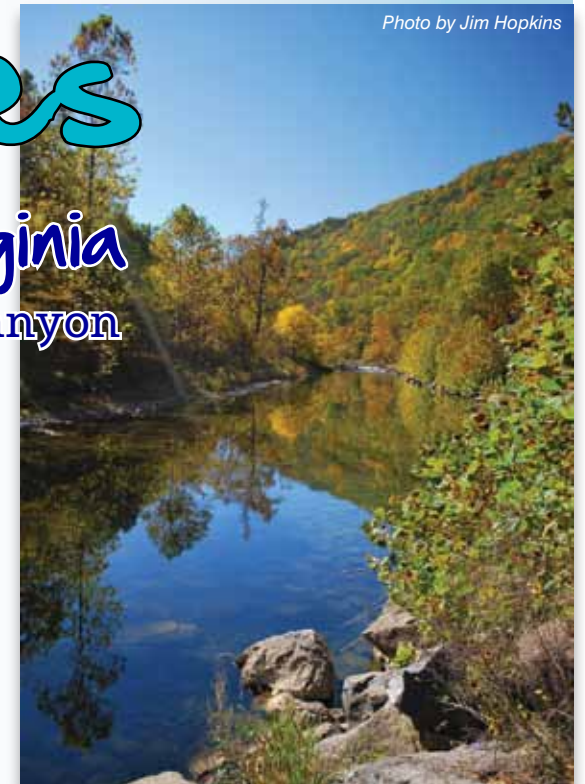


Photo by Jim Hopkins

Cranberry River

The Cranberry River stretches for 24 miles through Pocahontas, Greenbrier, Webster and Nicholas counties. The waters of this river were poisoned a few short decades ago due to acid rain, which killed the native and self-sustaining trout and many other forms of local aquatic life. Despite the serious acid

rain damage, Cranberry River was brought back to health thanks to the West Virginia Department of Natural Resources, Trout Unlimited and the building of two crushed-lime treatment sites.

An 18.9-mile trail follows the banks of the Cranberry River, and striking leaf displays and cool temperatures make for a perfect backpacking trip in autumn. Today, Cranberry River ranks as a top fishery, surrounded by serene and elegant forest. This river is a great location for trout fishing, hiking, swimming and camping, and it reminds us that there is hope for unhealthy streams and rivers. — AN

More Info: Located in Pocahontas County. Visit: troutu.com/streams/cranberry_river_west_virginia

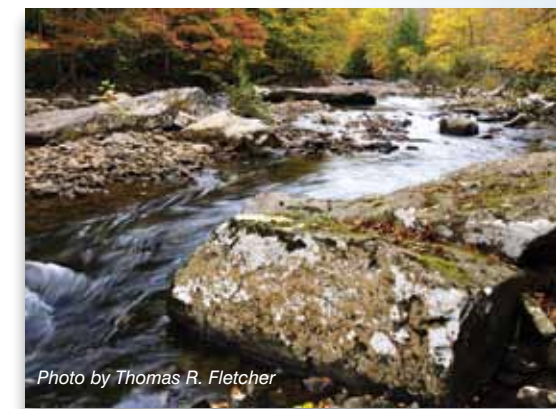


Photo by Thomas R. Fletcher



free wireless internet
FRAPPES & FRUIT SMOOTHIES
homemade pastries & desserts

LOCALLY ROASTED FAIR TRADE
COFFEE & ESPRESSO

221 w. state street black mountain, nc 828.669.0999 www.dripolator.com



Photo by Chuck Sutherland

Tennessee

Cummins Falls

Established this year, Cummins Falls State Park is home to a majestic 75-foot waterfall and a swimming hole rated as one of the best in America by *Travel + Leisure* magazine. From the parking area, a three-mile hike leads you to the sound of rushing water. The trail turns to rock-hopping and wading as you approach the falls.

Stair-step rocks at the base of the waterfall provide perfect perches for cooling down on a hot day. The pool at the base of the falls is big enough to cannonball into with plenty of places to sit in shallow water and sunbathe when you get out.

Between 1825 and 2010, the waterfall and surrounding area belonged to the Cummins family, who allowed the public to visit the falls. Several years ago, a development was proposed to take over the land surrounding the falls, but the Tennessee Parks and Greenways Foundation worked with the community to raise enough money to turn the area into Tennessee's newest state park. Open from 8 a.m. to sunset year round, and overnight camping is not allowed. — JK

More Info: Located nine miles north of Cookeville, Tenn. Visit: tn.gov/environment/parks/CumminsFalls

Tellico River

Although the Tellico River begins in Western North Carolina, the majority of this fishing and whitewater haven flows through Monroe County, Tenn. A tributary of the Little Tennessee River, the best aspect of the Tellico is the quiet, peaceful trout fishing; it's possible to find many spots along the river where you are alone with the fish and the sound of the river. Two tributaries of the Tellico, Bald River and North River, are also managed as wild trout streams and worth checking out if you want to venture a little deeper. Fishing season is year-round but best in spring or fall. Be sure to get your state issued fishing permit if you plan to fish here.

If you're not into fishing, the upper Tellico River provides a tough paddle trail for adventurous kayakers with sections of class III and IV whitewater when the water levels are high in the spring. Lower sections of the river are perfect for canoeing and tubing. Whether paddling, fishing, or just taking a scenic walk, the landscape of the Tellico River is awe-inspiring as it winds through the Great Smoky Mountains. — JK

More Info: Located in Monroe County, Tenn. Visit: tellico-plains.com/tellico-river-bald-river-falls.html



Photo by Ken Gables Photography at lighttowrite.com.

Hidden Treasures



Photo by Jeff Hammond

South Carolina Brasstown Falls

Sumter National Forest in South Carolina is home to a collection of stunning waterfalls, four of which are accessible from the parking area off Forest Service Road 751. An easy quarter-mile trail leads you to the first breathtaking waterfall known as Brasstown Cascades, a humbling 50-foot drop. If you're feeling adventurous, continue downstream and clamber

down the narrow, steep, rocky trail to Brasstown Veil, a wide and steep waterfall that dramatically free-falls about 20 feet into a shallow pool.

Adventure a little farther on the trail to reach the Brasstown Sluice, a long chute of water pouring into another picturesque pool. Little Brasstown Falls can be accessed from the same parking area, but you'll have to wade through Brasstown Creek to reach it. — JK

More Info: Located in Oconee County, S.C. Visit: sctrails.net

Appalachian Blueways Conservation on Paddle Trails

By Anna Norwood

Imagine floating down a river, soaking up the beauty of your surroundings while the only sounds you hear are birds chirping and the splash of your paddle. The Appalachian Mountains are decorated with a multitude of rivers, and exploring them by canoe or kayak can range from a peaceful to an exhilarating experience.

The age-old concept of water travel and navigation has evolved into an ecological education tool, a paddle trails that encourage people to experience a river while learning to protect and appreciate it.

A paddle trail, or "blueway," consists of multiple launch points, camping locations and points of interest for canoeists, paddle boarders and kayakers. These trails can be everything a hiking trail can be, short or long, historic or scenic, challenging or laid-back. These perfect prospects for paddle trails are the reason various blueways are scattered throughout Appalachia.

The French Broad Paddle Trail

In June, a nine-day grand opening float was held on the French Broad River, where participants paddled the entire length of the trail in North Carolina, camping at the seven new campsites along the way. Close to 30 people joined French Broad Riverkeeper Hartwell Carson on the trip.

The Western North Carolina Alliance and RiverLink, a non-profit devoted to the economic and environmental revitalization of the French Broad River, worked hard to create this paddle trail, spanning more than 120 miles of the river. The French

Broad River runs through Asheville, N.C. and popular tourist destinations such as the Biltmore Estate and Pisgah National Forest.

Carson paddled the entire French Broad with a small group a number of years ago and it sparked an interest in others who wanted to paddle and camp along the way. At the time, there was no public camping along the river but Hartwell began daydreaming about the idea.

Now that idea has become reality. Carson envisions that when "folks start paddling the river, they will become more interested in seeing it protected."

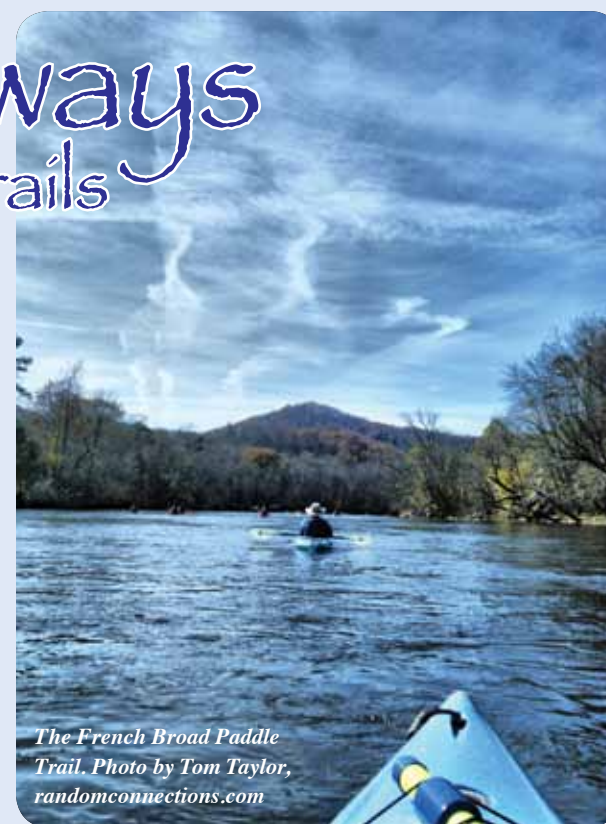
The first part of the French Broad trail is simple, with no real rapids or obstacles, a more family-friendly section of the river. The second part has some class II rapids, a few class III and one section is a class III or IV and attracts more skilled kayakers.

This trail will bring economic benefits as well as positive environmental impacts. WNCA reports that a 2001 economic impact study of eastern North Carolina indicated the Coastal Plain water trail system produced a significant \$103.9 million for the local economy.

"One thing I like about it is that it's a great overnight recreation option within minutes of Asheville," Carson says.

"I like it from the local's perspective too though, having this amenity in the backyard."

