

The Appalachian VOICE

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Then & Now

Forty years ago, a wave of coal slurry swept away communities along Buffalo Creek, killing 125. Some problems from our past have improved — others seem stuck in time. Have we learned our lesson?

ALSO INSIDE: The Habits of Hibernating Bears • Georgia's Historic Blood Mountain • Standing Up for Clean Water

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ABOUT THE COVER

A birds-eye view of the destruction in the wake of the 1972 Buffalo Creek slurry flood that killed 125 people and left more than 4,000 homeless. *Photo courtesy of West Virginia State Archives*



A Note From Our Executive Director



There's a common saying in Appalachia: what we do to the land, we do to the people.

What the coal industry is doing to the citizens in our region is unforgivable. In the last several years, 21 peer-reviewed studies have confirmed the worst of our fears -- that mountaintop removal coal mining is destroying not only the land, but also the people of Appalachia.

The results are staggering. Residents born near the destruction of mountaintop removal are 42 percent more likely to be born with birth defects and 50 percent more likely to die of cancer compared with other people in Appalachia.

The ecological footprint of the coal industry goes far beyond central Appalachia and is also damaging to regions where coal is consumed. Two-thirds of water withdrawals in the drought-prone Southeast are used to cool electric generating plants and the majority of our waterways are polluted with mercury as a result of coal combustion.

For far too long, the country has ignored the human and environmental costs of coal mining, processing and combustion. Even now, the coal industry's supporters in Congress are trying to undermine what few regulations are in place to protect Appalachia!

Yet there is hope — and it comes from you. Only by lifting our voices together can we be heard above the greedy demands of special interests. Join our growing online activists lists to stay informed and take action when you're needed the most. It is free and we make it easy. We need your voice.

For the health of Appalachia,

Willa Mays

P.S. - Go to AppVoices.org to sign up for action alerts

Yesterday and Today: Defending the Clean Water Act

By *Jamie Goodman*

Forty years ago, it took a flaming river to spur our nation to protect its waterways.

The river that played a prominent role in the creation of the Clean Water Act and the Environmental Protection Agency is thought to have erupted in flames on thirteen separate occasions in a one-hundred-year period, ending with a conflagration in June of 1969 that captured the attention of *Time* magazine, and subsequently the rest of the country.

At the time, Ohio's Cuyahoga River was so choked with industrial runoff it displayed no visible signs of life for miles. In a March 11, 1970 article, *Time* magazine described the river as "Chocolate-brown, oily, bubbling with subsurface gases" and "a constant fire hazard" due to the large quantities of oil and other pollutants smothering the surface. The '69 fire, which nearly destroyed two railroad bridges, was not even the largest the river had endured.

Sadly, the problem was not contained to the Cuyahoga. Due to lax water regulations, industrial pollution at the time was rampant in streams and lakes. Bacteria levels in New York's Hudson River were 170 times the safe limit, and Lake Erie was, according to the same article in *Time*, "in danger of dying by suffocation."

An environmental senator from Maine led the charge on the 1972 federal bill, and despite a veto from then-President Richard Nixon — overridden by both houses of Congress — forty years ago the Clean Water Act was born.

Flash forward to the present, and we see a country struggling once again with laws governing the health of our national waterways. Make no mistake, the nation's rivers and lakes are far cleaner than they were pre-1972, when drinking water standards were non-existent and wholesale industry straight-piping commonplace. But as



TOP: Councilmen from Cleveland, Ohio, examine a white cloth that came up dripping with oil after being dipped in the Cuyahoga River in 1964. The river notoriously caught fire in June 1969, bringing it national attention and leading to renewed efforts toward improving water quality (Photo by Jerry Horton). INSET: Another Cuyahoga River fire in 1952. (Photo by James Thomas). Both images courtesy of Cleveland Press Collection, Cleveland State University Library

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friendly representatives from both the Senate and House have waged what seems like a full-on war against the Clean Water Act and the EPA. Bills such as the Clean Water Cooperative Federalism Act of 2011 (H.R. 2018), which environmental groups dubbed the "Dirty Water Act," the REINS Act (H.R. 10) and numerous amendments attached to the 2011 Federal Budget all attempted to eliminate the EPA's ability to regulate federal clean water and other environmental laws and remove barriers to repeating mistakes of the past.

Forty years ago, it took a flaming river to spur our nation to protect its waterways. What will it take today?

Pollutant found that, "on average, three times more mercury is falling from the sky today than before the Industrial Revolution 200 years ago," and a 2009 EPA study found that tissue in game fish exceeded health-based limits of mercury in 40 percent of U.S. lakes.

New threats arose in the 2000s as well. A massive spill from a Harri-man, Tenn., coal-fired power plant into the Clinch and Emory rivers in 2008 prompted the EPA to investigate toxic coal ash — an arsenic-laden byproduct of burning coal that has to date been treated as no more dangerous than household garbage. EPA efforts to regulate coal ash have received tremendous backlash from industry groups and pro-coal representatives in Congress.

In fact, since 2010 and the start of the 112th congressional term, industry-

Carl Pope of the Sierra Club told PBS journalist David Brancaccio in a 2004 interview, "For the first time since the Clean Water Act was passed...EPA reported last year that America's waterways are getting dirtier."

In the 2002-2003 study Brancaccio referenced, 39 percent of the nation's streams were listed in "poor biological health." That number rose to 42 percent in the agency's 2006 report, with 55 percent of streams in Southern Appalachia receiving a "poor" rating.

Mercury pollution has also experienced a dramatic increase. Scientific findings by the Eighth International Conference on Mercury as a Global

In This Issue

In this special issue of The Appalachian Voice, we explore several environmental problems that have played a significant role in Appalachian history since the 1970s, including the issues surrounding coal — such as the sludge disaster that killed 125 people in Buffalo Creek, W.Va., forty years ago this month and the coal impoundments that still plague Appalachia (see p. 14) — and the management of our region's national forests. Some articles indicate that we have made progress, others expose the problems that have kept us in the past. All present a revealing look into how Appalachia has been a ground-zero for resource-related issues

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Hiking the Highlands

Plant your Feet on the Battleground

Blood Mountain, Georgia

By Robert Sutherland

Google “Blood Mountain” and you’ll find enough fodder for any arm-chair traveler. But like any other escape to the outdoors, Blood Mountain cannot be appreciated online.

Named for a battle waged nearby between the Cherokee and Creek Indians, Blood Mountain is the highest peak on the Appalachian Trail in Georgia, and the sixth highest spot in the state. The mountain majestically graces northeastern Georgia’s Blue Ridge Mountains, peaks included as part of the American colonies by King George III when he defined the boundaries of England’s occupation in 1763.

The southern sections of the Blue Ridge Mountains enjoy one of the world’s most botanically rich mixtures of temperate climate plants, with northern species mixing with their southern kin. Once alpine tundra, the ridge line of Blood Mountain is now blanketed in Catawba rhododendron, mountain ash and dwarf willow.

Along the trail to the summit, a variety of rock await the amateur and expert geologist alike. Hikers will pass over low-to-high-grade metamorphic rocks, including igneous deposits of Corbin metagranite, Fort Mountain gneiss, mafic and ultramafic rocks, and Proterozoic and Paleozoic sedimentary rocks.

Trivia about the trail, however, isn’t



BLOOD MOUNTAIN SUMMIT TRAIL



WHERE — Located 30 minutes north of Dahlonega in the heart of Chattahoochee National Forest and the northern Georgia mountains, and 25.6 miles up the Appalachian Trail from Springer Mountain, Ga.

LENGTH — 2.5 miles

ELEVATION — 4,458 feet

DIFFICULTY — Moderate to Strenuous

GETTING THERE BY CAR — US 129 - 19 to Union, Ga., Neels Gap / 3 miles south of Vogel State Park entrance - Parking available at Neels Gap off Highway 129.

Above: Listed in the National Registry of Historic Places, the famous Blood Mountain stone shelter welcomes hikers at the summit. Bottom: At the Blood Mountain trailhead, “thru-hikers” leave their boots behind to celebrate completing the 2181 mile Appalachian Trail. Photos by Robert Sutherland

much better than showing a dry garden a picture of rain. You must hike Blood Mountain to see for yourself.

Hiking Blood Mountain is more like a team sport than lonely immersion into the wild. If you’re not in the best physical shape, you can still make it to the top – although you’ll be surprised by how many “old” people pass you along the way. Before you hit the strenuous sections of the summit trail, spend some time taking in one of the most celebrated portions of the Appalachian Trail’s southern reaches.

Unfortunately in 2008, the trail gained some notoriety when a woman named Meredith Emerson was murdered while hiking alone. In Meredith’s

memory, a group called Right To Hike, Inc., was created. The group works tirelessly to keep trails safe by purchasing emergency solar and wireless phones for greenways, parks and trailheads and encouraging hikers to defend themselves and protect others.

Hike a Piece of History

There are no gurus atop Blood Mountain purporting to have answers for your soulful questions. It’s easy, however, to find families, Boy Scout troops, friends – and the occasional man asking his girlfriend to retrieve a treasure hidden in her backpack so that he can propose to her in a most gloriously memorable moment on a most glori-

ously memorable mountain.

If you spend the night at the summit, you might dream of the struggles of the famously mighty mice who dwell within the ruggedly handsome stone shelter constructed by the Civilian Conservation Corps in the 1930s and restored by the Georgia Appalachian Trail Club in the 1980s.

Perhaps you’ll find inspiration from the shoes in the trees, tossed there by “thru-hikers” after trekking the more than 2,000 mile Appalachian Trail.

Tie your boots tight and take off up the steep and rocky trail. It may be a challenge for beginners but the path is well-worn and easy to follow. The views waiting at the summit are worth every step.

In truth, the wilderness area surrounding Blood Mountain is 7,800 acres of peaceful pulchritude. Hike beautiful Blood Mountain. Plant your feet on the summit, and take a stand for your health and for the right to hike safely in Appalachia.



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photo by Tyler Stablerford

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Naturalist's Notebook

Bears, Body Rhythms and Boundaries

By Molly Moore

It's a feat that no rational human would attempt. A person who laid essentially dormant for up to six months without urinating or defecating would probably die from elevated levels of nitrogen and other wastes. If not, that person would at least show signs of muscle deterioration upon stirring. But not hibernating black bears.

"[Black bears] wouldn't have to go through some physical therapy, they would just come running out of that hole if necessary," says Christopher Ryan, supervisor of game management services for the West Virginia Division of Natural Resources.

The ability of black bears to hibernate without developing osteoporosis or eliminating waste has caught the attention of

NASA scientists interested in humans' capacity for long-term space travel. And, although their body temperatures drop, black bears don't go into a deep hibernation sleep like some species.

Pregnant females always find a place to den for winter, as most black bears will when the food supply dries up for the season. But when there is winter forage available, male bears and females with yearlings will stay out and gorge themselves instead.

Ryan says that 2010 was a bumper year for acorns in West Virginia, so a lot of bears stayed active. There wasn't as much food this winter, so most bears have remained in their dens.

Black bears have also found a way to integrate hibernation into their reproductive cycles.



Typical female black bears weigh between 90 and 300 pounds, and males can weigh up to 500 pounds. A male that weighs 500 pounds in fall can lose 100 pounds during the winter.

In Appalachia, bears mate between May and September, with peak breeding season toward the end of June and in early July. A female will avoid releasing an egg until she has mated, to maximize her odds of having cubs. And, no matter when she mates, the fertilized egg will wait until mid-December to implant. That way, the six-week gestation period coincides with the winter den season.

Those special reproductive traits come in handy in areas where there are few potential mates, but in West Virginia, a state with about 10,000 black bears, species scarcity isn't a problem.

In 1999, Ryan says, complaints of nuisance black bears were soaring in the state, mostly in the southern counties. In response, the state initiated early bear hunting seasons in 2002 to entice hunters to the area. Bear harvest numbers increased, but the population didn't drop as much as expected.

Josh Daniel, a wildlife manager at Cooper's Rock State Forest and a gradu-

ate student at West Virginia University, is studying whether female black bears are using active coal mine sites, which are inaccessible to hunters, as sanctuaries during hunting season.

Using GPS data that Christopher Ryan collected between 2006 and 2008, Daniel is mapping the bears' home ranges in four southern West Virginia counties and comparing those home ranges to two active mine sites. At the two mines being studied, most mining is occurring underground, though there are some surface disturbances.

Daniel's initial data suggests that the females living on the mine sites are concentrating their movements within the mine boundaries, particularly when compared to the broader ranges of black bears in the other counties. His study will analyze whether the females on the mines extend their ranges at different times of year, such as the summer months when there is no hunting.

Certain traits, such as black bears' selective hibernation and induced ovulation, are evolutionary adaptations to the challenges of winter food supply and the availability of mates. But, if Ryan and Daniel's hypothesis proves true, it would seem to suggest that black bears are also cleverly adapting to a human-impacted landscape.

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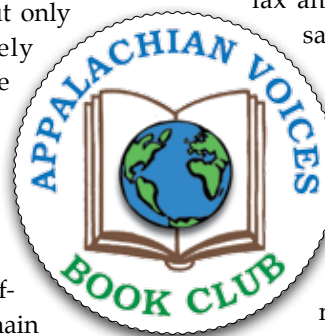


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A PREVENTABLE TRAGEDY— No. 9: The 1968 Farmington Mine Disaster

By Jeff Deal

Ninety-nine Americans were working in the No. 9 coal mine just north of Farmington, W.Va., on the morning of Nov. 20, 1968 — but only 21 would return safely to loved ones and the light of day. And of the 78 individuals that died from the coal mine explosion, or by suffocation from the toxic levels of gases present afterwards, 19 would remain forever buried in the mine.



Bonnie Stewart's Book, *No.9: The 1968 Farmington Mine Disaster*, is a marvel of cogent narrative. The technical subject matter concerning coal mining techniques and the investigations of state and federal agencies into the deaths of 78 people is clear and easy to follow. The reader is free to explore, sometimes in near disbelief, how Consolidation Coal Company recklessly pursued profit by knowingly disregarding safety standards and labor laws and eventually perverted the justice system of the United States in an effort to maximize profits at the expense of the Americans whose labor originally

created the company's earnings.

