

2022 West Virginia Mine Drainage Task Force Symposium

# OSMRE UPDATE ON MINING, RECLAMATION, AND AMD

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*Regional Director*

*OSMRE, Interior Regions 1 & 2*



# U.S. Department of the Interior



A.S.L.M.



Director



# 3 Key Areas:

- Title V – Active Mining and Reclamation
- Technical Assistance to State and Tribal regulatory and AML Programs
- Title IV – Reclamation of Abandoned Mine Lands





OSMRE



# Title V: Reclamation & Enforcement

- Grants to States and Tribes
- Oversight
- Coal Information Management System (CIMS)
- Tennessee Primacy
- Applicant Violator System (AVS)
- Field Technical Assistance

# Oversight

## WV Required Amendment:

- OSMRE notified WVDEP to submit a program amendment that will ensure tracking of existing reclamation liabilities (including water treatment) at mining operations. The improvement to reclamation liability tracking must reflect revisions or changes to the activities occurring at relevant sites and occur with such a frequency that the actuarial studies are informed by current data.”
- WVDEP responded with proposed language. House Bill 4758 was passed providing for the Office of Special Reclamation to develop a database which will track reclamation liabilities.
- OSMRE is processing the amendment (WV-128).



# Applicant Violator System (AVS)

In FY 2022 (as of Aug 31) by the numbers:

- **1,517** new violations entered into the system; **946** existing violations resolved
- The AVS Office collected **\$1.9 M** in payments received to resolve violations
- The AVS automated **10,655 evaluations** for State, Federal, Business and public inquiries
- The AVS team performed **376** O&C updates for interstate mining businesses with applications or permits to ensure accurate eligibility information for permit decision makers
- AML program administrators used AVS to evaluate **154 bidders** prior to award of AML contracts
- OSM awarded a contract to modernize the AVS in July 2022. Revisions should be complete by July 2023.



# OSMRE Technical Assistance to State and Tribal regulatory and AML Programs - Improving Reclamation

- **Appalachian Regional Reforestation Initiative (ARRI)**
- **Applied Science Program**
- **Watershed Cooperative Agreement Program (WCAP)**
- **National Mine Map Repository (NMMR)**
- **AMDTreat**
- **National Technical Training Program**
- **Technical Information and Professional Services (TIPS)**
- **Unmanned Aerial Systems**



# Appalachian Regional Reforestation Initiative (ARRI)

- Continues to Prove Itself as a Viable Concept
- In FY2022, ARRI and partners organized **27** planting events with **1,725** volunteers
- Planted approximately **695,699** trees on post-bond released sites
- Reforested **1,023** acres
- In FY2022, the coal industry utilized the Forestry Reclamation Approach (FRA) on **78%** of all trees planted in the Appalachian Region.
- OSMRE continues to educate the public about FRA and its positive environmental and economic impacts



Students planting American Chestnuts on site prepared in accordance with FRA





# Applied Science Program

Develop and demonstrate improved science-based technologies to address environmental and restoration topics related to the implementation of SMCRA. Project Topics can Include:

- Issues Identified by State and Tribal Programs
- National or Regional Needs
- Issues/Improvements 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

- From FY2005 to FY2021, OSMRE funded 98 projects totaling \$14,769,426
- Active projects - Sixteen (16)
- FY 2020 - Eight (8) projects totaling \$1,598,929
- FY 2021 - Eight (8) projects totaling \$1,598,801
- FY 2022 NOFO (~\$1.5 M)

Closing Date – Oct. 31, 2022



# Applied Science Project: Evaluating the Use of Reclaimed Forests by Threatened, Endangered and Species of Concern on Appalachian Coal Mines

- Study locations in WV and KY
- Wildlife cameras, acoustic monitoring, bird and amphibian counts, water quality monitoring