If you're interested in paddling the French Broad, visit: wnca.org/paddle



The French Broad Paddle Trail. Photo by Tom Taylor, randomconnections.com

The Etowah River Trail

The Etowah River in northern Georgia is considered one of the country's most biologically diverse river systems. The idea for the Etowah River Trail came from a group of students at the University of Georgia who wanted to create a blueway with multiple launch points, camping locations and points of interest for canoeists, paddle boarders and kayakers.

They took the idea to Matthew Pate, the manager of the Outdoor Division of Forsyth County Parks and Recreation, who has a passion for paddling. He researched the idea and, recognizing the growing trend, thought, "Why don't we try that?"

Continued on next page



Photo by Kyle Green

Virginia

Arnold Valley Pool

Off a dusty gravel road, Arnold Valley Pool is located near Devil's Marblyard in Natural Bridge, Va. This spring-fed swimming hole is perfect for the summer months, but be prepared for a shock when you hit the cold water. Massive boulders surround the pool on three sides, and a natural slide leads into the deepest part — almost 12 feet. Sometimes you can find a rope to swing on from one of the surrounding trees into the pool. However, be cautious if jumping — rocks lurk beneath the surface.

A nearby campground at Cave Mountain Lake in Jefferson National Forest provides overnight opportunities. Some describe Arnold Valley as nature's amusement park, and one of its best features is that it's kid and family-friendly. — AN

More Info: Located in Greenlee, Va. Visit: blueridgeoutdoors.com/outdoor-sports/hiking/swimmers'-guide-to-the-blue-ridge-parkway



Photo by Dennis Mott

Little Stoney Falls

The 2.8-mile Little Stony National Recreation Trail, located in the Jefferson National Forest, follows Little Stony Creek and passes by three waterfalls. A fairly easy hike, this trail is a good alternative to the more strenuous Devils Fork Loop nearby. Little Stoney Falls, a 24-foot vertical waterfall cascading into a 10-foot pool below, offers many scenic views and is a whitewater kayaking destination for very advanced boaters. A

bridge stretches across the top of the falls, allowing hikers to stand directly above the rushing water. The pool below is also a great spot to cool down in the late summer months. For hikers seeking a more challenging trip, the trail connects to the Chief Bengé Scout Trail, an 18.7-mile trail that encompasses seven different trailheads including High Knob, an iconic Appalachian lookout. — AN

More Info: Located near Dungannon, Va. Visit: waterfall-picture-guide.com/upper-little-stoney-falls.html

Miners Run Falls

Miners Run is a tranquil area nestled in lower Lycoming County, Penn. A path follows the course of a creek deep in McIntyre Wild Area, a forest region preserved by the state for "hiking, hunting, fishing and the pursuit of peace and solitude." As the trail emerges from the trees, you can look down into the ravine formed by Miners Run and over a breathtaking scene of jumbled boulders and waterfall after waterfall cascading over a very narrow and steep gorge. Anglers enjoy fly fishing at Miners Run, and the creek also flows into Rock Run, a popular fishing and swimming spot. Experienced boaters will even paddle a short section of Miners Run. For others, simply enjoying the scenery is enough. — AN

More Info: Located in Lycoming County. Visit: trails.com/tcatalog_trail.aspx?trailid=HGN197-039



Photo by Michelle C. Kehler

Pennsylvania

Georgia

Wildcat Creek

Wildcat Creek is a brilliant creek with an inviting swimming hole nestled among the trees in the Lake Burton Wildlife Management area. A major attraction at Wildcat is the "sliding rock," where water flows down a flat stone, creating a natural waterslide. Trout fishing is also popular, during trout fishing in the spring the creek is heavily packed with rainbow and brown trout from the nearby Lake Burton Fish Hatchery. There are two campgrounds close-by, and the creek provides

Photo by John Cothran

activities for all ages with plenty of room for relaxation. — AN
More Info: Located between Helen and Clayton in the Lake Burton area. Visit: northgeorgiamountainfreak.blogspot.com/2008/09/wildcat-creek-has-lot-to-offer.html

Gorge Trail

East Gorge Walk and West Gorge Trail create a two-mile loop along Mill Creek in Northeast Ohio. The part boardwalk, part footpath trail takes visitors by huge sandstone rock formations, a suspension bridge, and one of Mill Creek Metroparks' most impressive landmarks: Lanterman's Falls and Mill.



Photo by Larry Beers

The waterfall's 15-foot free fall into a deep, rocky pool is made even more amazing by its location adjacent to the nearly seven-story mill made of stone and wood. Depending on the water level, the creek is still used to operate the grist mill, which functions today as it did in the 1800s, grinding corn, wheat and buckwheat.

To add length to the Gorge Trail, jump onto another trail through Mill Creek Metroparks, which cover more than 4,400 acres of land in Mahoning County. Mill Creek Park was the first park district in Ohio, opening in 1893. — JK

More Info: Located near Youngstown, Ohio. Visit: millcreekmetroparks.org.

Appalachian Blueways

(continued from previous page)

Following Pate's initiative, Forsyth and Cherokee counties as well as the city of Canton are working with Coosa River Basin Initiative, the Upper Etowah River Alliance and Mountain Stewards to build the trail. Forsyth, the county with the smallest portion of the river trail, purchased property adjoining the trail in 2008, and is planning a 226-acre park along the river that will accommodate campers and paddlers on overnight trips. In total, there are 40-plus nautical miles of river and the trail will eventually have



Photo by Gail Des Jardin

seven- to ten-mile stretches of public launch access.

Pate explains that one of the key components of this blueway is using the Etowah as an educational

Mills River Trails

If you're looking for a hike to cool down but don't feel like fully submerging yourself, the network of trails in the Mills River area of Pisgah National Forest is the perfect place.

Hikes here are lined with babbling brooks that welcome visitors who make it to the less popular and more remote area of the park. The trails meander near and through the North and South Mills rivers and ford crisp mountain streams numerous times. Many of the stream crossings require hikers to wade instead of rock hop, so be sure to wear shoes that you don't mind getting wet.

At the beginning of the South Mills River Trail, a suspension bridge with a rope handrail provides one of the only dry river crossings. Multiple trails in this area of the park allow visitors to create a hike of any length — do a short out-and-back hike or grab a trail map to create a longer loop. If you're looking for a

North Carolina



Photo by Jeff Clark, MountainHikes: A Hiking Blog at internetbrothers.org

relaxing overnight trip, check out the campsite at Wolf Ford, four miles from Forest Service Road 476.

Before you dig out your water shoes, make sure to check the weather; some river crossings are impossible to wade through in high water from heavy rainfall. Many of the trails in this area allow mountain bikers and horseback riders as well. — JK

More Info: Located in Pisgah National Forest at the Turkeypen Gap Trailhead. Visit: hikewnc.info/trailheads/pisgah/pisgah/mills.html



Photo by Dwight Stephenson

Visitors to Fontana Lake can boat, water ski, swim, fish or check out the surrounding area, which is home to the Nantahala River as well as Tsali hiking and biking trails that overlook the lake. Because of its deep, cold waters, swimming is crisp and refreshing on a hot day, while fishing is prime; muskie and walleye of record sizes have been caught here. — JK

More Info: Located in Bryson City, N.C. Visit: greatsmokies.com/fontana.php

opportunity as well as a recreational one.

"The more people are outdoors, the more they appreciate it. Having something like this helps us take out groups, educate them about litter, about trees that are down, even about substances leaking from people's property." The idea, Pate says, is to "educate the public in being good stewards."

The troubled economy slowed construction on the Etowah River Trail in 2009, but it has recently picked back up and organizers hope the trail will be complete in the next year.

For more information about the Etowah River Trail, visit etowahriver.org.

Build a Rod, Tie a Fly

In Search of Healing Waters

By Brian Sewell

When David Frady, a 46-year-old from Leicester, N.C., woke up this morning, he felt like going fishing. So far, the rain has kept him indoors, where he'll practice tying flies, work on the small boat he volunteered to build or pick his guitar, his other favorite stress-relieving activity.

Frady says he's always been a fly fisherman. He began tying flies when his wife was pregnant with their son almost 12 years ago. But one day, he quit.

Although he has no history of heart conditions in his family, a series of heart attacks after serving in Operation Desert Storm left Frady with three coronary stents and an implanted defibrillator. "I was just depressed, sitting on the couch and feeling sorry for myself," he says. "I had not tied a fly in probably five years or more."

Then one day Frady saw a poster at the veterans' hospital in Asheville for Project Healing Waters, a nonprofit that teaches fly-fishing as therapy and treats the river as a rehab facility. He called, attended a meeting, and quickly rediscovered his passion for the sport and the possibility of a better life.

"To talk about it makes the hair stand up on my arms," Frady says, thinking back. "I want to say it saved my life."

Casting with Comrades

"It's really not about the fishing." That is the first thing Ryan Harman, the Western North Carolina coordinator for Project Healing Waters Fly Fishing, says.

An avid angler, Harman means that when he's on the river with the wounded warriors who participate in Project Healing Waters, fishing is just a means to a higher end.

"It's about the camaraderie," he says. "It's about the social interaction. And it's about getting them on the water and the rehabilitation that has."

To Project Healing Waters, a "wounded warrior" is just that, a disabled veteran — physically or psychologically — of any war. Warriors with wounds that aren't combat-related are also welcome. During trips to the rivers

surrounding Asheville, N.C., led by Harman and local volunteers, the participants have ranged in age from 19 to 93.

"All of these individuals have experienced warfare to one degree or another," says Harman. "In this type of group that understands what they're going through, it's a good place for them to release some of their anxiety and to start the healing process."

Project Healing Waters, which provides all training, equipment and trips free of charge, began as one might expect: with the cast of a fly rod. One day while staying at Walter Reed Hospital in Washington, D.C., Captain Ed Nicholson, a Navy veteran and fisherman, took to the lawn to practice his cast.

"The first time he did that, one or two people stopped and asked what he was doing," Harman recalls. "The next day 10 or 15 people stopped and watched and by the third day he had 25 people, everyone standing around wanting to cast his fly rod."

Nicholson knew he was onto something. If fly fishing on the land brought together this many vets, he wondered what getting them on the water together could accomplish.

Frady doesn't have to wonder. He describes being on the river as "peacefulness."

"Once you get out there, you're concentrating on what you're doing at the time," he says. "The stresses and the thoughts and the memories, all the things that we feel every day — they kind of wash down the creek."