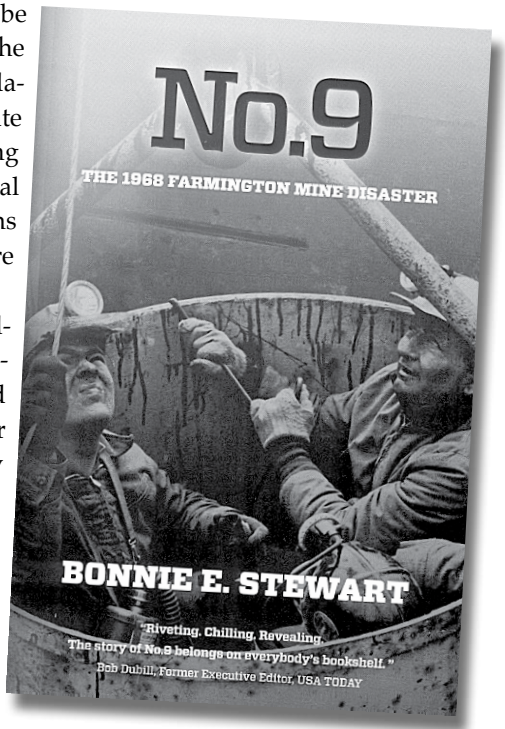
The book generously details the lead-up, disaster and aftermath of the tragedy. Stewart carefully exhibits the lax and sometimes irresponsible safety record of the West Virginia mine, right up to the last safety violations the mine received — just 24 days before the deadly explosion. These violations included unsafe roof areas, poorly maintained equipment capable of triggering explosions, airways that weren't properly supervised and dangerously exposed electrical wires. Stewart conveys testimony by employees and survivors describing how miners who reported safety issues were "rewarded" with the most arduous and hazardous duties the mine had to offer.

The contemptible treatment of the miners' families and loved ones by the coal industry and their all-too-powerful legal and political machine, skillfully related by the author, was painful to read. Governor Arch Moore, (later found guilty of corruption) assured the public that the disaster was a freak accident, something the workers in the mine

and later investigators knew to be patently false. Some employees of the mine were instructed by Consolidation Coal not to cooperate in the state and federal investigations seeking to determine the cause of the initial explosion. The retrieval of the victims bodies took years; 19 miners were never recovered.

After reading Stewart's revealing account of the tragedy, one realizes that if the disaster had resulted from the careless actions by one or more ordinary citizens, it's unlikely the persons could have escaped a conviction of second or third degree murder. It is more upsetting still to see a coal company virtually pardoned for the deaths of 78 Americans through legal maneuverings and political contributions paid for by the earnest labor of the victims. Would not this money have been better spent correcting the safety deficiencies within the mine that were known to Consolidation Coal?

The book's most heart-rending revelation: Nearly all, if not all, coal mine disasters and fatalities are preventable when human safety and well-being is placed before coal production and profits.



BOOK CLUB MINI-REVIEW It's Not My Mountain Anymore

A novel full of passion, soul and powerful writing, *It's Not My Mountain Anymore* by Barbara Woodall tells a traditional story of growing up in the heart of Appalachia. The stories of her upbringing and path toward becoming a journalist are enthralling, and the author bears witness to the toll the Appalachian Mountains are taking due to development and economic change.

Woodall's tone is powerful and hopeful, making the reader put down the book and wonder, "What can I do to help?" This is the type of read that will have anyone hooked until the very last page.

Read the full review by Madison Hinshaw at Appvoices.org/thevoice.

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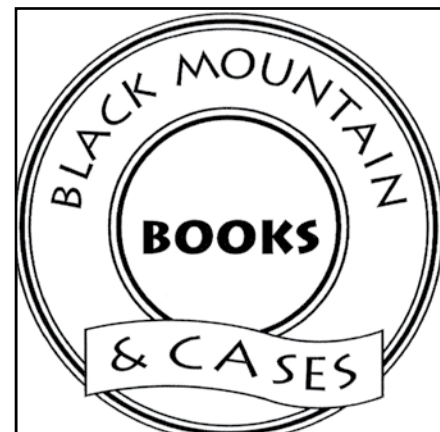
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SELC Releases Top Ten Endangered Places List, Shows Threats in Southeast

By Madison Hinshaw

The Southern Environmental Law Center recently released its fourth-annual Top 10 Endangered Places list for 2012, highlighting the ecologically and culturally rich areas throughout the Southeast that are threatened by development, water issues and the environmental impacts of mountaintop removal and hydraulic fracturing. Southeastern states bordering Appalachia, North Carolina, Virginia and Tennessee, are each featured in the list.

The Catawba-Watauga River system, originating in the Blue Ridge Mountains of North Carolina and providing drinking water for over a million people, has been negatively impacted by the presence of coal ash in leaky unlined ponds along major tributaries. In the Piedmont region, lawmakers are considering legalizing hydraulic

fracturing, the controversial natural gas drilling method that has been linked to groundwater contamination and other environmental and health concerns.

In southwestern Virginia and eastern Tennessee, mountaintop removal and other destructive coal mining practices have already destroyed at least 500 mountains and damaged 1,700 miles of streams in Virginia, Tennessee and other Central Appalachian states, and pressure continues to mount. On the Virginia coast, decades of pollution in the Chesapeake Bay estuary has created dead zones incapable of supporting aquatic life.

Plans to construct and renovate highways have disrupted many distinguished recreation spots in Char-



lottesville, Va., and in Chilhowee Mountain, Tenn. Chilhowee Mountain is part of Tennessee's Cherokee National Forest and known as a destination for outdoor lovers around the country.

Southern states such as South Carolina, Georgia and Alabama are experiencing severe environmental threats as well. The Savannah River, which stretches from South Carolina to Georgia, could lose many aquatic habitats as the Army Corps of Engineers plan to deepen its shipping channel.

The Dawson Forest, located just north of Atlanta, is threatened by a

proposed \$650 million reservoir that would drain 100 million gallons of water from the Etowah River each day to support Atlanta's increasing water supply needs. Alabama's coastline is on SELC's Top Ten list for a second year because of the potential recurrence of spills like the 2010 Deepwater Horizon explosion — the largest offshore oil spill in U.S. history.

SELC is the largest environmental organization focused exclusively on the South. Their major programs cover clean energy, transportation and land use, southern forests, the coast and wetlands, and preservation of rural countryside and community character.

Spruce Pine Residents Reject Proposed Re-Zoning

By Meg Kerwin

A group of concerned residents in Spruce Pine, N.C. attended a town hall meeting on Feb. 13 to express discontent with a proposed re-zoning of land that would allow the disposal of bulk feldspar and processed mineral waste in their community.

In December 2011, Quartz Co., with Feldspar Corporation, purchased more than 100 acres of land nestled in the heart of Spruce Pine's major residential area, despite the acreage being zoned for residential use. Quartz/Feldspar Co. has proposed using 35 acres of the tract as a dump site for mine tailings from their area mines and mineral process facilities. Without re-zoning the land for heavy industry, which would require unanimous approval from the town council, the land could not be used for mining or waste disposal activities.

Many residents have questioned why a company would purchase land

for more than \$1 million without the appropriate zoning needed, and expressed concern over the possibility that the re-zoning decision had already been made by the town council.

At the town meeting, questions about long-term health effects from mine tailing dust and the effect of contaminated groundwater on the local booming trout population were answered by Feldspar with general promises of preventing negative and environmental and economic impacts.

"It is said that the mining wastes are not dangerous, but no thorough reports have been proposed," argued Spruce Pine resident Cathy Sky. Like Cathy, many in attendance were worried that the zoning review process is being rushed and that the health and safety concerns surrounding a mining waste site within city limits are not being fully considered.

New EPA Tool Points Citizens to Worst Polluters

In February, the U.S. Environmental Protection Agency released a tool designed to help users find out who is discharging pollutants, in what amounts and where they are being released across the United States. The Discharge Monitoring Report Pollutant Loading Tool allows individuals to browse EPA data from 2007 to 2010 to identify the facilities contributing the most to the pollution of surface waters. The tool is available online at cfpub.epa.gov/dmr.

Wright Bros, Georgia DOT Fined \$1.5 Million for Clean Water Violations

By Madison Hinshaw

The U.S. Environmental Protection Agency and the U.S. Department of Justice will require Wright Brothers Construction Co. and the Georgia Department of Transportation to pay \$1.5 million in fines for violations of the Clean Water Act between 2004 and 2007.

One of the largest fines ever assessed under the CWA, the complaint states that Wright Brothers, with approval

from GDOT, buried seven primary trout streams in northeast Georgia. GDOT hired Wright Brothers to dispose of excess soil and rocks during two major highway expansion projects. More than one million cubic yards of excess rock and soil were improperly disposed of, impacting approximately 2,800 linear feet of streams.

Under the settlement, Wright Brothers and GDOT must purchase 16,920 mitigation credits at an estimated ad-

ditional cost of \$1.35 million to offset impacts to waters of the United States that cannot be restored. The credits must be purchased from mitigation banks servicing the area where the violations occurred.

The EPA is also requiring that Wright Brothers remove the piping and restore the bed and banks of a 150-foot stream channel that was impacted by their disposal activities. The estimated cost of the restoration is \$25,000.

N.C. Proposes to Develop Offshore Wind Energy with Governor's Support

By Madison Hinshaw

A 15-member panel, including North Carolina Governor Bev Perdue has stated wind energy projects along North Carolina's coast provide vast potential for clean energy production. A report released by the Governor's office said the state's coast had the largest offshore wind resource on the East Coast.

According to the panel, areas in North Carolina suited for wind farms

could generate a yearly average of 20,000 megawatts of power. The report says that, although producing wind energy is expensive and would raise costs for ratepayers along the coast, it would provide long-term benefits in producing pollution-free energy.

Iberdrola Renewables Inc., the second largest wind operator in the U.S. has proposed a 300-megawatt project called "Desert Wind" near Elizabeth

City, N.C. The project is currently on hold because no utilities have offered to enter a long-term deal to fund the \$600 million wind farm.

Iberdrola acknowledges the difficulty in investing in long-term power supply deals because natural gas prices in the U.S. are at a ten-year low. A poor economy has complicated efforts by wind developers to secure deals with utilities that do not immediately need the power.

Friends of Smokies Receives \$10,000 from REI for Trails Forever Program

The Friends of the Great Smoky Mountains National Park have received a grant for \$10,000 from the national outdoor retailer REI. The grant will benefit the Trails Forever program, which supports trail improvements throughout the park. Funds will help finance a new equipment trailer to transport tools and supplies needed for trail improvement projects. The Trails Forever program is a campaign effort by the Friends of the Smokies working to create a permanent fund for the Great Smoky Mountains National Park trail improvements.

Va State Parks' 75th Anniversary Sets Overnight Visitation Record

Contests, special events and near-record attendances highlighted the 75th anniversary of Virginia State Parks in 2011 and resulted in record overnight visitation. A three percent increase in overnight attendance in state park cabins, campgrounds and lodges raised numbers to 1,055,875 visitors in 2011. The overall attendance in 2011 of 7,836, 246 visitors was the second highest in Virginia State Parks' 75-year history after its record high of 8,065,558 in 2010. Virginia State Parks say that by attracting visitors from in and out-of-state, they provide economic stimulus to the state, through the purchase of local products and supplies.

King's Grant Causes Controversy Over Jackson River Rights

The developer of the River's Edge golf community in Covington, Va., filed a civil trespassing lawsuit against three Virginia anglers fishing lawfully on a section of the Jackson River that runs next to his land.

Citing two different outdated land grants, the developer is claiming ownership of the section of the Jackson River. The anglers cite a Virginia statute that is more than 200 years old, that makes clear the beds of all rivers and streams "are the property of the Commonwealth."

The three anglers accused of trespassing unloaded their kayaks at a public access point and remained along the banks of the river while fishing.

During a failed criminal trespassing lawsuit against the anglers, it was revealed that the developer's land grants do not explicitly reference the bed of the Jackson River or mention fishing rights when describing the property conveyed.

Concerned residents say the burden of proof has been put on the shoulders of the three anglers and are asking all fishermen, hunters and paddlers to contact Attorney General Ken Cuccinelli to support ability of the people of Virginia to fish, boat, and recreate in these rivers.

By The Numbers

2,300
Square miles of Appalachia surface mined between 1977 and 2010

9 billion
Permitted gallons in the Brushy Fork coal impoundment in Coal River Valley. If the impoundment were to break, the Mine Health and Safety Administration estimates that 998 people in downstream communities would be killed.

\$1 dollar
Amount saved per ton of coal by creating slurry instead of using safer technology like dry filter presses in coal preparation plants.

14.4% vs. 9.4%
Comparison of cancer rates per capita among those living near mountaintop removal mining and those elsewhere in Appalachia.

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Is There A Kumbaya Moment Coming for the National Forests?

By Randy Johnson

As wildflowers and buds break out this spring in the Southern Appalachians, hope that a greener fate for federal forest lands will bloom as well.

On Feb. 9, 2011, the U.S. Forest Service and a handful of public and private collaborators — not all of them very collaborative in the past — announced a ten-year, \$4.5 million plus effort to “restore” the forest landscape of Pisgah National Forest’s Grandfather Ranger District.

In the Blowing Rock area of western North Carolina, where the Grandfather District has seen its share of controversy, the move is seen as a harbinger of hope.

As recently as 2006, a dispute erupted over the size and visibility of timber cuts in Pisgah National Forest, just below the tourism town of Blowing Rock. But the “granddaddy” of all timber controversies exploded in 1988 in this same area. That battle and the following debate over clearcutting altered the course of forest management practices not only in the east, but the entire United States.

A Clear Cut Issue

Timber conflicts first surfaced in the 1970s when massive clearcuts in West Virginia’s Mononghela National Forest prompted congressional action that mandated the now routine forest planning process.

By the 1980s, many forests had offered timber management plans, but the continuing role of clearcutting had brought challenges from the public.

