

Eastern Mine Drainage Federal Consortium (EMDFC)

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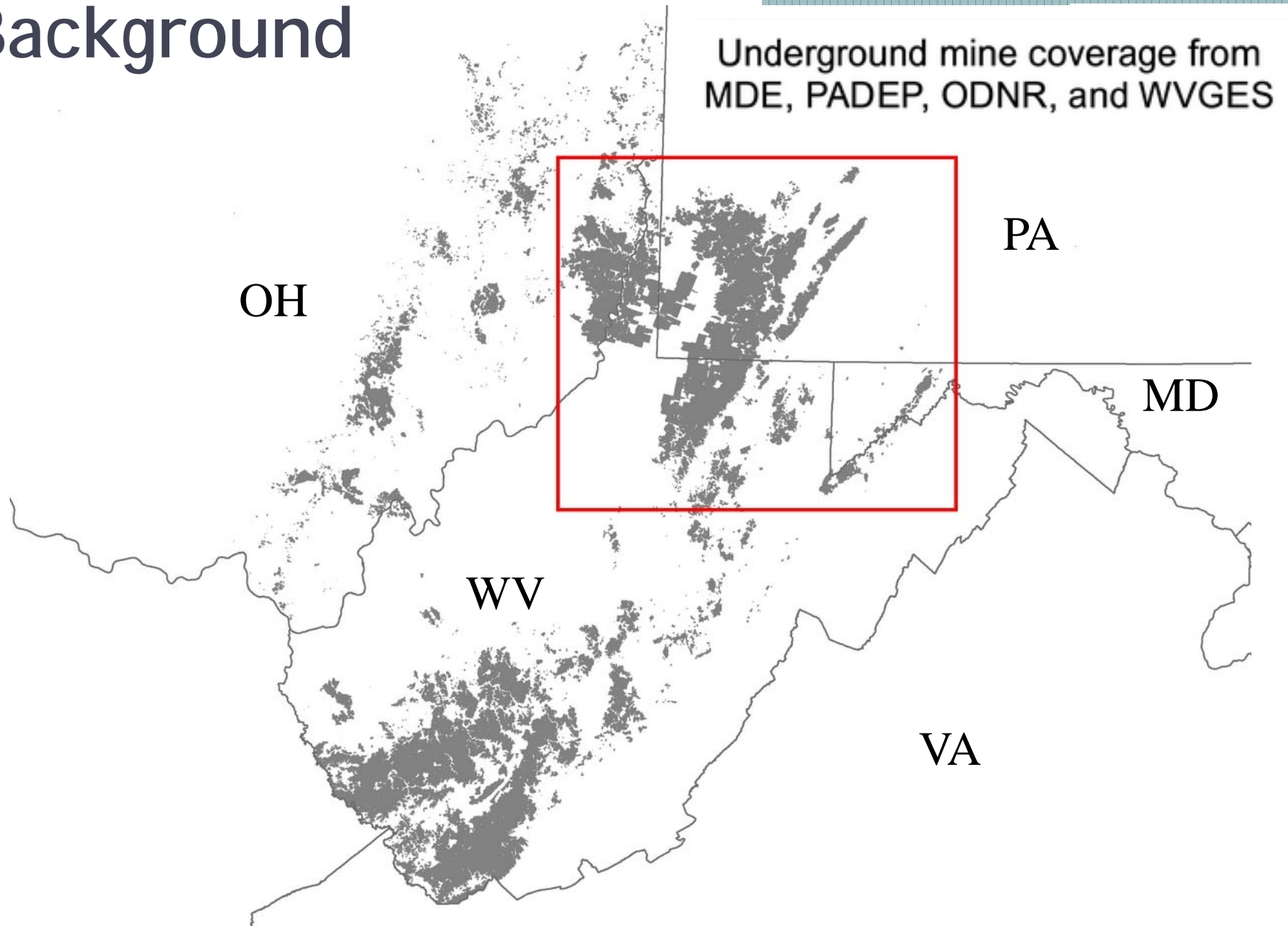
West Virginia Mine Drainage Task Force Symposium
March 27, 2018



