**What is Mountaintop Removal Coal Mining?**

Mountaintop removal is a relatively new type of coal mining that began in Appalachia in the 1970s as an extension of conventional strip mining techniques. Mountaintop removal occurs in West Virginia, Kentucky, Virginia and Tennessee. Coal companies in Appalachia are increasingly using this method because it allows for almost complete recovery of coal seams while reducing the number of workers required to a fraction of what conventional methods require.

There are 6 main components of the mountaintop removal process:

**CLEARING** — Before mining can begin, all topsoil and vegetation must be removed. These trees are often not even used commercially in the rush to get the coal, but instead are sometimes burned or illegally dumped into valley fills.



**BLASTING** — Much of the coal lies deep below the surface of the mountain. Accessing this coal through mountaintop removal mining can require the removal of up to 800 feet or more of elevation. This is accomplished using millions of pounds of explosives; in West Virginia alone, 3 million pounds of explosives are used daily in mountaintop removal.



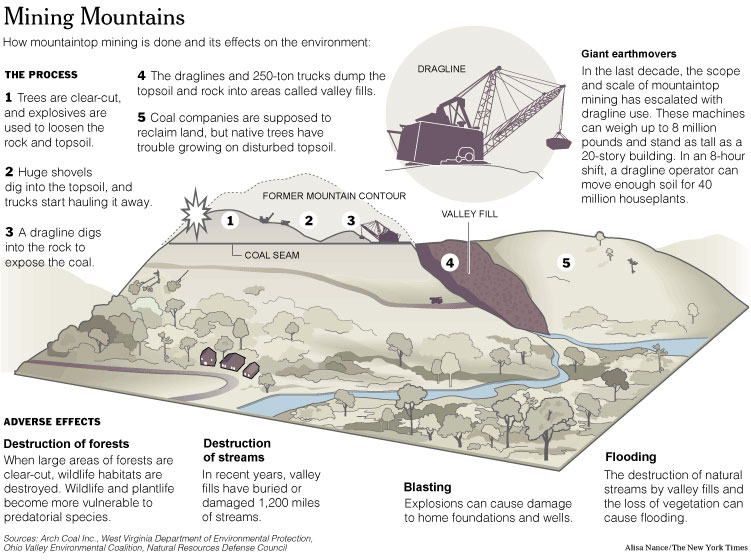
**DIGGING** — Coal and debris is removed by using a piece of machinery called a dragline. A dragline stands 22 stories tall and can hold 24 compact cars in its bucket. These machines can cost up to $100 million, but are favored by coal companies because they displace the need for hundreds of jobs.

**DUMPMINING WASTE** — The waste from the mining operation, known as overburden or spoil, is dumped into nearby valleys, burying streams. Nearly 2,000 miles of streams have already been buried and polluted.

**PROCESSING** — The coal is washed and treated before it is shipped to coal-burning power plants. The waste created by the treatment process is called coal slurry or sludge and is stored in open impoundments. Impoundments are lakes of liquid mining waste that are often held in place by dams made of dried coal slurry. The liquid mining waste, or sludge, is a mixture of toxic chemicals, including arsenic, mercury, lead, copper, and chromium.

**RECLAMATION** — In theory, reclamation efforts such as stabilization and re-vegetation are required for mountaintop removal sites, but often state agencies grant waivers to these reclamation techniques. Most sites receive little more than a spraying of an exotic grass seed that will grow on rock. However, even the best reclamation provides little comfort to nearby families and communities whose drinking water supplies have been polluted and whose homes are threatened by floods for the hundreds or thousands of years it will require to re-grow a forest on the mined site.