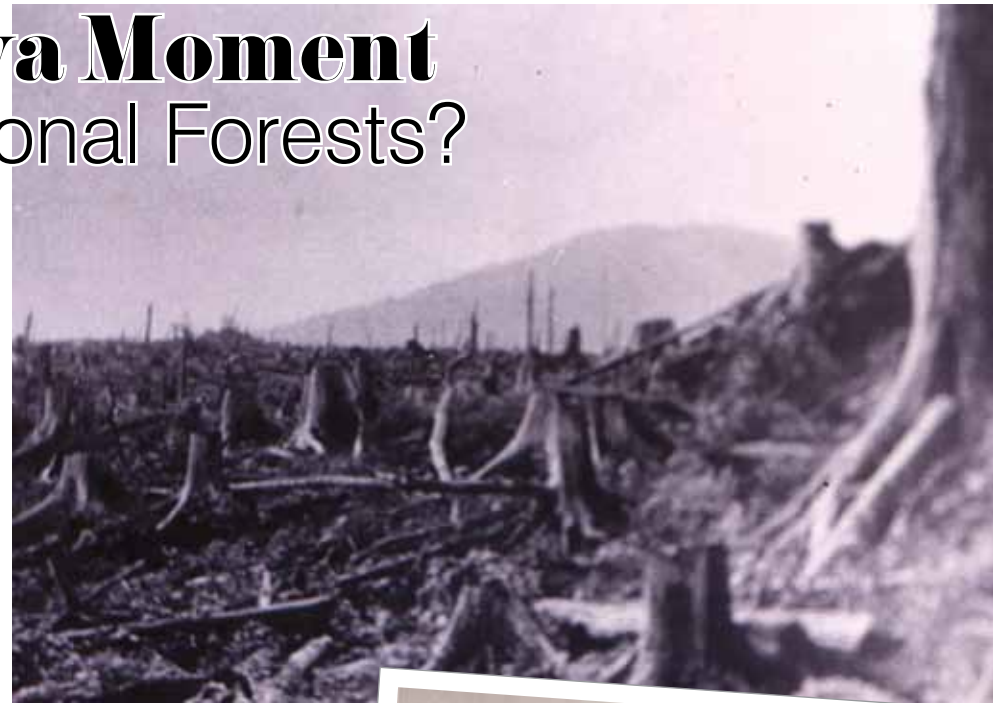
By late May 1988, gaping timber cuts were visible in Pisgah National Forest under the Linn Cove Viaduct on the newly-opened Grandfather Mountain portion of the Blue Ridge Parkway. Votes of opposition came from chambers of commerce and tourism organizations. While travel ads for Asheville, another state tourism hot spot, pictured the city’s watershed forests — a clearcut had crept into the pristine scene of the North Carolina High Country. Outrage ensued.

Logging and tourism had squared off, and the scenic status of the Blue Ridge Parkway was at the heart of the debate.

It’s extremely difficult to argue that the Forest Service even considered scenery in 1988, when glaring timber harvests appeared directly below the final link of the Parkway at the same time it was opening to the public. Gary Everhardt, Parkway Superintendent at the time, didn’t like the clearcuts — neither did the citizenry urging towns and organizations to vote for resolutions of opposition.

Since the 80s, clearcutting has become an ever-smaller part of Forest Service timber harvest methods, in part due to protections ushered in by the Endangered Species Act. Ensuing years have seen ongoing reductions in timber harvesting on Forest Service land in general, and a dramatic rise in logging on private land.

The clearcuts of the 1980s beneath



The disastrous late 19th and early 20th century clearcutting of the Southern Appalachians destroyed one of the world’s most precious ecosystems. The 1911 passage of the Weeks Act gave the US Forest Service the chance to start heal the wounds. Photos courtesy of Randy Johnson



the Parkway’s viaduct may now be forgotten, but the viewshed of the Parkway — and the economic importance of scenery in general — has not been. If anything, Appalachian conservationists and tourism promoters consider the protection of mountain scenery more critical than ever.

In 2006, timber cuts were again planned for the Globe, an area of Pisgah National Forest near Blowing Rock, rekindling logging fears and its potential negative impact on the Parkway and area tourism.

When new timber cuts were announced, the U.S. Forest Service handled local public input in a fashion that led some to seek permanent guidelines to protect scenery. Conservationists, spearheaded by the grassroots organization Wild South, called for designation of a 25,500-acre area below Grandfather Mountain to be permanently protected as a National Scenic Area.

Despite the passage of resolutions by local and county governments supporting the designation, the movement stalled.

The emphasis then shifted to the op-

position of the 2006 timber sale. Research by conservation groups revealed that the sale included “old growth” tracts containing trees up to 300 years old.

By summer 2010, Candice Wyman, then acting public affairs officer for U.S. National Forests in North Carolina, announced a “collaborative process” with conservationists that successfully achieved a “redirection” of the timber sale — including a reduction in logging area acreage from 212 acres to 137. Though no clearcuts were proposed, preservation groups were ecstatic that the Forest Service eliminated “old growth” trees from the harvest and pledged to reduce the visibility of the cuts with in surrounding areas.

New Ethos of Forest Service

Despite the success, the National Scenic Area proposal for the Grandfather District appears unlikely to overcome formidable political hurdles. Nevertheless, with plans for the Globe timber

Forests continued

cuts ultimately and amicably amended — with a significant emphasis on serious “restoration” of wildlife habitat — some argue that the event prompted a new ethos of Forest Service management in the Southern Appalachians.

One of these proponents is Gordon Warburton, a supervising wildlife biologist for the North Carolina Wildlife Resources Commission. Warburton’s tenure at the Commission began in the early 1980s with the release of the Peregrine falcons on Grandfather Mountain. Since then, he has worked on many other projects including the regeneration of wild turkey populations. “There’s a brand new Forest Service out there,” Warburton says. “The agency had a problem in the 1980s, with legacy logging, and they live with that. We (the Commission) used to ask that they hold back on some of their land disturbance activities. Today, they’re almost solely focused on ecological restoration. Glaring timber cuts have gone away.”

When Warburton hears “the designation ‘national scenic area, it makes me think that very little forestry will be permitted, and that’s not good,” he says. “You need to put on your ‘wildlife glasses’ and see that most of our forests are 80-90 years old, and that’s bad for a lot of wildlife and for the diversity of the forest.”

Even with smaller and fewer timber cuts on national forest land, and growing timber harvests on private land, Warburton says, “that’s not enough. The American Birding Conservancy says that young forests are one of the top twenty most endangered habitats for birds in the Eastern United States.”

“There’s a new kid on the block,” he says, “and it’s a philosophy called ‘ecological restoration’ of habitat — and that takes being able to introduce disturbance.”

Increasingly, conservationists and forest managers share the same priorities, says Ben Prater, associate executive director of Wild South. Prater maintains that national scenic areas have flexible management guidelines and that the original draft of the legislation proposing the Grandfather National Scenic Area explicitly allows for management that benefits wildlife and ecological restoration, including the use of prescribed fire.

A tract in Pisgah’s Grandfather Ranger District was the East’s first National Forest. Today the Globe area adds verdant rippling vistas to a drive on the Blue Ridge Parkway. Photo by Randy Johnson



Then & Now

Despite the apparent agreement on some basic principles, Prater says, “Restoration is a new philosophical approach, but it has a long way to go. Clear cuts are out, but for the folks who wanted clearcutting — and there are serious pro-timber folks still there — even ecological restoration has been a tough pill to swallow. We’ve changed, the Forest Service is changing, but it has a way to go.”

That’s where the new restoration project in the Grandfather District, announced in February of last year, comes in. There is significant money to be spent on projects that reduce invasive non-native species, increase forest species diversity, treat important stands of hemlocks against the hemlock woolly adelgid, enhance habitat for the rare golden-winged warbler and introduce controlled fire into areas where fire is part of the natural ecosystem and fuel loads are now dangerously high.

Groups joining the Forest Service in that agreement include the N.C. Wildlife Resources Commission, The Nature Conservancy, Wild South, the Southern Appalachian Forest Coalition, The Southern Forest Network and the Western North Carolina Alliance, among others.

“This collaboration between the Forest Service and the community is new, and it’s an awesome emergence from controversy to a new age of forestry,” Prater says. “This is a great reflection that the future holds a focus on regenerating ecological diversity and working with local communities.”

“The Forest Service is a resource extraction endeavor, after all,” he says, “but the Obama Administration is funding this effort and it’s a marquee project for our region.”

When Marisue Hilliard recently retired as forest supervisor in North Carolina, she said one of the things she was most pleased with was the eventual end result of the Globe timber sale.

“While the timber sale was controversial at first, I believe it worked out

well in the end,” Hilliard said. “The biggest lesson I learned is that you need to take time to work through issues that people feel passionately about. Sometimes you have to slow down to make sure that things are done right.”

No one knows for certain, but perhaps the time will come soon when all groups involved will sing a rousing

version of “Kumbaya” together around a campfire. There’s always hope.

Randy Johnson’s articles published in *The Mountain Times* on the late 1980s clearcutting controversy won first place N.C. Press Association Awards for Investigative Reporting and Community Service. *The Wilderness Society* said the series “influenced national policy,” and the N.C. Press Association stated that the articles were “clearly of national significance.” Visit www.randyjohnsonbooks.com.

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Nuclear Confusion

The Complicated History of the Atom in Appalachia

By Paige Campbell

Nuclear Fuel Services, Inc. sits on 66 acres between the Nolichucky River and the south end of Erwin, Tenn. This part of Erwin is the very picture of a small, blue-collar town. Within a quarter-mile of the fence surrounding the industrial site, there's a volunteer fire department, an IGA grocery store, a United Steel Workers union hall and a tiny white church, its sign out front urging the faithful to "Take Time to Pray." And there are houses — simple, single-story wooden homes, tidy and lively but showing their age.

Block after block of residential streets file up the hillside above the NFS complex, wedged since 1957 between Carolina Avenue and what is now Interstate 26. Considering the magnitude of what happens at the plant, it is striking to encounter it here. NFS processes highly enriched uranium for the U.S. Navy's nuclear-powered submarines and air craft carriers, and does it in the middle of town. This is a residential neighborhood with one very imposing neighbor.

Even as sustainability-minded folks find consensus on the need to pivot away from fossil fuels, opinions are divided on what to pivot toward. Some support the expansion of nuclear power and urge skeptics to embrace nuclear as the most suitable "bridge fuel" toward a carbon-neutral future. But others stand in vigorous opposition. Greenpeace International, for instance, calls nuclear power, which currently supplies about 20 percent of U.S. energy, "an unacceptable risk to the environment and to humanity."

In Appalachia, where the legacy of coal hangs over every conversation about energy, the possibility of nuclear expansion brings complexity. In some communities, it also brings a prospect already familiar to the region: the unwelcome responsibility of playing host to some of the energy industry's unsavory realities.

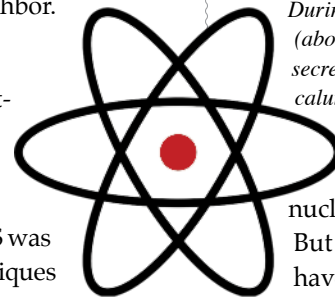
In 1942, a momentous chapter in America's early nuclear history began to unfold on the western edge of Appalachia, where the instant city of Oak Ridge, Tenn., was built to house the nearly 75,000 employees of the Manhattan Project. Within three years, the complex had created the nation's first atomic weapons, including the two dropped on Japan to effectively end the Second World War.

The technology developed in Oak Ridge changed the face of warfare and later, commercial energy. When the U.S. Navy saw potential for nuclear fuel to power its fleet, Nuclear Fuel

Then & Now



During World War II, women monitor control panels at the Y-12 plant in Oak Ridge (above), where uranium ore was refined to make atomic explosives. Workers toiled in secrecy without ever knowing the machinery's purpose. Below, one of the giant magnetic calutrons used to enrich uranium at the Y-12 plant. Photos by Ed Wescott, American Museum of Science and Energy. Inset icon by TheNounProject.com



Services began creating it, choosing Erwin partly for its proximity to Oak Ridge. By the early nineties, NFS was also developing techniques to "downblend" weapons-grade uranium into fuel for commercial reactors.

According to the company's website, this technology is a win-win and eliminates risks posed by leftover Cold War-era materials while supplying domestic power plants (representatives declined to be interviewed for this article). Yet many citizens of Erwin, concerned about the health and safety implications of having a nuclear processing plant in their backyards, have raised the same questions — about waste storage, soil and water contamination, and oversight — that have dogged the industry for decades.

Such questions prompted some state legislatures, including Appalachian states, to place restrictions on the



nuclear power grid as it emerged. But recently, certain restrictions have been revisited.

A 1984 Kentucky law banned nuclear power plants in the state until a permanent federally-managed disposal facility could be established. No facility exists, but for three years in a row state senator Bob Leeper has introduced legislation to lift the ban. Leeper's district is home to a uranium enrichment plant, and he sees clear economic benefits in allowing a reactor there as well.

Even after worldwide trust in nuclear safety soured following Japan's Fukushima disaster in March 2011 (with U.S. public approval of new plants dropping sharply, and some nations planning to abandon nuclear entirely), Leeper vowed to try again in 2012. "We don't get tsunamis in Kentucky," he told the Lexington Herald-Leader.

West Virginia also banned nuclear plants in 1996. But since 2009, State Senator Brooks McCabe has proposed changing that. He envisions an energy plan based on domestic sources, including renewables like wind and geothermal; and yes, he told Beckley, W.Va.'s Register-Herald, "nuclear will have some part [in] that equation."

Nationwide, proponents assert that despite well-known problems like the

1979 meltdown at Pennsylvania's Three Mile Island, domestic nuclear plants have been consistently safe.

"There have been commercial plants operating in the United States for more than 50 years," said Tom Kauffmann of the National Energy Institute in a 2010 Discovery News interview. "After all of those years and experience, there have been no deaths or negative health effects linked to the nuclear power plants in the public."

But chronic mechanical problems at some older plants raise concerns about long-term maintenance. At a Vermont plant, a 2007 cooling tower collapse and various leaks convinced state officials to recommend decommissioning the reactor. They took their case to federal court — unsuccessfully — and the Nuclear Regulatory Commission granted a 20-year extension to the facility's license anyway.

In Virginia, where commercial reactors already operate, legislators are preparing to consider another facet of the industry in 2013, when it will reevaluate the state's 30-year ban on uranium mining.

One mining company, eyeing Pittsylvania County with its rich deposits of yellow-cake uranium, promises 300 jobs and healthy conditions for the community if the ban is lifted. But the Virginia Conservation Network supports the ban, citing higher rates of

Nuclear continued

certain cancers, respiratory problems and kidney disease among people living near uranium mines.

Meanwhile, North Carolinians are revisiting the topic of nuclear waste. During the late 1980s, Sandy Mush, near Asheville in the southwest corner of the state, was evaluated as a potential federally-managed disposal site during a process that provoked significant public opposition and ultimately resulted in the selection of Nevada's Yucca Mountain instead.

When Yucca Mountain was recently deemed unsuitable, the federal Blue Ribbon Commission on America's Nuclear Future was tasked with proposing a new waste disposal strategy. The Commission's 2011 report did not suggest alternative sites, but representatives of the Nuclear Information and Resource Service believe that North Carolina's favorable geologic features could bring attention back to Sandy Mush. And a waste site, they say, would bring risks to public health.

Back in Erwin, some 170 residents have claimed that

substances handled by Nuclear Fuel Services have proved riskier than the company admits. A suit filed in June 2011 alleges personal injury, wrongful death and property damage.

The Nuclear Regulatory Commission acknowledges problems at NFS, including a six-year output of radioactive technetium-99 into on-site groundwater, soil contamination at former waste lagoons and burial trenches and long-term cleanup needs at the site of a decommissioned plutonium building. More recently, a uranium accident prompted fines and a temporary shutdown when an NRC investigation found enough violations to constitute a "deficient safety



culture." But each issue, NFS says, has been handled adequately; pumps have kept Tc-99 from reaching the river, contaminated soil has been removed and the plutonium site is encased by a tent.

