



2011 West Virginia Mine Drainage Task Force Symposium

OSM Update on Mining, Reclamation, and AMD

Thomas D. Shope
Regional Director
Appalachian Region, OSMRE



2011 West Virginia Mine Drainage Task Force Symposium



MEMORANDUM OF UNDERSTANDING AMONG THE U.S. DEPARTMENT OF THE ARMY, U.S. DEPARTMENT OF THE INTERIOR, AND U.S. ENVIRONMENTAL PROTECTION AGENCY

IMPLEMENTING THE INTERAGENCY ACTION PLAN ON APPALACHIAN SURFACE COAL MINING¹

JUNE 11, 2009

PREAMBLE

The mountains of Appalachia possess unique biological diversity, forests, and freshwater streams that historically have sustained rich and vibrant American communities. These mountains also contain some of the nation's richest deposits of coal, which have been mined by generations of Americans to provide heat and electricity to millions in the U.S. and around the world. After generations of mining, however, the region's most readily available coal resources have diminished, and the remaining coal seams are less accessible to non-surface mining methods.

In response, a surface mining technique commonly referred to as "mountaintop mining"² has become increasingly prevalent in the Appalachian region. Although its scale and efficiency has enabled the mining of once-inaccessible coal seams, this mining practice often stresses the natural environment and impacts the health and welfare of surrounding human communities. Streams once used for swimming, fishing, and drinking water have been adversely impacted, and groundwater resources used for drinking water have been contaminated. Some forest lands that sustain water quality and habitat and contribute to the Appalachian way of life have been fragmented or lost. These negative impacts are likely to further increase as mines transition to less accessible coal resources within already affected watersheds and communities.

With this Memorandum of Understanding (MOU), the Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (Corps)

¹ For purposes of this MOU, "Appalachian surface coal mining" refers to mining techniques requiring permits under both the Surface Mining Control and Reclamation Act (SMCRA) and Section 404 of the Clean Water Act (CWA), in the states of Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.

² The term "mountaintop mining" may also be referred to as "mountaintop removal" or "valley fill mining."



2011 West Virginia Mine Drainage Task Force Symposium

Overarching Action:

- More effective coordination between regulatory agencies and implementation of the SMCRA and the CWA



MEMORANDUM OF UNDERSTANDING AMONG THE
U.S. DEPARTMENT OF THE ARMY,
U.S. DEPARTMENT OF THE INTERIOR,
AND U.S. ENVIRONMENTAL PROTECTION AGENCY
IMPLEMENTING THE INTERAGENCY ACTION PLAN ON APPALACHIAN
SURFACE COAL MINING¹

JUNE 11, 2009

PREAMBLE

The mountains of Appalachia possess unique biological diversity, forests, and freshwater streams that historically have sustained rich and vibrant American communities. These mountains also contain some of the nation's richest deposits of coal, which have been mined by generations of Americans to provide heat and electricity to millions in the U.S. and around the world. After generations of mining, however, the region's most readily available coal resources have diminished, and the remaining coal seams are less accessible to non-surface mining methods.

In response, a surface mining technique commonly referred to as "mountaintop mining"² has become increasingly prevalent in the Appalachian region. Although its scale and efficiency has enabled the mining of once-inaccessible coal seams, this mining practice often stresses the natural environment and impacts the health and welfare of surrounding human communities. Streams once used for swimming, fishing, and drinking water have been adversely impacted, and groundwater resources used for drinking water have been contaminated. Some forest lands that sustain water quality and habitat and contribute to the Appalachian way of life have been fragmented or lost. These negative impacts are likely to further increase as mines transition to less accessible coal resources within already affected watersheds and communities.

With this Memorandum of Understanding (MOU), the Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (Corps)

¹ For purposes of this MOU, "Appalachian surface coal mining" refers to mining techniques requiring permits under both the Surface Mining Control and Reclamation Act (SMCRA) and Section 404 of the Clean Water Act (CWA), in the states of Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.

² The term "mountaintop mining" may also be referred to as "mountaintop removal" or "valley fill mining."