For anyone who has been through combat, says Frady, emerging unchanged is impossible. And companionship goes a long way.

"You aren't the same person," he says. "To join a program where you're with those that have the same life experience, it really helps a lot."

But on Asheville's Project Healing



Project Healing Waters, a nonprofit dedicated to the rehabilitation of active military and veterans, understands the therapeutic value of fishing with friends or simply rigging a fly line (top). No matter their age, disability or fishing ability, Project Healing Waters welcomes veterans into the world of fly-fishing (left). The group provides all instruction, equipment, travel and accommodations to participants at no cost. Photos courtesy of Project Healing Waters

munity to make it work."

As it turns out, most fly fishing groups are happy to help, whether it's providing instruction, guides for group outings or managing a local Project Healing Waters program. Currently, there are more than 130 active programs in the U.S. and one in Canada; the organization will soon add a program in Germany and potentially one in Australia, Harman says.

While Harman, Folger and volunteers instruct and immerse veterans in fly fishing, there is one more essential component. At local veteran's hospitals, recreation therapists like Joanie Ledford help identify the interest and connect vets with Project Healing Waters.

"I concentrate on what the veterans themselves enjoy doing and adapt that activity to their ability," Ledford says, because, while it's not really about fishing, that's where it starts. Some don't take to it, and that's OK, she says. For those who do, it can be transformative.

When Frady recently taught a fly tying class at the Asheville V.A., a "first-timer" who had never tied a fly or been fly fishing sat quietly in the room. "I'll tell you what," says Frady, "When he

Continued on page 17

The Value of Running Water

By Molly Moore

Appalachia's signature streams and rivers braid together the region's hills, hollows and pastures, offering fishing, recreation and transportation in addition to the planet's most vital liquid.

Rivers are so integrated into daily life that some people cross a bridge every day without truly seeing the waterway beneath it. But that doesn't mean the river isn't there, offering perches to herons behind small farms, making subtle commentaries about the surrounding residents based on how much litter lines the riverbanks, and influencing everything from the location and shape of a town to the businesses that set up shop nearby.

The Tennessee River, the largest tributary of the Ohio River, shaped the birth of Chattanooga, Tenn., a city that grew out of a riverfront trading outpost. When Chattanooga looked to revitalize its downtown in the early '80s, reconnecting with the river was the goal. "This is how we started and began as a city hundreds of years ago, so it made sense to get back to the river," says Jim Williamson, vice president of planning and development for River City Company, a private nonprofit founded to help the city and county capitalize on the riverfront.

Chattanooga's waterfront boasts entertainment venues, an aquarium and a network of parks that highlight local history. An old bridge was redeveloped as a pedestrian walkway, and the current Tennessee Riverwalk path spans 13 miles. Williamson says that the anecdotal evidence of bricks-and-mortar investment dollars is huge — and Volkswagen alluded to the city's downtown as a reason for building a \$1 billion facility nearby. This spring, economic development and tourism officials from Huntington, W.Va., visited the city's river corridor to take notes.

In Chattanooga, fishing piers and the opportunity to rent paddle boards attract visitors, as does the nation's second-largest rowing regatta. "You encourage more activity by having a

clean river," Williamson says.

Along the French Broad and Swannanoa rivers, the city of Asheville, N.C., is also making use of its water access. Scott Hamilton, president of Advantage West, Western North Carolina's regional economic development group, says every sector of the economy is affected by waterways, either through the use of low-cost hydroelectric power or because the amenities of a waterway have added to quality of place.

This year, both Sierra Nevada Brewing Co. and New Belgium Brewing Co., the nation's second and third largest craft brewers, announced plans to build facilities on the banks of the French Broad citing the area's high-quality municipal water. Together, the breweries will add about 240 jobs.

The value of clean water isn't limited to urban centers. In recent years, North Carolina's famed Nantahala River has drawn over 500,000 recreation enthusiasts annually. A survey conducted by Western Carolina University in 2009 showed that whitewater recreation on the Nantahala contributed \$85.4 million and 1,060 jobs to the local economy.

Ecotourism might be a big draw, but Kevin Colburn, national stewardship director for paddling group American Whitewater, says that recreation is typically a secondary purpose of Eastern dams. On the Nantahala, Duke Power's 98.5 megawatt hydroelectric facility is the top priority and the rafting industry is considered after that. And on North Carolina's Cheoah River, which was completely dewatered for 77 years, dam release negotiations centered around downstream ecological benefits. When releases began in 2005, the forest service provided commercial boating permits, fostering yet another opportunity for the rafting industry and



The Tennessee River flows by a neighborhood in Knoxville, Tenn. (above) Istockphoto: Melinda Fawver. A kayaker tours the Upper Chattooga in January 2007 (right) to gather data about the recreational values of the river during the only Forest-Service-condoned descent of this section of river since 1976. Photo courtesy of American Whitewater, by Brian Jacobson



a river's-eye view of Appalachia.

From flashy headwater streams in the mountains to steady flows through stately valleys, the region's rivers supply the people with everything from trout and tourism to transportation and energy. Running water is always rewriting its story, but some themes are constant.

A Tale of Three Rivers

The Gauley

Internationally known for its narrow gorge and wild whitewater, the flow of West Virginia's Gauley River is governed by the Summersville Dam.

Though the dam currently controls a hydroelectric project capable of generating 80 megawatts of electricity per hour and a whitewater boating experience that draws an average of more than 150,000 visitors per year, it was built in the 1960s for a much more mundane purpose — flood control. The Army Corps says the dam paid for itself in less than eight years by preventing \$67 million in flood damages.

In the mid-eighties, Congress made recreation an official goal of the Summersville Dam, providing a fixed number of dam releases in the fall and marking the first time that a river was congressio-

nally recognized for whitewater boating. The timing of the fall boating season is based on the need to lower Summersville Lake, the reservoir above the dam, to make room for winter and spring precipitation. In 1988, the Gauley River National Recreation Area was established, protecting 25 of the 107 miles between the Summersville Dam and the Gauley's confluence with the New River.

A hydroelectric plant was added to the Summersville Dam in 2001, garnering praise from proponents of low-impact hydropower — projects that have a minimal effect on the rivers they occupy — because the plant capitalized on an existing dam.

Despite all the Gauley River contributes to the state, it also appeared on watchdog group American Rivers' annual 10 Most Endangered Rivers list in 2010 due to contamination from mountaintop removal coal mining, particularly in the Twentymile and Peters Creek watersheds. What happens along the Gauley affects

22% Percentage of West Virginia streams that may qualify as impaired under state criteria²

Sources for statistics: 1&4 National Hydropower Association 2. "How Many Mountains Can We Mine? Assessing the Regional Degradation of Central Appalachian Rivers by Surface Coal Mining," *Environmental Science and Technology*, Bernhardt, Lutz, et. al., 12 July 2012. 3. "Money Pit: The High Cost and High Risk of Water Supply Reservoirs in the Southeast," *American Rivers*, 10 July 2012.

Continued from previous page

the state's largest cities — the Gauley and New rivers converge to become the Kanawha, which provides municipal water to Charleston and Huntington.

Coal River

The Coal River and its chief tributaries, the Big and Little Coal Rivers, snake through the heart of southern West Virginia and are emblematic of both the region's beauty and the consequences of dependence on the river's namesake.

Coal River has been a utilitarian artery since the 1800s, when seams of coal mined from its banks were used as a replacement for whale oil. In those days, the river was managed by a lock and dam system to transport timber and coal; it also powered small mills that produced textiles, flour and lumber. Eventually, railways replaced water as the primary mode of transportation.

More recently, the Coal River watershed has become a default dumping ground for mine and timber waste. Twenty-five percent of the river's watershed is either permitted for surface mining or has already been surface mined. Pollution from these mines has earned the river a place on the endangered rivers list twice, including in 2012. This time, however, American Rivers said that the river basin was listed because it is at a "decision point" where rules regarding surface mines will have a profound affect on its future.

Cleanup efforts in the Coal River watershed have cost millions of dollars. A \$20 million sewer project near St. Albans, a town at the confluence of the Coal and Kanawha rivers, was secured by the nonprofit Coal River Group to help eliminate fecal coliform bacteria. And a project directed by the



state Department of Environmental Protection is building dozens of partial dams out of boulders to create narrow channels and deep pools that will help scour sediment from the river bottom.

Today, the river is carrying a new economic cargo — outdoor enthusiasts. The Coal River/Walhonde paddle trail — which recognizes the Delaware Indians' name for the river, Walhondecepe — stretches 88 miles along the Big, Little and main Coal rivers. An annual fundraising float sponsored by Coal River Group this June drew more than 600 participants.

The Chattooga

From its headwaters in the mountains near Cashiers, N.C., until it joins the Tugalo River, the Chattooga runs unfettered through three states. The 57 miles of alternately tranquil and turbulent water were declared a National Wild and Scenic River in 1974 and are crossed by just four bridges.

A study by North Carolina State University, American Rivers and the National Park Service found that in 2002 boating generated \$2.6 million for the six-county area surrounding the Wild and Scenic portion of the river — and the overall regional economic impact of Chattooga boating was estimated at \$5.8 million.

The river's popularity has also led to strife. When the Forest Service issued the first management plan in 1976, approximately 20 miles of the river's upper reaches were declared off-limits to paddlers, making the Upper Chattooga the only Wild and Scenic river in the nation with a boating ban.

When the the management plan was up for revision in the late '90s, national paddling organization American Whitewater lobbied against the boating ban, and the argument continues. Several groups, including national fishing organization Trout Unlimited, contend that the Upper Chattooga offers foot travelers a rare reprieve from the presence of boaters, while American Whitewater maintains that decades of preferential treatment have given anglers

Rafters enjoy Pillow Rock rapid on the Upper Gauley River. Photo courtesy of American Whitewater, by Thomas O'Keefe

a "perceived right" to a river that should be equally accessible to all types of wilderness enthusiasts. Appeals regarding the disputed stretch are ongoing.

At the same time, pollution from Stekoa Creek, which joins the river on section four, has scarred an otherwise healthy river for decades. In fact, the area downstream from the creek's mouth was

almost excluded from the Wild and Scenic zone for that reason, says Buzz Williams, program assistant at the Chattooga Conservancy, a local environmental group. He cites contamination from industrial agriculture and a leaky, 60-year-old sewage system in the nearby town of Clayton as the chief problems.