Yet claimants say their long-term exposure to radioactive material, including material NFS is authorized to release, has caused cancer rates to soar. While regulators insist the radiation output in Erwin is within a safe annual threshold, others argue that there may be no such thing.

"Even a single particle of ionizing radiation is capable of causing the genetic damage that could result in cancer," Edwin Lyman of the Union of Concerned Scientists told Discovery News in 2010. "But the risk is proportional to the dose." And the NRC-established threshold does not vary according to age or weight, Lyman added.

At an October 2011 meeting in Erwin, the National Academy

A welcome sign and a Nuclear Fuel Services satellite office greet residents and visitors as they enter Erwin, Tenn. Photo by Paige Campbell

of Sciences announced a study to track cancer rates near nuclear facilities. If a definitively higher rate is proven, it could prompt "radical changes" to regulations, said chairperson John Burriss.

Of course, pinpointing a cancer's trigger is notoriously difficult, Burriss said, so the study will be a long-term one. To many in Erwin, though, the connection is already clear. They say the diagnoses, including those in children with adult-type brain tumors and patients with three or more separate cancers, are too numerous to be coincidental.

For Park Overall, whose property sits downstream from NFS, the lawsuit is only the latest chapter in a two-decade fight for answers about not just the plant's output of hazardous substances, but also bigger-picture issues of oversight. How, she wonders, could the facility still be in operation after so many problems?

"The industry is out of control," says Overall. And on the ground in Erwin, the struggles of residents to be heard louder than the industry echo so many past struggles across Appalachia. "We've been a sacrifice zone," she says. "And it's shameful."

Remembering Buffalo Creek

“Those who cannot learn from history are doomed to repeat it.” —George Santayana

By Brian Sewell

“In West Virginia, history often repeats itself. Perhaps the fact that our history is so painful explains why it is so poorly understood.” —John Alexander Williams

In the morning of Feb. 26, 1972, nearly 132 million gallons of water and coal waste rushed from Buffalo Mining Company’s slurry impoundments through Buffalo Creek Hollow, Logan County, W.Va. The flood coursed through 16 coal mining settlements along the creek where hundreds of families lived, while children slept or watched cartoons as their mothers cooked breakfast. In an instant their lives were washed away.

The company men of Pittston Coal called it an “act of God”

“People were in shock,” says Marty Backus, who was the news manager at WVOW Logan. “They just wanted to find their loved ones, find safety and find shelter.”

Backus navigated the floodwater to Man, a town at the mouth of Buffalo Creek, after staying on-air for a round-the-clock flood watch. He remembers vividly walking up the valley toward the town of Saunders and the broken dams.

“The clouds were hanging low over the valley,” he says. “People were walking down the railroad tracks. It seemed like hundreds of them. It was very quiet. People weren’t talking at all.”

He saw familiar faces. When William “Tootie” Carter, the head football coach at Man High School, emerged from the fog, Backus ran up to him.

“I said ‘Tootie, how bad is it?’ He didn’t even acknowledge me.”

Before mined coal is transported to the market and used for electricity, it is sent to a preparation plant, commonly called “tipples.” There, the raw coal is washed of impurities, crushed and transported to market by rail.

Impounded in slurry ponds and injected underground, the toxic waste left over, mostly rock and fine coal suspended in water, contains toxic heavy metals such as arsenic and mercury. Many surface coal waste impound-

ments are simply valleys dammed with coal refuse, dry slurry — the very material that is being impounded.

A series of three dams were built on the Middle Fork upstream from the Buffalo Mining Co. tipples in the 1950s and 60s as Logan County continued to grow as one of southern West Virginia’s prolific coal-producing counties. Dam No. 3, the largest, stood 60 feet above the pond and downstream dams below. When it gave way, the others collapsed instantly.

Rushing through Buffalo Creek hollow, the slurry carried with it semi-rotten trees, rocks and sediment. It ripped homes from their foundations and swept up cars and bridges until it finished three hours and 15 miles later at the Guyandotte River, destroying nearly everything in its path. When the physical chaos settled, out of a population of 5,000 people, 125 were killed, 1,121 injured, and more than 4,000 were left homeless.

Jack Spadaro was a 23-year-old engineer teaching at West Virginia University’s School of Mines when Governor Arch Moore formed a commission to investigate the causes of the Buffalo Creek flood. He was asked by the dean of the School of Mines and chair of the governor’s commission, Jay Hillary Kelley, to travel to Buffalo Creek and investigate the disaster. When Spadaro arrived weeks later, they were still pulling bod-

ies from the mud.

“I had never seen anything like that in my life,” he says. “It gave me a mission. It gave me a purpose.” Spadaro’s purpose became the protection of miners and

communities where their families live; his mission, to enforce the laws already in place, and write new ones where they were needed.

Spadaro began his investigation by interviewing survivors, Buffalo Mining employees, engineers and contractors, recording them on a reel-to-reel in the Man, W.Va. high school gymnasium — a building that acted as a makeshift morgue and a gathering place for families of the missing. He dug through the records of the West Virginia Department of Natural Resources and Public Services Commission, the Bureau of Mines, and the U.S. Geological Survey. Before long, he began to uncover a pattern of shortcuts and regulators asleep at the wheel.

“All along, as these dams were being built, they weren’t really constructed using any engineering methods,” Spadaro says. “They were simply dumped, filled across the valley.”

The state’s Public Services Commission, responsible for dams blocking streams, required detailed plans for any structure over 15 feet high that obstructed a waterway. In the case of dams above Buffalo Creek, no plans were submitted.



INSPECTING THE AFTERMATH: Residents of Buffalo Creek worried constantly about the stability of the slurry dams upstream (above). Pittston managers assured downstream communities they were not in harm’s way. After the disaster (below left), residents had few places to go — the flood had destroyed nearly everything in its path. Photos courtesy of West Virginia State Archives.



“They just ignored the law,” says Spadaro. “But the Public Service Commission and the prosecutor in Logan County decided that since the dam was already built, they couldn’t do anything about it.”

Steve Dasovich, the vice president of Buffalo Mining, later admitted that during the construction of Dam No. 3, no engineering calculations were made and no outside soil experts’ or hydrologists’ services were solicited. Hours before the dam broke, it was Dasovich that who repeated told residents they were safe.

Still, some good came after the flood. By 1973, Spadaro had joined the Department of Natural Resources and began building an inventory of dams and enforcing new laws regulating coal waste and dam construction.

“We found about 150 unsafe coal waste dams in the state and forced the mining companies to stabilize them, build emergency spillways, put instruments in the dams that could monitor movement and bring everything up to the standards that were established in the laws” he says.

Spadaro is certain that through preventative measures and strong enforcement, thousands of lives were

saved. But even though the laws are on the books, a culture of corruption, non-compliance and the rejection of alternative technologies have led to more breaks, spills, and the necessity for advocacy groups who work to protect citizens. Forty years later, there are still lessons to learn from Buffalo Creek.

“It really did a lot of good and most of the state agencies and federal agencies were staffed with competent geotechnical engineers and hydrologists,” he says. “That is not the case now.”

Past Practice and a Culture of Corruption

On Oct. 11, 2000 it happened again. Around midnight, a portion of the reservoir basin of the Martin County Coal Corporation’s Big Branch impoundment near Inez, Ky. collapsed, inundating two tributaries of the Tug Fork with 306 million gallons of sludge. The EPA called it the worse [environmental] disaster in the southeastern United States, but luckily this time, no one was killed.

Martin County Coal, a subsidiary of Massey Energy, was quick to dismiss fault. Taking a page from the Pittston playbook, the company declared God had a hand in the massive spill. But when Mickey McCoy, a retired high school English

teacher and longtime Martin County resident, stepped onto the soupy sludge that came into his community, he recognized it as an act of man. “That was one time you didn’t have to be Jesus Christ to walk on water,” he says.

Within days of the flood, Davitt McAteer, the head of MSHA during the Clinton administration, called someone he knew would not pull any punches. Jack Spadaro, who had become the superintendent at MSHA’s Mine Health and Safety Academy near Beckley, W.Va., joined team leader Tony Oppegard in Kentucky to launch an investigation into what went wrong.

Unlike Buffalo Creek, the 2-billion-gallon capacity, 70-acre slurry pond in Martin County suffered a breakthrough in the reservoir holding the slurry, not a dam failure. Almost two miles of active and abandoned underground mines beneath the basin were flooded out before the torrent of sludge blasted out of a mine opening and poured into Coldwater Creek. What connects the disasters are the patterns of neglect that were discovered too late.

Then & Now

According to Spadaro, by the time reservoir failure occurred, three agencies were responsible in the state of Kentucky: the state’s Division of Mine Reclamation and Enforcement, the Federal Office of Surface Mining and the Federal Mine Health and Safety Administration.

“Those agencies knew that that failure had occurred and they knew that there was a minimal amount of rock between the reservoir and those mine workings,” he says.

After a similar event at the same impoundment in 1994, Larry Wilson, an engineer at MSHA’s Technical Support Center in Pittsburgh, wrote a memo to the agency’s district office in Pikeville, Ky. with nine recommendations toward fixing flaws in the impoundment, including the revelation that as little as 15 feet of earth held up the reservoir, a fraction of the recommended 150 feet.

“They just completely ignored the recommendations,” says Spadaro. “All the managers in the various levels of these bureaucracies were simply not doing their jobs.”

In late 1994, Martin County Coal was granted a permit to expand the impoundment.

Once the heavy machinery moved in and recovery began, representatives from EPA region 4 held hearings in Inez to address residents’ concerns. McCoy remembers an auditorium full of students being told that the sludge, and their drinking water, is safe because everything it contains is on the periodic table of the elements. “It’s true,” the EPA representative reportedly said. “Go ask your biology teacher.”

McCoy’s wife, Nina, has taught biology at the school for 29 years.

“People have their buttons,” McCoy says. “That was her button. That was the bomb for her and then we started looking into everything about the mining industry.”

The University of Kentucky Markey Cancer Center in Lexington has expressed alarm at the high cancer rates in Martin County, and many others in Kentucky’s 5th congressional district. “There’s something about this region that we think is environmental causing this very high incidence,” the center’s director Dr. Mark Evers says. Markey Center research mentions the adverse effects of heavy metals such as arsenic and chromium in the water and soil and pointed out that counties with the highest levels of heavy metals are more likely to use well water.

“We all know the Markey Cancer Center,” says Nina McCoy. “I mean, it’s the University of Kentucky, who we think is a god here. So why don’t people here know that the Markey Cancer Center says that the cancer rate in this community is higher than anywhere else? Anybody that’s paying attention just buys their water because there is nothing else we feel like we can do.”

Continued on next page

Revisiting Buffalo Creek

Continued from page 15

“Water is one of the best sellers at the supermarket here,” Mickey mentions.

Waking Up To the Toxic World We’ve Created

Of the hundreds of impoundments in Appalachia, several deemed high-hazard or Class “C” by MSHA — a classification given to dams whose failure would likely result in the loss of life — have been subjected to public condemnation and the grassroots efforts of citizens’ who refuse to forfeit their safety.

In West Virginia’s Coal River Valley is one of the largest dams of any kind on earth. The Brushy Fork dam, at 954 feet tall, looms over the towns of Sylvester and Whitesville in Raleigh County, W.Va. Around 645 acres, the impoundment will eventually hold 9 billion gallons of slurry. For activists, outside observers and residents in downstream communities, Brushy Fork has become a symbol of an industry out of control.

Over its lifetime, Brushy Fork’s size and rap sheet of violations have grown. Between 2000 and 2009, the impoundment received 20 violations. Some of them, especially issues related to dam compaction could, if left unabated, be fatal to downstream communities.

In December 2011, largely in response to the perseverance of a retired union miner named Joe Stanley bombarding the administration with complaints about the impoundment, MSHA held a public meeting to address Brushy Fork. Over several hours, MSHA addressed a variety of complaints from poor communication between agencies to the stability of the mine workings beneath the impoundment and blasting at a surface mine only 100 yards away, with the conclusion that they believe the dam is safe.

Through a Freedom of Information Act request, Stanley specifically requested evidence or paperwork that proved that those citations were prop-



Forty years after Buffalo Creek, Jack Spadaro still works to improve mine safety and oversight. Photo courtesy of Vivian Stockman.

erly abated. Except for one citation, none was provided. “We’re holding MSHA liable,” Stanley adds. “If there is any way that we can get a lawyer, to take this and sue, for the devaluation of those people’s property downstream, the health hazards that water is releasing and the destruction to their mental well-being by having to live underneath that thing, we intend to get to the bottom of it in any way possible.

Rob Goodwin, coordinator of the Citizens’ Enforcement Project for the Whitesville-based Coal River Mountain Watch, sees the meeting with MSHA as a step forward on a long road.

“The regulatory structure is just not capable of dealing with 100 or 50 more years of producing slurry,” says Goodwin. “It would just be way, way simpler to use other technologies.”

A Future of (Less) Slurry

“Not only was I an underground coal miner,” says Joe Stanley. “I was transferred as a filter-press operator at Maribone Development’s prep plant, which was absolutely the most advanced technology in the United States by a long shot in 1981.”

In a dry filter press system, water is pumped through a filtration fabric leaving the fine coal, clay and heavy metals in a “cookie” with

little moisture left behind.

Directly after Buffalo Creek, Stanley says, it was impossible to get a permit for an impoundment. The plant operated from 1979 to 1987 with no impoundment and no underground injection using filter presses and a closed loop water system.

“We could have continued to operate using those,” says Stanley. “But the company was able to get an impoundment permit and they felt they were at a financial disadvantage as a company because it was costing them somewhere in between 25 and 50 cents a ton to use filter presses.”

Spadaro encountered the same argument when he interviewed Martin County Coal CEO, Ray Bradbury after the Martin County flood. “They had a dry filter press but they stopped using it,” he says. “We asked Mr. Bradbury ‘why did you stop using it and go to an impoundment? He said ‘we saved a dollar a ton in cost on processing.’”

A prep plant on a closed loop system can use less than 10 gallons of water per ton of coal. An open loop plant that



Joe Stanley is challenging coal companies to adopt safer technologies. Photo by Lawrence Pierce courtesy of the Charleston Gazette.

Living in Fear: When the Brushy Fork impoundment reaches its permitted capacity, 9 billion gallons of slurry will be held in the 645-acre reservoir. Downstream communities communities. Photo courtesy of Vivian Stockman

pumps to an impoundment, uses between 65 and 70 gallons per ton.

Recently, Stanley has put his knowledge of filter presses and alternative coal waste disposal toward convincing legislators to move away from slurry.