2011 West Virginia Mine Drainage Task Force Symposium

Interagency coordination:

Local Interagency Working Agreement for Coal Mine Permitting, Compliance and Enforcement Actions in Tennessee Under the Clean Water Act, the Surface Mining Control and Reclamation Act, and the Endangered Species Act

The June 11, 2009 National Memorandum of Understanding (MOU) was signed by the Department of the Interior, Department of the Army, and the Environmental Protection Agency (EPA) in recognition that the Appalachian Mountains possess unique biological diversity, forests, and freshwater streams. With the June 11, 2009 MOU, the federal signatory agencies announced a plan designed to reduce the harmful environmental consequences of Appalachian surface coal mining operations, while ensuring that future mining remains consistent with federal laws. The Federal government has made a commitment to move America towards a 21st century clean energy economy based on the recognition that sustainable economy and environment must work hand in hand. The MOU committed the federal agencies to work in coordination with regional, state, and local entities to implement processes and procedures which are embodied in the MOU.

The purpose of this Local Interagency Working Agreement (LIWA) is to improve agency communication and coordination during the coal mine permitting process in Tennessee under the respective state and federal permitting, enforcement, and compliance reviews required by the Clean Water Act (CWA), the Surface Mining Control and Reclamation Act (SMCRA), and the Endangered Species Act (ESA).

The Tennessee Department of Environment and Conservation (TDEC), the Nashville District of the Corps of Engineers, The Cookeville Field Office of the US Fish and Wildlife Service (USFWS), the Knoxville Field Office of the Office of Surface Mining Reclamation and Enforcement (OSM), and Region 4 of the EPA have worked together since the national MOU was signed to develop standard operating procedures (SOPs) covering major activities that agencies undertake in their joint reviews of mining operations in Tennessee. These SOPs will enhance integration and efficiency of each agency's operations, provide better information and data for permitting decisions, and make these processes more transparent. These SOPs will provide the public and the regulated industry with guidance on agency expectations for data and information needs and are designed to ensure environmental protection while expediting the decision process. It is the intent of these agencies to continue to work on common goals and to include other groups (i.e., Tennessee Wildlife Resources Agency, Tennessee Department of Agriculture/Division of Forestry, etc.) to accomplish the common goal of protecting the human and natural environment.

The agencies will implement the LIWA and modify as necessary to provide continuous improvement of the review and coordination process and to incorporate any changes in national policies or regulations. The SOPs currently included in the LIWA are: Jurisdictional

Determinations, Avoidance and Minimization, Mitigation and Restoration, Section 401 and 404 CWA Permit Verification and Enforcement Notification, Cumulative Hydrologic Impact Assessment (CHIA), Public Participation, Endangered Species Act, National Historic Preservation Act (NHPA), Revision Coordination, and Water Quality Data. SOPs currently under development are National Environmental Policy Act (NEPA) and Permit Renewals. Additional SOPs will be developed on an as needed basis. The conceptual framework is laid out in the process flowchart found in Appendix 1.

The LIWA, including its associated SOPs, does not create any rights, either substantive or enforceable by any party. This document does not and is not intended to impose any legally binding requirements on state or federal agencies, the regulated community or public, and does not restrict the authorities of signatory agencies to exercise their discretion in each case to make a regulatory decision based on their judgment about specific facts and application of relevant statutes and regulations. Nothing in this document or associated SOPs are intended to diminish, modify, or otherwise affect the statutory or regulatory authorities of the involved agencies or relieve these parties of their obligations under federal and state law. Nothing in this working agreement will be construed as indicating a financial commitment by the agencies to expend funds. Any agency can withdraw at anytime from this working agreement by providing written notice to the other agencies; however, the working agreement will continue to remain in effect for other agencies.

