

# From Appalachia to Alaska: Coal Development and the Environmental Justice Movement



Mountaintop Removal Coal Mine, Appalachia  
(EcoWatch)



Usibelli Coal Mine, Alaska  
(Ground Truth Trekking)

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# U.S. Coal-Fired Power Plants



- 386,000 tons of toxic air emissions annually
- 67 different air toxics
  - 55 known neurotoxins
  - 24 known, probable, or possible carcinogens
- Fine Particle Pollution = 23,600 premature deaths/year

(American Lung Assoc., 2011; Physicians for Social Responsibility, 2009; U.S. EPA 2005).



# Mountaintop Removal Coal Mining



# Flooding



# Maria Gunnoe





## Maria Gunnoe

...I found out one morning at 3:00 in the morning, it was thundering and lightning, and I go in, and I find her setting on the edge of her bed with her shoes and her coat and her pants [on]. And I found out then, what it was putting my daughter through. And that is what pissed me off. How dare they steal that from my child. The security of being able to sleep in her own bed. The coal companies now own that. They now own my child's security in her own bed. And how can they expect me as a mother to look over that? How is it, what if I done this to their kids? What if I created terror in their children's lives? And that's what it's done to my children...

# Coal Preparation Plants and Coal Dust





# Sylvester, WV



“We could walk outside here on days like today and the sun looked like a kaleidoscope, like you was looking through a kaleidoscope there was so much coal dust in the air. And I mean it just plastered our homes. Our homes were just polluted completely with it...You couldn't cook outside, you couldn't do nothing outside. And not only that, then it began to seep through your windows and things and coming inside of your home...And I mean, right now, in order to get all the coal dust out of our homes, we're going to have to take them apart and rebuild them because there's no way you can get it all out. There's just no way you can do it.”

– Pauline Canterbury





“You know, it’s not easy to sit and watch your home being destroyed, something you have worked for all your life...we found out through our lawsuit – because we all had our homes appraised [for it] – that our homes have lost 90% of their value.”

-- Pauline Canterberry



Photo: Vivian Stockman



Photo: Colin Finlay, Vanity Fair

We're being discriminated against. We're being sacrificed here for energy for the rest of the world. For more money for the people that already has more than they know what to do with. And it isn't right. To me, it isn't the American Way. It will never be the American Way for the America I envision, that we're supposed to be here. It's just for greed. It's just greed. You know, why should we give up everything we own for somebody else to have cheap energy? For a world of people that's already pampered to death. It's the injustice of it.

- Pauline Canterbury

# Coal Slurry Impoundments & Injections



Coal Slurry from “Washing” Coal:

- Chemicals
- Heavy metals, including arsenic beryllium, cadmium, among others



## Coal Slurry Impoundment Breaches

Buffalo Creek, West Virginia -- 1972  
- 125 dead, thousands homeless



Martin County, Kentucky - 2000  
- 250 million gallons of coal waste spilled  
- Polluted more than 70 miles of streams



## Coal Slurry Injection Sites



Water contamination  
from coal slurry:

- Cancer
- Gall bladder disease
- Skin disorders
- Organ failure

# Maria Lambert, Prenter, WV







“Everybody was showing their water, Terry Keith had her water, and they were talking about the health issues and how...to bathe in it was causing people’s skin to itch and turn red; and how it had bad odor and how it looked coming out of the water tanks, and...the different illnesses, the brain tumors, the gall bladder problems, stomach problems, children’s teeth falling out, and all of these things. And it’s like, a light bulb going off all here, there, yonder, everywhere. And it’s like my whole life flashing before my eyes, because my children had lost their teeth, my parents had had cancer, we’d had our gall bladders removed, and all of these things was, it’s just like, oh no, it’s not just us, it’s the whole community, and we’re not even blood related.”

-- Maria Lambert, Prenter, WV



## Donetta Blankenship

“I started getting sick at the end of February 2005. ... I stayed nauseous, I stayed tired. My urine was changing colors. I started having problems with my eyes. ... The first week of April, I started noticing I could look at my skin and it looked a little yellow....I thought maybe it was the sun doing it to me. And, my husband, he kinda noticed it, even getting in my eyes. You know, the white parts of my eyes was lookin’ yellow. Then on that Tuesday morning, my kids, I got them up for school, and my daughter looked at me, she said, “Mommy,” she said, “What’s wrong with you? You look yella.” And she got Josh, my son, to look at me, and he agreed with her. And I told him, I said, “Honey, when you look yella,” I said, “that means you’re about to die.” Me not knowing, you know, that I was about ready to ... I ended up having to go to the hospital. ... My enzymes—liver enzymes—was up in the—it was close to 10,000.”



