

# Reclamation of Dangerous Impoundments at Abandoned Coal Mines

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# THE FEDERAL LAW

- **S**urface
- **M**ining
- **C**ontrol and
- **R**eclamation
- **A**ct of 1977

# SMCRA

- Established nationwide program to protect society and the environment from the adverse impacts of past and present coal mining
- Set standards to minimize the adverse impacts to the environment
- Also recognized the need to provide for the nation's need for coal as an energy source



# PRE-SMCRA MINING IMPACTS

- Spoil piles
- Abandoned Impoundments
- Acid mine drainage
- Slope instability
- Erosion and sedimentation
- Useless land
- Habitat elimination
- Flooding





# COAL MINING

- Coal mining in the United States began in colonial times
- Coal has been mined in 35 states
- Currently, about one billion tons of coal are mined each year
- Coal is mined through surface, underground, and augering operations
- Over 50% of the electricity in the United States comes from the burning of coal

# STATE LEGISLATIVE HISTORY

- Individual States enacted mine land reclamation laws
  - West Virginia in 1939
  - Illinois in 1943
  - Indiana in 1941
  - Pennsylvania in 1945
  - Ohio in 1947
  - Kentucky in 1954

# FEDERAL LEGISLATION HISTORY

- Congress begins mine land reclamation discussions in 1940s
- Requirements focus on post-mining topography being “approximate original contour”
- After years of development SMCRA is signed into law on August 3, 1977.

# ABANDONED MINE LANDS

- To correct adverse impacts of coal mining done before SMCRA the Abandoned Mine Lands Fund was established
- The major impacts include dangerous impoundments, subsidence, dangerous high-walls, mine fires, landslides, and dangerous openings
- The monies for the fund comes from a fee paid by coal companies on every ton of coal mined
- Sites with high probability of substantial harm to the general public are reclaimed first as part of the emergency program
- Other sites are reclaimed on a priority scale based on danger and risk to the public

# ELIGIBLE LANDS AND WATER

- Mined or affected by coal mining
- Abandoned prior to SMCRA
- Inadequate reclamation status

# EMERGENCY POWERS

- SMCRA Section 410
  - Provides immediate response
  - Danger to public from mine hazard
  - No other agency has authority to act
  - Site access can be done by police power

# Dangerous Impoundment

- Any AML-related large-volume water impoundment such as a mine waste embankment, sedimentation pond, or underground mine water pool which poses a threat of flooding and catastrophic destruction to downstream property and human health, safety, and general welfare in the event of rupture or breach of the water retention structure.











**Breakthrough  
Location**









# CURRENT STATUS

- Reclaimed
  - Over 1700 dangerous impoundments
  - Over 240,000 acres costing \$1.7 billion
- Unreclaimed
  - 19,000 problem areas
  - \$11.4 billion needed

# SUMMARY

- The enactment of SMCRA came only after a significant debate and compromise
- SMCRA provides for a balance between coal resource development and the protection of our land, water, and people
- SMCRA is flexible enough to allow local regulatory authorities to manage their programs
- SMCRA also established the abandoned mine lands reclamation program to address the hazards and impacts left by unregulated coal mining