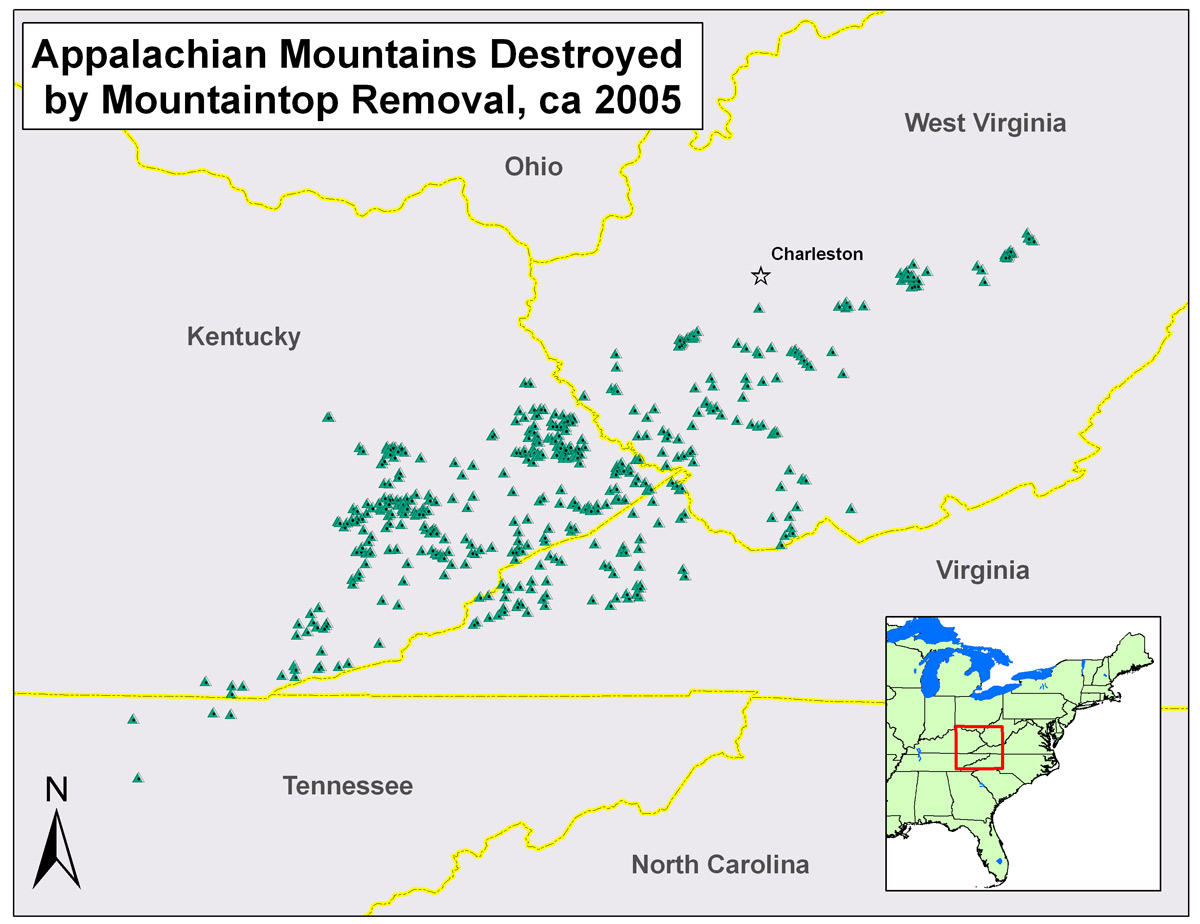
The following illustration published in the *New York Times* shows the mountaintop removal process and its adverse effects:



**Where is mountaintop removal happening?**

New data compiled by Appalachian Voices shows that more than 1.1 million acres of Kentucky, Tennessee, Virginia and West Virginia have been impacted by mountaintop removal, based on satellite imagery and permit data. This study identifies more than 500 mountains and summits in Appalachia that have been destroyed by mountaintop removal.

Appalachian Voices produced the map below in August of 2006. It identifies more over 470 mountains and summits in Appalachia that have been destroyed by mountaintop removal coal mining (as defined by the Office of Surface Mining in their 1985 Environmental Impact Statement).



**What are the effects of mountaintop removal on families and communities?**

In their Mid-Atlantic Regional Assessment, the Environmental Protection Agency states:

“The impact of mountaintop removal on nearby communities is devastating. Dynamite blasts needed to splinter rock strata are so strong they crack the foundations and walls of houses. Mining dries up an average of 100 wells a year and contaminates water in others. In many coalfield communities, the purity and availability of drinking water are keen concerns.”

In addition to the loss or pollution of drinking water and dust contamination from coal trucks, families living near mountaintop removal sites contend with:

**“The impact of mountaintop re-moval on near-by communities is devastating.”**

**FLOODING** — Coalfield residents have had to deal with drastic increases in flooding following mountaintop removal operations. The coal industry usually maintains such floods are “acts of God.” Researchers at the University of Kentucky recently concluded: “there is a clear risk of increased flooding (greater runoff production and less surface flow detention) following [mountaintop removal and valley fill] operations.”

**SLUDGE DAMS** — Sludge dams are the greatest threat to nearby communities among the impacts of coal mining. Impoundments are notoriously leaky, contaminating drinking water supplies in many communities, and are known to fail completely. As recently as 2000, a sludge dam breach in Martin County, Kentucky, sent more than 300 million gallons of toxic coal sludge into tributaries of the Big Sandy River, causing the EPA to call the breach “the biggest environmental disaster ever east of the Mississippi.”

**BLASTING** — Families and communities near mountaintop removal sites are forced to contend with continual blasting from mining operations that can take place up to 300 feet from their homes and operate 24 hours a day. The impact of blasting not only makes life all but unlivable in nearby homes, but it also frequently cracks wells and foundations. Blasting can also send boulders flying hundreds of yards into roads and homes.

**How does mountaintop removal affect the ecology?**

Mountaintop Removal occurs in a hotspot of biological diversity. According to The Nature Conservancy, the mountain region including southwest Virginia, southern West Virginia, eastern Kentucky and northeastern Tennessee contains some of the highest levels of biological diversity in the nation. This region is also at the headwaters of the drinking water supplies of many US cities.

Unfortunately, there is little information on the cumulative impacts of mountaintop removal. The one attempt at a comprehensive analysis of MTR by government agencies was presented in a multi-agency Environmental Impact Statement that was completed in 2003. This effort was initiated in the late ‘90s, but the focus of the EIS was revised after the White House changed hands in 2001.