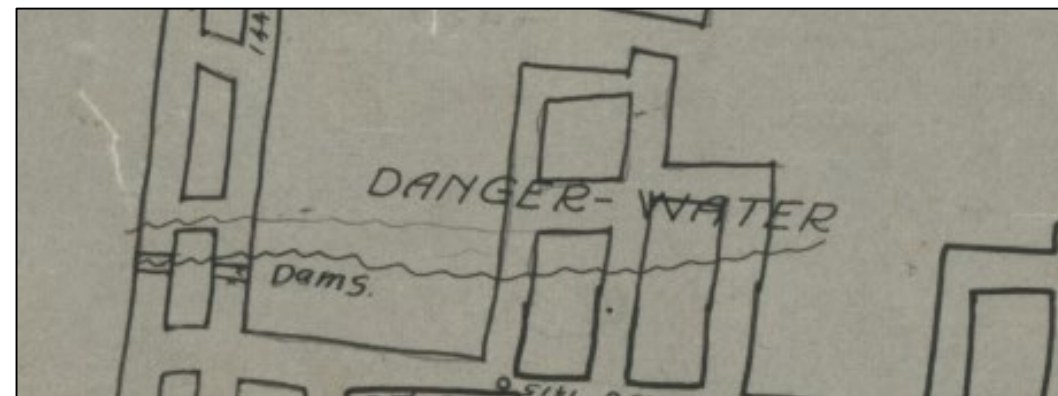


Created wetland on a reclaimed grassland mine bench in the Monongalia National Forest, WV. Credit: Steven Price