## Coal in drinking water

- Well-documented medical disorders from organic coal compounds in drinking water, including diseases of the kidneys and urinary tract, endocrine disruption, and cancer.
- Balkan Endemic Nephropathy (BEN): causes end-stage renal failure; high rate of co-incidence of cancers of the renal pelvis or upper urinary tract

Orem WH, Tatu CA, Lerch HE, Maharaj SVM, Pavlovic N, Paunescu V, Dumitrascu V. (2004). Identification and environmental significance of the organic compounds in water supplies associated with a Balkan endemic nephropathy region in Romania. *Journal of Environmental Health Research*. 3:53–61.

Maharaj, S. V. M., Orem, W. H., Tatu, C. A., Lerch III, H. E., & Szilagyi, D. N. (2014). Organic compounds in water extracts of coal: links to Balkan endemic nephropathy. *Environmental geochemistry and health*, 36(1), 1-17.

Gaitan E, Cooksey RC, Legan J, Cruse JM, Lindsay RH, Hill J. (1993). Antithyroid and goitrogenic effects of coal-water extracts from iodine-sufficient goiter areas. *Thyroid*. 3:49–53. doi: 10.1089/thy.1993.3.49.

Bunnell JE, Tatu CA, Bushon RN, Stoeckel DM, Brady AMG, Beck M, Lerch HE, McGee B, Hanson BC, Shi R, Orem WH. (2006). Possible linkages between lignite aquifers, pathogenic microbes, and renal pelvic cancer in northwestern Louisiana, USA. *Environmental Geochemistry and Health*. 28:577–587. doi: 10.1007/s10653-006-9056-y.

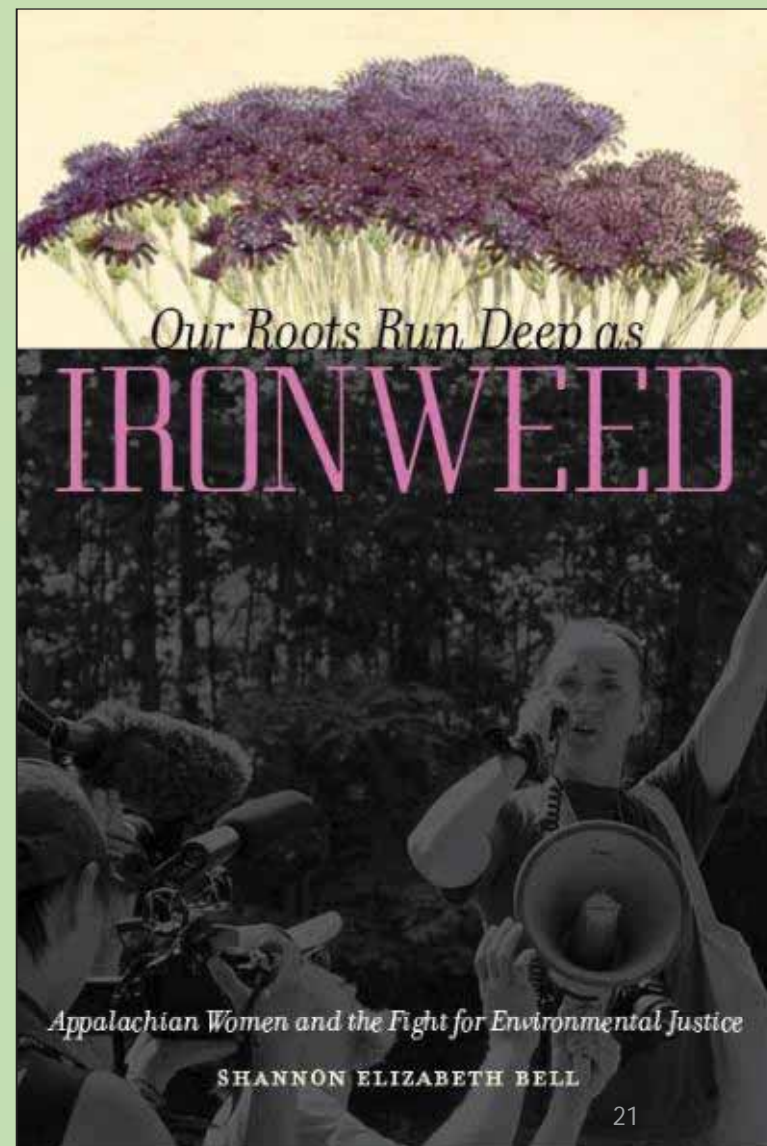


## Higher rates of:

- Birth defects
- Cancer
- Cardiovascular conditions
- Respiratory illnesses
- Mortality

