

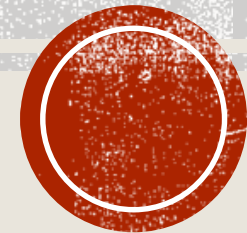


2019 West Virginia Mine Drainage Task Force Symposium

OSMRE UPDATE ON MINING, RECLAMATION, AND MINE DRAINAGE



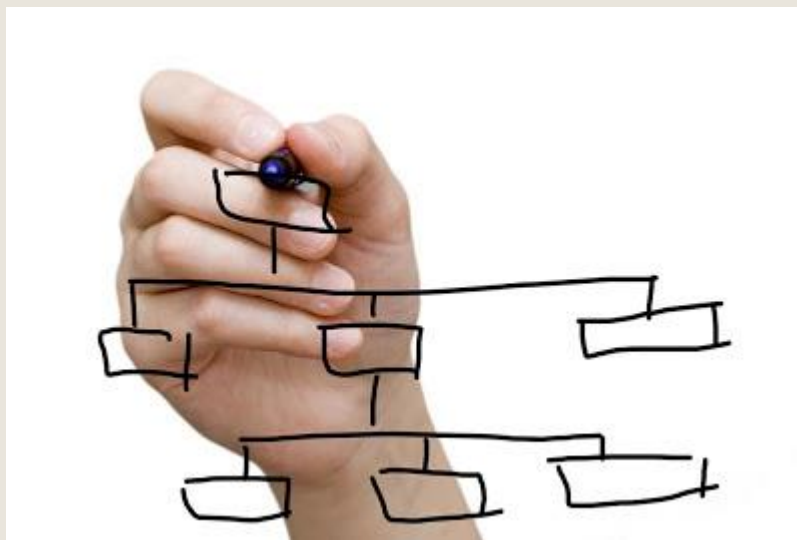
Thomas D. Shope
Regional Director
Appalachian Region, OSMRE



U.S. DEPARTMENT OF THE INTERIOR



DOI'S REORGANIZATION



12 Unified Regions Based on Watersheds



OSMRE'S MISSION PRIORITIES



- **Regulatory Stability.**
- **Supporting the Reclamation of Abandoned Mine Lands.**
- **Technical Development and Technical Transfer.**



REGULATORY STABILITY

- **Stable Regulatory Grants**
- **Federal, State and Tribal Summit**
- **NEPA Guidelines**
- **Tennessee Primacy**



SUPPORTING THE RECLAMATION OF ABANDONED MINE LANDS

- **AML Steering Committee**
- **Improving and enhancing eAMLIS.**
- **AML pilot program.**
- **Watershed cooperative agreements**



AML PILOT PROGRAM

AML Pilot Funds are to be Used *“For the Reclamation of Abandoned Mine Lands in Conjunction with Economic and Community Development and Re-Use Goals”*

- **2016**

- ✓ **29 ATPs have been issued for \$80.5 million**
- ✓ **7 conceptually approved for \$8.5 million**

- **2017**

- ✓ **12 ATPs have been issued for \$25.4 million**
- ✓ **31 conceptually approved for \$73.7 million**



AML PILOT PROGRAM

- **2018**

- ✓ **Kentucky, Pennsylvania, and West Virginia each were awarded \$25 million**
- ✓ **Alabama, Ohio, and Virginia each were awarded \$10 million**
- ✓ **Crow Tribe, Hopi Tribe, and Navajo Nation each were awarded \$3.3 million**
- ✓ **Total of \$115 million**

- **Overall 73 of the 79 conceptually approved projects are active, the remaining 6 have been tabled for various reasons.**





***Powderly Mine Underground Fire Site
Photo Credit: Pennsylvania Department of Environmental
Protection***





***Patriot Guardens - WVNG
Muddlety, WV***





***Future building site of the ethane cracker plant at the Big Run
Gob Pile Project Site, Ohio***



WATERSHED COOPERATIVE AGREEMENT PROGRAM (WCAP)

The WCAP Program was Designed by OSMRE to Assist Coalfield Citizens in Completing Projects that are Cleaning Streams Affected by Mine Drainage by Making Funds Available Directly to Non-Profit Organizations

Watershed Organizations Leverage Many Resources:

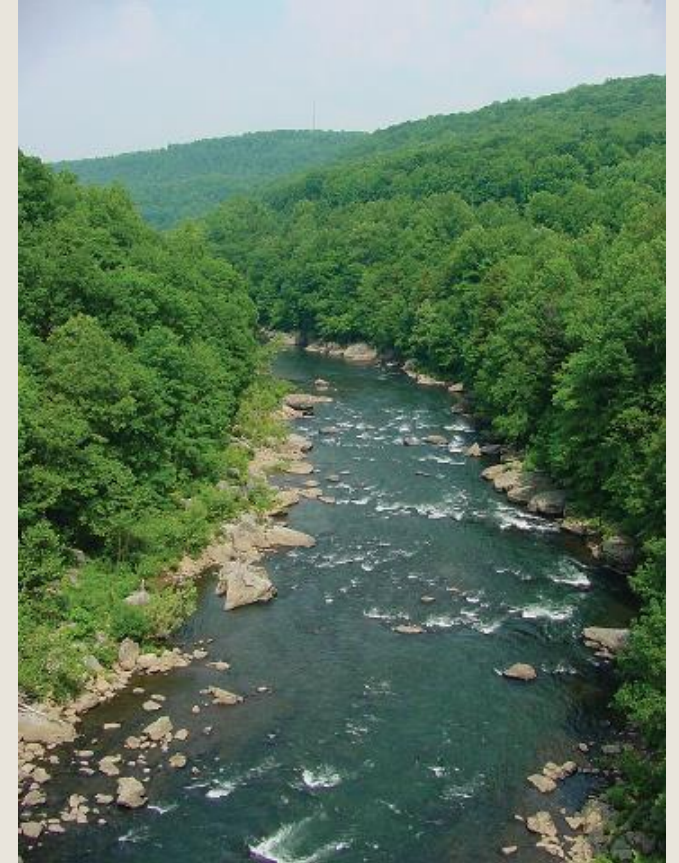
- **Direct Contributions – Funds, Equipment, Land for Facilities**
- **Foundation and Trust Grants**
- **Fund Raisers (Cheat Fest)**
- **Volunteers – Labor and Monitoring**
- **State Grants**



WATERSHED COOPERATIVE AGREEMENT PROGRAM (WCAP)



- **Since 2007 OSMRE has awarded 171 WCAPS totaling \$15,070,262.44**
 - ✓ **2017: 4 WCAP awards totaling \$400,000**
 - ✓ **2018: 14 WCAP awards totaling \$1,342,955**



Photos Courtesy of Friends of the Cheat



TECHNICAL DEVELOPMENT AND TECHNICAL TRANSFER

- **NTTP/TIPS Training**
- **TIPS Hardware, Software & Geospatial Activities.**
- **UAS Aviation Program**
- **ARRI**
- **Applicant Violator System**
- **Coal Information Management System (CIMS)**
- **National Mine Map Repository**
- **Field Technical Assistance Activities**



UNMANNED AERIAL SYSTEMS



Aviation Program



APPALACHIAN REGIONAL REFORESTATION INITIATIVE (ARRI)

- **Continues to Prove Itself as a Viable Concept**
- ✓ **Number of volunteers organized by OSMRE in 2018: 1,697**
- ✓ **Number of trees planted: 401,728**
- ✓ **Number of planting events scheduled for 2019: 22**

- **OSMRE Continues to Educate the Public about the Forestry Reclamation Approach (FRA) and its Positive Environmental and Economic Impacts**