Over the past several years, however, a partnership between area nonprofits such as the Chattooga Conservancy and the local government to clean up the creek



The smell and sight of Stekoa Creek entering the Chattooga River is hard to miss — water testing by conservation groups has helped pinpoint parts of a nearby town's sewage system most in need of repair. Photo courtesy of Chattooga Conservancy

has made progress. The partnership aims to create a stream buffer zone and institute fiscally smart, environmentally strategic upgrades to Clayton's sewage lines — two major repairs are already complete. And a decrease in the the amount of pollution Stekoa Creek dumps into the river is one thing that will please all river recreationists.

3% nationwide percentage of dams that generate electricity⁴

SPECIALTY OUTFITTERS FOR

FOOTWEAR & CLOTHING FOR YOUR OUTDOOR & URBAN ADVENTURES

SHARING IN YOUR OUTDOOR ADVENTURES

FOOTSLOGGERS SINCE 1971

OUTDOOR & TRAVEL OUTFITTERS

Chaco MOUNTAIN HARD WEAR patagonia KEEN GoPro WILDERNESS SYSTEMS

Downtown Boone & Blowing Rock
(828) 262-5111 | (828) 295-4453

Recycling the Rain Brings a Barrel of Savings

By Paige Campbell

Tom McMullen may be the most water-wise homeowner in the neighborhood.

McMullen, his wife Amanda and their two sons live on six-tenths of an acre inside the town limits of Abingdon, Va. A small front lawn and the house itself take up a third of the lot. But walk out the back door and you're greeted by four-tenths of an acre with a job to do. Vegetable gardens, a chicken coop, rabbit hutches, berry bushes and newly-planted fig and mulberry trees fill nearly every patch of ground with a specific purpose.

All that functionality demands water. Lots of it. But this summer, even with dry spells and record heat, not a drop of city water has been spilled in the McMullens' backyard. That's because over the past six years, McMullen has constructed an elaborate rain barrel system that stores 740 gallons of rainwater diverted from the gutters on the family's modest home and a single outbuilding.

That water has helped them transform a small backyard into a wildly productive micro-farm to feed their family; it has allowed them to practice diligent conservation while keeping their water bill — and sewer bill, as it turns out — quite low.

Here's something you might not know about your sewer bill: it's probably not determined by how much sewage you generate. Most municipal systems calculate residents' sewer bills

based on estimates derived from their water usage.

"They figure that what's coming in is going out," McMullen says. It's a reasonable assumption for many people using city water, whose consumption takes place almost entirely indoors — showering, cooking, cleaning, flushing toilets. But what about outdoor usage?

Around 2006, "rain barrels kind of became a big thing in this region," McMullen says. "Several groups started putting on workshops to teach people how to put them together." With that community interest as a kickstart, McMullen got to work on his own system. And as a member of Abingdon's Go Green Committee, he also helped organize and present a series of helping to offer rain barrel workshops at community events.

Workshops typically demonstrate the concept using a thick-walled, food-grade lidded barrel made from a type of plastic that will not break down in sunlight. "You can't use any that have contained anything toxic," McMullen says, "so a good place to look is a local bottling company." Carol Doss, coordinator and workshop facilitator for the Upper Tennessee River Roundtable, a nonprofit that works to improve water quality in that river's watershed, also suggests contacting companies that make pickles.

Once you get your hands on this



Using their 740-gallon rainwater catchment system, the water-wise McMullen family has fostered a thriving micro-farm. Even the simplest system can collect enough rainwater to water plants, fill birdbaths or wash a car. "It's a no brainer," says Carol Doss, who teaching rain barrel building workshops. Photos by Paige Campbell

type of barrel, the rest is simple: cut three holes. First, cut the lid so a plastic colander can be nested in securely. Your gutter's downspout should land inside the colander, which will catch debris. Next, buy a half-inch spigot and drill a hole near the bottom of the barrel wall. Coat the spigot's threads with a sealant (like silicone or Gorilla Glue), and fit it snugly into the hole. The last hole, near the top, is for overflow. Fit this hole with two simple half-inch plumbing couplings — one straight, one elbow — to position a flexible tube so it points down and away from your house or into another barrel.

Of course, rain can be collected in just about anything. Large plastic storage bins and trash cans work too, though they may crack and buckle over time. McMullen began with a 250-gallon tank that once contained a non-toxic substance used for wastewater treatment. He fitted a hose onto the tank and propped it up on cinder blocks at a height just slightly above the high end of his vegetable garden to allow gravity to bring the water through the hose, like a siphon, to the entire garden. "The higher you store your water, the easier it

is to get it where you need it," he says.

One piece of advice Carol Doss gives every workshop participant is how to keep mosquitoes out. Standing water can quickly turn into a mosquito breeding ground if the water is not treated with a product to kill larvae, usually made from bacteria called *Bacillus thuringiensis israelensis*.

Doss also suggests using the water within two weeks to prevent algae, avoiding moss-killing products on your roof (they can taint the water and harm your garden), and bringing barrels indoors over the winter. "One winter we left ours out and it froze into one humongous chunk of ice," she says. "It didn't pop the faucet off, but it could have. And I swear it didn't melt until late spring."

When the water is flowing, it can be used to water plants and lawns, fill birdbaths, and wash cars. From a conservation perspective, the benefits are clear. "Just a tiny bit of rain, and you have a ton of water," Doss says. "It's a no-brainer. That water would just run off your property. Why not put it to use instead?"

...

Buried Blackwater: Coal's Dirty Secret

Continued from page 10

bathing in and could be harmful whether ingested or inhaled as steam, pointing out that hot water heaters concentrate heavy metals in water before it reaches the sink or shower.

Coal-related activities likely contributed to the pollution, the report found, but additional studies would be required to determine the exact sources of the contamination. What Stout really needed, he says, was a slurry sample from site of the slurry injection.

Stout visited the site with the permission of Massey Energy, the owner of the prep plant that pumped 1.4 billion gallons of slurry into the ground over nearly a decade. At the last minute, Massey denied him access to collect slurry for testing. Nearly 700 impacted residents of Mingo County sued the notorious coal company, who denied culpability. Seven years later, on July 27, 2011, Massey settled with the residents for \$35 million.

"Now, that doesn't admit guilt but it sure raises a red flag that something went wrong there," says Stout.

The simple fact, Stout says, is that "there are surface impoundments and underground injections into old coal mines and around aquifers, and a lot of those aquifers are where people get their drinking water."

Repeat Offenders

The settlement between Mingo County residents and Massey's Rawl Sales & Processing subsidiary became one of the most publicized of its kind.

In Search of Healing Waters

Continued from page 13

retied that first fly, you could feel the sense of accomplishment that he had." At the next meeting, he arrived holding his own fly tying kit.

"When the guys come together they see themselves as fly fishermen," Ledford says. "I think that's what brings them out of their shell. You can see the sparkle in their eyes as they accomplish more, they start looking you in the eye and standing up straighter."

Frady, for one, found healing in the

Some, such as Erkan Esmer, a one-time consultant for Massey, believe the chances of contamination could have been minimized, had the company constructed an impoundment instead of opting for underground injection. But as Esmer said in recently publicized testimony from the pretrial investigation, "Don [Blankenship, then-CEO of Massey Energy] thought that \$55,000 was too much to spend."

Rosenberg and the Sludge Safety Project know these are not new problems, and that they won't be easy to fix. But after another high-profile settlement in June 2012 related to water contamination from slurry injection in neighboring Prenter, W.Va., this time against Patriot Coal Corp., the group, and residents, are hopeful.

There are many parallels between the Prenter and Rawl cases. They took place just two counties apart. Both communities watched their water quality decline until a brackish, foul-smelling liquid fell from their faucets and stained and corroded bathtubs and sinks. Both watched as their community's health rapidly declined. And in both cases, the coal companies settled at the last minute, just days before opening arguments.

"That is what's common in most of these court cases," Rosenberg says. "Even when you win, you don't win. You settle. The coal companies don't want the public spectacle of a trial."

Before 1999 in West Virginia, Rosenberg says, there were no meaningful regulations governing slurry injection, meaning that coal companies

water. His excitement recounting a recent trip to West Virginia is as pure as a child's who has just caught his first fish.

But like Harman, Frady knows that the organizers, volunteers and most of all his fellow wounded warriors have helped him heal more than the water or fly-fishing.

"I would do anything in the world for them right now," he says. "They'd do anything in the world for me. Well, I know they would. They already have."

indiscriminately injected slurry underground with little to no oversight for more than 30 years.

In 2009, after Sludge Safety Project worked to organize citizen efforts, the group won a moratorium — self-imposed by the West Virginia Department of Environmental Protection — on new underground injection permits being issued in West Virginia.

"We've made major strides but we're still trying to get the last of them shut down," says Rosenberg. "The moratorium could be lifted at any time."

Sludge Safety Project came close last year to achieving their primary goal: an outright ban on slurry injection. But as the group worked to gain support in the legislature for the ban, the West Virginia Coal Association was lobbying for the DEP's moratorium to be lifted.

Neither accomplished their goal, but the difficulty in obtaining a permit to build a surface impoundment and the inability to inject underground has the industry backed into a corner.

After years of pressure from West

Virginians, companies operating coal prep plants are making the switch to alternative technology that Sludge Safety Project and many others have supported for years. In the past two years, three plants have switched to using dry-filter presses, a closed-loop system that eliminates the creation of slurry and the need to dispose of it. In the stain that slurry has left on water and West Virginia, Rosenberg sees an encouraging story.

"Unlike the general downturn of coal, the things that are blocking injection and impoundment permits really come from years [of] aggressive advocacy, not just because of market conditions," he says.

In the heart of Appalachia, the shift away from coal slurry continues. But the resource the residents sought to protect is lost.

"There is no truly good solution to a poisoned aquifer," says Rosenberg. "That's a resource that's been taken away from people forever that can never be fixed. There's no true justice for something like that."



**The World's Finest
Log & Timber Frame
Homes**

Individuals, Builders, Architects and Realtors interested in Quality Comprehensive Log & Timber Subcontract Services: We can assist you or your clients with regional UNIQUE HEAVY TIMBER products or arrange full custom construction services.