- Ahern, Melissa M., and Michael Hendryx. 2008. Health Disparities and Environmental Competence: A Case Study of Appalachian Coal Mining. *Environmental Justice* 1 (2): 81–86.
- Ahern, Melissa M., Michael Hendryx, Jamison Conley, Evan Fedorko, Alan Ducatman, and Keith J. Zullig. 2011. The Association between Mountaintop Mining and Birth Defects among Live Births in Central Appalachia, 1996–2003. *Environmental Research* 111 (6): 838–846.
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- Hendryx, Michael, and Melissa M. Ahern. 2008. Relations Between Health Indicators and Residential Proximity to Coalmining in West Virginia. *American Journal of Public Health* 98: 669–671.
- Hendryx, Michael, Melissa M. Ahern, and Timothy R. Nurkiewicz. 2007. Hospitalization Patterns Associated with Appalachian Coal Mining. *Journal of Toxicology and Environmental Health* 70: 2064–2070.
- Hendryx, Michael, Leah Wolfe, Juhua Luo, and Bo Webb. 2012. Self-Reported Cancer Rates in Two Rural Areas of West Virginia with and without Mountaintop Coal Mining. *Journal of Community Health* 37 (2): 320–327.

# Grassroots, women-driven environmental justice movement



# MOUNTAIN JUSTICE FALL SUMMIT 2012

OCTOBER 19<sup>TH</sup> - 21<sup>ST</sup>  
ROCK CREEK, WV

come to Appalachia to learn about MTR ...



... and take action!

Join us in the mountains of West Virginia for a weekend of workshops and trainings to prepare you to take action this year against mountain top removal, and see MTR first hand.

Following the weekend of trainings there will be intensive sessions including direct action, and community service projects for people who are interested in spending more time working in the Appalachian region.

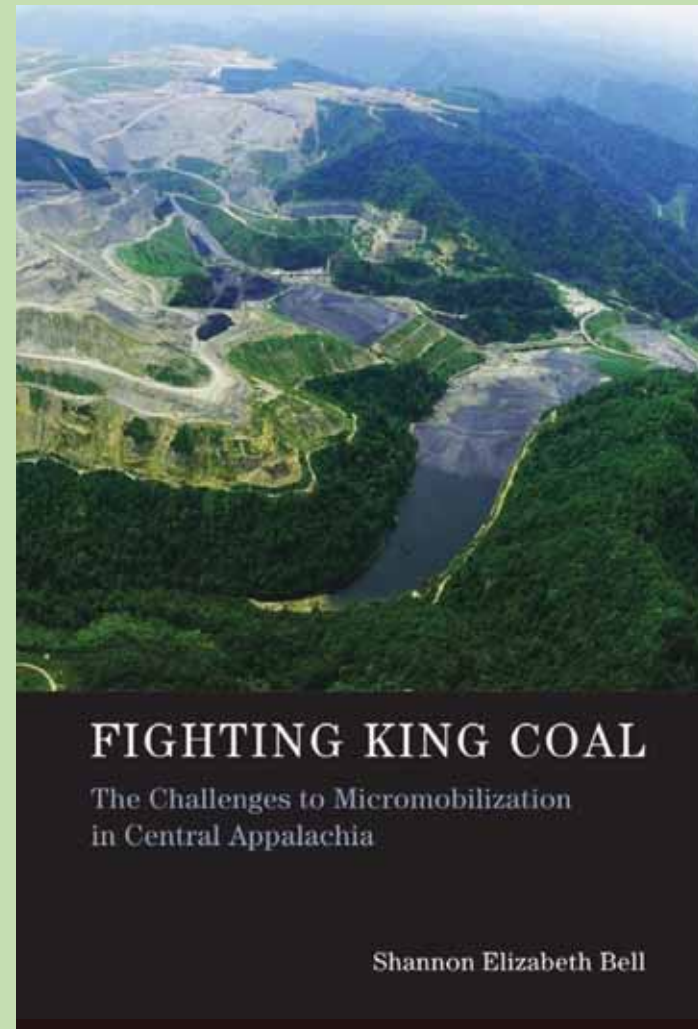
[MOUNTAINJUSTICE.ORG](http://MOUNTAINJUSTICE.ORG)