TDEC, Knoxville Environmental Field Office

USFWS, Cookeville Field Office

OSM, Knoxville Field Office

Corps of Engineers, Nashville District

EPA, Region 4

Appendix 1. Process Flowchart

List of SOPs

Jurisdictional Determinations SOP
Avoidance and Minimization SOP
Mitigation/Restoration SOP
Section 401 and 404 CWA Permit Verification and Enforcement Notification
Cumulative Hydrological Impact Assessment SOP
Public Participation SOP
Endangered Species Act SOP
National Historic Preservation Act SOP
Revision Coordination SOP
Water Quality Data SOP



2011 West Virginia Mine Drainage Task Force Symposium



Office of Surface Mining Reclamation and Enforcement

April 9, 2010

Draft - Geospatial Strategic Plan

access activities applications available business coal data decisions developed doi
federal future geoplan **geospatial** gis goals implement information
infrastructure land location maintain map mining national nrcmc offices **osm**
partners plan processes program provide public reclamation related requirements resources
services smcra spatial standards **State** support system technology tips
tools Tribal Tribes



2011 West Virginia Mine Drainage Task Force Symposium



MEMORANDUM OF UNDERSTANDING AMONG THE
U.S. DEPARTMENT OF THE ARMY,
U.S. DEPARTMENT OF THE INTERIOR,
AND U.S. ENVIRONMENTAL PROTECTION AGENCY
IMPLEMENTING THE INTERAGENCY ACTION PLAN ON APPALACHIAN
SURFACE COAL MINING¹

JUNE 11, 2009

PREAMBLE

The mountains of Appalachia possess unique biological diversity, forests, and freshwater streams that historically have sustained rich and vibrant American communities. These mountains also contain some of the nation's richest deposits of coal, which have been mined by generations of Americans to provide heat and electricity to millions in the U.S. and around the world. After generations of mining, however, the region's most readily available coal resources have diminished, and the remaining coal seams are less accessible to non-surface mining methods.