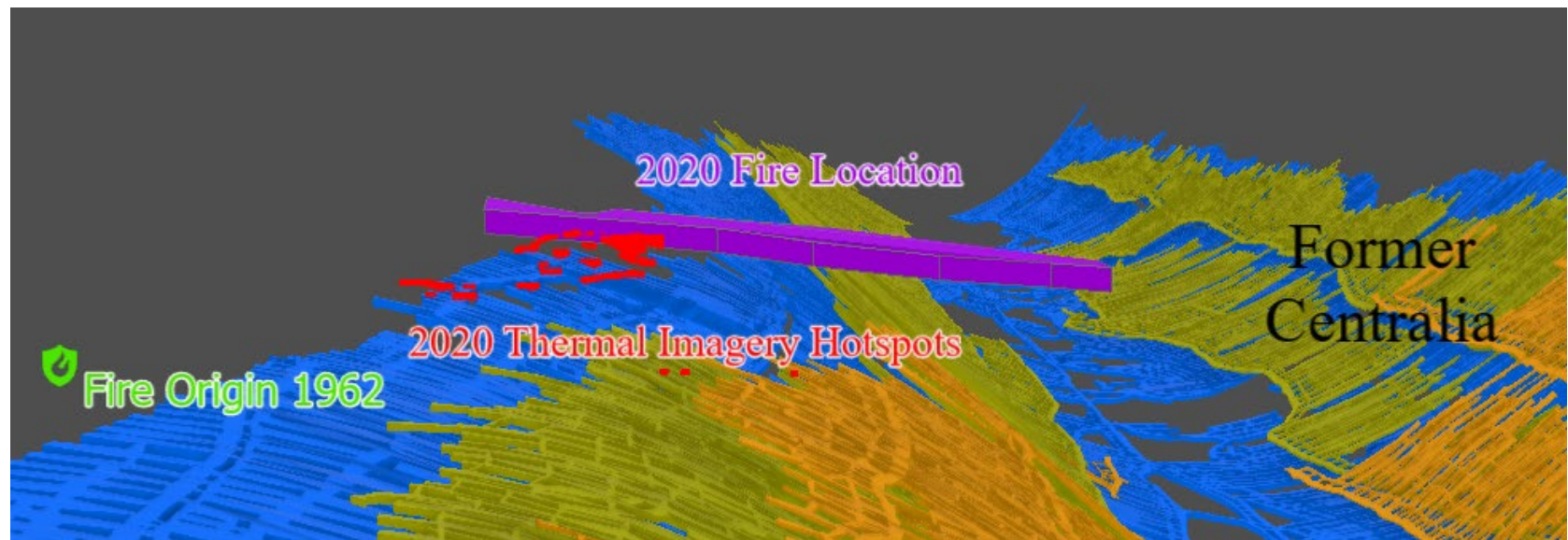
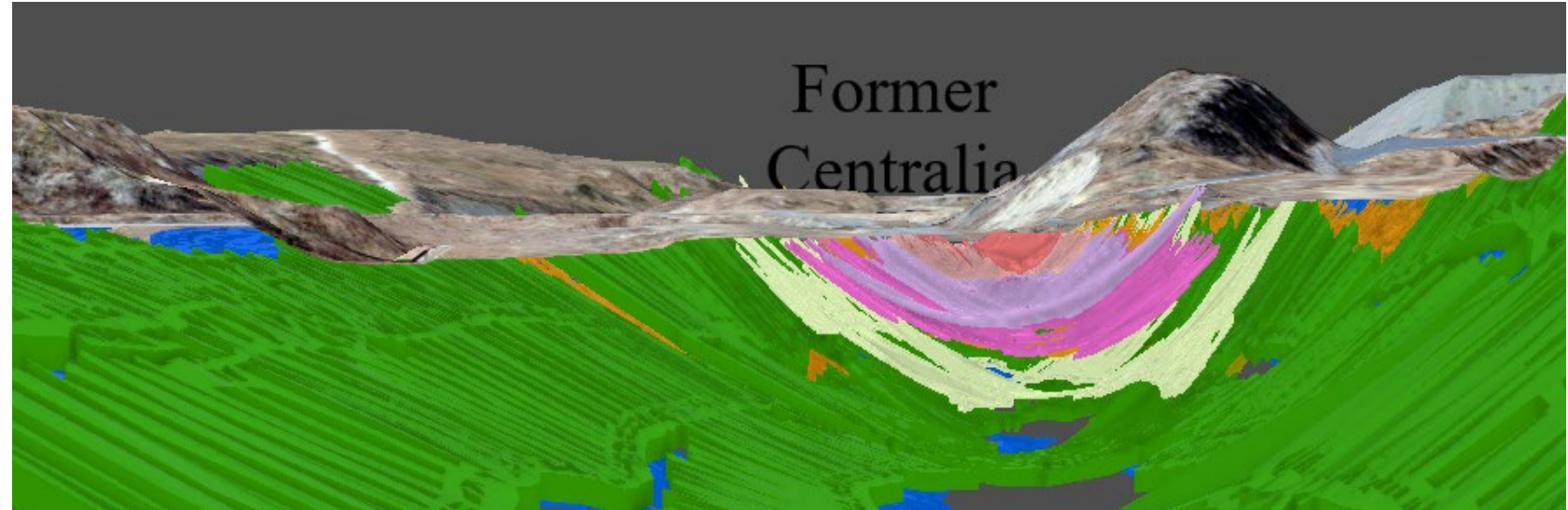
# National Mine Map Repository (NMMR)

- Source of Historic Mining Data for Investigations – Many Maps can be Used to Generate 3D Models
- Approximately 200,000 Mines on over 146,000 Maps for 48 States
- Database with Interstate Coal Seam Correlations Can Help Track Mining in REE-Significant Strata



# Mine Maps Basis for Centralia 3D Model

- 3D Model created from mine map data
- Complexity of subsurface becomes instantly visible
- 2020 Thermal Imagery data compared to 3D Model





AMDTreat software utilizes geochemical modeling to develop mine drainage treatment system designs, estimate costs, and predict effluent water quality.

- External beta testing by academia and industry underway
- Official rollout planned for late 2023
- Graphical User Interface – more user friendly
- PHREEQC Module allows water quality prediction at any point in system
- Facilitates estimation of long-term O&M as well as recapitalization costs
- Necessary tool for States and Tribes for water treatment cost computation (bonds and trusts) \$548M/yr. in PA alone
- Very applicable to BIL water treatment cost estimation



# Call for Beta Testers!

- *Beta testing runs through November 30, 2022*

As part of our efforts to protect communities and the environment from the impacts of reclaimed coal mines, OSMRE invites industry leaders, environmental groups, states, and Tribes to beta test a newly revised software tool, AMDTreat, which estimates the cost of treating acid mine drainage.