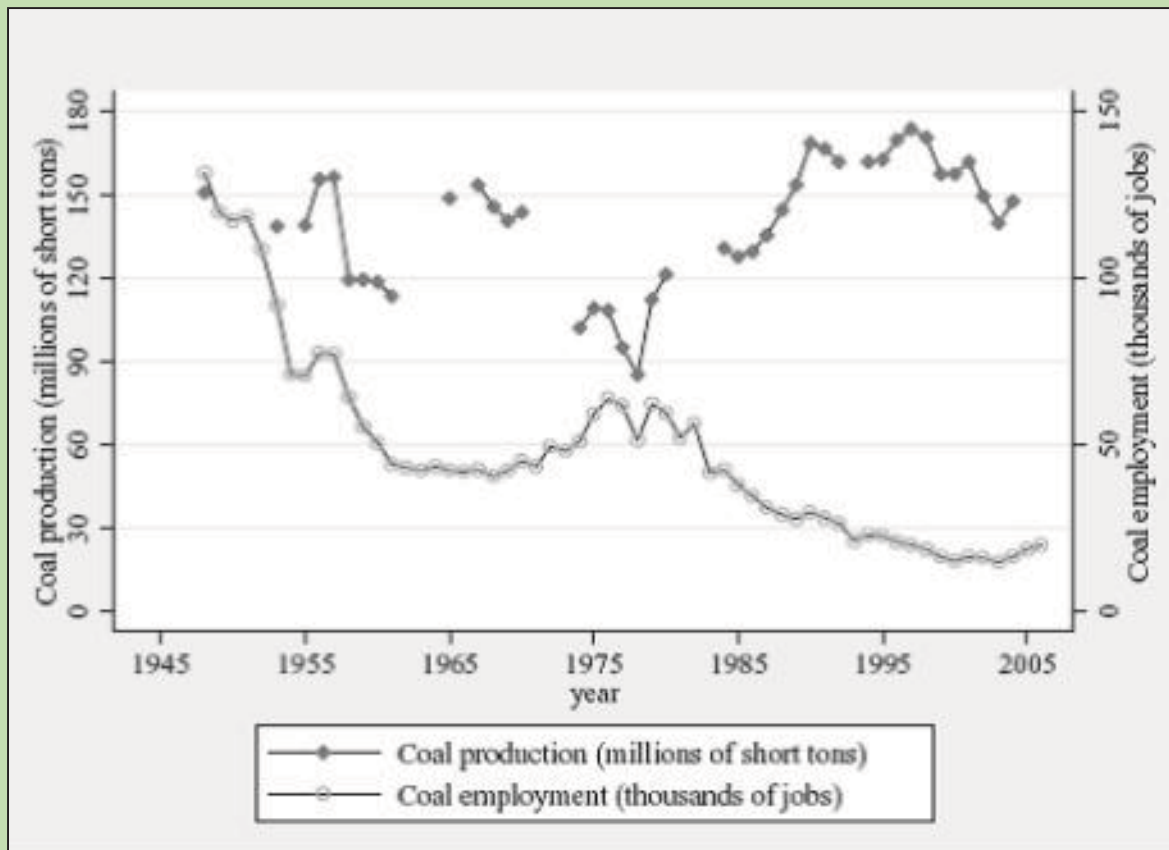
- However, most of the affected population remains uninvolved in the movement.
- Organizers have been forced to recruit participants from outside the region

Why?

Why is there such limited participation at the local level?



## WV Coal Employment and Coal Production



Job losses mainly due to technological advances in coal mining:



Longwall mining



Surface mining

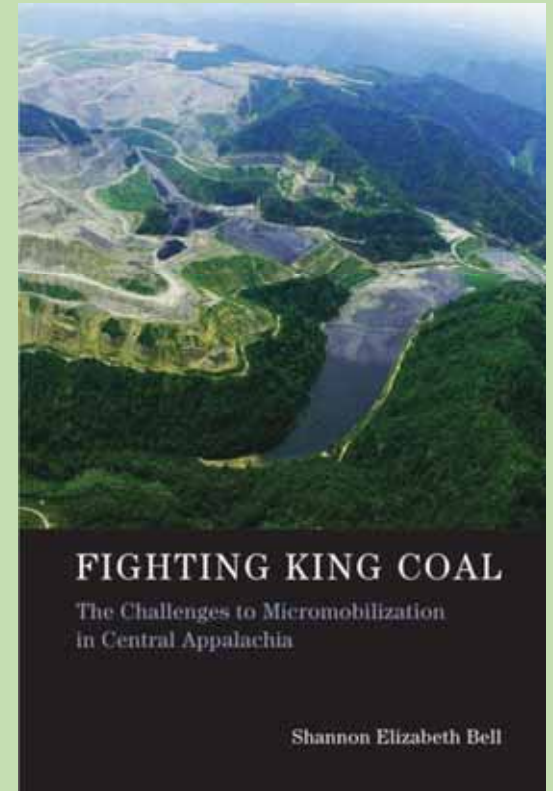


Why is there such limited participation in the coalfield justice movement at the local level?