Please call for more information
Mountain Construction Enterprises, Inc.
828-963-8090





Please visit our website: www.HearthstoneOfBoone.com

2012 Ford Focus Electric

110MPGe

The most fuel-efficient five passenger vehicle in America.

You could get up to a \$7,500 federal tax credit

Not A Drop Of Gas and No Oil Changes



Eco-conscious interior made with REPREVE

Style & Comfort

Alfred B. Glone's
BOONE
FORD • LINCOLN

BooneFordIm.com Join Us On Facebook Today

(828) 264-6111

300 New Market Blvd. • Boone

Coal's Cloudy Future: The Factors in The Fossil Fuel's Decline

By Brian Sewell

A light winter that dented demand is the least of the coal industry's worries in a year of unprecedented challenges that may point to a very frigid future.

While the industry is familiar with market fluctuations and the shifting regulatory framework, analysts considering coal's present challenges, especially natural gas' affordability and abundance, are saying it will be difficult to recover.

In June, the Energy Information Administration reported that during the month of April natural gas-fired electricity caught up to its coal-burning counterpart. Both sources contributed about 32 percent of total electricity generated in the United States during that month.

In domestic markets, coal is finally facing a true competitor and investors are taking note. "Get out of

coal," the investment analysis website SeekingAlpha.com advised shortly after the EIA's announcement. Among other indicators, the steady decline of coal stocks reveals that natural gas is already taking its toll. Prices for major Central Appalachian coal producers such as Alpha Natural Resources and Arch Coal continue to fall.

Casting a deeper cloud of uncertainty over the entire sector, Patriot Coal filed for bankruptcy in July, having reported considerable losses every year since 2010. The St. Louis-based spin-off of Peabody Energy lost nearly \$200 million in the fiscal year that ended March 31 and had collected more than \$3 billion in debt.

In an effort to save itself, Patriot had increased exports to China, the world's largest coal consumer and a nation that looms large for United

States coal producers. The demand overseas, however, was not enough to serve as Patriot Coal's lifeboat. Other Appalachian-focused coal producers have also looked to exports as a viable way to stay afloat.

On July 19, Rep. Ed Markey, the ranking democrat of the House's Natural Resources Committee, released a report, titled "Our Pain, Their Gain," that analyzes data from the EIA, the U.S. Mine Safety and Health Administration and self-reported data from 97 mines. According to the report, exports from mountaintop removal mines in Kentucky, Pennsylvania, Virginia and West Virginia have increased by 91 percent since 2009. Some of the mines exported 100 percent of their production in 2011.

"The coal may be shipped to foreign markets," Rep. Markey said the day the report was released, "but the diseases, the destroyed mountaintops, and the environmental ruin from these destructive practices are staying right here in America."

Recent public backlash in response to proposed ports and the expansion of exports on the west coast will not be easily overcome. Nor will the challenges associated with geographic distance and transportation change – analysts believe Australia and Indonesia rather than the United States are in the best position to appease China's demand for coal.

For Appalachian coal miners, the

effects of coal's decline are much closer to home. In June, Arch Coal announced it would lay off 750 workers, citing "the unprecedented downturn in demand for coal-based electricity."

That unprecedented downturn has caused the industry to focus their ire on environmental regulations for the challenges coal faces. In June, an attack on the U.S. Environmental Protection Agency's greenhouse gas rules failed when a federal court ruled the EPA's interpretation of the Clean Air Act to pursue the regulation of carbon dioxide to be "unambiguously correct."

Industry leaders and politicians who lambast President Obama's "war on coal" are backed by miners and families that depend on the coal industry for their living and are fearful of its uncertain future. Recently, the coal industry's rhetoric spurred one of its most ardent Congressional supporters to speak out.

"The reality is that many who run the coal industry today would rather attack false enemies and deny real problems than find solutions," West Virginia Sen. John Rockefeller said on the Senate floor in June. "Scare tactics are a cynical waste of time, money, and worst of all coal miners' hopes. But sadly, these coal operators have closed themselves off from any other opposing voices and few dared to speak out for change – even though it's been staring them in the face for years."

Changing Winds on Air Pollution Standards

By Molly Moore

Back in December, environmental advocates cheered the arrival of the EPA's long-awaited Mercury and Air Toxics Standards, which will limit the amount of mercury, arsenic, selenium, cyanide and other toxins released by new power plants.

The agency estimates the rule will prevent as many as 11,000 premature deaths and 4,700 heart attacks a year. In June, Oklahoma Sen. Jim Inhofe in-

troduced a resolution to block the rule, but a slim majority of senators voted to uphold the air toxics standards.

Just weeks after the rule was supported in the Senate, the EPA announced that it will review the standards and focus on how the rules will affect five particular planned power plants, including Plant Washington in Georgia. Industry and public health groups are watching to see how the EPA's review impacts the strength of the pollution standards.

The Coal Expressway: 50 Mile Strip Mine Slated For Virginia

By Mike McCoy

The Virginia Department of Transportation and Alpha Natural Resources are teaming up in a public-private partnership to create a 50-mile road and strip mine in Southwestern Virginia. Called the Coalfields Expressway, the road would run from Pound in Wise County northeast to the West Virginia border.

The expressway is also slated to cover an additional 60 miles in West Virginia, where it is already partially completed.

Tax dollars and eminent domain will allow Alpha Natural Resources to strip-mine once-private lands, with the agreement that they grade the land in preparation for the road.

Details are still emerging, but according to a 2012 Environmental Assessment,

the first 25 miles of the strip mine and road would impact 12 miles of streams and more than 2,000 acres of forest. Area residents have expressed concern about not only water and land impacts, but also potential economic impacts of a roadway that allows travelers to bypass local communities. Supporters of the project claim it will boost local economic development.

VDOT has scheduled two public

hearings for the Coalfields Expressway Sections I and II. The first will take place Monday, Aug. 13 from 5 – 7 p.m. at Central High School in Wise and the second will be held Tuesday, Aug. 14 from 5 – 7 p.m. at Russell Prater Elementary in Vansant.

Visit virginiadot.org for updates or wiseenergyforvirginia.org for information about submitting comments.

New Bill Seeks Moratorium on Mountaintop Removal Permits

Representatives in Washington introduced a bill that would halt permitting for mountaintop removal coal mining until federal studies on health impacts can be conducted.

Thirteen congressional representatives from nine states unveiled H.R. 5959, the Appalachian Communities Health Emergency Act in mid-June, with the help of the Appalachian Community Health Emergency organization, a non-profit collaborative grassroots campaign established

by Christians for the Mountains, Coal River Mountain Watch and Mountain Health & Heritage Association.

According to author Wendell Berry, "As certain people of the Eastern Kentucky coalfields helped me to understand nearly 50 years ago, the fate of the land and the fate of the people are inseparable. Whatever affects the health of the land must affect the health of the people."

For more information about the ACHE Act, visit: stoptheache.org.

Black Lung Increasing in Appalachia

According to a report by the Center for Public Integrity and NPR News, black lung in coal miners is not only still very much around, it's actually growing worse. The report incorporates research by the National Institute for Occupational Safety and Health that shows black lung cases have increased 3.2 percent in the past decade, and the prevalence of the most severe form of the disease has tripled since the 1980s. Out of 24 victims from the

Upper Big Branch mine explosion in 2010, 17 had signs of black lung — some of whom had spent fewer than 10 years in mines. The report goes on to look at issues in the Mining Safety and Health Administration inspection process as well as endemic corruption in the coal industry which leads coal miners, fearful of losing their jobs, to cheat when taking air dust samples for inspectors. To read the full report, visit iwatchnews.org.

In Brief

Whistleblower Gets His Day: A federal judge ordered a West Virginia coal company to allow Charles Scott Howard to return to his mining job and also pay a \$30,000 fine for discriminating against a whistleblower. Cumberland River Coal Co. and its parent company, Arch Coal, reportedly fired Howard for reporting unsafe conditions at a Cumberland River mine. The ruling marks the third time that Howard, known for reporting safety violations, has been reinstated to his job by the courts.

All Fired Up: Despite statewide resistance, Dominion Power's Wise County

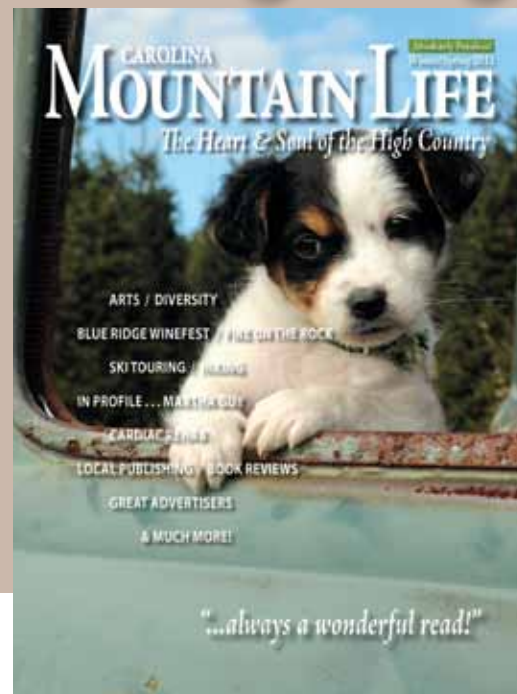
coal plant in St. Paul, Va., fired up in July after four years of construction. According to Dominion, the 585-megawatt plant is one of the "cleanest U.S. coal-fired power stations in terms of air emissions with one of the nation's strictest air permits." Grassroots pressure during the permitting phase of the plant resulted in stricter emissions limits, including a 94 percent reduction in mercury emissions and 82 percent reduction in acid-rain producing sulfur from Dominion's original proposal. The plant is allowed annual greenhouse gas emissions equivalent to the emissions of nearly one million cars.

Nearly Fatal Failure to Communicate: Following a surprise federal MSHA inspection that uncovered enough violations to shut down a Harlan County, Ky., mine for nearly a week and a half this spring, a state inspector was reprimanded for finding no problems at the same mine in nearly 30 inspections during the two and a half years leading up to the federal review. The inspector reportedly failed to cite the mine for potentially fatal violations including a non-working fire suppression system, an unsupported roof and potential fire hazards.