“I’m not anti-coal,” he says. “But I do not believe in the impoundments because I know for a fact,

from being a young man, that I have seen that technology applied and I’ve seen it work and if the state or federal government had the courage, we would not even have these impoundments at the present time.”

In the final pages of the report on the Buffalo Creek disaster, investigators concluded that Dam No. 3 on the Middle Fork was born out of the age-old practice in the coal fields of disposing of waste material and was constructed without utilizing technology developed for earthen dams and without using or consulting with professional persons qualified to design and build such a structure.” Though, in their search for answers, they failed to find any evidence of an act of God.

Resources

For more on the disasters and dams in this story, watch the documentaries *SLUDGE; Buffalo Creek: Act of Man* and *Buffalo Creek Revisited*; and *On Coal River*.

Events

On Feb. 25, The Buffalo Creek Memorial Library will host “**Buffalo Creek, Remembering After 40 years**,” featuring guest speakers and an audio and slideshow presentation to honor the victims of the flood.

On March 2, The Sludge Safety Project will host **Remembering 40 Years of Black Water: From Buffalo Creek to Today**, at the West Virginia State Capitol to ensure the state does not overlook the past and present injustice of coal slurry “disposal” methods.

The Sewanee Coal Seam: The Dirt on East Tennessee’s Toxic Coal

By Jenni Frankenberg Veal

One of the most toxic coal seams east of the Mississippi River has cast a dark shadow over the land and people living in its boundaries.

Landon Medley, a resident and former county commissioner of Van Buren County, Tenn., has witnessed the impacts of mining in the Sewanee coal seam firsthand. “I remember being invited to dinner at a home on Cagle Mountain,” says Medley. “One wall of the home had subsided due to mine blasting, and the green beans that were being cooked for dinner turned blue in the water due to the acid mine drainage.”

More than 300 abandoned mines are sprinkled throughout the East Tennessee landscape — a majority are in the Sewanee coal seam — where runoff containing acid mine drainage, highly toxic to humans, animals and plants, has polluted waterways and communities.

The Sewanee coal seam is surrounded by a layer of shale that contains high levels of pyrite, an iron sulfide. When pyrite is exposed to water and air, it creates acid mine drainage. Because of its chemistry, there is no proven method of preventing acid mine drainage that would still allow companies to strip-mine the Sewanee coal seam.



While the seam is not currently being mined in Tennessee, the threat of future surface mining efforts is real. Currently, the Canadian mining company Tiacme is exploring opportunities within the pristine Rock Creek watershed on Walden’s Ridge, despite the area’s federal designation as Land Unsuitable for Mining. The Rock Creek watershed is located on the northern end of Walden’s Ridge near the Smithtown community in Bledsoe County.

Prior to enactment of the federal Surface Mining Control and Reclamation Act of 1977, mines in Tennessee were not regulated, making it difficult to create a comprehensive picture of the environmental damage from mining within the Sewanee coal seam.

Underlying the Cumberland Plateau, the Sewanee coal seam’s largest and most toxic sections are thought to be limited to East Tennessee. According to James Macfarlane’s 1873 book, *The Coal Regions of America*, “The Sewanee Division includes that part of the table-land bounded on the east by the Sequatchie Valley, on the south by the Alabama line, and on the north by White and Cumberland Counties.”

Medley says that eight counties in Tennessee have been particularly impacted by acid mine drainage but that the actual extent of the Sewanee coal isn’t well known.

Medley lives near two abandoned Skyline Coal Company mine sites on Walden’s Ridge that border the Sequatchie and Van Buren county lines. Skyline declared bankruptcy and ended mining practices there 20 years ago; however, acid mine drainage devastated water quality in the area. The federal

Acid mine drainage from the Sewanee coal seam has groups across the state calling for a ban on surface coal mining on the toxic seam. Photo courtesy of D. Hardesty, USGS Columbia Environmental Research Center



This mountaintop removal site is Zeb Mountain in Campbell County, Tennessee. Local residents face water quality problems from the highly sulfuric runoff of mountaintop removal sites in Tennessee. The Sewanee coal seam, which underlies much of the surrounding area, is the most toxic coal seam east of the Mississippi. Photo courtesy of TNLeaf.org

Office of Surface Mining stepped in and created a state trust fund to treat the acid mine drainage coming off the two sites. The water has been treated for the past six years and will continue to be “in perpetuity,” says Medley.

Currently, citizens of Tennessee are limited to three legislative tools to protect their communities from the impacts of surface mining in the Sewanee coal seam: the Water Quality Act on the state level and the Lands Unsuitable for Mining petition and Surface Mining Control and Reclamation Act on the federal level.

Local and statewide public interest groups are working with state legislators to find tools that would protect the citizens and waterways of Tennessee from the devastating impacts of acid mine drainage.

“We must address the Sewanee

coal seam because of its impacts on water,” says Medley, a long-time member of Statewide Organizing for Community eMpowerment in Tennessee. “We know that if mining is allowed, it will result in acid mine drainage, which will impact water quality, which will impact tourism in this area. This is not just an environmental issue — it is directly linked to the economic growth of the state and employment as well.”

To learn more about efforts to end surface mining in the Sewanee coal seam, visit the Statewide Organizing for Community eMpowerment website at socm.org.

Jenni Frankenberg Veal enjoys writing about the natural world and exploration opportunities found within the southeastern United States, one of the most biologically and recreationally rich regions on earth. Visit her blog at www.YourOutdoorFamily.com.

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Reclaiming Appalachia

Can Legislation and Enforcement Restore Mountains?

By Molly Moore

Kathy Selvage has lived in Stephens, Va., her entire life. From her front porch, she can almost see the field where her childhood home once sat. Instead of the hardwood forest that surrounded her home, graded hills lean against each other like a lumpy bag of onions beneath a blanket of savannah grasses and gravel. The sparse grassland across the road will never replace the ridgetops where she went berry-picking as a child.

In 2004, this land became an active surface mining site. Now the coal is gone, but orange water seeps out of the earth mere feet from the mine permit boundary, casting a warning glow down the ravine.

Living in Wise County, where 33 percent of the land has been permitted for surface mining, Selvage is familiar with mountaintop removal. For years, she has watched mine operators blast away mountaintops to access seams of coal, dumping overburden into valleys and burying headwater streams.

In 2009, while reclamation was underway, citizens noticed orange water, a signature indicator of pollution, near the site. Just months after the contaminated water was reported, the coal company and the state and federal agencies charged with enforcing mining laws signed a legal agreement that freed the company from further reclamation responsibility, years ahead of schedule. Now the orange water is back in another location.

"How anyone could look at the Appalachian region from far above it and call this reclamation is beyond me. They may call it reclamation but I call it desecration," Selvage says, and her soft drawl doesn't quite veil her frustration.

"Reclamation" is a volatile word in Appalachia. For Selvage, it represents her struggle to bring state attention to the polluted water oozing from the mine permit boundary. For those



Then & Now

who worked on the surface mining law in the '70s, reclamation is a glaring example of the perils of weak enforcement. Researchers who show how, under certain conditions, tree growth on post-mining land can be comparable to growth on native soil, see reclamation as the flawed but necessary intersection of engineering and ecology. And for the coal companies that walk away from their legal responsibility to restore mined lands, reclamation is simply a forfeited bond amount on a spreadsheet.



Kathy Selvage surveys orange water near her Virginia home. The water emerges just feet from a reclaimed mine site. "It would take nothing short of a fool to try to convince you that a mountain can rise again," she says. Photo by Molly Moore

Thirty-five years after the Surface Mining Control and Reclamation Act became law, there is little evidence that reclamation in Appalachia is being enforced as the law intended, says Louise Dunlap, former head of the nonprofit Environmental Policy Center.

When the federal surface mining law was enacted in 1977, SMCRA was presented as the regulatory medicine needed to rein in the largely unregulated coal industry. The law created the federal Office of Surface Mining for enforcement, and allowed states to create their own regulatory agencies to implement SMCRA at the state level.

The path toward SMCRA started with a surface mining bill proposed in 1940 by Illinois Senator Everett Dirksen. By the early 1970s, when Dunlap got involved with the bill, strip mining was rapidly expanding. West Virginia Representative Ken Hechler introduced a bill in 1971 that would

ban the practice within six months of the bill's enactment. Hechler's bold bill drew national attention to the issue. Support from the United Mine Workers of America was also influential in the '70s. "Deep miners living in the hollows were having their houses threatened with boulders rolling down the hills from the strip mines up above," Dunlap says. "At one time, Miners for Democracy and Arnold Miller, a former president of the UMWA, had a position of banning all strip mining."

Around the same time, Pennsylvania began enforcing new environmental regulations for surface mines, and the coal industry responded by threatening to leave the state. "It became obvious that if we didn't have a federal law, the coal industry would try to intimidate different states," Dunlap says.

This coincided with congressional mark-up sessions being opened to the public, which made it easier for citizens to get amendments into legislation. In the days before Xerox and overnight mail, Dunlap recalls her colleagues making carbon copies of proposed amendments and driving to the midfield post office at the Washington, D.C. airport to send the language to citizens groups across the country. People familiar with similar amendments in their state mining laws would call and provide input. "Many of the provisions in the law were written by coal-impacted citizens," she says.

Finally, after two vetoes from President Gerald Ford, the bill was signed by President Jimmy Carter. Its hardships began early on with lack of funding and challenges to its constitutionality. "It's easier to get a law passed than to get it implemented," says Dunlap. In addition to problems with enforcement, she says some of the regulations, designed for the steep-slope mining of the 1970s, haven't caught up to the scale of today's industry.

Reclamation is complete at this former surface mine near Hueysville, Ky. Two rock "riprap" conduits are designed to channel stormwater runoff. On the far right, native forest marks the permit boundary. Photo by Molly Moore

Reclamation continued

Reclamation began in 2005 and used the Forestry Reclamation Approach, with 250,000 trees planted on 400 acres in W.Va. Photo courtesy West Virginia Department of Environmental Protection



Above: Three forestry research plots demonstrate some of Patriot Coal Company's reclamation efforts on Kayford Mountain, W.Va. The 750-acre mine site is supposed to be capable of supporting a commercial forest before reclamation can be considered complete. Photo by Vivian Stockman, courtesy South Wings
Left: Coal-Mac, Inc. won a reforestation award in 2010 from the Appalachian Regional Reforestation Initiative for Phoenix Surface Mine No. 2. Reclamation began in 2005 and used the Forestry Reclamation Approach, with 250,000 trees planted on 400 acres in W.Va. Photo courtesy West Virginia Department of Environmental Protection

Regarding reclamation, SMCRA is fairly clear. The coal operator is required to restore mined land "to a condition capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses."

When applying for permit, companies must present a reclamation plan that describes the condition of the land prior to mining, designates an intended "equal-or-better" post-mining use and explains how the company will make that future land use a reality. "It it a privilege, not a right, to mine coal," Dunlap says, adding that companies that can't prove how they're going to reclaim shouldn't receive permits.

A Flat Way Out

In drafting the law, legislators required that coal operators restore the general lay of the land, borrowing the phrase "approximate original contour" from Senator Dirksen's 1940 bill. But SMCRA also legalized swaths of flattened mountains by granting an exception to the approximate original contour requirement if the post-mining use generated an added public or economic benefit, such as a hospital,

industrial park or residential area.

A 2009 study by the Natural Resources Defense Council surveyed 410 reclaimed mountaintop removal sites and reported that 89 percent had no verifiable economic reclamation, excluding forestry and pasture. Among the verified development projects: a federal prison, three oil and gas fields, two airports, a hospital, an ATV training center, three golf courses, four business parks, two municipal parks and a county fairground.

Research Takes Root

Since 1977, over 2,300 square miles of Appalachia — an area about the size of Delaware — has been surface mined, according to a 2011 study published in *Environmental Management*. Of those, over 1,540 square miles are in the mountains of Virginia, West Virginia, Tennessee and Kentucky, which are dominated by biodiverse forests.

Following SMCRA's implementation, much of this forest was lost. Before the law, loose overburden littered the landscape, exacerbating floods, landslides and surface water contamination. Ironically, the new regulations stabilized mined land by compacting soil with heavy equipment and encouraging fast-growing non-native vegetation, inadvertently creating a climate hostile to native plants, including hardwood trees.

Aware that this was a tough environment for trees, mine operators rarely planted any. When they did, they planted species that survive but don't restore the land's biodiversity.

But Dr. Carl Zipper, co-author of the 2011 study and director of the Powell River Project, says that reclamation techniques are improving. The Powell River Project, a public-private partnership in Virginia, formed in 1980 with the goal of making reclamation more effective.

The Project's research was incorporated into the Forestry Reclamation Approach, a five-step reforestation technique for recovering Appalachian strip mines. The FRA aims to restore the soil's ability to support planted seedlings and to provide fertile ground for native seeds carried by wind or animals. The Appalachian Regional Reforestation Initiative, a seven-state association, formed in 2004 to advocate for the forestry approach.

Since the FRA was implemented in 2006, 15 square miles have been reclaimed using the technique and more than 46 square miles are permitted. Though a small percentage of the 2,300 square miles already surface mined, these 60-plus square miles represent land that might otherwise be barren.

As the *Environmental Management* study notes, the oldest sites using the forestry technique are only about five years old, so the science is still out on

whether these practices are successful in permanently restoring forests.

Zipper says that reclamation techniques need to be cost-effective to be adopted. He explains that some parts of the forestry approach, such as the FRA's use of loose soil material and lack of emphasis on heavy fertilizer and seed, save coal companies money. Other aspects, such as the seedlings themselves and the selection of appropriate soil and rock layers, cost more than conventional grass reclamation.

Nathan Hall, an eastern Kentucky native and former deep miner, believes that revisiting post-SMCRA grasslands and applying the forestry approach will help the land and people move forward. Providing equipment operators who used to work for coal companies with jobs preparing compacted land for tree growth will make use of the region's workforce, he says. And The American Chestnut Foundation recently received a three-year grant to plant hybrid chestnut trees and native hardwoods on compacted reclaimed land.

Dealing with the Damage

While researchers plan for the future, others are trying to mitigate existing problems.

On Kayford Mountain in southern West Virginia, Patriot Coal Company must produce commercial timber on

Continued on page 25

Natural Gas: Not All It's Fracked Up To Be

By Jesse Wood

When energy industry giant Halliburton invented hydraulic fracturing in the 1940s, they unlocked the potential for a natural gas boom in the United States. Now, decades later with mounting environmental and health impacts and more accurate estimates of the nation's reserves, some feel natural gas isn't all that it's cracked up to be.