However, the multi-agency Environmental Impact Statement did provide some useful information on the extent and impacts of mountaintop removal. Here are some of the impacts and concerns expressed in the final EPA report:

* More than 7 percent of Appalachian forests have been cut down and more than 1,200 miles of streams across the region have been buried or polluted between 1985 and 2001.

**More than 500 mountains and nearly 2,000 miles of streams have been destroyed.**

* Over 1,000 miles of streams have been buried in valley fills. (for scale, this is a greater distance than the length of the entire Ohio River).
* If mountaintop removal mining continues unabated, it will cause a projected loss of more than 1.4 million acres of land by the end of the decade—an area the size of Delaware—with severe impacts on both plant and animal species.

**If mountaintop removal continues unabated, it will cause a projected loss of more than 1.4 million acres of land by the end of the decade.**

* 800+ square miles of mountains have already been destroyed. (This is equal to a one-quarter mile wide area of destruction from New York to San Francisco—it is also significantly underestimated).

Other quotes from the 2003 report include:

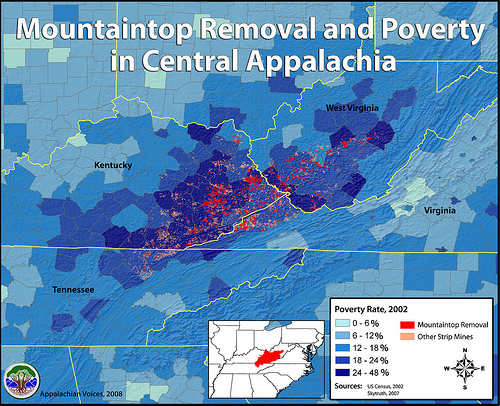
* “[S]tudies found that the natural return of forests to mountaintop mines reclaimed with grasses under hay and pasture or wildlife post-mining land uses occurs very slowly. Full reforestation across a large mine site in such cases may not occur for hundreds of years.”

**“It is difficult to reconstruct free flowing streams at mountaintop removal sites.”**

* “Because it is difficult to intercept groundwater flow, it is difficult to reconstruct free flowing streams at mountaintop removal sites.”

**How does mountaintop removal affect the economy?**

*“*Areas with especially heavy mining have the highest unemployment rates in the region; contrary to the common perception that mining contributes to overall employment.” – Dr. Michael Hendryx, 2009



*“*History shows that the transition from deep to surface mining devastated the region economically, and that the prosperity of mining companies has not gone hand in hand with the economic welfare of coal mine workers…Central Appalachia has suffered from current and persistent economic distress, and that this distress “has been associated with employment in the mining industry, particularly coal mining*.” ­*– Synapse Energy Economics, August 25 2009, *Economic Impacts of Restricting Mountaintop/Valley Fill Coal Mining in Central Appalachia*

Mountaintop removal is a mining technique designed, from the very start, to take the labor

force out of the mining operation. According to the Bureau of Labor Statistics, there were once more than 138,000 mining jobs in West Virginia alone. Currently, there are less than 20,000 mining jobs. During the time that those workers lost their jobs, production increased. Despite increased production, coal-bearing counties in Appalachia continue to be among the poorest counties in the entire country. Multiple studies have shown that there is a direct correlation between increased mining and higher unemployment rates, lower life expectancy, and lower socioeconomic status in the communities of these counties.

**How does mountaintop removal affect America’s energy future?**

Mountaintop removal accounts for roughly 9% of America’s coal, and less than 4.5% of our electricity. According to a report from the US Geological Survey in 2000, the Appalachian coal basin will not continue providing coal for much longer anyway. The report states:

“Sufficient high-quality, thick, bituminous resources remain in [Appalachian Basin] coal beds and coal zones to last for the next one to two decades at current production.”

The report goes on to say that the major Appalachian coal beds “already have peaked in production and the remaining coal is deeper (>1,000 ft), thinner (<3.5 ft), and/or contains environmentally less desirable medium-to-high ash yields and sulfur contents."

**What can Congress do to end Mountaintop Removal?**

In 2002, the Bush Administration enacted a rule change to the Clean Water Act which redefined the phrase "fill material" in order to include mining waste. This rule change has greatly facilitated the practice of mountaintop removal.

**The Clean Water Protection Act re-establishes the original intent of the Clean Water Act.**

Congressman Frank Pallone (D-NJ), Dave Reichert (R-WA), and John Yarmuth (D-KY) have introduced the Clean Water Protection Act (HR 1375), which would stop the valley fill process associated with mountaintop removal. This bill currently has over 115 cosponsors in the US House of Representatives.

In March 2009 Senators Ben Cardin (D-MD) and Lamar Alexander (R-TN) introduced a Senate version of the bill called the Appalachia Restoration Act (S 696). The bill currently has more than 10 bipartisan cosponsors and strong support in the Committee on the Environment and Public Works.

Congress must pass HR 1375 and S 696 in order to end valley fills and protect Appalachian mountains, streams, and communities from toxic mining waste.