

# Take Action When You Have Bad Water

## *When Your Water Goes Bad: 10 Steps to Take*

1. Talk to Your Neighbors
2. Report the Problem as an Emergency
3. Collect Evidence When You See It
4. Have Your Water Tested
5. Do a Community Health Survey
6. File an Official Complaint
7. Talk to People Who Have Faced this Problem
8. Register People to Vote
9. Know Your Rights
10. Get the Facts

Contamination from coal mining has contributed to a long history of health problems in the Appalachian region. Whether it is black, red, silted, or clear toxic water coming out of the faucet, or an unusual smell or color in the water running in a nearby creek, it's up to you and your neighbors to protect your health and the health of your children. It won't be easy and it won't be quick, but here are a few steps you can take to clear the water and hold accountable whoever is responsible for sludging it up in the first place.

### **If you suspect water contamination**

- \* Do not boil water from your spigot - this does not take care of heavy metals.
- \* Have water tested as soon as possible See Section 4 of "10 steps to take"
- \* Do not use water to cook
- \* Do not use water to brush your teeth
- \* Keep a log of all health problems and water problems

### **Step 1: Talk to Your Neighbors**

Have they had similar problems? Encourage them to take action with you. Get everyone together and come up with a plan. It is best to have everyone take action together to get government officials to pay attention.

### **Step 2: Report the Problem as an Emergency**

West Virginia Dept. of Environment Protection Emergency Spill Hotline: 1-800-642-3074

More than one person calling is helpful to give details of the situation from more than one perspective, so the DEP officials are prepared when they arrive.

National Response Center: 1-800-424-8802

This national hotline is open 24hrs/day. Calling this hotline ensures that the spill is documented federally. The operators will also contact the DEP to respond to the spill.

*Call Your County Commission.*

Check with local authorities to see if you can get emergency water delivered from

uncontaminated local public water supplies until your community can organize a more permanent source of clean water. Ask about community centers, fire departments, emergency services offices, etc., as possible providers of the emergency water.

### **Step 3: Collect Evidence When You See It**

\*Take pictures and/or video to record bad water and visible health problems. Get the date, time and place on film (you can hold up the day's newspaper or take a shot of the TV displaying the date). Be sure to make copies of the film and do not give away the originals.

\* Collect samples of bad water when you see it. These samples will be the visual evidence that will help you explain the problem to neighbors, make your case in court, or persuade politicians to help you. Make sure to record the date, time, and place of the sample, as well as any weather events taking place (flooding, rain, etc.) at the time of sampling.

#### **How to Collect a Sample of Water**

Suggestion: Video records the process, so you can prove the source of your sample.

- \* Rinse each jar several times using the water you will be sampling.
- \* If the contamination is in a stream, take Sample ONE at the site of contamination, where the contaminated water is coming into the stream.
- \* Take Sample TWO 100 feet up stream.
- \* Sample THREE about 100 feet downstream from the site of contamination.
- \* Label and date each jar and put the jars in the fridge. Then...

### **Step 4: Have your water tested**

\* Do this as soon after you collect the sample as possible. People will understand the importance and be more willing to help if you can explain it with factual data.

- Do this regularly. Even if nothing shows up at first, having a history of what's in your water will help in case it becomes contaminated, which is likely if you live near a coal mining operation.

#### **One test may not pick up contaminants.**

Some contaminants may only be washed into your aquifer during heavy rain, or the contaminants may not be evenly dissolved in the water. **Consider testing more than once.**

#### **Chemicals may accumulate in hot water heaters.**

If possible, have the bottom of your hot water tested for the above chemicals. Chemicals present in your water may accumulate and, therefore be more easily detected in the heated environment.

Call a private lab to test your water

State labs in West Virginia only test for bacteria and not heavy metals. Ask the lab to test for metals, pH, and corrosion – these are contaminants associated with coal slurry and acid mine drainage. The EPA recommends you use a lab certified by the state. However, some residents do not trust labs in their home state.