# Methods

- 13 months of field research conducted between July 2006 and May 2009.
  - In-depth interviews
  - Participant observation
  - Content analysis
  - Geospatial viewshed analysis
  - Photovoice in 5 communities



# Phase I of the Research

- Depleted social capital in coalfield communities
- The coal-related hegemonic masculinity of the region
- The coal industry's cultural manipulation efforts
- Hidden destruction

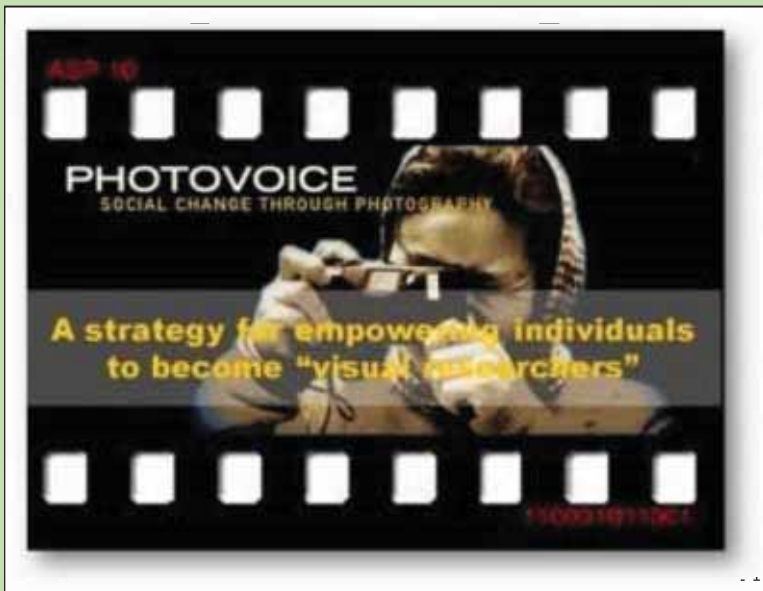


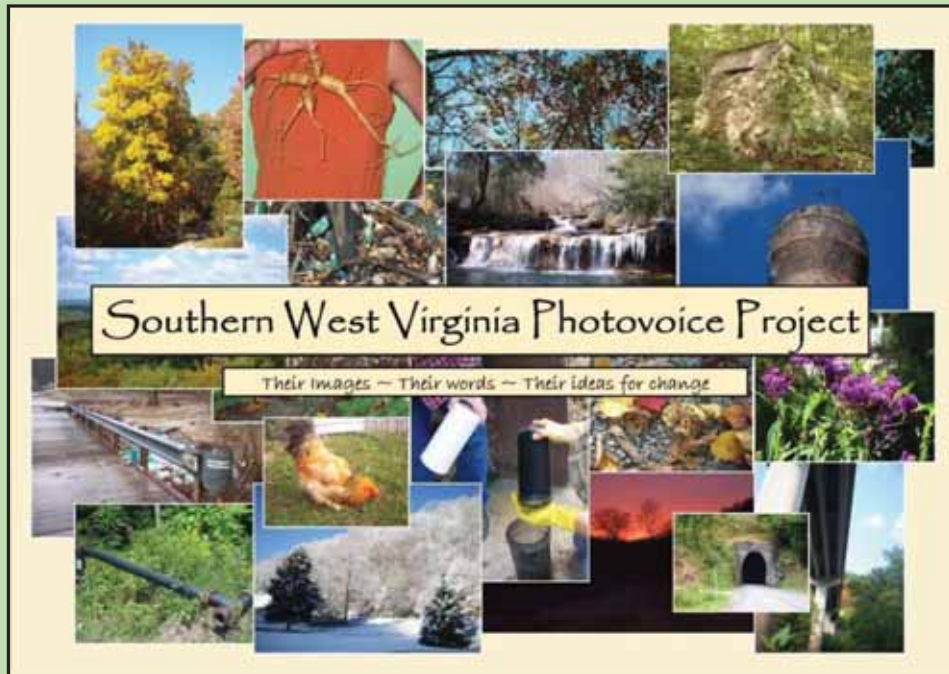


Challenge: Most social movement studies take place after individuals have become activists (McAdam and Paulsen 2003)

To understand barriers, necessary to study individuals who are not yet activists but who could become activists.

Used Photovoice to create a micromobilization context among five groups of non-activist women





- 54 women (47 non-activists, 7 activists)
- 5 coalfield communities
- Monthly reflection meetings in each community
- 2 regional meetings
- Local and regional exhibits and presentations



## “Winter Glow”

The sun coming down through the trees and lighting up the snow took my breath away.



## “Please Pass the Bottle Bill!”

This picture was taken of Little Harts Creek after a rain. As you can see, trash piles up against our bridges almost anytime it rains. Look at all those bottles! The biggest part of the trash we see piled up by our bridges is pop bottles and water bottles. This is really nasty to look at, and all this trash is also very hard on the wildlife in our area. If we had a bottle deposit in our state, a lot of this wouldn't be here. I would really like to see our state pass the Bottle Bill.