For several years, proponents of natural gas have touted the shale reserves beneath Appalachia — and other parts of the country — as clean and abundant. In fall 2007, after the scramble began for drilling permits in the Marcellus Shale, a multi-state formation that lies underneath the Appalachian Basin, *Petroleum News* published an article titled "Appalachia to the Rescue," suggesting where U.S. energy salvation and independence lay.

Since then, controversial issues have emerged related to hydraulic fracturing, commonly known as "fracking." Natural gas is the cleanest burning fossil fuel, emitting significantly less carbon dioxide, carbon monoxide, nitrogen oxide, sulfur oxide and mercury during combustion than oil and coal. But its extraction by fracking poses risk to water quality and the disposal of wastewater in underground wells has been linked to swarms of earthquakes.

The process requires drilling thousands of feet into shale rock formations and the high-pressure injection of enormous amounts of water, sand and chemicals, fracturing shale rock to liberate the trapped gas. As the gas travels up the well, mere inches of concrete casing prevent its migration into surrounding ground water.

Don't Drink the Water

In November 2011, *The New York Times Magazine* printed a harrowing piece on Amwell Township, Pa., a 44-acre community that experienced a proverbial gold rush five years ago. Texas-based Range Resources, a pioneer gas company in the Marcellus, came to town and sought mineral rights from landowners eager to cash in on the natural gas below their feet. But soon after, those living near drilling sites and

multi-acre wastewater ponds discovered their dogs and horses mysteriously dead, litters of puppies were aborted or born with cleft lips, no hair or missing limbs and children became inexplicably ill.

Black water originating from a well corroded water-using appliances and water valves, and a smell of "rotten eggs and diarrhea" emanated from shower faucets and fouled the air outside.

Blood test results of sick Amwell residents found high levels of heavy metals such as arsenic and industrial solvents including benzene, toluene and ethylene glycol. Test results of the wastewater pond commissioned by Range Resources revealed acetone, benzene, phenol, arsenic, barium, heavy metals and methane. According to the *The New York Times Magazine* article, Range Resources maintained that none of the chemicals in question were found in the drinking water, but the company did later deliver a 5,100-gallon tank of potable water to one resident after two complaints.

Seismic Awakenings

Roughly 30 miles from Amwell, the countryside of Ohio has become a dumping repository for fracking wastewater, which has been linked to earthquake swarms in the state. More than half of the disposed fluid in Ohio arrives from drilling operations in other states, such as Pennsylvania, which does not have permeable geological formations suitable for underground storage.

In the first six months of 2011, the DEP reported that 99 percent of all non-recycled wastewater from Pennsylvania's Marcellus Shale formation was transported to disposal wells in Ohio. One of those wells, located in Youngstown, was recently shut down along with four others in a five-mile



July, the area had six minor earthquakes — a reduction of more than 99 percent. In a peer-reviewed paper to be published in a professional seismology journal, Horton notes that the U.S. Environmental Protection Agency's Underground Injection Control, which regulates wastewater injection wells, does not limit the proximity of these wells to seismic zones, schools, hospitals or nuclear power plants.

Researching Fracking's Footprint

At the end of 2011, Time Magazine reported that fracking was the nation's "biggest environmental issue" of the year, citing a very contentious study by Cornell

University published last May, titled "Methane and the greenhouse gas footprint of natural gas from shale formations."

Cornell's Robert Howarth, Tony Ingraffea and Renee Santoro, who were also named runners-up in the magazine's annual "Person of the Year" selection, postulated that shale gas extraction through fracking exacerbates climate change more than coal mining or oil drilling over a 20-year period as a result of methane leakage during the lifetime of a shale gas well. The researchers estimated that nearly eight percent of the methane found in shale gas leaks into the atmosphere during the fracking process.

Immediately after the Cornell University study, proponents of the natural gas industry refuted these claims. A senior vice president for engineering and technology with Range Resources told *The New York Times*, "That the industry would let what amounts to trillions of cubic feet of gas get away from us doesn't make any sense. That's not the business that we're in."

Other scientists have also disputed the study — including fellow colleagues at Cornell, who argued that the study

Then & Now

radius after 11 earthquakes, including a magnitude 4.0 on New Year's Eve, shook the relatively seismically stable area.

Early last year, hundreds of earthquakes shook the Fayetteville Shale Deposit in Faulkner County, Ark., leading to the permanent closure of four disposal wells and a moratorium on any future wells covering a 1,150-square-mile area. Steve Horton, a seismologist at the Center for Earthquake Research and Information, says that injection wells triggered the earthquakes. "The fact that these earthquakes happen basically right after these wells started up, and they stopped as soon as the wells stopped," Horton says. "It's a virtual certainty."

After two wells in Faulkner County were used for wastewater in 2010, 923 earthquakes between Sept. 23 to March 8 — the biggest being a magnitude 4.7 — revealed the previously undetected Guy-Greenbriar Fault. Ninety-eight percent of those earthquakes happened within four miles of three of the four wells. After the wells were shut down in

Natural Gas continued

was "seriously flawed" and "overestimated fugitive emissions." In a press release from Cornell, Ingraffea clarified that their research wasn't the "definitive scientific study" on the issue. "What we're hoping to do with this study is to stimulate the science that should have been done before," he said. "In my opinion, corporate business plans superseded national energy strategy."

The EPA is currently conducting a study to assess fracking and its potential impacts on drinking water resources. The EPA identified seven locations — two prospective and five active mine sites — one of which is located in Washington County, Penn., which includes the Amwell Township. The first report is expected to be released at the end of 2012, but the final report is not scheduled for release until 2014.

According to an EPA press release, "The final study plan looks at the full cycle of water in hydraulic fracturing, from the acquisition of water, through

the mixing of chemicals and actual fracturing, to the post-fracturing stage, including the management of flowback and produced or used water as well as its ultimate treatment and disposal."

For the study, the EPA issued voluntary information requests in September 2010 from nine companies engaged in fracking. Requested information included the chemical compositions used in the extraction process. Halliburton, one of the nine companies, was subpoenaed by the EPA when it did not comply. The exact contents of the drilling fluid mixtures are not known because of the Energy Policy Act of 2005, which exempts fracking from the Safe Drinking Water Act. The amendment, known as the Halliburton Loophole, was spearheaded by former Halliburton CEO Dick Cheney during his vice presidency.

Fracturing the Hype

Often considered green, clean energy, natural gas is also praised for its

abundance — positing the fuel as both a bridge to renewable energy and an alternative to foreign oil.

In his 2012 State of the Union Address, President Obama boasted that the U.S. has "nearly 100 years" of gas reserves. The 100-year figure is derived from a report by the industry-friendly Potential Gas Committee, which estimates that the U.S. has 100 years of "future gas supply" if consumption rates stay the same. But a closer look at the report reveals that the U.S. actually has only 11 years worth of proven reserves with "known gas reservoirs" and "existing economic and operating conditions."

Figures for gas reserves in the Marcellus Shale seem to drop with each successive assessment. In April 2011, the U.S. Energy Information Administration estimated a "technical recoverable resource base of about 400 trillion cubic feet" but revised that figure to 141 trillion cubic feet this January. The U.S. Geological Survey released a

report in August 2011 stating that the Marcellus Shale has 84 trillion cubic feet of "undiscovered, technically recoverable" natural gas. Based on percentages provided by USGS and the current annual consumption rate, the Marcellus Shale formation has a 50 percent probability of supplying 3.5 years worth of natural gas.

As a growing body of evidence exposes the potential environmental and health impacts of fracking, states continue to issue permits with abandon. North Carolina officials are considering legalizing the practice to reach natural gas trapped in shallow Triassic basins, while other places like Rockingham County, Va., investigated fracking's effects on other Marcellus Shale communities and finally rejected the practice — much to the chagrin of Carrizo Oil and Gas.

Across Appalachia, the natural gas boom continues, but some cannot help but wonder wonder if and when it will bust.

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EPA Issues First-Ever National Mercury and Air Toxic Standards

In December 2011, the U.S. Environmental Protection Agency issued the Mercury and Air Toxic Standards, the first-ever national standards to protect families from mercury and toxic air pollutants emitted by power plants.

Plants include arsenic, acid gas, nickel, selenium and cyanide. The standards will cut these emissions with proven pollution controls used by more than half of the nation's coal-fired plants.

Hailed as a victory by environmentalists and public health advocates, the

EPA estimates that as many as 11,000 premature deaths and 4,700 heart attacks will be prevented and that the new standards will eliminate more than 130,000 cases of childhood asthma symptoms and 6,300 cases of acute bronchitis among children each year.

Mercury and other toxic pollutants have been shown to harm the nervous system, cause cancer, and impair thinking and early development. As mercury enters local waterways, it bioaccumulates at levels dangerous for human consumption.

Power plants are the largest remaining source of these toxic

air pollutants. They are responsible for more than half of the mercury and 75 percent of the acid gas emissions in the United States. More than half of the power plants in the country use some sort of pollution control, which the EPA used as a basis when creating the Mercury and Air Toxic Standards.

The standards are accompanied by a Presidential Memorandum that directs the EPA to use tools provided in the Clean Air Act to implement the Mercury and Air Toxic Standards in a cost-effective manner that ensures

electrical reliability. The standards also ensure that benefits to public health will outweigh costs of implementation.

The EPA estimates that for every dollar spent on reducing pollution, the American public will see \$9 in health benefits. Annually, the total health and economic benefits of these standards are estimated to be as much as \$90 billion.

The Mercury and Air Toxic Standards and the final Cross-State Air Pollution Rule are the most significant steps in cleaning the air since the Acid Rain Program of the 1990s.

Concerned Citizens Dispute Water Quality Study

The Whitesville, W.Va.-based Sludge Safety Project is claiming that a recent study of the water quality in an area of Boone County by the West Virginia Department of Environmental Protection used flawed research methods, contains errors and misinterprets its own data.

In January, the WVDEP completed a year-long study that found that drinking water supplies in the area surrounding Prenter Hollow were not coal-mining impacted. Residents of Prenter have complained of "blackwater" events and contamination that they believe is the result of injecting coal slurry into abandoned underground mines.

WVDEP commissioned Triad Engi-

neering to conduct the year-long study of the geology and hydrology of the area, interview impacted residents and examine samples from domestic wells.

A week before the WVDEP study was released, the Sludge Safety Project rallied at the state Capitol to share results of independent studies concluding that coal slurry contaminated Prenter residents' water. In 2008, Prenter residents filed a lawsuit against a group of coal companies claiming that underground slurry injection from a Massey Energy coal facility and other coal preparation plants contaminated their underground water supply.

The Battle For Blair Mountain Continues

With new reports of heavy equipment activity on Blair Mountain, residents are growing increasingly concerned that Arch Coal could begin strip mining the historic site of the 1921 battle for coal miners' rights.

In February, Arch Coal announced record profits for the fourth quarter of 2011. One of the nation's largest coal producers, Arch has four planned operations on Blair Mountain, some of which intrude onto the historic battlefield.

Supporters are exploring new ways to protect the mountain. The Blair Community Center and Museum, a non-profit organization located in Logan County, W Va., opened in the fall of 2011 to promote and preserve the history of Blair Mountain and educate the

public on the environmental destruction caused by strip mining on the mountain.

The Community Center and Museum is currently running a special fundraising campaign for improvements to the museum building — including much-needed roof repair and a heating system — and to enhance the museum's collection, including showcases, frames and important museum pieces. Future projects the center hopes to pursue include converting the building to solar power and constructing a community garden greenhouse.

The Blair Mountain Community Center and Museum has a goal of reaching \$10,000 by the end of April. Visit indiegogo.com/the-start-of-a-new-beginning, to learn more.

Constellations Ahead of New Rules

At least one energy company in the country was looking forward to the new emissions and cross-state air pollution rules.

Baltimore, Md.-based Constellation Energy spent \$885 million in 2009 to install emissions controls for sulfur and nitrogen, anticipating new rules by the EPA. The company has already drastically reduced emissions at their Brandon Shores plant.

The Cross-State Air Pollution rule was originally to take effect on Jan. 1, but a federal court issued a temporary stay of regulations to evaluate how much time coal companies would need to implement the retrofits.

Constellation argued that other plants should have to implement these emission limits or shut down completely.

the Human Cost of Mountaintop Removal Coal Mining

According to 21 recent scientific studies, people living near mountaintop removal and other types of coal mines suffer higher cancer rates, more birth defects, and have shorter life spans than other people in Appalachia.

- Interactive Google Earth map
- 21 peer-reviewed study summaries
- Detailed profiles of Appalachian counties

iLoveMountains.org/the-human-cost

Alpha Pays \$209 Million in Upper Big Branch Settlement

Alpha Natural Resources, the global coal company that purchased Massey Energy in January 2011, reached a settlement with victim's families and the Mine Safety and Health Administration for \$209 million in civil and criminal penalties for a mine explosion that killed 29 workers last year.

The explosion at the Upper Big Branch Mine, one of the worst underground mining disasters in 40 years, occurred while still under the ownership and operation of Massey. The settlement includes \$46.5 million for families of the victims and those injured in the explosion.

The settlement also includes \$80 million to improve safety and infrastructure in all underground mines owned by Alpha; \$48 million to establish a mine health and safety foundation; and approximately \$35 million in fines from prior violations to the Mine Safety and Health Administration, including \$11 million for violations at the Upper Big Branch Mine.

Federal prosecutors are pursuing cases against a number of Massey executives they say are partially responsible for the explosion. But with weak mining laws, prosecutors may face a grueling battle to criminally convict top-level executives such as former Massey CEO Don Blankenship.

Under the Federal Mine Health and Safety Act, safety violations are categorized as misdemeanors, presenting a challenge to prosecutors building the criminal case. Hughie Stover, the mine's security chief at the time of the blast, was the only individual criminally prosecuted after being found guilty of lying to investigators and disposing of thousands of security-related documents.

Proposed changes to the Mine Health and Safety Act were not passed by Congress last session, but many argue that the explosion brought more awareness to federal inspectors from the Mine Safety and Health Administration which could result in new rules and increased fines.

Alpha Natural Resources says that the company is focused on improving safety in former Massey mines.

NEWSBITES FROM COAL COUNTRY

EPA Buffaloes Over Surface Mine

A letter sent by the EPA to WVDEP in January expresses the agency's concerns about CONSOL Energy's 2,308-acre Buffalo Mountain surface mine. The EPA has suggested ways to reduce the negative impacts on the environment and water quality that the surface mine, one of Appalachia's largest, will inevitably have. Stretching from Belo to Williamson in Mingo County, the Buffalo Mountain mine will extend the King Coal Highway project.

House of Representatives Flunks 2011 Environmental Scorecard

The League of Conservation voters, a group that works to turn environmental values into national priorities, released its 2011 National Environmental Scorecard, which rates Congressmen on 11 Senate and 35 House votes on issues including public health protections, clean energy, land and wildlife conservation. The group called the results "a sad testament to the radical nature of the U.S. House of Representatives in the first session of the 112th Congress."