Outline

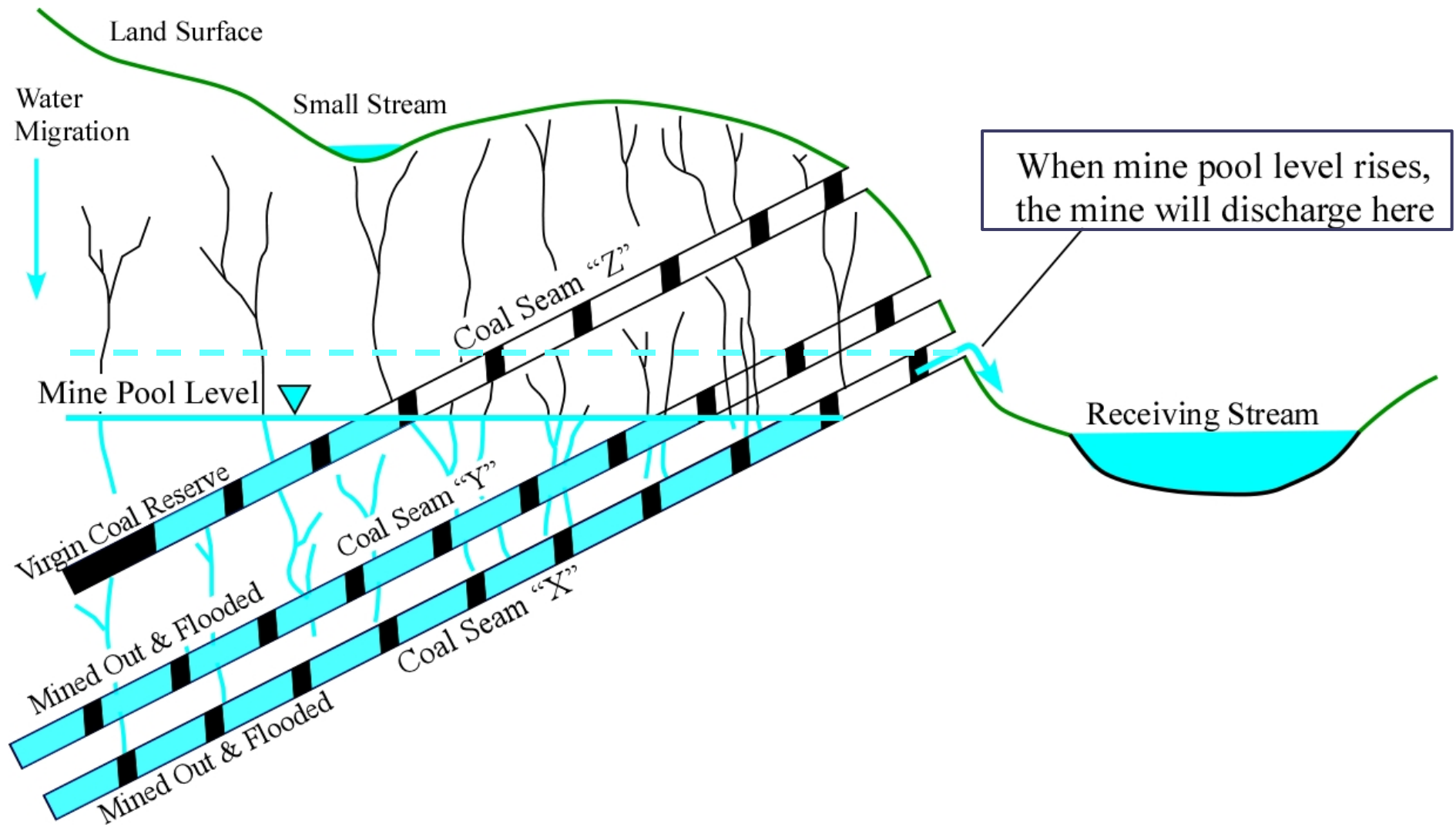
- 💧 **Background**
- 💧 **Organization and Mission**
- 💧 **Current Focus**
- 💧 **Objectives**
- 💧 **Strategy**
- 💧 **Acknowledgements**

Background



Eastern Mine Drainage Federal Consortium

Mine Pool Flooding



Mine Drainage



Mine discharge in Cambria County, PA (Photo: Jay Hawkins)

Mine Drainage - Aluminum



Photo: Steve Ball



Photo: Nancy Pointon



Photo: Jay Hawkins

Mine Drainage - Manganese



Photo: Nancy Pointon



Photo: The Post Athens

Mission Statement

“EMDFC provides a forum to promote and coordinate the review of technical issues and policies regarding water quality related to mining and reclamation activities in the Eastern United States. The Consortium will consult with the States, industry, academia, and the public as appropriate.”

