

# SKYTRUTH

Satellite images and digital mapping for environmental protection, education, and advocacy



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SkyTruth is a 501(c)(3) nonprofit organization recognized as a tax-exempt charity by the U.S. Internal Revenue Service.  
(ID number 54-2059475)

## SkyTruth work helps link Mountaintop Removal to water pollution



It's official: strip-mining for coal using the massively disruptive process known as "mountaintop removal" definitively pollutes streams and rivers.

Duke University researchers just announced the [results of a new study](#) (awaiting publication) that quantitatively links the amount of mining activity within West Virginia watersheds to levels of key pollutants downstream, including sulfates, selenium and other metals with known environmental and human health effects. This is significant (groundbreaking, actually) because, as one researcher puts it, the results

*"directly link changes in the stream water chemistry to the area of the watersheds that has*

*been disturbed by mining activities."*

How did the team determine the area of the watersheds that was impacted by mining? Glad you asked: **SkyTruth's work provided a key component of this study.** [Our satellite image analysis](#) of surface mining impacts throughout Appalachia from the 1970s through the 2000s gave researchers the spatial and temporal information they needed to correlate mining activity with water-quality measurements.

Now we have a predictive tool, a way to forecast the water-quality impacts of proposed new mining activity. This may mean mining companies need to figure out ways to better protect water quality if they hope to get new mining permits approved. That's good news for aquatic creatures, and great news for those of us humans living downstream who drink this water every day.

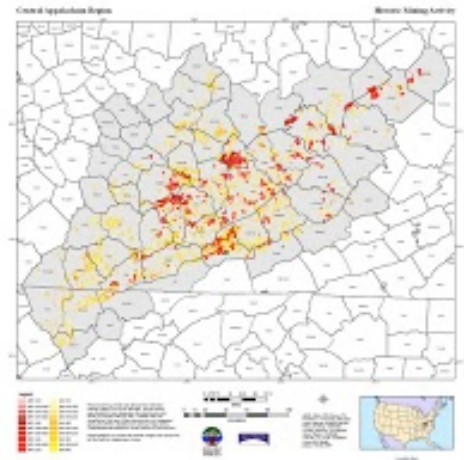


John Amos,  
President

## FEATURED PROJECT: MOUNTAINTOP REMOVAL

SkyTruth, in partnership with Appalachian Voices, [documented the impact](#) of Mountaintop Removal (MTR) over a 59 county area in Kentucky, West Virginia, Tennessee and Virginia. The goal of the project was to map the historical occurrence of MTR and conventional surface strip mining over a 30-year period, from 1976 to 2005. With this analysis, and some great database and Google Earth work by Appalachian Voices, we can tell you exactly which mountains in Appalachia have been- or are being- destroyed to power your home or business ( thought you might like to know...).

Click on "[What's My Connection](#)" to get started.



Map showing total extent of surface mining from 1976-2005

**The historical record shows significant increases in MTR occurring the the last two decades: from 77,000 acres in 1985 to over 272,000 acres in 2005, a 250% increase .**

**Total MTR Mined Area since 1976  
445,792 acres**

**Largest Single Mined Area  
10,410 acres**

**Average Mined Area  
406 acres**

**Number of Mines > 1 sq. mile  
73**

**Number of Ridges Mined  
2,789**

**Total Acres of Impacted Ridges  
130,655 acres**

**Average Ridge Length Mined  
1/2 mile**

**Largest Ridge Removed  
504 Acres**

## PROJECT PARTNER

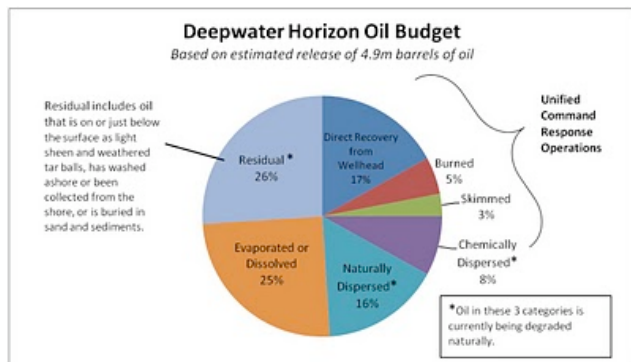


[Appalachian Voices](#) brings people together to solve the environmental problems having the greatest impact on the central and southern Appalachian Mountains. Their mission is to empower people to defend our region's rich natural and cultural heritage by providing them with tools and strategies for successful grassroots campaigns.