In response, a surface mining technique commonly referred to as "mountaintop mining"² has become increasingly prevalent in the Appalachian region. Although its scale and efficiency has enabled the mining of once-inaccessible coal seams, this mining practice often stresses the natural environment and impacts the health and welfare of surrounding human communities. Streams once used for swimming, fishing, and drinking water have been adversely impacted, and groundwater resources used for drinking water have been contaminated. Some forest lands that sustain water quality and habitat and contribute to the Appalachian way of life have been fragmented or lost. These negative impacts are likely to further increase as mines transition to less accessible coal resources within already affected watersheds and communities.

With this Memorandum of Understanding (MOU), the Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (Corps)

¹ For purposes of this MOU, "Appalachian surface coal mining" refers to mining techniques requiring permits under both the Surface Mining Control and Reclamation Act (SMCRA) and Section 404 of the Clean Water Act (CWA), in the states of Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.
² The term "mountaintop mining" may also be referred to as "mountaintop removal" or "valley fill mining."

OSM Action Areas:

- Resolve Litigation over 2008 Stream Buffer Zone Rule/Stream Protection Rule.
- Permit Defects
- Enhanced Oversight



OSM Enhanced Oversight:

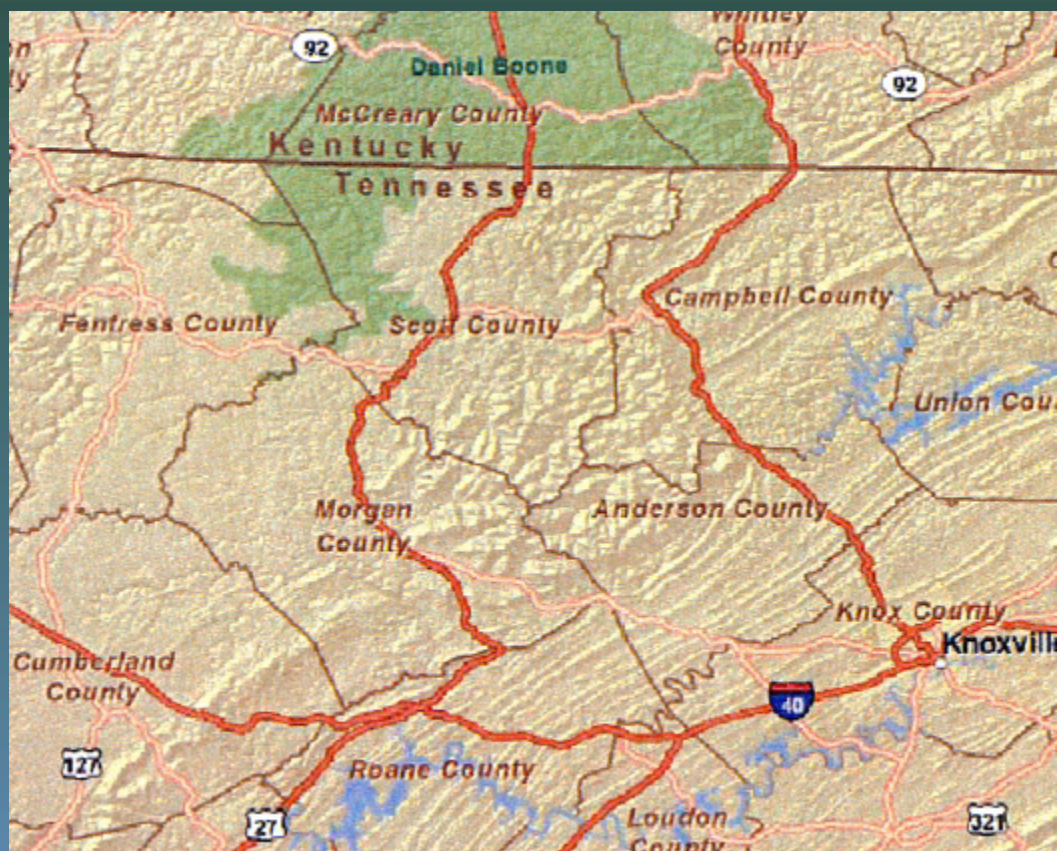
— Focus Areas:

- Increasing the Number of Oversight Inspections
- Inspection Methodology
- Clarifying our authority and responsibility to conduct reviews of and act on state permitting procedures and state issued permits.
- Establishing Action Plans to Resolve Issues
- Greater Stakeholder involvement in the oversight process
- Improving the quality and availability of data and information
- Examining our data collection requirements, quality and use.

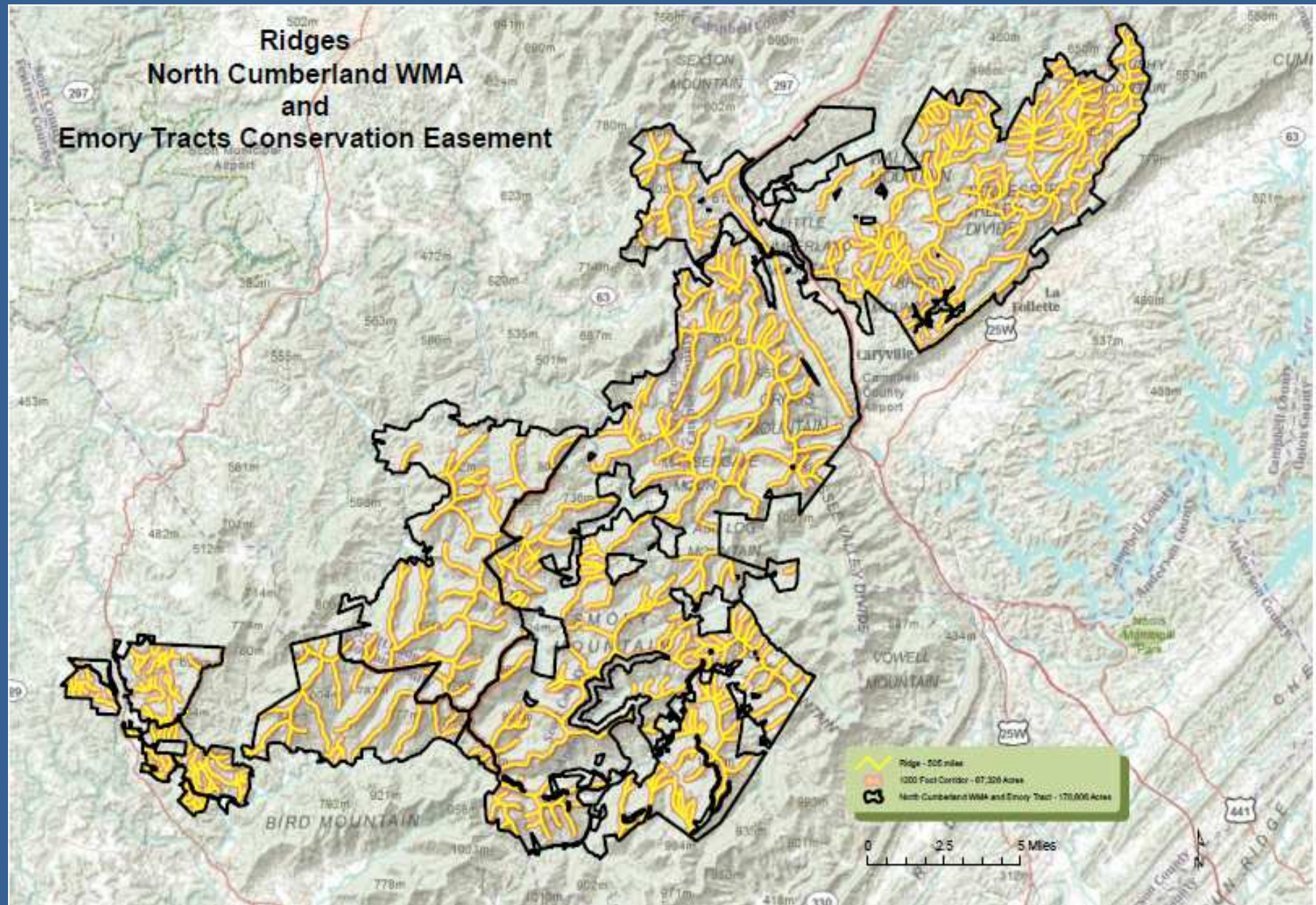


2011 West Virginia Mine Drainage Task Force Symposium

Tennessee Lands Unsuitable for Mining Petition



Ridges North Cumberland WMA and Emory Tracts Conservation Easement





2011 West Virginia Mine Drainage Task Force Symposium

2012. . .





2011 West Virginia Mine Drainage Task Force Symposium

Ongoing Projects:

Improving Passive Mine Drainage Treatment for Manganese Removal – Phase II

Dr. William Burgos, Pennsylvania State University

Developing a Geochemical add-in Module for AMD Treat to Compute Caustic Quantity to Achieve Target pH and Corresponding Effluent Quality and Sludge Volume

Dr. Charles Cravotta, USGS PA Water Science Center



2011 West Virginia Mine Drainage Task Force Symposium

Projects that have just been funded:

Low-pH Fe(II) Oxidation for Passive Treatment of Coal Mine Drainage

Dr. William Burgos, Pennsylvania State University

Effective Monitoring and Assessment of Total Dissolved Solids as a Biotic Stressor in Mining-Influenced Streams