Current Members



**US Army Corps
of Engineers®**



United States Department of Agriculture

Natural Resources
Conservation Service

National Mine Land
Reclamation Center



**APPALACHIAN
REGIONAL
COMMISSION**



Accomplishments

Programs resulting from EMDFC initiatives:

- 💧 Appalachian Clean Streams Program (1995)**
- 💧 Acid Drainage Technology Initiative (1997)**
- 💧 WVI 73 Monongahela Basin Mine Pool Project (2004)**
- 💧 Workshops on stream capture due to longwall mining (2007)**

Current Focus



- 💧 **Concerns about long-term mine pool management once active mines close and cease pumping/treating mine pool water**
- 💧 **Focus on flooding mines, discharges, and impacts on water quality (drinking water, aquatic life)**
- 💧 **Consider proactive responses to potential environmental issues**
- 💧 **Low cost methods for treatment**

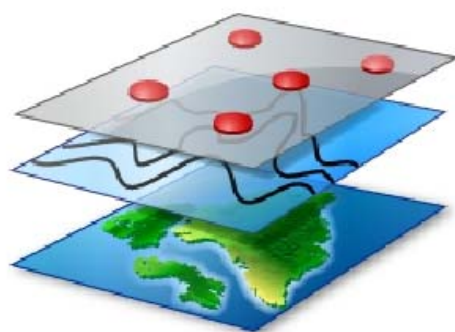
Current Objectives

- 💧 **Identify & catalog underground mines, mine pools, and relevant information in **GIS database****
- 💧 **Develop basin-wide tools to **assess watersheds** and potential risks related to flooded underground coal mines**
- 💧 ****Facilitate coordination** with States, industry, and others to create strategies for protecting watersheds**
- 💧 **Develop **proactive** methods for efficient handling of mine pool water on a large, often basin-wide scale.**

Strategy

- 💧 **Coordinate with State partners (policy and technical)**
- 💧 **Data collection**
- 💧 **Develop GIS database**
- 💧 **Develop methodology for assessing watersheds**
- 💧 **Create watershed-scale contingencies for potential mine discharges**
- 💧 **Cooperative Federalism** - ultimately include all interested parties

