



POISON WATER

Part two of a case study documenting efforts to protect our water

By Rick Handshoe

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County, Kentucky**

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The stream was our playground

My name is Rick Handshoe. I'm a retired radio technician with the Kentucky State Police. I live in Hueysville, Kentucky, along the banks of Raccoon Creek. A number of coal companies have been strip-mining in this community for about 16 years. I live within half a mile of at least nine hollow-fills. There are also two abandoned underground mines nearby.

I love living here. My ancestors have lived here for over two hundred years. It's real quiet. It's the place where I grew up and learned to appreciate our mountains and streams. This community is really close. Everybody here is either family or we grew up and went to school together. We've known each other for generations. Everybody in my community has a garden to supply their food during growing season, plus we do a lot of canning for wintertime. The whole neighborhood does that. We like to hunt and hike and spend a lot of time outdoors.

All of us used to play in the creek years ago. The stream was our playground. We'd catch minnows and crawdads to use as bait when we went fishing. And many families watered their gardens with the creek water.

But none of that happens any more, because Raccoon Creek is dead. Nothing can live in this stream. A neighbor recently used the creek water to fill his stocked fishing pond. His statement was that "it boiled the fish alive." He had raised these fish like pets, but it killed a whole lot of them. My neighbors who watered their sweet potatoes with creek water noticed that the plants wilted immediately. We have to wonder what harm the pollution is doing to our health.



The stream now starts at the top of the mountain at a discharge pipe that carries water off a mine site operated by James River Coal Company. The water is supposed to be treated on the mine site. It flows into a settlement pond where the iron and other pollutants have a chance to drop to the bottom before the water flows downstream. But there have been frequent problems, including a three-month period in the spring of 2011 when James River Coal was cited four separate times for water quality violations coming out of that pond. At times, the whole stream has run orange for days.



A new sign of trouble

Then early in 2012, I noticed something new and very odd about a second creek on my property. This stream runs about 500 feet behind my house. Starting in January 2012, I could see that it was covered with white foam. When I tested it, the pH was about 4.5, which is very acidic.

Normal rainwater has a pH of about 6.5. As you go lower on the pH scale, each new number means the water is 10 times more acidic. So when my tests showed that the creek had a pH of about 4.5, that means it was 100 times more acidic than rainwater.

The way I understand it, the foam on the surface of the water is a sign that acidic water is eating through organic material in the stream. It's also an indicator that the problem is a recent one, because after a while all the organic matter would be gone.

These are problems I tried to prevent

To understand this situation, you need to know a bit about the mining around here. There's a long history of deep mines in this area. The hillsides are honeycombed with old underground mines filled

with water. A couple years ago Miller Brothers Coal Company started surface mining up on the hill behind my house. The company has since changed hands several times. It's now owned by James River Coal.

Before they got started, I challenged their proposed mining permit. I told the state that there was already an unstable slide on the mountain from an old logging job, and I was concerned that mining would make that problem much worse. I also tried to protect the two streams on my property.

At the time, the state Department of Mine Reclamation and Enforcement said you can't look into the future and say they are going to destroy the water. So they approved the company's permit. Now some of the problems I worried about are actually happening. And I have to gather

evidence to say for sure what has caused the damage to my land and water.

I also had to work for more than two years to get the US Army Corps of Engineers to admit that the stream behind my house was, in fact, a perennial stream. It

wasn't listed that way on the coal company's permit, which would have allowed them to mine right through it. For two years I had to document the stream was flowing all the time, even in the middle of a big drought. Finally, I won that argument. The company had to quit mining so close to the stream.

They haven't taken any action, and they continue to let poisoned water run down this hill

The company strip-mined up on top of the mountain around 2007. Since that time I've had many concerns that the land was not properly reclaimed. A couple years back, a slide appeared on the permitted area, up above the older logging slide. Then, between December 2011 and January 2012, the company brought some equipment on the backside of this mountain and did some reclamation work. It's not clear what happened. But something is now putting pressure on the acidic water inside the old deep mines and causing it to come to the surface and enter the stream.