- *Are you up for the challenge?*

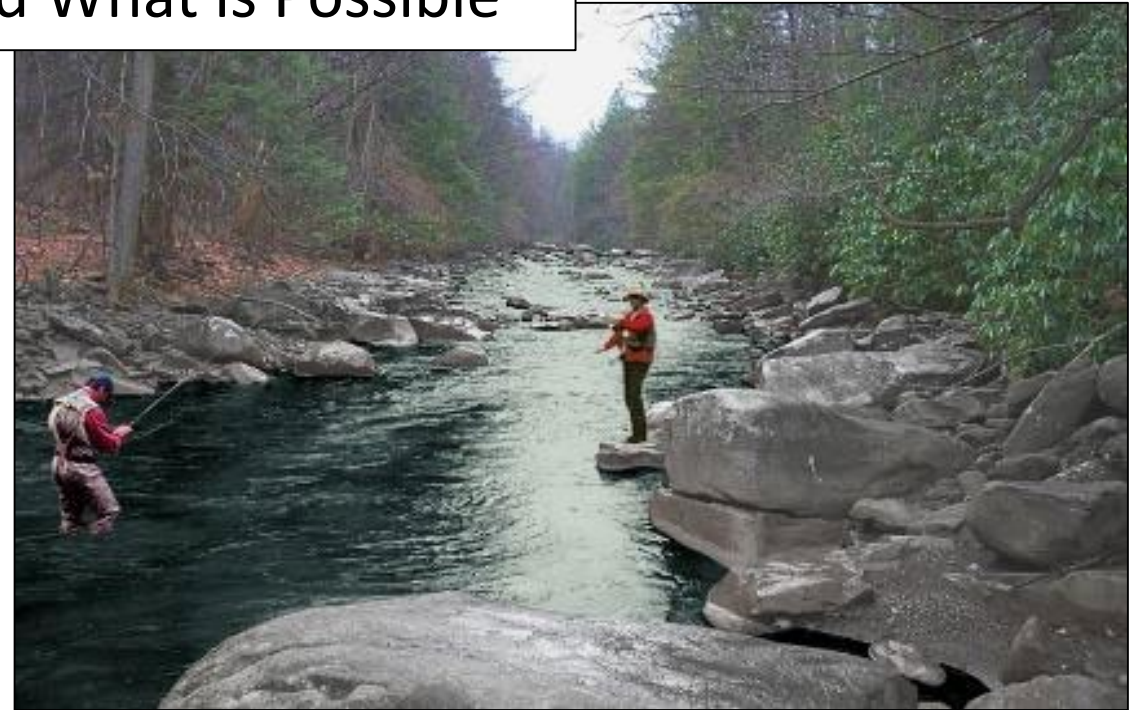
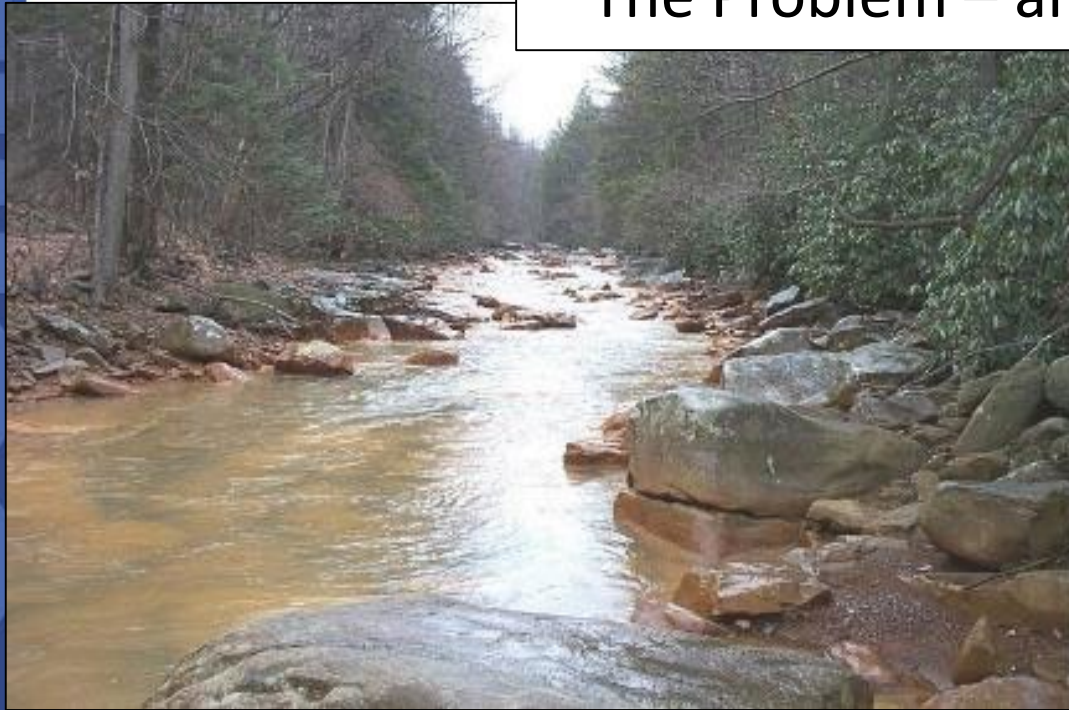
Request access to AMDTreat Version 6.0 Beta [amdtreat@osmre.gov](mailto:amdtreat@osmre.gov)