The National Center for Water Quality Research: 1-800-925-9250 Ext. 2198

Website: <http://www.heidelberg.edu/wql> Email: ncwqr@heidelberg.edu

This lab is based in Heidelberg College in Ohio. The cost is \$60 for heavy metals testing. In addition, there is also \$5 handling fee per order. If samples are gathered and sent together, there will be one \$5 fee. When each person sends them one by one, each one will have to pay \$5 on top of the \$60 cost for testing. The result will be back anywhere between 2-4 weeks.

Office of Laboratory Services, Bureau of Public Health: (304) 558-3530

This office will provide you with a list of WV state-certified labs that you can call.

Department of Health and Human Resources (DHHR): (304) 558-0684

They test only for bacteria. Ask to speak with the sanitarian to assist in collecting samples.

Note: If bacteria are found in your water, it is not necessarily a result of human waste. Some bacteria feed on iron or sulfur found in coal.

The Environmental Microbiology Lab: (304) 558-3530 Ext.2117

They will test for bacteria for a total cost of \$20. They will test for both fecal bacteria as well as E.Coli. It will take them a couple of days to get the result.

The Environmental Chemistry Lab: (304) 965-2694

This lab will test for heavy metals. The cost is as follows: \$15 for each metal tested, \$25 for mercury in particular, and \$10 for chloride in particular. In addition, there is a \$5 processing fee for the test. They are also able to test for hydrogen sulfide (whenever there is the odor, then there is hydrogen sulfide). However, the lab is not able to test for organic materials anymore. They will have to send it to a private lab.

### **WARNING:**

The DEP will probably not test your samples. Most private labs will accept them, so call and ask. Even if you cannot get your water samples tested, keep them for evidence.

### **Step 5: Do a Community Health Survey**

How many people have died or been diagnosed with cancer in the past 5 years? How many people have had liver, gallbladder, or kidney problems? Take a day or two and go door-to-door. Start asking questions and recording data about the health problems in your community. This information is powerful ammunition when explaining to officials that your community needs emergency drinking water NOW!

### **Step 6: File an Official Complaint**

Department of Environmental Protection (DEP) headquarters: (304) 926-0440

Pam Nixon, the Citizen's Advocate of the DEP can be reached at **1-800-654-5227**. She will help you file a complaint. After the complaint is filed, someone else in the DEP will do an investigation to determine the source of the problem. If they can find the source of the contamination, then those who caused it are responsible for the costs of providing you with water. If you believe a mining operation has contaminated a water source, or violated the permit in any way, you have the right to a Citizen's Inspection. This means you can accompany the DEP inspector onto the coal operation and conduct your own inspection. If you do not want the

company to have your name, you do not have to accompany the inspector, and you can tell the DEP not give your name out.

### **Step 7: Talk to People Who Have Faced This Problem**

Coal River Mountain Watch: 304-854-2182

This organization can help guide you through the process of contacting and following up with various government agencies. They can help to connect you with others who have faced water contamination issues, as well as provide resources and training through the Citizen's Enforcement Program.

### **Step 8: Register People to Vote**

Sometimes we need to remind ourselves and our government officials that THEY work for US. If you believe it is your right to have clean water, then it is your responsibility to vote people out of government who are not protecting that right. Call your County Clerk's office for voter registration cards.

### **Step 9: Know your Rights**

Water Systems Council Hotline: 1-888-395-1033

This is a very helpful organization based in Washington DC. They will answer any questions you have regarding your well and the laws that protect your water.

Citizen's groups, like the Coal River Mountain Watch, will also help you to know your rights and direct you to lawyers willing to give advice.

### **Step 10: Get the Facts**

See the next section for more details on how to get information from government agencies and what to look for in strip mining or slurry permits that might impact your water supply!

### **REMEMBER**

- **Be patient:** many people in the DEP are well intentioned, but stretched thin
- **Be persistent:** you have a right to know the results of the investigation
- **Be ready to fight:** Most of these laws depend on Citizen Enforcement. That means it is up to us to protect ourselves and our children from contamination.

### ***Health Problems and Chemicals to Watch For***

The following chemicals have been found to exceed drinking water standards in coal slurry and/or in homes near coal slurry storage. This is NOT a complete list of the chemicals found in coal or of the chemicals used to wash coal, all of which may impact ground water quality and your drinking water. This is also NOT a complete list of possible health problems associated with drinking water contaminated by mining waste.