Patriot Down in the 4th Quarter, Reportedly "Saving the Best for Last"

Patriot Coal Corp., idled its Big Mountain mining complex in Boone County, W.Va. and announced estimates that it will sell 7 percent to 13 percent less coal this year than it did in 2011, saying demand for coal is weak. In 2011, the company reported a fourth-quarter loss

and says idling mines now will allow for the highest quality coal to remain unmined until conditions improve.

Patriot Takes a \$7.5 Million Hit For Selenium Pollution

Patriot Coal Corp. has agreed to pay a \$7.5 million civil penalty and spend potentially hundreds of millions more to install water pollution treatment systems at some of its West Virginia mining complexes to settle a lawsuit filed last year by the Ohio Valley Environmental Coalition, West Virginia Highlands Conservancy and the Sierra Club last year. The lawsuit alleged that Patriot mining complex's selenium discharges exceeded limits in the company's state water permits and the federal Clean Water Act.

Coal River Mountain Tree-Sitter Sentenced

Coal River Mountain tree-sitter Catherine Ann MacDougal was sentenced to seven days in a West Virginia regional jail on Feb. 9 for trespassing.

Last summer, MacDougal and Becks Kolins, sat for a month in an oak tree near the active Bee Tree surface mine, holding up banners pretesting mountaintop removal. Alpha Natural Resources, owner of the Bee Tree mine, filed civil suits against the sitters and their support team.

MacDougal said that her jail sentence has only strengthened her desire to fight against mountaintop removal.

On February, 13, Greenpeace activists launched a new Quit Coal campaign with an action at Progress Energy's Lake Julian Power Plant outside of Asheville, N.C. hanging a banner from the plant's smokestack and coal conveyor belt. Sixteen activists were arrested in the peaceful protest. In a press release, Greenpeace called on Duke Energy — poised to merge with Progress Energy — to position itself as an example for the rest of the energy industry, stop using mountaintop removal coal and quit coal altogether by 2030.

Photo by Greenpeace



Duke, Progress Energies Appeal FERC

In mid-December of last year, the Federal Energy Regulatory Commission made a second rejection of the proposed merger between energy giant Duke Energy and Progress Energy, citing concerns that the merger of the two utilities may create an energy monopoly.

Charlotte, N.C.-based Duke Energy and Raleigh, N.C.-based Progress Energy combined could potentially dominate power markets and manipulate wholesale prices. The results would also eliminate more than 1,860 jobs in North Carolina alone.

The companies claim that the merger would result in hundreds of millions of dollars in savings for cus-

tomers and would hold down rising electricity costs.

Announced over a year ago, Duke and Progress were planned on finalizing the \$26 billion deal by the end of 2011 but have been forced to set back their merger completion date to no earlier than May or June of 2012. The new date for the completion of the merger will allow both companies to revise the deal to accommodate recommendations of the commission.

Once FERC approves revisions to the merger, the N.C. Utilities Commission will approve the measures if they prove beneficial to the state.

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Editorial

The Unhealthy Culture of Coal

The latest in a round of studies on health and well-being in the coal-bearing regions of Appalachia was released in mid-February, with the puzzling conclusion that, while coal mining may not directly contribute to health problems in Appalachia, it still plays a significant role in the health problems in Appalachia.

Borak's study claims that the direct impact of coal mining on the physical environment does not significantly affect mortality, cancer or other illness rates among residents living in mining counties. Yet the study also says that the coal industry fosters a mono-economy with a social and cultural environment that lacks quality healthcare and suffers from lower incomes due to lack of job diversity — and that this coal-dependent mono-economy *does* have a significant impact on the health of people in these counties.

The peer-reviewed study, by Dr. Jonathan Borak of Yale University and others, was paid for by the National Mining Association, though the study's authors were quick to point out in their summary that their funders had no bearing on their findings. We believe them — or, at least, we want to.

When a preliminary analysis of the study was fed through the coal industry's PR machine, it churned out a line about the study "debunking previous studies" on mountaintop removal mining's health impacts, referring to research by Dr. Michael Hendryx that found strong correlations between mountaintop removal and illness. Borak denied that claim for what it is — nonsense.

Borak's study not only doesn't debunk Hendryx's studies, it provides perspective on the truly pervasive, fundamentally damaging nature of the coal industry on the health of Appalachian communities.

Muddying the waters further, after essentially saying coal mining did not seem to have a direct effect on health in Appalachia, the study goes on to report, "Our analyses do not rule out the *possibility* [our emphasis] that some specific mining methods may have greater adverse effects than others on the physical environment."

Although labor rights and regulations brought better pay and safer mining conditions, it seems that the underlying culture of the coal industry has not changed much over the years. Big Coal dangles the proverbial job carrot just past the noses of working-age residents in Appalachia while the rest of Appalachia suffers, and they do it extremely well.

By maintaining a mono-economy and spoon-feeding the community with whispers about how environmental regulations are going to "steal your jobs," many residents in turn defend the very industry that is likely poisoning their community and steering their proud culture astray.

It's time for those who benefit most from extracting Appalachia to look in the mirror and accept responsibility for the damages to human health from coal mining.



Viewpoint

We Can End Mountaintop Removal in Tennessee

By Dr. Minnie Vance
Chattanooga, Tenn.

In Tennessee, we love our mountains. These peaks and valleys inform our southern heritage, enhance our connection to family and represent the best of what we call state and country. Our mountains are home. Nevertheless, we too are facing down the barrel of continued mountaintop removal mining. Unfortunately, in that respect, we are not that different than many other states in Appalachia.

But one thing in Tennessee is different: the playing field between the coal industry and the citizens of our state. Because of the relative unimportance of the state's coal industry we have a tremendous opportunity to play offense on issues like mountaintop removal, and to make Tennessee a leading light among Central Appalachian states. The negative impact that coal is having on our environment, our economy, and on public health is tremendous, but their the coal industry's contribution to our well-being is

lacking. Their influence on the political process remains tenuous in Tennessee. Our state only produces 0.2 percent of America's coal, 98 percent of our coal comes from just three counties, and Tennessee's mountain-driven tourism industry employs more than 470 times more people than the state coal industry while bringing in \$14 billion each year.

The coal industry's impact on our state budget is a net loss of more than \$3 million every year. All over Tennessee, taxpayers are sick of our money being wasted on subsidies that prop up a coal industry that can't compete without an influx of our hard-earned cash. And who runs the industry these tax dollars going to prop up? Increasingly, the coal industry in Tennessee is controlled by out-of-state operators who come into our state, blast apart our land and take our money and mountains back out of state and overseas, leaving us with poisoned water, layoffs and poverty.

The Tennessee Scenic Vistas Protection Act is one way that Ten-

nessee is fighting back. This bill would eliminate high-elevation surface mining techniques such as mountaintop removal in the state. Ninety-five percent of these high elevation surface mines are owned by out-of-state operators, and nearly half of them are owned by a single individual. In January, a coal preparation plant owned by this same individual illegally dumped toxic coal slurry into the New River while failing to notify either the Office of Surface Mining or the Tennessee Department of Environment and Conservation. A citizen report came days after the accident, after more than 28 miles of the New River had been sullied. In the same month, this operator shut down National coal and laid off 155 workers, representing roughly 40 percent of Tennessee's coal workforce.

For these and many other reasons, Tennessee must pass the Scenic Vistas Act and begin to reverse some of these abuses of our state, our communities, and our citizens.

Reclamation continued

Continued from page 19

its 750-acre mine site to achieve the designated post mining land use. Rob Goodwin, coordinator of the Citizens Enforcement Project at Coal River Mountain Watch, says the West Virginia Department of Environmental Protection allowed the permit's post-mining land use to change to commercial forestry. This "higher and better" land use grants the company a cost-cutting approximate original contour variance.

"Even if you were doing commercial forestry, you wouldn't necessarily need flat land," Goodwin says.

Part of the permit hosts three West Virginia University forestry research plots, each the size of a football field. According to a permit map, one of the plots is designated a commercial forestry test plot. This plot use natural topsoil combined with weathered sandstone and minimal compaction. Another plot has similar soil with a different type of compaction, and the third had minimally compacted unweathered sandstone. The plots with natural topsoil are clearly more successful.

Goodwin says West Virginia and other Appalachian states have routinely waived SMCRA's clear requirement to stockpile and re-spread topsoil during reclamation.

When Marfork Coal Company's Bee Tree permit came up for renewal last summer, Coal River Mountain Watch intervened and was able to get the company to adopt a Forestry Reclamation Approach topsoil advisory. According to the advisory, operators who don't have enough natural topsoil should combine the topsoil they do have with weathered sandstone.

Foreseeable Floods

Jack Spadaro, former superintendent of the National Mine Health and Safety Academy, was invited to testify before Congress about the relationship between surface mining and flooding just before President Carter signed SMCRA into law. He recalls an exchange from the 1977 hearing.

"The congressman who was conducting the hearing said, 'Mr. Spadaro, Do you think the new law will be effective in controlling these negative environmental effects?' I said, 'Sir, I'm



A vacant building at a mountaintop removal site-turned-business park in Martin County, Ky., lacks insulation and water hookups. Inside, the floor is gravel. Martin County resident Nina McCoy doubts that the business park will fulfill its economic promise. In the distant background, elk graze in the sunset. The state's elk reintroduction program has been touted as reclamation success, but McCoy points out that elk thrived in the state long before surface mining arrived. Photo by Molly Moore

sorry to say that I don't think so because I don't think it's ever going to be enforced.' And I was right."

SMCRA intended to protect surface mines' downstream neighbors from flash floods intensified by huge expanses of barren, loose spoil. Such flooding was common before the law, so SMCRA requires that companies reclaim as they go.

On July 17, 2010, a wall of water rushed through the Harless Creek area of Pike County, Ky. One house exploded; another split in half. 37 families lost use of their wells.

126 residents are suing two surface mining companies that operate in the Harless Creek watershed for damages in a trial that will begin March 5.

Spadaro, who is serving as an expert witness in the Harless Creek case, says "[Regulators routinely let operators] go long, long periods of time without replacing topsoil, grading, seeding and mulching areas. What you get are these vast wastelands."

At the time of the 2010 flood, one of the companies, Cambrian Coal Corp., hadn't even begun to reclaim over half of the permitted area, according to Spadaro.

"This company was essentially operating the way it wanted to without any control by the state of Kentucky," he says, adding that the state inspector overseeing the site was "allowing them to violate the law and the intent of the law for months if not years before this flood happened."

Immediately following the flood, Cambrian was cited for six violations.

The company's lack of reclamation had drastic consequences for those downstream. Hydrologists serving as expert witnesses for the residents report that the

two companies' surface mines and failure to reclaim resulted in a 44 percent increase in peak runoff during the July 17 storm.

The Cost of Compliance

When it comes to mandating that coal companies clean up their mark on the land, money talks. SMCRA requires that operators post a bond before they begin mining so that the state has funds available for reclamation in case the company fails to comply. In places with state-level enforcement agencies, those agencies set the bond amounts and sign off on the permits. The money is returned to the company in three stages as the land meets the reclamation requirements of each stage.

In 2010, the federal Office of Surface Mining began a nationwide review of bond amounts. When a bond amount is too low, it can be cheaper for a company to forfeit the bond than reclaim. When that happens, states don't have enough money to complete the reclamation plan. The reclamation cost is either passed on to state taxpayers or the land pays the price.

In Kentucky, nearly fifty permits were forfeited between January 2007 and May 2010. The Kentucky Division of Abandoned Mine Lands estimated reclamation costs for those sites. When those estimates are compared to the bond amounts the companies paid, the difference amounts to a shortfall of nearly \$13 million.

After two years of back and forth between Kentucky state agencies and OSM's Lexington office, the state has proposed new bond practices that OSM says are still deficient.

"Time continues to elapse without a final solution to Kentucky's bonding issue," states a Jan. 17 letter

from OSM's Lexington office to the Kentucky Energy and Environment Cabinet. The letter says that, unless the state comes up with a suitable plan soon, OSM might use its authority under SMCRA to federalize Kentucky bond calculations.

On Feb. 13, OSM began an enforcement review in Kentucky. If the agency finds mines without adequate bonds, it will notify the state, which has ten days to either increase the bond or tell OSM that it refuses to. If the state opts for the latter, OSM can use its authority to enforce the law.

The ability of the federal OSM to take direct action in cases where state agencies aren't doing their jobs is just one of the tools in SMCRA that, if utilized, could help heal Appalachia's surface mining scars. But bringing enforcement to bear is a difficult undertaking.

"Congress put an unprecedented array of citizen rights into the surface mining act," says Tom FitzGerald, a lawyer with Kentucky Resources Council. "What they didn't count on is how difficult it would be for the average citizen to muster the time and the energy and the resources to effectively monitor the performance of the industry. It is far from a level playing field."





Red, White and Water Campaign Turns Up the Heat on Toxic Coal Ash

On Feb. 15, Appalachian Voices' Red White and Water team, North Carolina Riverkeepers and other organizations launched a campaign called N.C. Can't Wait, a petition and education drive to protect communities from toxic coal ash pollution.

The campaign was created after monitoring near coal ash ponds at North Carolina's 14 coal-fired power plants confirmed that toxic heavy metals such as arsenic, boron, selenium and thallium are leaking into groundwater.

The petition targets the state's Department of Environment and Natural Resources, who reported they were investigating the contamination but did



not provide a timeline on enforcement, and the U.S. Environmental Protection Agency, who has postponed finalizing long-awaited rules that would provide federal guidelines to clean up coal ash lagoons nationwide.

The new coalition is coordinating upcoming events for the spring, including a series of Clean Water Events on March 22 in Charlotte, Asheville and

Wilmington, scheduled to coincide with World Water Day.

In mid-January, Appalachian Voices joined with Earthjustice and other environmental groups across the country to file a notice of intent to sue the EPA to force the release of the delayed guidelines governing toxic coal ash. The notice was filed under the Resource Conservation and Recovery Act, which requires the agency to ensure that safeguards are regularly updated to address threats posed by wastes.

The EPA delayed the first-ever federal protections for coal ash for nearly two years despite documented evidence by its own researchers and

environmental groups showing coal ash has poisoned aquifers and surface waters at 150 sites in 36 states.

More than 5.5 million tons of coal ash is created each year in North Carolina, the ninth highest total in the country. There are 26 active ponds in the state, 12 rated "high-hazard" by the EPA, meaning that if the ponds were to break, it would probably cause a loss of human life.

To sign the petition, or to learn more about our coal ash campaign and clean water events, visit AppalachianVoices.org/nc-cant-wait.