When I noticed the foam in the stream in January 2012, I notified the Kentucky Division of Water and the Department for Mine Reclamation and Enforcement. The first agency I contacted was the Division of Water. They were up here in the neighborhood with five people from Frankfort and two local inspectors to check on another situation. I asked them to stop by my place and check the pH in this stream to make sure that my instrument was reading properly. Their reading showed that the pH was 3.62 that day, worse than I had thought. I also showed them the foam in the stream.

I didn't hear anything after they left that day. So a week later I called Josh George in the Hazard office of the Division of Water to formally request an inspection from the Division of Water. He called me back the next day and said, "My supervisor is telling me that you should contact the Department of Mine Reclamation and Enforcement (DMRE) and file a complaint with them. Since the problem is on a permitted area, let them come out and do an inspection. If they don't, or if you don't agree with their actions, then our agency will come out." So I filed a complaint with DMRE on January 20.

About a month later I happened to be in a meeting with Kentucky Environmental Protection Commissioner Bruce Scott about other issues. I showed him some pictures of the foam in my creek and described the problem. He said that his department, which includes the Division of Water, was working to build a closer working relationship with the Natural Resources Department, which includes the Department for Mine Reclamation and Enforcement. He admitted that they didn't always share information or work well together.

In these six months, I have seen some friction between those two state agencies that are part of the same Energy and Environment Cabinet. They don't seem to communicate. One inspector in the Division of Water told me he can't get any information about my situation from his sister agency. They don't share information. That's sad. But lately it seems that things might be getting a bit better. If those agencies start working together more, that would be a good outcome from all this.

Since I first reported the problem back in January, both state agencies have been back repeatedly to check on the problem. They've watched, along with me, as the water quality has grown from bad to worse. But they haven't taken any action. They continue to let poison water run down this hill.

From bad to worse: At what point are you going to call this a blowout?

In mid-April, after three and a half months of the acidic water in my creek, other strange things started happening. The water has always run out the right side of this holler. But all of a sudden one day it quit running there and started shooting out the left side. And the creek got really muddy. I called the state Department of Mining and asked, "Do you have an inspector here close?" They said no. I said that I would go up and look myself. I found a place where there was water shooting out of the side of the hill from a hole as big as the upper part of my arm, a place where no water has ever come from before.

I called an inspector named Wesley Smith and said, "You ain't going to believe this, but the water has just about dried up where we've been testing it for years. And now it's shooting out the other side of the hill." He came up and looked. He said, "You aren't lying to us."

He checked the water and found the pH was really low and the conductivity was about 4,000 microsiemens. Conductivity is a measure of how much stuff is in the water that conducts electricity. In this area, healthy streams have a conductivity level below 300. If conductivity is higher than 500, the stream can't support aquatic life. A high conductivity reading doesn't tell you what heavy metals or other chemicals are in your water. It just tells you there is a problem. You have to do other tests to figure out exactly what's going on.

After that inspector drove back to Frankfort I called him and asked



This photo shows a conductivity meter resting in a flow of water coming from a new hole, or blowout, in the side of the mountain.

what he found about the water coming out of the deep mines. He said, "What are you talking about?" I asked, "Didn't you check the water coming out of the deep mines?" He didn't even know where those were. They had to send him back out from Frankfort. Sure enough, the water from the deep mines is just as acidic as the water coming out behind my house. The whole water table is destroyed. And for some reason it's under pressure and pouring out where it never has before.

I have to wonder, would the old deep mine have fallen in if they hadn't mined around the edge of the mountain and taken out all the structural support?

A little later another inspector came out and found a new hole about the size of my wrist had opened up and there was water

shooting out. One inspector said that he observed the water there flowing at 8 gallons a minute one week, and 20 gallons a minute a week later.