If you are concerned about specific chemicals, you must request for the lab to test for them.

The EPA recommends that people using household wells near a “coal or other mining operation” should test for “Metals, pH, and corrosion.”

You can be exposed to chemicals in bad water by breathing them in from steam in a shower,

absorbing them through your skin, and drinking them. Inform your doctor if you are on well water near a mining site.

Some health effects occur after receiving low doses over a long period of time. If you think your water might be contaminated, have it tested now, and have it tested regularly, in order to document your exposure. Keep a home record of any health problems and any noticeable problems with the water.

**Chemical Possible Health Effects\*\* EPA Drinking Water Standard (mg/L)**

Chemical	Possible Health Effects**	EPA Drinking Water Standard (mg/L)
Aluminum	Irritation of skin, eyes, nose and upper respiratory tract. Loss of feeling in limbs, drop in blood pressure, damage to liver, kidneys, and lungs. Inflammation of the gastrointestinal tract. Skin or tooth discoloration.*	Secondary 0.05 to 0.20
Arsenic	Cancer (liver, bladder, lung, kidney, and skin).  Skin Damage, problems with circulatory systems, increased risk of cancer.*	0.01
Barium	Respiratory paralysis, muscle twitching or paralysis, may affect pacemaker or the heart muscle.  Increase in Blood Pressure.*	2.0
Beryllium	Lung tumors and lesions, weight loss.  Intestinal lesions.*	0.004
Cadmium	Causes cancer, anemia, discoloration of teeth, & bone changes.  Kidney Damage.*	0.005
Chromium	Irritation to nasal cavity and upper respiratory tract, some compounds may cause cancer.  Skin problems.*	0.1
Copper	Irritation of upper respiratory tract, corneal ulcers and skin irritation, green hair.  Short term: Gastrointestinal distress. Long term exposure: liver or kidney damage.*	1.3
Iron	Decreased blood pressure, bloody diarrhea or coma, vomiting, mild lethargy.	Secondary 0.3
Lead	May cause cancer. Lethargy, autoimmunity, problems with joints, kidneys, and nervous system. Infertility and birth defects  Children: delays in physical or mental development, deficits in attention span and learning ability  Adults: Kidney problems, high blood pressure.*	0.015

Manganese	Loss of controlled movement; weakness, stiff muscles, and trembling hands, hallucinations, forgetfulness and nerve damage, Parkinson, lung embolism and bronchitis.	0.05
Selenium	Hair loss, deformed nails; rashes and redness in skin; numbness in arms or legs. Fingernail loss; numb fingers or toes, circulatory problems*	0.05
Sodium	Could interfere with blood pressure medication	Tertiary
Sulfuric Acid (Acid Mine Drainage)	Corrosive and irritating to skin, eyes, and respiratory and gastrointestinal tracts	Secondary 250
Zinc	Stomach cramps, nausea, vomiting, anemia, damage to the pancreas, and decreased levels of high-density lipoprotein (HDL) cholesterol.	Secondary 5.0

\*\*Health information in this column is from: Hazardous Substances Databank of the National Library of Medicine online at <http://toxnet.nlm.nih.gov/cgi-bin/sis/search>, unless otherwise noted by (\*).

\*Health information from: United States Environmental Protection Agency. Office of Water. June 2003. Poster: National Primary Drinking Water Standards

### **How to Limit Exposure to Hydrogen Sulfide Gas (Rotten Egg Odor)**

- \* On warm days, open doors or windows and turn on fans -- the one on the heating-cooling system or ceiling fans to push out bad air and bring in fresh air
- \* Limit use of hot water.
- \* Take showers instead of baths (lessens chances of UTI).
- \* Limit number of showers per week when possible.
- \* Take showers in early part of the day to limit exposure during sleeping hours.
- \* If you have 2 bathrooms, use the one farthest away from sleeping areas.
- \* Use exhaust fans in bathrooms and kitchen.
- \* Use a humidifier if you have one, with bottled water only in it.