## “Mountaintop Removal at Marthatown”

In many areas of Boone County, the entire top half of a mountain is removed to retrieve a very thin seam of coal, like the one pictured here. This mountaintop removal mine has supposedly been closed down and is to begin being reclaimed. From the looks of it, I see no way possible to reclaim this land.



## Flooding

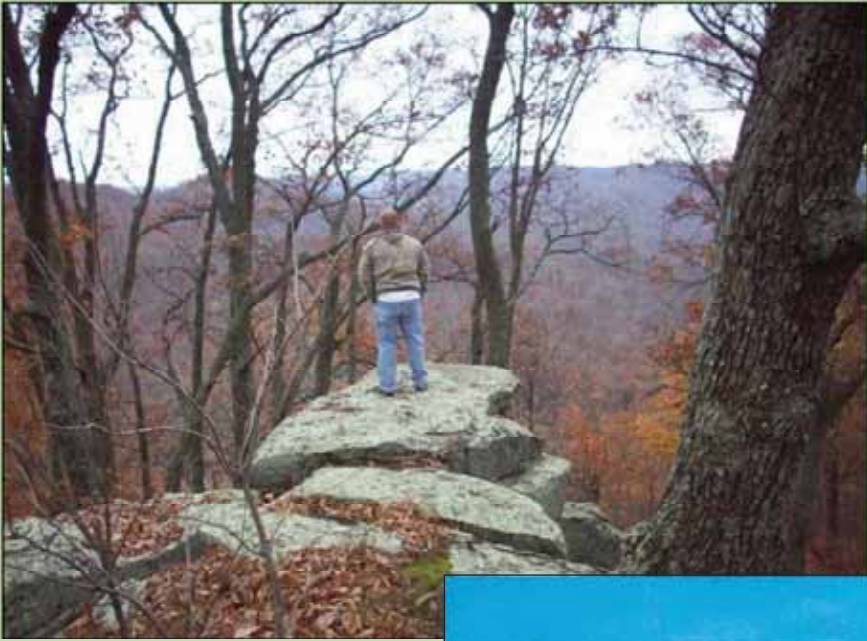
High water is a major concern for local residents. Mountaintop removal, strip mining, and logging cause more water run-off from the mountains when it rains. That, in turn, causes flooding.



- 34 non-activist women completed the 8-month project
  - 18 created coal-critical photostories for public exhibits
  - Only 5 of these 18 women became involved in the environmental justice movement



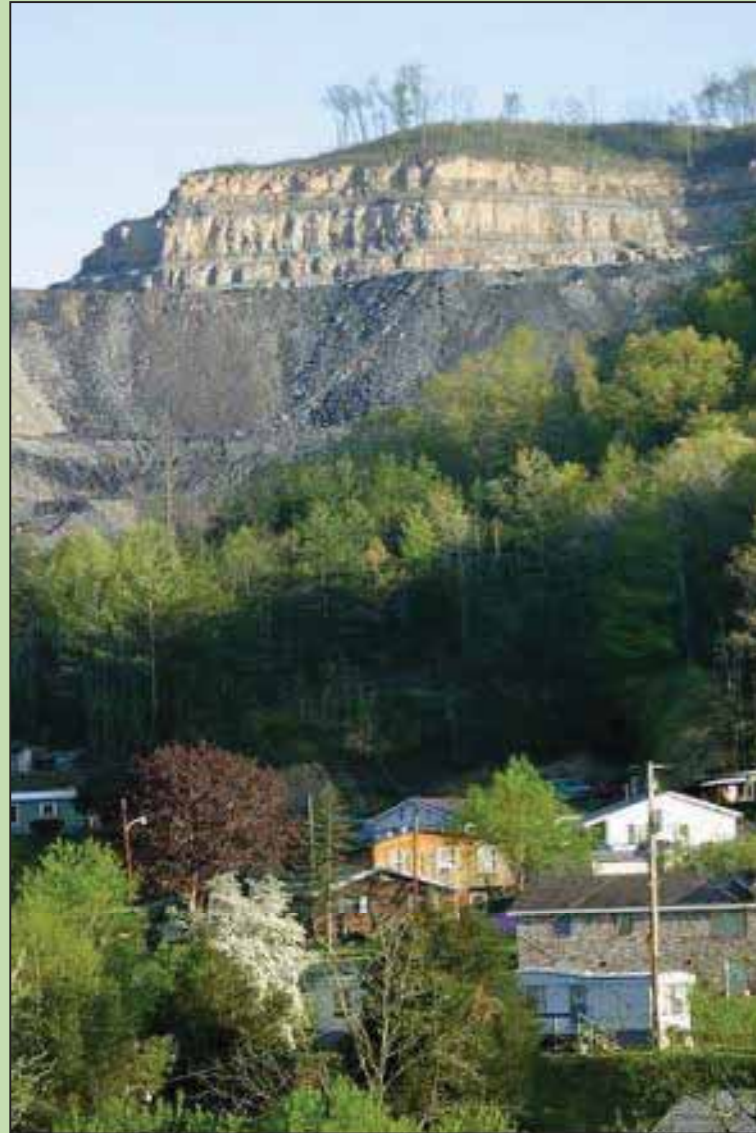
“Heritage Rock”