Dr. Stephen Schoenholtz, Virginia Tech



2011 West Virginia Mine Drainage Task Force Symposium

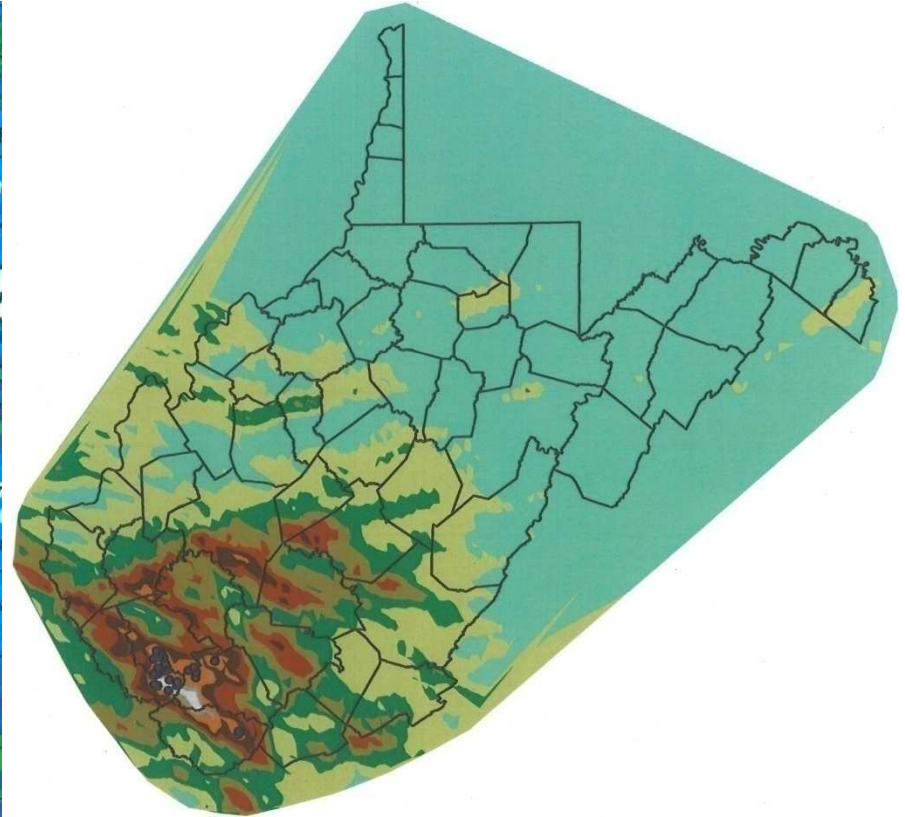
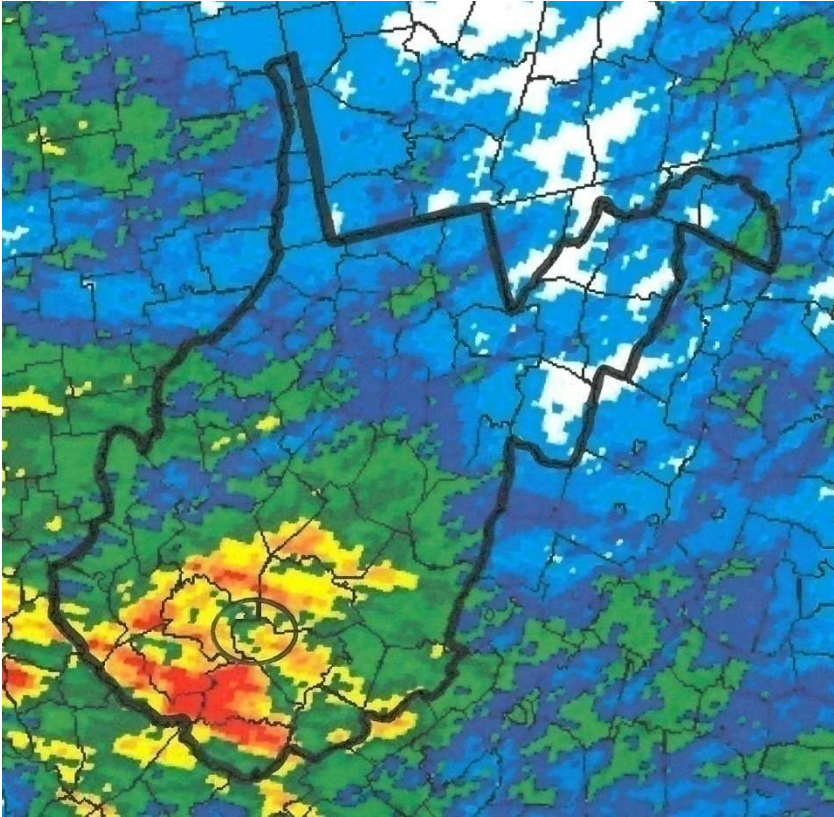