Information for Geodatabase



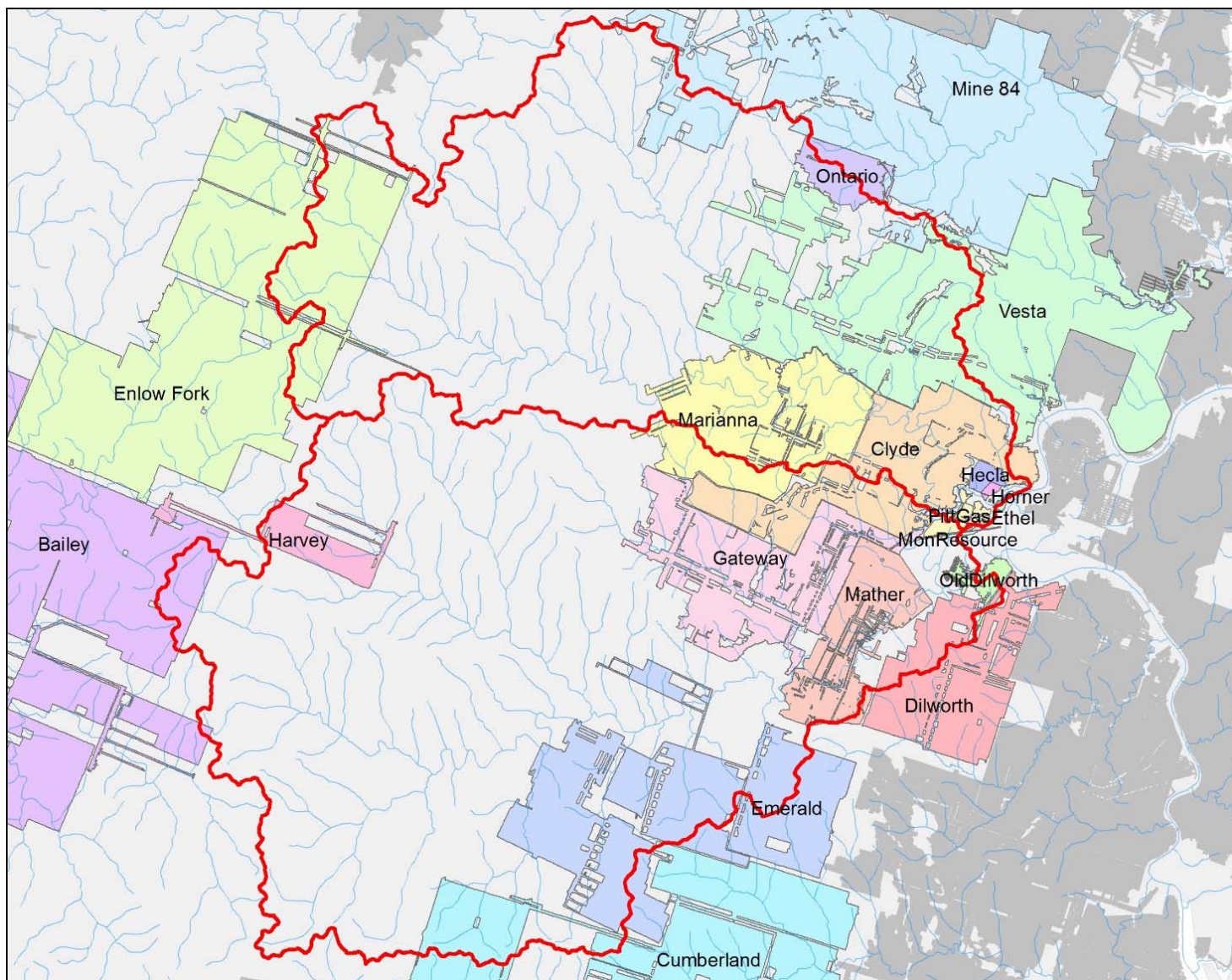
GIS
Database

Mining Geospatial Coverage
Mine Pool Levels & Conditions
Mine Water Chemistry
Mine Pumps & Discharges
Connections Between Mines
Treatment Methods & Facilities
Watershed & Receiving Streams

Progress and Moving Forward

- 💧 **Coordination with States (policy and technical)**
- 💧 **Data gathering**
- 💧 **GIS database development**
- 💧 **Develop methodology for assessing watersheds (e.g. Tenmile Creek North and South Fork HUC10s)**

Tenmile Creek HUC10s



Workgroups within EMDFC

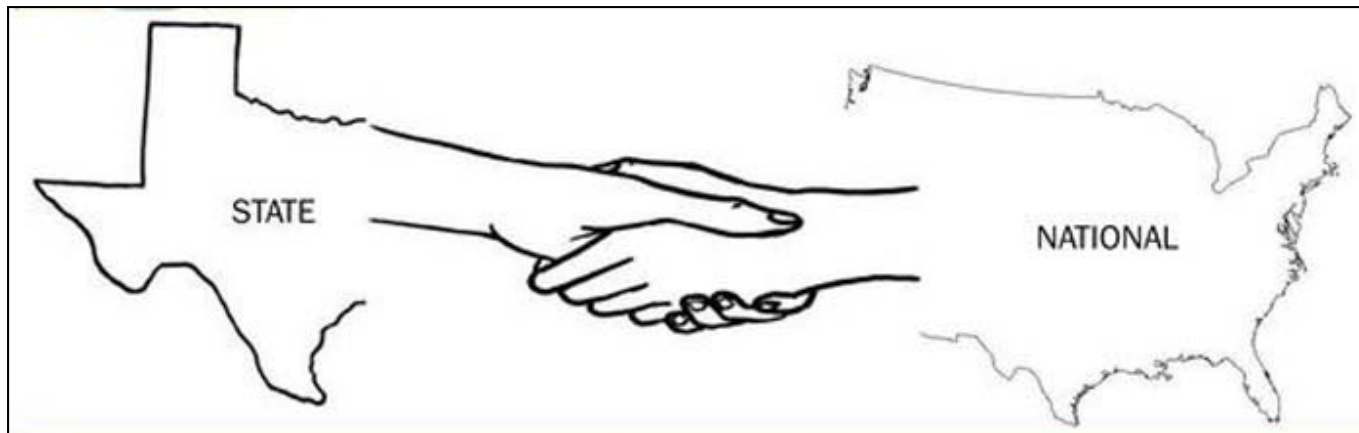
- 💧 **GIS Applications – narrow down what’s needed**
- 💧 **Workgroups for select watersheds:**
 - 💧 **Use GIS data to assess underground coal mines, mine pools**
 - 💧 **Prioritize discharges and mine pools based on risk to designated uses of receiving streams**
 - 💧 **Develop potential contingency strategies**
 - 💧 **Assess costs of treatment**
- 💧 **Future groups to be assigned as needed**
- 💧 **Coordination with State partners and others is crucial**

Cooperative Federalism

State and Federal agencies have limited resources

Mines/mine pools extend across state boundaries

Mutually beneficial: work together to identify the issues and find potential solutions



Forbes/Opinion

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Why Are We Doing This?

To avoid these scenarios:

💧 **Gold King Mine, CO (2015)**

💧 **Lancashire 15 Mine, PA (1970)**



Who Will Be Responsible?



Acknowledgements



OHIO
UNIVERSITY

Voinovich School of
Leadership and Public Affairs



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Maryland
Department of
the Environment



west virginia department of environmental protection



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Questions? Comments?

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We are here to help!