A week later, I called and said, "Guys, something else is happening." I've got twice the normal water flow. And I spent 7 hours walking the mountain and I found an old "house coal" mine up on the hill. (That's where they would tunnel into the mountain to get blocks of coal to heat people's homes.) Water is just pouring out of it. The inspector said, "When I was up here last week, there was no water coming out of that mine." I said, "You are right. This is the third incident. At what point are you going to call this a blowout?"



This photo shows the entrance to an old house coal mine. Polluted water began flowing from the mouth of his mine in the spring of 2012.

I know I'm in danger

All that water is running into the lower slide and causing it to move. It's moved about 3 feet down hill since January. I'm below it. I'm also concerned about the other slide that formed higher up on the mountain after the company started mining. That one is about 60 yards from the top to the bottom. From side to side it's 60 feet at the bottom and 72 feet at the top. It's located on the company's permitted area, just 27 feet from where their dozer blade stopped. But I've got a letter from the state saying that it's not where there was active mining and is not mine related.

My concern now is that there's still a whole lot of water in there. If there's an additional cave-in, that's when it could be catastrophic. It would be like having a bottle full of water and smashing it. All that water has to go somewhere.

As you can see in the picture above, the entrance to the house coal mine is located at the top of the coal seam. The fact that water is pouring out of this location tells me that the mine inside this mountain is plum full of water, and now it's pouring out the top hole. The first blowout appeared about 120 feet down the hill from this old mine mouth. Two weeks later, when I saw the second hole, it was also about 120 feet down the hill. Then when water started pouring out of this location, 120 feet up the mountain, that's when I got really concerned.

I believe this is a life-threatening situation I'm in right now. The mountain is moving. If the mountain blows, there is no time to get to safety. The problem is 500 feet above my house. There is nowhere else for the water to go.

I had given the state 5-months to deal with the poisoned water, and a month and a half to address this more serious situation. They had been checking. But they had never done anything. They have seen this water change over a several month period. But at no point did they say, "You are in danger, Rick." I know I'm in danger.

I realized I needed to talk with Joe Blackburn or Gail Smith at the federal Office of Surface Mining (OSM) in Lexington. It's a sad situation when you call the OSM office and no one will answer you. The recording says there is nobody here by the name of Blackburn or Smith. I left a message and got a call back from a fellow named John Chedester.

I told him what had been going on. I explained, "I gave these guys with the state five months to deal with the low pH problem. I've given them a month and a half to deal with water blowing out the side of a hill that has never done that before.

How much longer are you going to let them pollute this stream?" He asked if I thought I was in danger. I said, "Mister, I've been in danger a month and a half. I made my daughter leave. It may happen or it may not happen while we talk on the phone right now. The state has seen this situation developing and nobody is even saying it is dangerous."

I also called Gwendolyn Keyes Fleming at the EPA Region IV office in Atlanta. They always say she's in a meeting. Finally yesterday the secretary let me talk with her assistant. I said, "We need some help here. They are letting poisoned water run down this hill for five months. I've given the state every opportunity to take care of this problem. I've got 76 acres of property. I've got two perennial streams running through and joining on my property. And every day I have to buy water to water my tomato plants. That's making me angry. The water that I'm buying is water that is running downhill and is being pumped back to me on the city water system. I've done everything I can to save the one stream that was left, and now it is gone. And I have dangerous blowout up here and can't get any help."

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I see problems the state doesn't see

After that the OSM sent several inspectors out. I told them I believe that I am in imminent danger. They seemed shocked by the things they saw when they were here. When they started looking at all the reclamation behind my house, they kept saying, "This is all in violation." One guy said, "Rick, even though they haven't mined where that slip is, they mined within 30 feet of it and the slip is still on their permit." But the state is still saying no, the slip is not mine related. No state inspector has written them a violation.

The same day the OSM was here, we also saw a state inspector up on the hill looking at the slide. (Maybe that's another coincidence.) One of the federal inspectors said to him, "Look, there are all kinds of violations around here." The state inspector replied that he hadn't done his quarterly report yet and hadn't had time to look things over. But I know he's been up here many days over the past month.