New iLoveMountains.org Tool Reveals "The Human Cost" of Mountaintop Removal

On Valentine's Day, Appalachian Voices and The Alliance for Appalachia launched a new tool for the campaign to end mountaintop removal.

Dubbed "The Human Cost of Coal," the tool features an interactive map that definitively plots the connection between mountaintop removal coal mining and significant health problems in Appalachia with detailed profiles of each county.

The data includes poverty rates and population indices from the 2010 U.S. Census, birth defect rates from the Center for Disease Control, the Gallup-Healthways Well-Being Index, and life expectancy and population

numbers from the Institute for Health Metrics and Evaluation. The site also includes summaries for twenty one peer-reviewed studies that show human health problems such as heart, respiratory and kidney diseases, cancer, low birth weight and serious birth defects are significantly higher in communities near mountaintop removal mine sites.

"In the past year several studies have come out about the health impacts of living near mountaintop removal mining," said Ada Smith, 24, a Letcher County, Ky., resident and a speaker at I Love Mountains Day. "Though many of the studies state the obvious for those of us living in these communities, the

scientific facts give us much-needed evidence to make sure our laws are truly enforced for the health of our land and people."

iLoveMountains.org is a project of The Alliance for Appalachia, which is comprised of thirteen local, state and regional organizations across Appalachia working together to end mountaintop removal and create a prosperous future for the region.

To view "The Human Cost of Coal," visit iLoveMountains.org/the-human-cost.



In Surry County, A Step in the Right Direction

Appalachian Voices' campaign to stop a massive Old Dominion Electric Cooperative coal-fired power plant proposed for Surry County, Va. has been heating up.

In a positive development last fall, the Board of Supervisors in neighboring Isle of Wight County passed a resolution of opposition to the coal plant.

But in a recent municipal election, two of the three supervisors who voted for the resolution lost their seats, and a new Isle of Wight supervisor brought up a motion to declare the county's stance on the coal plant as neutral.

Our Virginia team went into overdrive, working alongside local citizens to get the word out. Dozens of letters and phone calls from county residents asking the board to uphold the resolution were made in the week leading up to the most recent meeting.

Thanks to this overwhelming opposition to the coal plant in Isle of Wight County, the resolution of opposition was upheld during a meeting on Feb. 16. We will be working to organize other communities in the Hampton Roads region of Virginia to oppose the proposed plant in the coming months.



Tennessee Office Making Ground with State Legislature, TVA

In Tennessee, our staff is currently working with the state legislature to pass the Scenic Vistas Protection Act, a bill that would ban high elevation surface mining techniques such as mountaintop removal in the mountains of eastern Tennessee. In collaboration with partners across the state, we are building relationships with key members of the House and Senate committees and building grassroots pressure in strategic districts, while also advancing legislation

that would increase disclosure and responsible party identification for coal operators in our state.

Tennessee Director J.W. Randolph recently gave a presentation to the Tennessee Valley Authority Board of Directors, where he pointed out that a relatively small amount of TVA's coal comes from Central Appalachian surface mines (around 2.6 percent), the most expensive states for TVA to purchase coal from are the four Central Appalachian states (Tenn.,

Ky., W.Va., and Va.). As of 2010, surface mined coal was actually more expensive for TVA than underground mined coal from Central Appalachia. Appalachian Voices' ultimate goal is to help TVA move away from the use of surface-mined Appalachian coal in their power plants.

To keep up to date with our Tennessee work, visit AppalachianVoices.org/tn.

Appalachian Voices In Brief

Church "Shares the Plate" with App Voices

Appalachian Voices recently had the honor of being chosen for Allegheny Unitarian Universalist Church's "Share The Plate" program, in which the Pittsburgh, Pa., church donates 50 percent of their quarterly tithings to a justice-related nonprofit. After seeing an Appalachian Treasures presentation organized by local activist Shane Freeman, the Reverend David McFarland and the church board decided to sponsor Appalachian Voices as their fourth quarter "Share The Plate" organization. Longtime field staff member Austin Hall paid a visit to the church to accept the generous \$1,250 check. We're honored and thankful to receive this donation from our new friends at Allegheny Unitarian Universalist Church.

Voice Team Receives Investigative Journalism Grant

In January, the editors of The Appalachian Voice received a grant from the Society of Environmental Journalists' Fund for Investigative Journalism. Funds from the grant paid for research and travel costs as we investigated issues surrounding the past and present problems of coal slurry impoundments in the region and the enforcement troubles plaguing mined land reclamation under the Surface Mine Control and Reclamation Act. Check out the stories on pages 14 and 18.

Go West, Appalachian Treasures!

Our Appalachian Treasures tour, a multimedia presentation that educates people about the impacts of mountaintop removal coal mining on communities in Appalachia, is feeling spring fever and making plans to head to the other side of the country.

During March, our Director of Campaigns Lenny Kohm will make a Southwestern tour of Nevada, New Mexico, Arizona, California, and in April, our Washington, D.C. Director Kate Rooth will travel to Oregon and Washington state to share our presentation and talk with people about the national campaign to end mountaintop removal. Residents of communities impacted by the mountaintop removal method of coal mining will rendezvous with the tour to provide first-hand testimony.

Since 2002, the Appalachian Treasures tour has traveled to over 30 states and talked to over 10,000 people about mountaintop removal coal mining.

Visit AppalachianVoices.org/apptreasures for updates on our tour schedule!

SAVE THE DATE: Registration Opens March 1 for Week in Washington!

Join The Alliance for Appalachia and Appalachian Voices in Washington, D.C., June 4-6, 2012 for the 7th annual End Mountaintop Removal Week in Washington. You'll get the chance to work toward an end to

mountaintop removal coal mining in Central and Southern Appalachia by meeting with members of Congress and the federal agencies that regulate mountaintop removal.

In 2011, more than 150 people from 23 states as well as directly impacted communities in Appalachia gathered to ask Congress to support the Clean Water Protection Act and end mountaintop removal coal mining. Registration begins March 1. Visit iLoveMountains.org to register.



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

Organizational Staff

Table listing Executive Director (Willa Mays), Programs Director (Matt Wasson), Deputy Program Director / Virginia Director (Tom Cormons), and Campaign Director (Lenny Kohm).

OPERATIONS & DEVELOPMENT

Table listing Operations Manager (Susan Congelosi), Administrative Associate (Shay Boyd), Director of Foundation Relations (Rachael Goss), and Director of Leadership Gifts (Kayti Wingfield).

PROGRAMS

Table listing 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 (Mike McCoy), Water Quality Specialist (Eric Chance), and another Water Quality Specialist (Erin Savage).

TECHNOLOGY & COMMUNICATIONS

Table listing Technologist (Benji Burrell), IT Specialist (Jeff Deal), Communications Coordinator (Jamie Goodman), Americorps Communications Outreach Associate (Brian Sewell), Americorps Public Outreach & Education Associate (Molly Moore), Graphic Designer (Meghan Darst), and Communications & Development Associate (Maeve Gould).

INTERNS

Table listing Red, White & Water Senior Campaign Assistant (Amber Smith), Red, White & Water Research Assistant (Jordan Wise), Red, White & Water Research Assistant (Patrick Cavanaugh), Virginia Campaign Assistant (Stacy Casey), Water Program Assistant (Jillian Kenny), Legislative Intern (Ce Garrison), and Editorial Communications Assistant (Madison Hinshaw).

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Table listing Chair (Christina Howe), Vice Chair (Heidi Binko), Secretary (Cale Jaffe), and Treasurer (Bunk Spann).

Table listing Members-At-Large: Clara Bingham, Rev. Jim Deming, Dot Griffith, Mary Anne Hitt, Silas House, Landra Lewis, Rick Phelps, Kathy Selvage, Brenda Sigmon, Lauren Waterworth, Willa Mays (Ex-officio).

Table listing Advisory Council: Jonathan C. Allen, Jessica Barbara Brown, Alfred Glover, Randy Hayes, Liz Riddick, Van Jones.

AppalachianVoices BUSINESS LEAGUE

New & Renewing Members — Dec. 2011 / Jan. 2012

Table listing new and renewing members: Abigail Higgins Gardening Services, Papa John's, Rimm-Kaufman Group, Scott Seagle Construction and Development, Timothy L. Warner, Inc., V and V Land Management and Resource Recovery, LLC, Mast General Store, etc.

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

Advertisement for 'Managing Your Woodlands' handbook, 2nd edition, a guide for Southern Appalachian landowners, produced by AppalachianVoices. Includes a call to action for a free DVD and contact information.



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In an extraordinary story of “taking the long way ‘round,” a bird from the other side of the world paid a visit to the Hiwassee Wildlife Refuge in eastern Tennessee, shortly before the New Year. Jeffrey Davis drove 12 hours from Chester County, Penn., to take this photo of the Hooded Crane, a 3-foot tall grey and white bird (far right) that typically lives in Siberia and northern China and winters in Japan. More than 2,500 visitors from at least 35 states and five countries — including, ironically, Russia — visited Hiwassee to see the bird, who likely followed Sandhill cranes during their yearly migration from Russia to North America. A report by the *Indianapolis Star* placed the bird in southern Indiana during February.

GET INVOLVED environmental & cultural events in the region

Buffalo Creek Remembrance

Feb. 25, Noon: In honor of the victims of the disaster, the Buffalo Creek Memorial Library in Man, W.Va., will host “Buffalo Creek, Remembering After 40 years.” featuring guest speakers and an audio and slideshow presentation. For more info call the library at (304) 583-7887.

Clean Energy Lobby Day

Feb. 28, 8:30 a.m. - 3 p.m.: Join KFTC members and the Kentucky Sustainable Energy Alliance for a day of conversations with legislators about the benefits of clean energy for Kentuckians and the Clean Energy Opportunity Act of 2012. Frankfurt, Ky. RSVP by e-mailing Lisa Abbott at lisa@kftc.org.

Energy Innovation Forum

March 1, 6 p.m.: Appalachian State University will host Energy Innovation in the High Country, a forum to discuss current energy issues and ways to move forward with renewable technology. Hear from local business leaders, industry experts and ASU faculty. Broyhill Inn & Conference Center, Boone, N.C. E-mail: focusnorthcarolinaasu@appstate.edu.

Remembering 40 Years of Black Water: Buffalo Creek to Today

March 2, 5 p.m. - 6 p.m.: The Sludge Safety Project will commemorate the 40th anniversary of the Buffalo Creek flood at the W.Va. State Capitol in Charleston. Musicians, speakers, prayers and film included. A candlelight march will follow the program. SSP will host a dinner to discuss the future of sludge-related organizing in West Virginia. Visit sludgesafety.org

Mountain Justice Spring Breaks

March 2-11, 21-28: Attend Mountain Justice’s Spring Breaks and support grassroots, community led resistance to environmental injustice. During this week-long in event there will be mountaintop removal site visits and an opportunity to meet with local residents. Workshops, organizing skills, trainings, site tours, mountain music and dancing. March 2-11, Appalachia, Va. March 21-28, Northern West Virginia. Visit mjsb.org

Wild & Scenic Film Festival

March 11, 1 p.m. - 5 p.m.: Georgia Forest-Watch has teamed up with Upper Chattahoochee Riverkeeper and Georgia River Network to present their 5th annual environmental film festival. \$15 general admission, \$12 for students/seniors, \$11 for groups of 8 or more. Landmark Midtown Art Cinema, Atlanta, Ga. Visit gafw.org.

“A View From the Mountaintop”

March 11: Renowned author Barbara Kingsolver and Grammy-award-winning singer Kathy Mattea will combine their talents for an evening of spoken word and song at the Bijou Theatre that celebrates their shared Appalachian heritage and casts a spotlight on mountaintop removal mining. Knoxville, Tenn. \$25. Purchase tickets through knoxvilletickets.com, knoxbijou.com, or by calling (865) 684-1200.

Hike Along the Kephart Prong Trail

March 17, 9:30 a.m.: Danny Bernstein, author of *Hiking North Carolina’s Blue Ridge Heritage*, will lead this 4 mile hike. A \$35 donation for the Smokies Trails Forever program is requested (\$10/

members) and includes a complimentary membership. Members who bring a friend hike for free. Great Smokey Mountains National Park, Tenn. Contact Hannah Epperson, fotshe@bellsouth.net, or visit friendsofthesmokies.org.

Old Time String Band Day

March 17, 9 a.m. - 8 p.m.: Join WMMT FM 88.7 and Appalshop for a day of classes, concerts, dancing, and fun with Kentucky’s rich heritage of traditional music. Square dance at 7 p.m. with Michael Ismerio. Registration begins at 9 a.m. and is \$25/person, \$3/lunch. Whitesburg, Ky. Visit appalshop.org.

Mother Nature’s Child

March 24, 7 p.m.: SustainFloyd’s Winter Film Series presents Mother Nature’s Child. In an age when our children spend much of their time inside, this film looks at the importance of a relationship with the natural world. A panel discussion will follow the screening. \$5. Floyd Country Store, Floyd, Va. Visit sustainfloyd.org.

The Last Mountain Documentary in Spartanburg

March 27, 7 p.m. - 9 p.m.: Screening presented by Upstate Forever, this documentary focuses on residents of Coal River Valley of W. Va., a small but passionate group of ordinary citizens who are trying to stop Big Coal from continuing the devastating practice of mountaintop removal. Free. Spartanburg, S.C. Visit upstateforever.org.

Email voice@appvoices.org to be included in our Get Involved listing. Deadline for the next issue will be Friday, March 30, at 5 p.m. for events taking place between April 20 and June 20, 2012.

Little Owl Music & Arts Festival

March 31, 12 p.m. - 6 p.m.: Join Audubon Acres for a fun day including a flying show by Save Our American Raptors with dramatic birds of prey. Performing and visual arts by Jerre Haskew of Cumberland Trio, Uncle Lightning, Ray Zimmerman, Marcus Ellsworth, Troy Underwood, Hara Paper and Jeff Pfitzer. Food, contests, face painting and nature walks. \$5/ person, or \$10/ car. Chattanooga, Tenn. Contact Bill Fisher at (423) 892-1499 or bfisher@chaas.org.

Coal Mine Health and Safety with Ken Hechler

April 2: The Honorary Ken Hechler will speak about his work as a former West Virginia Senator in the U.S. Congress and his work in passing the most far-reaching coal mine health and safety legislation in American history. Free. For information and time of events contact Karen at karen@wventerprises.com.

Blue Ridge Wine & Food Festival

April 11-15: Enjoy wine tastings, seminars, cooking classes, wine makers’ dinner and much more. This year’s special guest is Teresa Giudice, bestselling cookbook author and reality TV star. Blowing Rock, N.C. Price varies by event. Visit blueridgewinefestival.com.