Learn more at [www.osmre.gov/amdtreat](http://www.osmre.gov/amdtreat)



# Watershed Cooperative Agreement Program (WCAP)

## The Problem – and What is Possible



Photos Courtesy of the Friends of the Cheat

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

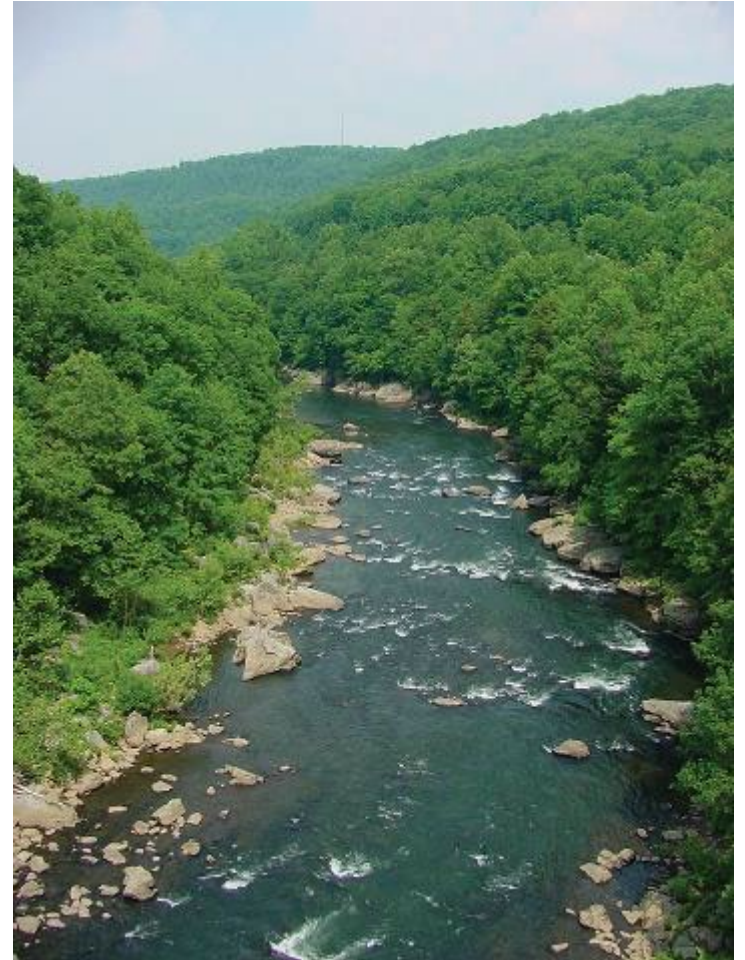




# Watershed Cooperative Agreement Program (WCAP)



- FY 2020, 15 projects received funding, totaling \$1,283,366.
- FY 2021, 7 projects received funding, totaling \$679,249.
- FY 2022, 8 projects received funding, totaling \$701,557.