## “The Death of a Community Treasure”

The rock formation in the top two photographs was called [Heritage Rock]...It has been a landmark to our community for generations. On January 6, 2009... Community members were invited to attend a “town forum” to (supposedly) give us the opportunity to provide input about whether the Department of Environmental Protection (DEP) should renew Pritchard Mining Company’s expired mining permit, which included the area of Daniel Boone Rock. There were about 100 people total at this meeting. At least 10-12 community members spoke out against renewing the permit, while only one community person spoke for it. Despite our time and effort, the day after this meeting – January 7th – the mining company tore down one of the rocks, and the others soon followed. Obviously, this meeting was in name only. We now feel that the DEP doesn’t take the input of the community seriously.



“I really hadn’t intended for it to be...so much against the mining industry as a whole. You know, I was, I was against the mountaintop thing, but it seemed like, you know, it kinda went to being against miners totally... It seems like there’s, there’s just so much against it right now. And I kinda feel bad because...I voiced my opinion on it, and maybe, you know, helped it to go that way, I don’t know...That wasn’t my plans, in taking the mountaintop removal pictures, you know. But it just seems like it’s just everybody, well not everybody, but a bunch, are going against the mining industry. And, you know, that’s the way we made our living. My husband worked in the mines for twenty-some years, and I wasn’t against it all together, just against the mountaintop part. .. after we saw the way it was going, we did back off.”



“I’ve kind of retracted myself from certain groups and everything because I just felt like I didn’t want my name to be out there with [them] because of some of the things that they were doing that I totally didn’t agree with. I mean, I agree with their cause, but I think there’s a way to go about things..... they’re taking stuff a little farther than what I’m comfortable with...”

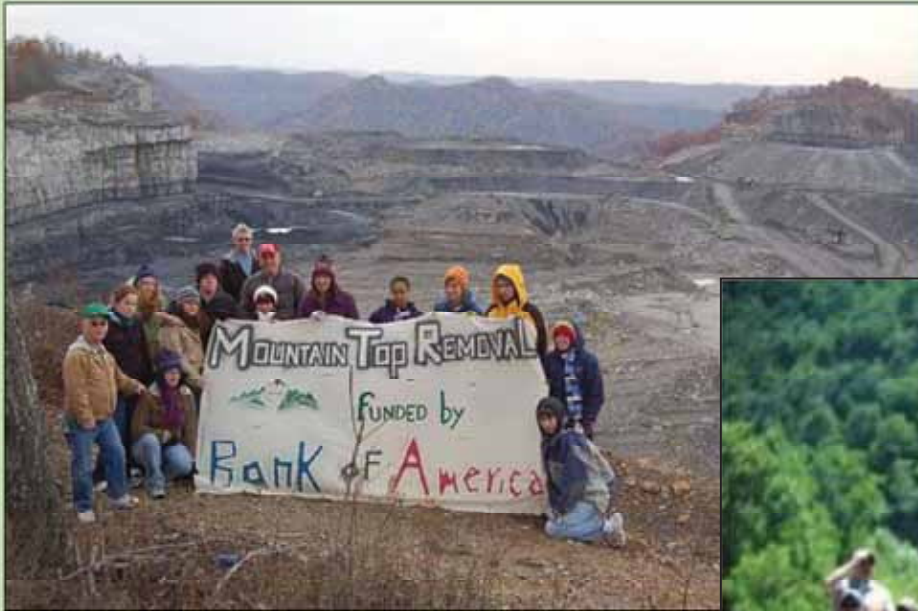
“...We have to live here, and I respect their causes, and I understand a lot of them, that’s kind of what they’ve dedicated their life to, but don’t, don’t try to force, you know?”

