

Eminent group of scientists call for moratorium on issuance of mountaintop mining permits

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Based on a comprehensive analysis of the latest scientific findings and new data, a group of the nation's leading environmental scientists are calling on the U.S. Environmental Protection Agency and the U.S Army Corps of Engineers to stay all new mountaintop mining permits. In today's edition of the journal *Science*, they argue that peer-reviewed research unequivocally documents irreversible environmental impacts from this form of mining which also exposes local residents to a higher risk of serious health problems.

The authors - hydrologists, ecologists and engineers - are internationally recognized scientists, including several members of the National Academy of Sciences. They argue that the U.S. should take a global leadership role on the issue, as surface [mining](#) in many developing countries is expected to grow extensively in the next decade.

"The scientific evidence of the severe environmental and human impacts from mountaintop mining is strong and irrefutable," says lead author Dr. Margaret Palmer of the University of Maryland Center for Environmental Science and University of Maryland, College Park. "Its impacts are pervasive and long lasting and there is no evidence that any mitigation practices successfully reverse the damage it causes."

In mountaintop mining, upper elevation forests are cleared and stripped of topsoil, and explosives are used to break up rocks in order to access

coal buried below. Much of this rock is pushed into adjacent valleys where it buries and obliterates streams. Mountaintop mining with valley fills (MTM/VF) is widespread throughout eastern Kentucky, West Virginia, and southwestern Virginia.

In their paper, the authors outline severe [environmental degradation](#) taking place at mining sites and downstream. The practice destroys extensive tracts of deciduous forests and buries small streams that play essential roles in the overall health of entire watersheds. Waterborne contaminants enter streams that remain below valley fills and can be transported great distances into larger bodies of water.

Co-author Dr. Emily Bernhardt, of Duke University, explains that "The chemicals released into streams from valley fills contain a variety of ions and trace metals which are toxic or debilitating for many organisms, which explains why biodiversity is reduced below valley fills." The authors provide evidence that mine reclamation and mitigation practices have not prevented the contaminants from moving into downstream waters.

The authors also describe human health impacts associated with surface mining for coal in the Appalachian region, including elevated rates of mortality, lung cancer, and chronic heart, lung and kidney disease in coal producing communities.

"Over the last 30 years, there has been a global increase in surface mining, and it is now the dominant driver of land-use change in the Central Appalachian region," says Dr. Keith Eshleman also of the University of Maryland Center for Environmental Science. "We now know that surface mining has extraordinary consequences for both aquatic and terrestrial ecosystems. Notwithstanding recent attempts to improve reclamation, the immense scale of mountaintop mining makes it unrealistic to think that true restoration or mitigation is possible with

current techniques."

The scientists argue that regulators should no longer ignore rigorous science. "Mining permits are being issued despite the preponderance of scientific evidence that impacts are pervasive and irreversible and that mitigation cannot compensate for losses. Considering environmental impacts of MTM/VF, in combination with evidence that the health of people living in surface-mining regions of the central Appalachians may be compromised by mining activities, we conclude that MTM/VF permits should not be granted unless new methods can be subjected to rigorous peer-review and shown to remedy these problems."

"Now more than ever, we need a 21st century approach to fulfilling our nation's energy needs," says Dr. Palmer. "No longer can we risk human and environmental health in our never-ending search for inexpensive energy. We need to move beyond filling valleys with mountaintop mining waste and temporarily storing fly ash in containment ponds to a modern energy production process built upon sound science, environmental safety and economic common sense."

More information: The article, "Mountaintop Mining Consequences," appears in January 8, 2010 edition of *Science*.

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