It's Hard Being the Alpha: For the second time this year, environmental organizations headed by the Sierra Club have filed suit against subsidiaries of coal giant Alpha Natural Resources over selenium pollution. The latest suit targets nine surface mines in West Virginia and is asking for fines up to \$37,500 per day of violation, some of which date back to 2007, as well as monitoring and cleanup. A similar lawsuit targeting two other mines was launched in May, and last December Alpha settled a case with the same groups that called for \$50 million in

cleanup efforts and fines. In another blow for the massive coal company, the Office of Surface Mining overturned a West Virginia Department of Environmental Protection decision to retroactively extend a 2,000-acre mountaintop removal permit along Coal River Valley eight months after the three-year limit had expired. WVDEP is currently undergoing an audit by the state.

"What a great magazine!"



"I discovered your magazine while visiting and found it to be uplifting and delightful! I plan on moving to your area and am thrilled to stay in touch through your magnificent magazine online."

—Best, Karen from California whose parents live in Vilas, NC

828-737-0771

PO Box 976, Linville, NC 28646

At stores & businesses almost everywhere in the High Country ... and online at CarolinaMountainLifeMagazine.com

livingcarolina@bellsouth.net

THE WOODLANDS BARBECUE RESTAURANT & CATERING SERVICE

Open 11 a.m. - 9 p.m., Sun.- Thur.
Open 11 a.m. - 10 p.m., Fri. & Sat.

8304 Valley Blvd (HWY 321 Bypass)
Blowing Rock, NC 28605

EAT IN THE ROUGH

Restaurant (828) 295-3651 Catering (828) 295-3395

FISHING - HIKING - HUNTING - SKIING

ORIGINAL **blizzard balm™**

OUTDOOR LIP CARE

CAMPING - RAFTING - CLIMBING - CYCLING

order online:
www.blizzardbalm.com [chattanooga, tn](http://chattanooga,tn)

Editorial

What's Our Water Really Worth?

As our most precious natural resource, clean drinking water, all-too-quickly becomes a scarce commodity for global communities, it is also turning into a hot commodity for multinational corporations.

According to a United Nations Global Environment Outlook study, two-thirds of the world's population is expected to face water shortages by 2025. And to assess and prepare for those shortages, some of the world's wealthiest corporations have created a series of maps that inventory the world's groundwater aquifers.

Monoliths of the global economy such as Goldman Sachs, Dow Chemical Company, Bloomberg, GE and Coca-Cola have teamed up under the moniker Aqueduct Alliance to detail hydrological data on the world's largest river basins, giving investors unprecedented details of international water availability.

It appears that the insatiable ilk of Big Business is deciding how to divvy up our water.

Privatization of water resources — or leasing public utilities to private corporations — is well-known in many parts of the world, but is only now becoming more common in the United States. In some developing nations, privatizing water utilities has helped build much-needed infrastructure in communities previously lacking access to fresh, clean water. But in several cases, privatization has also resulted in higher rates and poorer water quality — in one instance resulting in the worst cholera outbreak in South African history.

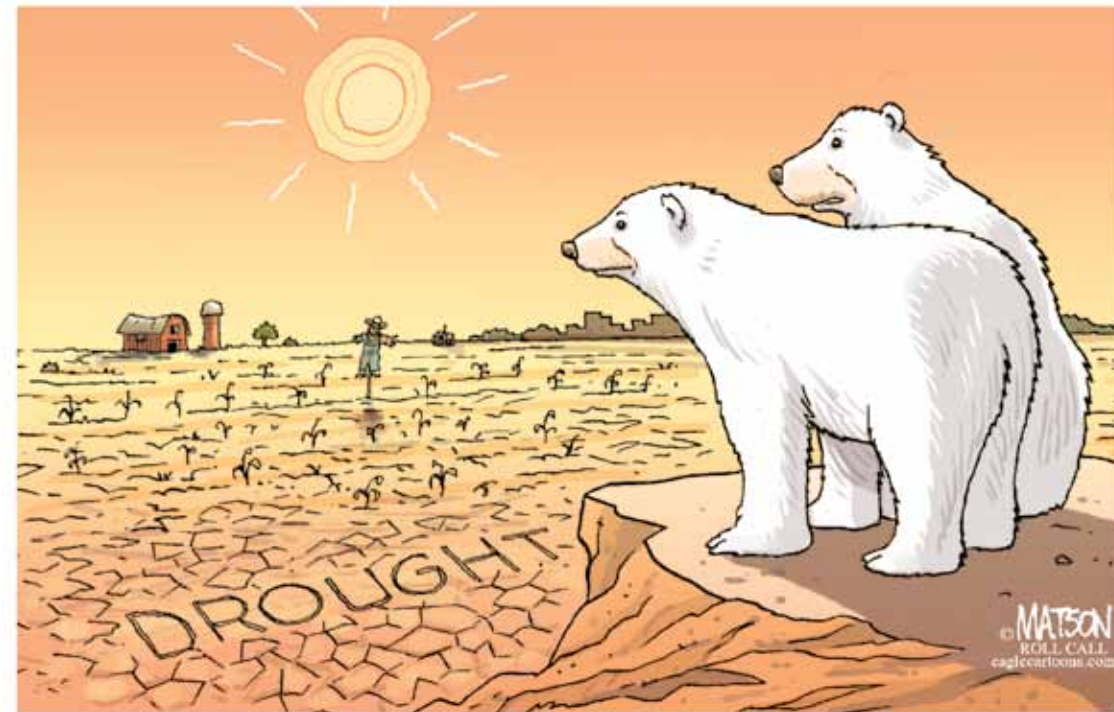
Today, nearly 70 million Americans get their tap water by way of private companies who have struck lease agreements with public municipalities. According to consumer rights group Food and Water Watch, those residents pay an average of 33 percent more for their water than residents on public water sources.

With many of the nation's urban areas facing funding shortfalls, the lure of handing off water supply projects to private companies with deeper pockets can be irresistible. But the results are not always positive. In one example cited in *The Daily Beast*, United Water, an American subsidiary of the multinational corporation Suez, shut down sewage pumps in the city of Milwaukee in order to save money — and dumped billions of gallons of raw sewage into Lake Michigan. The city of Gary, Ind., cancelled a 12-year contract with the same company, claiming their dealings with United Water had more than doubled annual operating costs.

Individual citizens and the environment are typically the biggest losers when profits are on the line. With quarterly gains for shareholders as their primary concern, private companies have no incentive to encourage water conservation or water-quality protection, and dwindling reservoir supplies and increasing population demands will ultimately drive up prices.

In other words, selling a fundamental resource that people literally cannot live without is good for big business. And now we have proof that corporations are thirstily eyeing the world's reservoirs with dollar signs swimming in their eyes.

As *National Geographic* famously published in 1993, "All the water that will ever be is, right now." This is all we get. We must ensure that our water remains a publicly owned resource for all to use efficiently, without a price tag determined by the highest bidder. Because water is, and always should be, priceless.



"I USED TO BELIEVE GLOBAL WARMING WAS A VAST HUMAN CONSPIRACY TO DESTROY THE POLAR ICE CAPS... BUT NOW I'M NOT SO SURE."

Viewpoint

Witnessing the Transformative Power of Water

By Ryan Robinson

In May I spent three days navigating the ancient Chattooga River with North Carolina Outward Bound School, an organization that has used the Chattooga for many years to help individuals develop character through challenge and self-discovery.

For centuries the Chattooga River has been witness to thousands of events and host to many accolades. The river served as a major resource to the Cherokee Nation. It also provided the stage for Burt Reynolds' daring paddle trip through the rural South in the 1972 classic, "Deliverance." And in 2012, the river helped facilitate the most self-defining experience I have ever had.

I work for North Carolina Outward Bound School in sales and marketing. Therefore, my experience in the field is limited to visits to basecamps and personal excursions. When offered the opportunity to join a crew for a whitewater canoeing course, I could not pass it up.

The Chattooga was familiar to me. Last fall I was introduced to the river in a whitewater kayak. My confidence, however, was somewhat diminished by the fact that this time I would be running the river in a tandem canoe. Lining up a tandem canoe for a rapid is a major feat compared to lining up a kayak. Clear and assertive communication is needed to be successful, and rolling a flipped tandem canoe into an upright position is like trying to hit a baseball with your eyes closed.

Together, my co-paddler and I covered 20 miles in three days. Through this Outward Bound experience I was challenged, pushed, snapped and reeled back in. We dealt with copperheads, lightning storms, communication barriers, wet sandwiches and a

heap of challenging rapids, but in the end we arrived at our desired take-out location in one piece. The experience on the river left a major footprint on my heart and mind.

The Chattooga, declared a National Wild and Scenic river in 1974, is an amazing wilderness playground. There isn't any development in sight. Paddling the river provides a sense of liberation. You might see the occasional fisherman or fellow boater, but overall the river is solely yours as you navigate its waters.

Whitewater canoeing is like taming a mustang. It takes patience, ease, determination, grit and a lot of luck. The positive impact whitewater boating can have is immeasurable, and the Chattooga offers boaters a memorable adventure and the opportunity to push their limits.

...

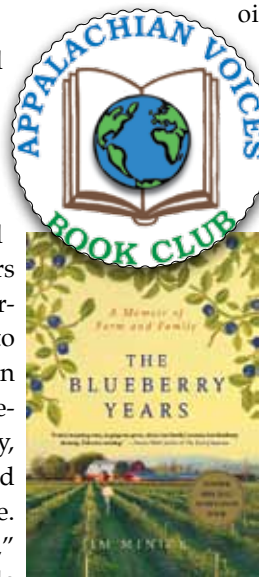
The Blueberry Years: An Ode to Farming and Family

Reviewed by Kara Dodson

The story of Jim and Sarah Minick's years managing a blueberry farm read as sweet as a warm, ripe berry plucked from the bush. The courageous and loving young homesteaders recount ten years of preparing, planting, and picking to bring alive a shared dream: an organic, pick-your-own blueberry farm in Floyd County, Va., that welcomes seasoned pickers and newcomers alike.

In "The Blueberry Years," Minick poetically recalls young pickers' first buckets, breakfasts in the field, and a sun-struck worm who saved the farm. Split into five parts and very short chapters, the book is a breeze to read, each page offering small insights into the lives of two young teachers-turned-farmers.

I wasn't expecting to reach personal epiphanies from a blueberry farm mem-



oir. Bur Minick's patient prose draws you in until you are part of his challenges, his successes and his shortcomings.