2011 West Virginia Mine Drainage Task Force Symposium



NWS Precipitation Map



Output

5 Year Event 6/13/10

permittee	facility	type	per_status	permit_id	County	Precipitation	5_Year
APPALACHIAN FUELS, LLC.	NA	Other - Haulroad	RN, Renewed	H043600	Logan	3.64	3.5
MID-VOL COAL SALES, INC.	NA	Other - Haulroad	RN, Renewed	O000381	McDowell	3.74	3.64
HAMPDEN COAL COMPANY LLC	NA	Other	RN, Renewed	O000981	Mingo	3.6	3.54
COBRA NATURAL RESOURCES LLC	NA	Other - Preparation Plant	RN, Renewed	O002685	Mingo	3.82	3.54
ROCKHOUSE CREEK DEV LLC	NA	Other	RN, Renewed	O003584	Logan	3.72	3.5
SNAP CREEK MINING LLC	HAULROAD NO. 1	Other	RN, Renewed	O501196	Logan	3.79	3.5
HAMPDEN COAL COMPANY LLC	NA	Other - Preparation Plant	RN, Renewed	O501388	Mingo	3.83	3.54
SNAP CREEK MINING LLC	LYBURN TIPPLE	Other	RN, Renewed	O501696	Logan	3.66	3.5
COBRA NATURAL RESOURCES LLC	NA	Other - Preparation Plant	RN, Renewed	O505088	Mingo	3.55	3.54
DYNAMIC ENERGY, INC.	NA	Other - Preparation Plant	RN, Renewed	P058600	Wyoming	3.92	3.56
HAMPDEN COAL COMPANY LLC	NA	Coal Surface Mine	P1, Phase 1 Released	S004784	Mingo	3.76	3.54
MID-VOL LEASING INC	ECKMAN-PAGE STRIP AND AUGER MI	Coal Surface Mine	IPH3, Incremental Phase 3 Relea*	S400487	McDowell	3.91	3.64
MID-VOL COAL SALES, INC.	ECKMAN SURFACE MINE NO. 1	Coal Surface Mine	RN, Renewed	S401096	McDowell	3.85	3.64
PIONEER FUEL CORPORATION	WINIFREDE NO. 2 MOUNTAINTOP RE	Coal Surface Mine	RN, Renewed	S401595	Wyoming	3.68	3.56
DYNAMIC ENERGY, INC.	COAL MTN VALLEY FILL NO. 2	Coal Surface Mine	RN, Renewed	S402196	Wyoming	3.59	3.56
HAMPDEN COAL COMPANY LLC	PETE BRANCH SURFACE MINE	Coal Surface Mine	NW, New	S500808	Mingo	3.71	3.54

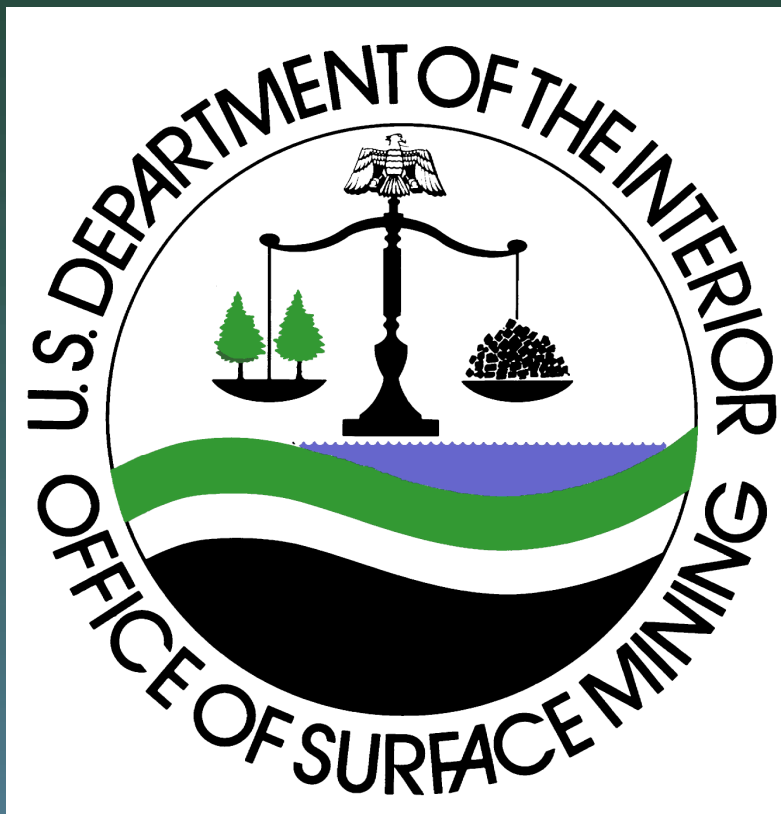


2011 West Virginia Mine Drainage Task Force Symposium





2011 West Virginia Mine Drainage Task Force Symposium



Oversight Suggestions 3/31/11