Photos Courtesy of Friends of the Cheat

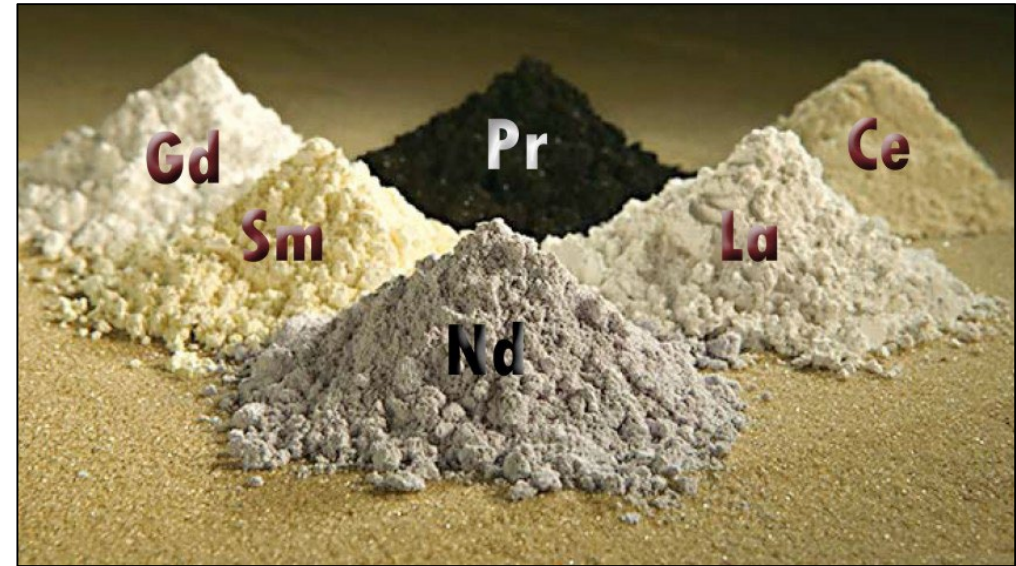


# Potential Opportunities for the Coal Mining & Reclamation Community

Recovery of **Critical Minerals (CM)** and **Rare Earth Elements (REE)** from **Mine Drainage** and **Coal Mine Waste**