The first surprise hits in chapter one when a hasty delivery man, alarmed by how backcountry the area was, unloaded a thousand blueberry bushes on the side of the road. The unfamiliar farmers were left hauling the precious "kids" to a creekside home still in pots. Two months later the plants were nestled in the newly plowed field down the road from the farmhouse, each given a simple prayer:

"Grow, little plant."

Over the course of the book, Jim and Sarah welcome hundreds of pickers to their rural retreat to share laughs, stories and lots of blueberries. They nourished the land to make a living and cultivated communities to strengthen the web of life. To me, this is true Appalachia.

are used in fracking fluid because many states have "trade secrets" exemptions that allow companies to keep fracking recipes secret from other companies. In Pennsylvania, a new law allows doctors to find out what's in the fracking fluid, but forbids them from telling other doctors. Some physicians say the law doesn't specify what they can tell patients, thus putting them at risk of unknowingly violating the law.

In response to growing health concerns, the Southwest Pennsylvania Environmental Health Project opened an office this year to serve as a resource to people who have health problems related to natural gas drilling operations. Raina Rippel, the project's director, says people come in with problems ranging from skin disorders to gastrointestinal concerns.

"We cannot determine the exact exposure pathways and toxic contaminants creating these symptoms," Rippel says. "However, chemicals associated with the flowback water, and contamination associated with holding ponds, accidental spills, runoff, etc., are likely culprits."

Even in states where fracking is currently illegal, citizens are grappling with the industry and legislators to ensure

There are dark parts among the sunny stories. Fearing the "failure of this blueberry dream of a farm" and feeling loneliness hovering, the Minicks reach out for friendship within church communities and hippy communes. But lasting

friendships are only found when they're not sought out, much like that perfect berry that Minick aptly describes as an "elemental, unrefined, sun-water-earth-and-air-created color of blue."

Stand Up That Mountain: A Contemporary Tale of Conservation

By Brian Sewell

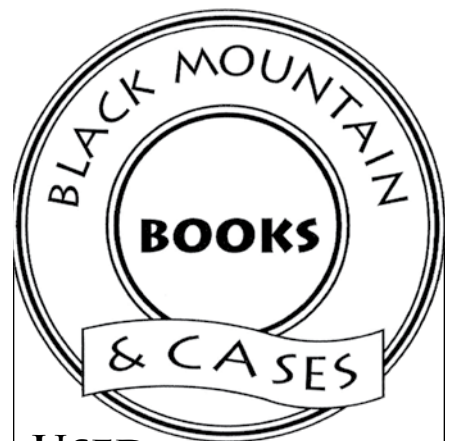
In the movement to end destructive mining practices that have made parts of Appalachia a sacrifice zone, stories of David versus Goliath proportions often emerge. In "Stand Up That Mountain," Jay Erskine Leutze relates his own underdog tale in personal and powerful fashion.

It all began the day that Leutze received a phone call from a 14-year-old girl who told him that Belview Mountain, near her home in Avery County, N.C.,



was being dynamited to create a gravel quarry for nearby highway construction.

Leutze is a gifted storyteller and in "Stand Up That Mountain," the characters — some unwavering in their quest to save Belview Mountain and others intent on its destruction — carry the story. This book will appeal to conservationists, activists and anyone interested in the underdog stories of Appalachia that may begin with a simple phone call asking for help.

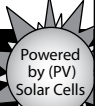


USED, RARE & OUT OF PRINT BOOKS

SPECIALIZING IN BOOKS ABOUT BLACK MOUNTAIN COLLEGE



Jean & Carl Franklin
103 Cherry Street
Black Mountain, NC 28711
(828) 669-8149
Lookbooks@earthlink.net





Saying Hello and Goodbye

At Appalachian Voices, we are fortunate to share our work with some of the finest minds in the conservation movement, and this year is no exception. We would like to welcome three exciting new additions to our team, expanding our expertise exponentially as we move into the next 15 years.

Directing Our Development

Kevin Jones, joins us from the "Liberty and Prosperity" state of New Jersey as our new Director of Development, and has served an inspired lifetime so far in the environment, conservation and human rights sectors. He previously managed local and statewide non-profit and political campaigns while simultaneously overseeing development operations for the National AIDS fund. Prior to that, he worked with science and environmental educators Dr. Sylvia Earle and Jean Michele Cousteau as Director of the U.S. Pavilion for Lisbon's World Expo called, "The Oceans: Heritage for the Future." Kevin is also a certified facilitator for the "Awakening the Dreamer, Changing the Dream" sustainability symposium and serves on the board of trustees of United for a Fair Economy. Kevin is a former priest who "sees my work in promoting a health of our planet and the mother forest of the Appalachias as a divinely inspired call."



communications and policy. She was Senior Communications Manager at the Southern Environmental Law Center where she supervised media relations and communications campaigns at the national, state and local level. Her work has appeared in *The Washington Post*, *The New York Times*, and outlets throughout the South. An award-winning reporter for *The Roanoke Times*, Cat received her B.A. from UT Knoxville, and masters in journalism from UC Berkeley. She recently completed the Virginia Natural Resources Leadership Institute and serves on the board of the Rockfish Wildlife Sanctuary. A Yankee transplant to Appalachia, Cat says that she is "honored to work with Appalachian Voices' staff, board, members, contributors and activists to protect this magnificent region."

A Master Communicator

Also joining us this summer is our new Director of Communications, Cat McCue. Cat joins us with more than two decades of experience in environmental

AppalachianVoices BUSINESS LEAGUE

New & Renewing Members — June / July 2012

The Rock Barn — Arrington, Va.

Blue Truck Soup — Scottsville, Va.

Rag Mountain Trout — Madison County, Va.

Caromont Farms — Esmont, Va.

AM Fog — Afton, Va.

Poet Man Records, USA — Lexington, Ky

To become a business member visit AppalachianVoices.org or call us at 877-APP-VOICE

Executive Director of a small non-profit group promoting land conservation in the foothills of Rappahannock County. Nathan lives with his wife, Kara, on his family's land in Etlan, Va.

A Fond Farewell

We also must bid adieu to two long-time and devoted staff members and defenders of Appalachia. Virginia Campaign Coordinator Mike McCoy, a keystone in our fight to stop the Hampton Roads coal-fired power plant and promote energy efficiency in the Commonwealth, leaves us for a dream position working on a sheep farm along the wild New Zealand coastline. Technologist Benji Burrell, who for many years has championed the iLoveMountains.org website, delved into the depths of programming data and produced outstanding video materials, is headed off to provide critical support for the medical field in Asheville, N.C. We will miss them both, and wish them much success in their new endeavors!



An Ardent Thank You

And last but not least, we would like to extend the most hearty of thanks to our Americorps members for this year, Molly Moore and Brian Sewell, who went above and beyond in the creation of this publication. What's more, both have committed to working with App Voices for the foreseeable future, so our communications will be even better in the coming year!



A Hearty Thanks to Our Selfless Summer Interns

While we are fortunate each season to gather to us many fine interns from around the region, this summer we had a bumper crop of 12 impressive, highly qualified young minds helping us in all capacities.

For our very busy and growing state campaigns, Stacy Casey (SIT Graduate Institute) handled volunteer recruitment and mobilization in Virginia, and Nick Amis (UT-Chattanooga) researched the impacts of mining on waterways in Tennessee. Erin Burks (UNC-CH) helped to create the informational building blocks for our upcoming Red, White and Water website.

In Washington, D.C., our two Stanback fellows from Duke University, Emily Yu and Dillion Buckner, worked with our end mountaintop removal campaign team to gain additional support for the Clean Water Protection Act and prepare for grassroots organizing during the election season.

The Appalachian Water Watch team's interns, Kara Dodson (Virginia Tech), Jillian Kenny (ASU) and Pallavi Podapati (UPenn), traveled to Kentucky and Virginia to provide support to our citizen water monitors, and compiled seemingly endless state water quality data for review.

Clifford Shaw (ASU) helped our IT team build a database of highly useful coal data, and leaves to begin a position with a regional software design firm.

The Appalachian Voice team bids a fond farewell to Editorial Assistant Jessica Kennedy (UNC-CH) and Online Assistant Anna Norwood (ASU), as well as our spring/early summer Editorial Assistant Madison Hinshaw (ASU), all who delved into the world of investigative research and also went above and beyond in the search for Appalachia's Hidden Treasures.

support our work to create a better future for Appalachia! Tent camping and limited RV camping available. Visit musiconthemountaintop.com for all the details.

Noble Nuptials

When Ann Kingston and her new husband, John, got married, they decided to add a different spin to their bridal registry by including donations to Appalachian Voices as part of their gift options. Thanks to their generous gesture, and to their friends and family, the inventive pair collected a total of \$695 for the organization! We send our heartfelt thanks and congratulations to the happy couple, who helped save mountains and communities through their selfless act of love.



Artists for Appalachia Help Us Celebrate 15 Years

By Kayti Wingfield

What better way is there to celebrate 15 years of protecting the beautiful and unique Appalachian region than bringing people together with Appalachian-inspired music and revelry? That's what we did on July 21 in Charlottesville, Va., when hundreds of members from across the region joined us as we commemorated 15 great years working with you to protect Central and Southern Appalachia.

The Artists for Appalachia evening would not have been possible without the amazing artists that joined us on stage. The evening included rousing performances by Kentuckians Michael Johnathon and Daniel Martin Moore, country fusion band 2/3 Goat, Charlottesville's own The Honey Dewdrops and Trent Wagler of the Steel



Artists who provided inspiring performances for the evening included The Honey Dewdrops and Trent Wagler from Steel Wheels (top left), Grammy winner Kathy Mattea (top right), and Jessica Tzou and Michael Johnathon. Sponsors of the event enjoyed a special dinner at Positively 4th Street in downtown Charlottesville (below).



Wheels, as well as a profoundly inspiring headline appearance by Grammy award-winning artist and West Virginia native Kathy Mattea.

Keynote speaker Jeff Goodell, a contributing editor of *Rolling Stone* magazine and the author of "Big Coal," shared his own unlikely journey of becoming a standard-bearer for environmental health and encouraged the crowd to stand up for a just and sustainable transition in

Appalachia — a place where we are all connected.