I see problems the state doesn't see. I showed the OSM inspectors a violation that the state has never issued because their inspectors don't get out of their truck to see it. (Somehow even from helicopters they never see two big pits and two big points that have never been reclaimed.) But the federal inspectors told me that they were only there to decide if I was in imminent danger.

It's a really strange situation

It's really a strange situation. If they declare that I am in imminent danger, what actions will that trigger? I don't have a clue. This is new territory.

The federal Office of Surface Mining inspectors were here on May 11. I didn't hear another word from them for about three weeks. Just before Memorial Day weekend I called to talk with Joseph Blackburn, but spoke with a guy named Bob Evans. He said he wasn't familiar with the situation, but would call Joseph Blackburn and John Chedester to ask them for an update. He called me back the next day and said they were waiting on the state's report before they would do their report. He said I should expect it sometime soon, but not the next week because of the holiday.

I waited until June 21 and then I called again and asked to speak with Joseph Blackburn. I was told he was out. I said I hadn't received anything from them about my imminent danger complaint. The secretary, Loren Estes, said she was familiar with the case. She said they had just put a letter in the mail to me the day before. She went ahead and also sent it to me in an email.

That letter is the only piece of written communication I have received about this situation from either state or federal agencies.

It said that the Kentucky Department for Natural Resources has requested assistance from the Federal Office of Surface Mining to determine if the flow of poisoned water from the underground mine is "due to later surface mining operations."

Then on June 25 I got a call from the state DMRE inspector. He said he would continue to come out and take samples each month until the federal OSM inspector could come down from Pittsburgh to help with the investigation. That sounds like it could be months. So it's still a waiting game.

It never ends. And it's making me angry.

The water flowing out of this hillside now is the weirdest looking water I've ever seen. It's shiny and clear. The conductivity was 1,900 in January. In May it was 4,700. That's the highest reading I've ever heard of. And the pH reading has been as low as 2.6. That's the same acidity as lemon juice and it's about 1,000 times more acidic than rainwater.

In May I asked an organization called Appalachian Voices to take a sample of this water and help me learn more about what exactly is in it. They produced pages and pages of lab results. Here are just a few areas of concern:

Pollutant	Concentration	Notes
Aluminum	69,300 ug/L	Almost 100 times over freshwater acute standard of 750 ug/L
Iron	44,100 ug/L	44 times freshwater chronic standard of 1000 ug/L; 10 times the permit limit
Manganese	12,900 ug/L	129 times freshwater fish consumption limit; 3 times permit limit
Selenium	10.1 ug/L	2 times freshwater acute standard of 5 ug/L

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At about that time, I called David Jackson with the Division of Water. He's always been a help to me. He said, "I've got to come out there. With levels that high we need to come out regardless of whether the problem is on a permitted area or not." He came out on May 16 and took water samples. I'm not sure what chemicals he planned to look for. I haven't seen those results.

This whole situation makes me wonder, how long will all these agencies allow this poisoned water to flow downstream before they take any action? I can't sleep.

You know how when you have a baby you sleep with one ear open? That's what I'm doing. It never ends. And it is making me angry.

We're all just waiting for them to do the right thing

There are a lot of people across Kentucky who have been to my place. They have seen what I'm dealing with. They'd be surprised at how much things have changed in these last few months. At this point, I'd like for everyone to stay tuned. Let's see what action the state decides to take. Right now we are all just waiting for them to do the right thing.

What would the right thing be? Well, they've got to stop the poisoned water from running into the stream. That means creating a pond where it can be treated. As for the blowout, I don't really know. But we can't continue to let this water run in the stream.

It's too late to protect my water. But we have got to prevent the destruction of places like Lynch, Kentucky, where there is still good, clean water today.

The people living in eastern Kentucky and Central Appalachia deserve better.