*Students Planting American Chestnuts on Site
Prepared in Accordance with FRA*



AMD TREAT

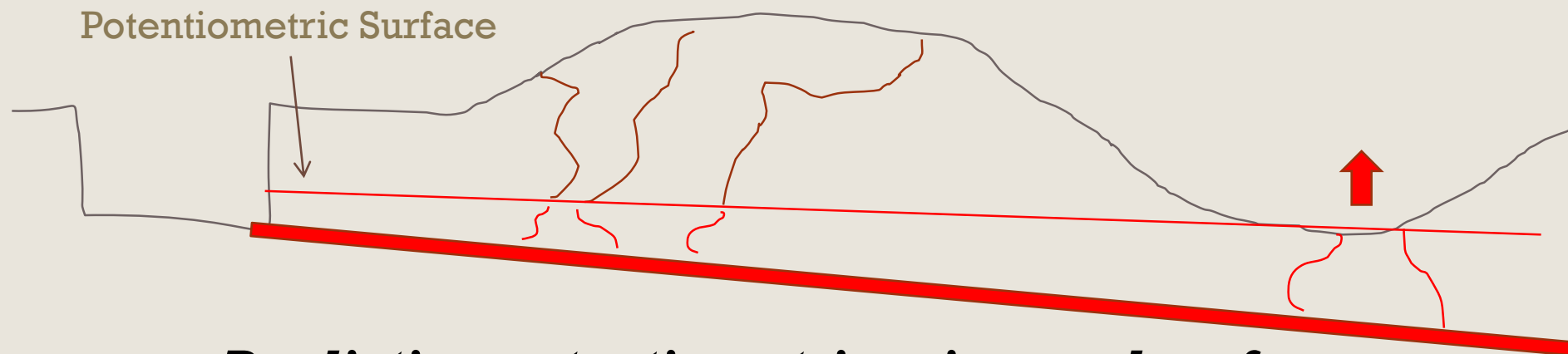
- **The first phase, 16 modules, of the update has been completed as of February 14, 2019.**
- **The remaining functions of the program, mainly PHREEQ, the enhanced geochemical analysis function, are slated for Phase II.**
- **Funding options for Phase II are being considered.**



FIELD TECHNICAL ASSISTANCE

Mine Pool Potentiometric Surface Prediction

- OSMRE and PADEP have spent the last 3 years documenting the accuracy of final mine pool level predictions.
- Successful predictions help prevent point source discharges.
- The team compared the predictions in the permit application to the measured potentiometric surface of the equilibrated mine pool after mine closure



Predicting potentiometric mine pool surfaces

**Joe Montrella, Jay Winter, Greg Greenfield, Steve Ball*



Predicting Potentiometric Mine Pool Surfaces



FIELD TECHNICAL ASSISTANCE

- Starting in 2018, OSMRE and PADEP will form a team to develop an improved prediction strategy.
- Conduct case studies on recently-closed underground mines to develop an improved understanding of the variables that control mine pool development and identify the critical data required to make improved predictions.



APPLIED SCIENCE PROGRAM

- **Project Topics can Include:**
 - ✓ **Issues Identified during the Course of Activities of State and Tribal Programs**
 - ✓ **National or Regional Needs**
 - ✓ **Issues Related to Responsible Mining or Reclamation Practices**
- **All Funded Applied Science Proposals Include Technology Transfer Plans – to Disseminate Findings to Stakeholders**



APPLIED SCIENCE PROGRAM

■ **Projects**

- ✓ **Since 2005, OSMRE Funded 144 Projects Totaling \$11, 571,696**
- ✓ **Twenty Two Currently Active Projects**
- ✓ **Seven Projects Totaling \$1,310,034 were Funded in FY 2015**
- ✓ **Twelve Projects Totaling \$2,274,672 were Funded in FY 2016**



APPLIED SCIENCE PROGRAM

What are Some Topics You would like to see Investigated from a Pragmatic, Application of Science Perspective?

Direct any Potential Topics to Michael Richmond
412-937-2850
mrichmond@osmre.gov



APPLIED SCIENCE PROGRAM

■ Rare Earth Minerals

- ✓ **Assess the feasibility of extracting critical rare earth minerals from coal waste materials**
- ✓ **TVA, USGS, DOE, EPA and OSMRE.**
- ✓ **The various coal wastes have been shown to have elevated concentrations of various rare earth minerals**



**USDA, Peggy Greb*



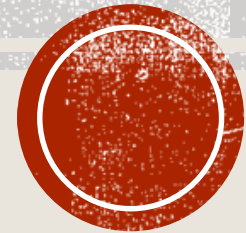


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Questions!



Thomas D. Shope
Regional Director
Appalachian Region, OSMRE



DOI-OSMRE BUDGET REQUEST

- **Commitment to promoting the economic security and energy independence of the US through responsible stewardship**
 - ✓ **Reduce national spending**
 - ✓ **Help the public capitalize on the development of national resources**
 - ✓ **Continue to protect the Nation's land, water, and natural resources**
- **Requests \$12.5 billion for DOI, 14-percent decrease from the 2019 estimate**



APPLIED SCIENCE PROGRAM

- **Rare Earth Minerals**
 - ✓ **A Toyota Prius has 10 lbs. of Lanthanum in its battery alone, plus the other REEs in other components**



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