The artists closed the night by joining together on stage to sing a very appropriate song, "Jubilee." Just as songwriter Jean Ritchie wrote, "Swing and turn/ Jubilee/ Live and learn/ Jubilee," we must celebrate Appalachia and we must continue to learn how to protect it better. We promise that, with your help, Appalachian Voices will continue to do so for another 15 years.

To see pictures, watch video and listen to clips from the evening, visit appvoices.org/artistsforappalachia.



Become a Mountain Protector Today!

Become a Mountain Protector monthly supporter at \$15/month (in honor of our 15th anniversary!) and receive a special gift package including a CD and DVD from Woodsongs Old Time Radio Hour's very own Michael Johnathon. Supplies are limited, so join now. The package includes:

- Front Porch, a new CD by Michael Johnathon
- Walden: The Ballad of Thoreau, a DVD by Michael Johnathon

Name of Member _____
Address _____
City _____ State _____ Zip _____
Phone _____ Email _____
 Yes, I would like the special Michael Johnathon CD/DVD set! Please make me a Mountain Protector (monthly contributor) at \$ _____/month (\$15 minimum)
For one-time contributions, visit our website at www.AppalachianVoices.org/donate
MC/VISA # _____ Expiration date _____
Signature _____

Mail to: Appalachian Voices · 171 Grand Boulevard, Boone, NC 28607



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

EXECUTIVE DIRECTOR	Willi Mays
OPERATIONS & DEVELOPMENT	
DIRECTOR OF DEVELOPMENT	Kevin Jones
CONTROLLER	Susan Congelosi
OPERATIONS MANAGER	Shay Boyd
DIRECTOR OF LEADERSHIP GIFTS	Kayti Wingfield
OPERATIONS AND OUTREACH ASSOCIATE	Maeve Gould
PROGRAMS	
DIRECTOR OF PROGRAMS	Matt Wasson
DEPUTY PROGRAM DIRECTOR / VA DIRECTOR	Tom Cormons
CAMPAIGN DIRECTOR	Lenny Kohn
WASHINGTON, D.C. DIRECTOR	Kate Rooth
NATIONAL FIELD ORGANIZER	Kate Finneran
LEGISLATIVE ASSOCIATE	Thom Kay
TENNESSEE DIRECTOR	J.W. Randolph
NORTH CAROLINA CAMPAIGN COORDINATOR	Sandra Diaz
VIRGINIA CAMPAIGN COORDINATOR	Nathan Jenkins
WATER QUALITY SPECIALIST	Eric Chance
WATER QUALITY SPECIALIST	Erin Savage

TECHNOLOGY & COMMUNICATIONS

DIRECTOR OF COMMUNICATIONS	Cat McCue
IT SPECIALIST	Jeff Deal
COMMUNICATIONS COORDINATOR	Jamie Goodman
AMERICORPS COMMUNICATIONS OUTREACH	Brian Sewell
AMERICORPS PUBLIC OUTREACH & EDUCATION	Molly Moore
GRAPHIC DESIGNER	Meghan Darst

INTERNS

STANBACK MOUNTAINTOP REMOVAL FELLOW	Dillon Buckner
STANBACK MOUNTAINTOP REMOVAL FELLOW	Emily Yu
VIRGINIA CAMPAIGN ASSISTANT	Stacy Casey
N.C. CAMPAIGN ASSISTANT	Erin Burks
N.C. CAMPAIGN ASSISTANT	Tabitha Lunsford
TENNESSEE MINING RESEARCH ASSISTANT	Nick Amis
COAL DATA ASSISTANT	Clifford Garth
WATER PROGRAM ASSISTANT	Kara Dodson
WATER PROGRAM ASSISTANT	Pallavi Podapati
WATER PROGRAM ASSISTANT	Jillian Kenny
EDITORIAL COMMUNICATIONS ASSISTANT	Jessica Kennedy
ONLINE & COMMUNICATIONS ASSISTANT	Anna Norwood

Board of Directors

CHAIR	Christina Howe
VICE CHAIR	Heidi Binko
SECRETARY	Cale Jaffe
TREASURER	Bunk Spann

MEMBERS-AT-LARGE

Clara Bingham	Silas House	Brenda Sigmon
Rev. Jim Denning	Landra Lewis	Lauren Waterworth
Dot Griffith	Rick Phelps	Willi Mays (Ex-officio)
Mary Anne Hitt	Kathy Selvage	

ADVISORY COUNCIL

Jonathan C. Allen	Randy Hayes
Jessica Barbara Brown	Li: Riddick
Alfred Glover	Van Jones



The Appalachian Voice

171 Grand Boulevard
Boone, NC 28607
www.appalachianvoices.org

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

And a river runs through it: The entirety of the majestic, 340-mile-long James River, from Blue Ridge Mountain beginning to coastal end, resides in Virginia. Approximately 10,000 square miles — nearly 25 percent of the Commonwealth — comprise the river's watershed, and is home to one-third of all Virginians. According to the James River Association, the river "touches the lives of Commonwealth residents more than any other feature on the landscape." Photo by Benji Burrell

GET INVOLVED environmental & cultural events in the region

Floyd Country Store Traditional Appalachian Music

Thurs.-Sat. throughout summer: The Floyd Country Store, home of the Friday night Jamboree, hosts regional Appalachian music Thursdays through Sunday. Visit: floydcountystore.com

Holler in the Holler 2012

Aug. 10-12: An annual music and arts festival in the foothills of the Appalachian Mountains. Enjoy a variety of music from bluegrass to jazz, as well as many other activities such as workshops and even hula hooping. Ticket prices vary. HomeGrown Hideaways, Berea, Ky. For more information, or to purchase tickets visit: homegrownhideaways.org

Earth Sabbath Celebration

Aug. 13, 7 p.m.: Step out of your hectic life into a joyful celebration of the mystery and meaning of the universe. A time for community with people caring for creation. Open and free to the public. Asheville, N.C. For more info, contact: Jean Larson, Larson_Jean@hotmail.com.

Stand up that Mountain

Aug. 23, 6:30 p.m.: Presentation by author, Jay Leutze on his novel, "Stand Up That Mountain: The Battle to Save One Small Community in the Wilderness Along the Appalachian Trail." Reception and book signing afterwards. Catawba College, Salisbury, N.C. More information and registration: centerfortheenvironment.org.

Music on the Mountaintop

Aug 24-26: Join Appalachian Voices at this annual music festival featuring 15 diverse

bands in the beautiful Grandfather Mountain area of the Appalachian Mountains. This festival has given \$12,000 back to local non-profit organizations, AIRE, Appalachian Voices, and Mountain Alliance. General Admission \$99. Single day tickets available as well. Grandfather Mountain Campground, N.C. Visit: musiconthemountaintop.com

Outdoor KnoxFest

Aug 24-26: A three-day outdoor festival benefiting Legacy Parks Foundation. For the adventurous outdoor lovers. Events include the 3 Day Anglers Carp Cup, the Urban Trail Race, Bike and Boat Rentals and more. Rates and registration at active.com. Knoxville, Tenn. Visit: outdoorknoxville.com.

Clear Creek Festival

Aug. 31 & Sept. 1-2: A homecoming for you and yours over Labor Day weekend. The stage will be graced with great artists, healing and rejuvenation in a family-friendly, loving environment. Rockcastle County, Ky. Visit: clearcreekfest.org

Beech Mountain Mile High Kite Festival

Sept. 2, 10 a.m. - 4 p.m.: A great tradition with lots of color and fun activities for kids of all ages. There will be a kite decorating station, kite store, flying competition, face painting, food and craft vendors. Free event, the first 300 children 12 and under will receive a free kite. Free parking. Beech Mountain, N.C. Visit: beechmtn.com

Terrapin Hill Harvest Festival

Sept. 7-9: Music festival featuring a wide spectrum of musical styles by over 20 bands, food and craft vendors, kids playground, fire dancers, bonfires, and family camping. Weekend pass \$90 in advance, \$110 at the gate. \$5 per vehicle parking fee. Free camping next to your vehicle. Harrodsburg, Ky. Visit: terrapinhillfarm.com/festival

Organic Gardening Workshop

Sept. 8: All-day workshop on organic gardening. Subjects covered will include: composting, growing in raised beds, lasagna gardening, cold frames winter gardening, beneficial insect promotion, mulching, gardening by the moon and more. Registration deadline: Sept. 1. Visit: ForestRetreats.net

Wellness and Water: Health Impacts of Fossil Fuel Extraction

Sept. 8: Conference sponsored by OVEC and the WV Chapter of the Sierra Club. Speaker Wilma Subra, workshops and panels with impacted residents, and experts including Dr. Ben Stout and Dr. Michael Hendryx. Registration begins at 8 a.m. \$10 suggested donation. Morgantown First Presbyterian Church, W.Va. Contact Robin Blake-man at robin@ohvec.org or call (304)522-0246.

West Virginia Wind Forum

Sept. 25: Tour the AES Laurel Mountain wind and energy storage facility in Elkins, W.Va. Canaan Valley Resort & Conference center, Davis, W.Va. Registration for both the forum and the AES facility tour is open at: marshall.edu/cegas/events/wvwind

Email voice@appvoices.org to be included in our Get Involved listing. Deadline for the next issue will be Sunday, Sept. 30, at 5 p.m. for events taking place between Oct. 10 and Dec. 5.

Rooted in the Mountains: Valuing our Common Ground

Oct. 4-5: Designed to raise awareness of health and environmental consequences of mountaintop removal coal mining. Participants will go away with a new sense of urgency and tools to use in valuing our common ground. Western Carolina University, N.C. For more information, contact Pamela Duncan at (828)227-3926 or email pyduncan@wcu.edu

Bethel Half Marathon & 5K Race

Oct 13: This race is Bethel Rural Community Organization's main fundraiser for the year. They are a small non-profit organization that raises money to go toward farmland and rural preservation. Haywood County, N.C. Register online: bethelrural.org.

Changing of the Leaves Festival

Oct 13-14: See mountaintop removal and celebrate Appalachian culture with Larry Gibson and other inspiring mountainkeepers. Kayford Mtn, W.Va. Learn more: mountainkeeper.blogspot.com

SOCM Turns 40!

Oct. 20: Help Tennesseans celebrate 40 years of SOCM (Statewide Organizing for Community eMpowerment) history. For more information, visit: socm.org.