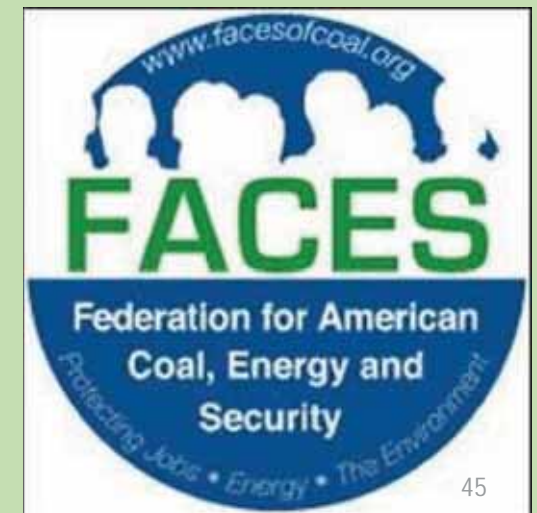
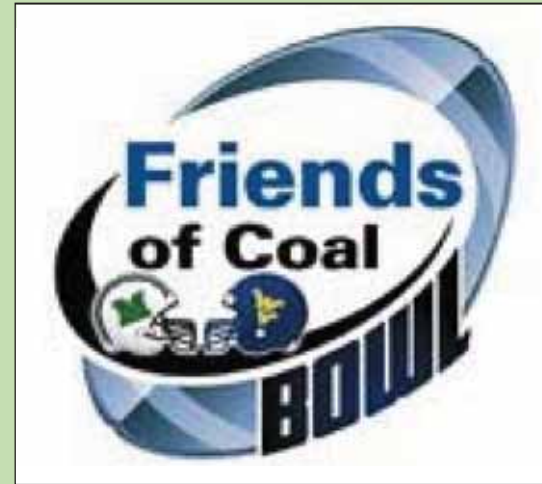
“I don’t want to be involved with something like that; it’s just not me.”



“They got – who was it - Daryl Hannah – Daryl Hannah came in and got arrested. Well, that put it into national [news], which really makes people talk and get upset, and it opened a big can of worms because words got harsh. It put people back away from that negotiating line. It really is difficult to get them up to that point ...it takes a lot of work to get the confidence, to get people to open up to even just listen to you...I don't know how they'll get them to open up again...it'll take a lot of work.”

– Photovoice participant Dorothy





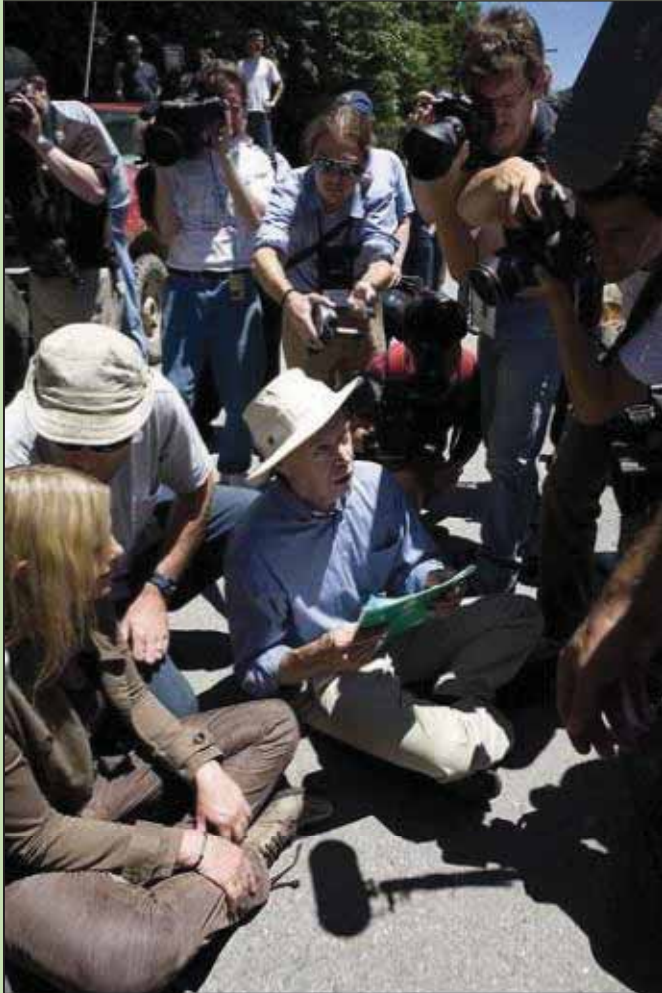
Coal-Industry sponsored “Astroturf” (fake grassroots) organizations

- “If you talk about the bad things that’s happened [because of coal mining]...everybody’s like, ‘Oh, you’re against coal.’”
- “When somebody says, ‘You’re against coal,’ what they mean is, ‘You’re against me’...that doesn’t go away.”





- “It backlashed on us, Shannon....we had repercussions over it.”
- An “outsider stigma” could have consequences due to the region’s loss in social capital



← Actress Daryl Hannah and Climate Scientist James Hansen being photographed and interviewed at a 2009 protest



Actress Daryl Hannah being arrested at the 2009 protest





The environmental justice platform is influential because it is grounded in a struggle for human rights

EJ movements need local voices to give credibility to the claims of injustice

If the local identities of these movements are lost, they may also lose their power.