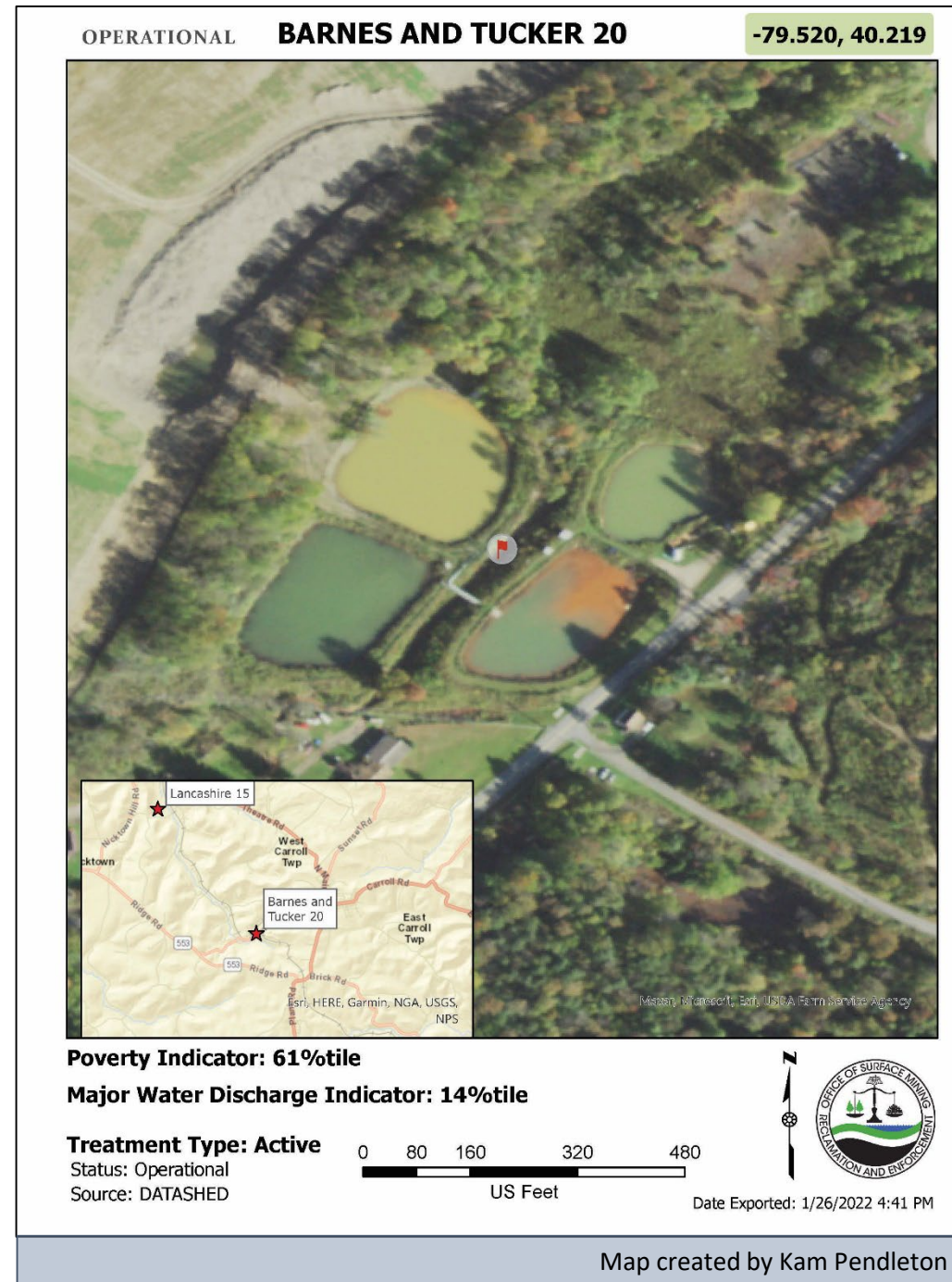
## Benefits:

- **Support domestic REE/CM production.**
- **Provide economic incentives for reclamation** of existing coal refuse sites and slurry impoundments.
- **Offset costs of treating mine drainage**
- Provide additional funding for AML reclamation.
- **Use existing waste sources to recover REES/CMS** rather than develop new ore mining sites to reduce environmental impacts and increase cost-effectiveness.



# OSMRE REE/CM Activities

- Funding for REE/CM projects through the **Applied Science Program** and **Mine Drainage Technology Initiative (MDTI)**
- Providing Technical Assistance
- Incorporating Justice40 requirements where appropriate