## Gulf Oil Spill Update

### 172 Million Gallons of Oil, 11.6 Billion Cubic Feet of Natural Gas

The "static kill" operation succeeded, and [cement was pumped into BP's deadly Macondo oil well in the Gulf of Mexico](#) in early August, providing a measure of comfort that the catastrophic spill had been stopped for good. As of this writing, work is continuing to permanently plug the well by pumping more cement into it from the bottom via a relief well. This delicate "bottom kill" operation, expected by the end of September, will provide a redundant measure of assurance that the Macondo dragon is truly dead.



According to the "Oil Budget Chart" (left - [Figure 1 in their report](#)), [NOAA estimates only 25%](#) of the oil has been diverted, collected or otherwise definitively destroyed. The remaining 75% is still on or below the water's surface or buried in marsh and beach sediments (26%); or it evaporated or dissolved (25%), was naturally dispersed (16%), or was chemically dispersed (8%). Take the report at face value, agreeing that "only" 26% of the oil remains active in the environment, and you're still talking about 50+ million gallons, almost 5 *Exxon Valdez* spills.

Researchers at the University of Georgia [issued their own report](#) claiming that nearly 80% of the oil spilled remains in the ecosystem, subject to evaporation and biodegradation but at unknown rates, meanwhile doing damage in a variety of different ways. Some scientists have estimated that as much as [40% of the flow](#) from the Macondo well was natural gas, mostly methane (CH<sub>4</sub>) that dissolved rather than floating to the surface and escaping into the atmosphere. Much scientific work must be done to answer many questions concerning the fate and impact of this massive oil and gas spill.

### Our Vision

*SkyTruth envisions a world where all people can see and understand the environmental consequences of human activity everywhere on the earth, and are motivated to take action to protect the environment.*

### Our Mission

*SkyTruth's mission is to motivate and empower new constituencies for environmental protection. We use scientifically credible satellite images and other visual technologies to create compelling pictures that vividly illustrate environmental impacts and provide these pictures and supporting data to environmental advocates, the media, and the public.*

## OUR SUPPORTERS

**THE CURTIS AND EDITH  
MUNSON FOUNDATION**

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FOUNDATION**

**TIDES FOUNDATION-  
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FOUNDATION**

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**WALTON FAMILY FUND**

**WESTWIND  
FOUNDATION**

**...and dozens of individual  
donors like YOU!**

## How You Can Help

Support from charitable foundations and private donors like you helps SkyTruth conduct projects, provide training to other groups, and improve our capabilities in an ever-changing field of technology.

You can donate online by using [PayPal or Network for Good](#), or you can mail us a donation (checks only, please) at **SkyTruth, PO Box 3283, Shepherdstown, WV 25443-3283**.

SkyTruth is a 501(c)(3) nonprofit organization recognized as a tax-exempt public charity by the U.S. Internal Revenue Service.

You can also confirm our status at [Guidestar](#), an online registry of tax-exempt organizations.

*SkyTruth does not conduct any lobbying or political activities. Your donation is tax-deductible to the extent allowed by the IRS.*

**SkyTruth** continues to monitor hardrock mining, mountaintop removal coal mining, oil and gas drilling onshore and off, logging, and other activities that impact our environment. Visit our [webpage](#) to learn more about our work.

### Spread the Word...

Help us continue the work of environmental protection, education, and advocacy. Send this newsletter to some of your friends and invite them to learn more about SkyTruth today. **To subscribe/unsubscribe to the SkyTruth newsletters, write to [sarah@skytruth.org](mailto:sarah@skytruth.org).**



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