



CONDUCTIVITY: MEASURING MOUNTAINTOP REMOVAL'S HARM TO OUR WATER

Mountaintop removal is an extremely destructive form of coal mining. It clear-cuts timber and undergrowth, blasts open the earth, and destroys streams by filling them with the blown-off mountaintops and toxic mining waste, creating “valley fills.” This devastating practice poisons drinking water, lays waste to wildlife habitat, increases the risk of flooding, and wipes out entire communities.

According to a 2005 Environmental Impact Statement, mountaintop-removal coal mining has buried and contaminated more than 2,000 miles of streams in Appalachia – and many more miles have been buried since then.

Specifically, it is the pollution identified by high conductivity levels in water downstream from mountaintop removal sites and valley fills that poses the clearest danger to our waterways.

WHAT IS CONDUCTIVITY?

Conductivity is a measure of certain pollutants in water, based on the water’s ability to hold an electrical charge. The Environmental Protection Agency has conducted scientific studies that found “high levels of conductivity, dissolved solids, and sulfates are a primary cause of water quality impairments” downstream from valley fills and other mining operations.

In 2010 the Environmental Protection Agency reviewed state mining permits in Appalachia and found that none of them took steps to prevent pollution that increases conductivity in streams they filled with debris.

WHY CONDUCTIVITY MATTERS TO YOU.

High levels of conductivity reliably indicate the presence of other forms of mining-related water pollution. It’s one of the key ways to measure the health of waterways and can point to other safety concerns related to our water.

A handful of states – including Kentucky and West Virginia – seem so friendly with the industry they are supposed to oversee that they have systematically failed to enforce existing clean water laws meant to protect our streams and the health of communities that depend on them. It’s up to concerned residents to force them to act.

Water is fundamental to who we are. It should run clean and clear from our taps, and we have a right not to fear any stream where our children play. Sadly, for many in Appalachia that’s simply not the case.

In addition to conductivity and other water pollution, research shows that “residents in mining areas – especially mountaintop removal mining areas – have higher incidents of cancer, heart disease, kidney disease, birth defects, premature mortality and other issues.”



Ensuring the safety of our water and the health of our citizens should be a matter of course, and that's why we need President Obama to take administrative action.

WHAT CAN I DO TO HELP?

President Obama is the only person who can direct our EPA to create strong and enforceable safeguards against mountaintop removal mining pollution. In the face of states that are more willing to protect the coal industry than protect their own residents, a comprehensive water conductivity standard that protects our waterways and ensures that Kentucky, West Virginia and other states act to test their water reliably is the only option.

Join the Sierra Club in calling on President Obama to direct the EPA to create binding, enforceable water quality protections for Appalachia.

- **Help stop the devastating practice of mountaintop-removal coal mining:**
sierraclub.org/mtr
- **If you have a well and want to test it, contact a local lab for details on obtaining a test kit, or take a sample of the water and send it to them for testing.**
- **Tell state and federal agencies to require pre-mining conductivity assessments and to enforce the Clean Water Act and Surface Mining Control and Reclamation Act.**
- **Write a letter about the coal industry and conductivity to the editor of your local newspaper.**