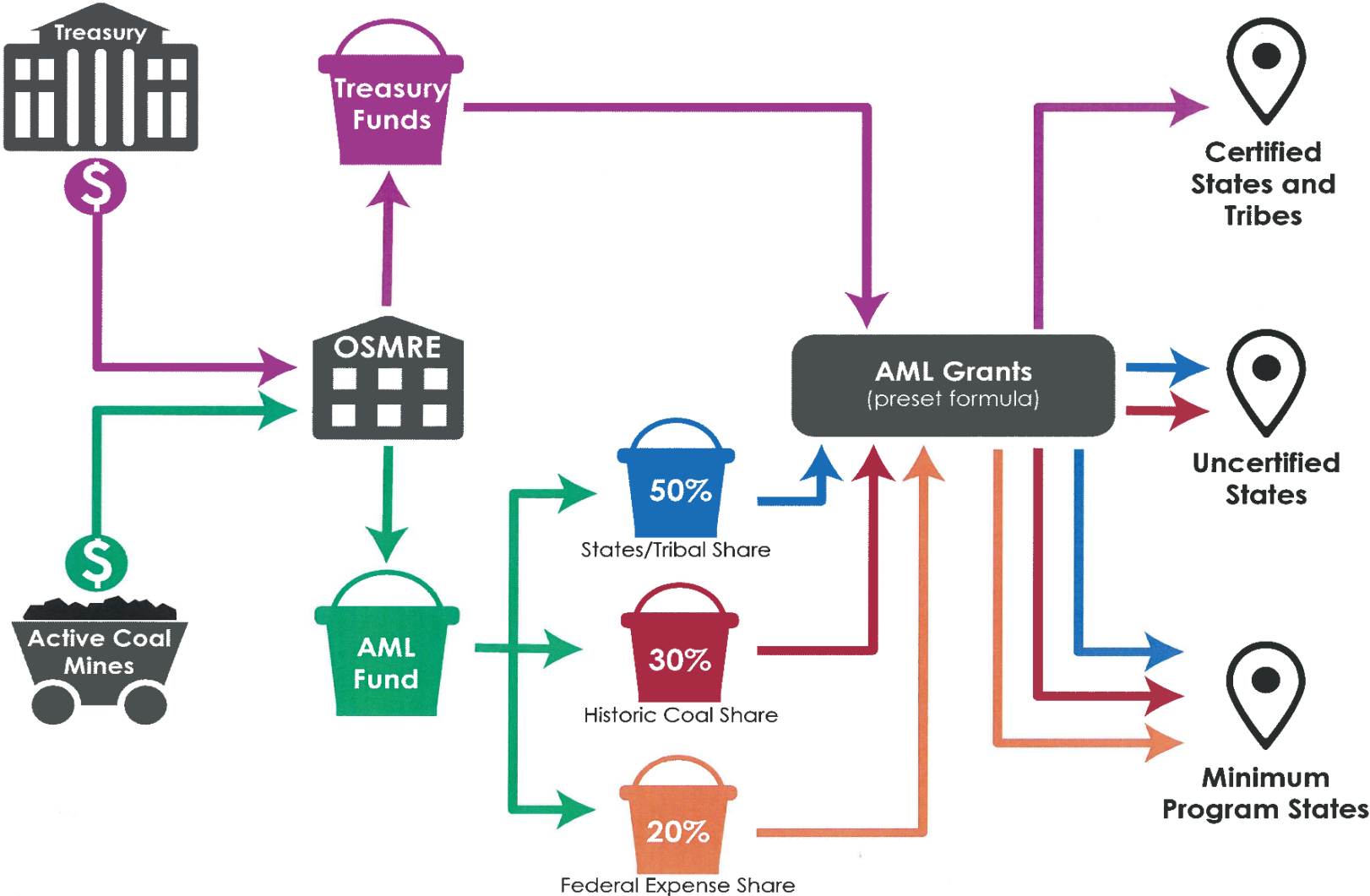
# AML Reclamation:

- **Fee Based AML funds**
- **Abandoned Mine Land Economic Revitalization (AMLER) Program**
- **BIL Funding**



# Fee Based AML Program

## Abandoned Mine Land Grant Distribution Process



# Abandoned Mine Land Economic Revitalization (AMLER)

AMLER funds are to be used **“For the Reclamation of Abandoned Mine Lands in Conjunction with Economic and Community Development and Re-Use Goals”**

## FY 2022

- Kentucky, Pennsylvania, and West Virginia were each eligible to receive \$26.63 Million for a total of \$79.89 Million
- Alabama, Ohio, and Virginia were each eligible to receive \$10.652 Million for a total of \$31.956 Million
- Hopi Tribe, Crow Tribe, and Navajo Nation were each eligible to receive \$3.551 Million for a total of \$10.653 Million



# AMLER Projects

## Project Status:

- Over 240 Projects proposed
- 224 projects that received preliminary approval
- 154 of those active projects have received OSMRE's Authorization to Proceed

## Types of projects that have been approved:

- Infrastructure
  - ❑ Water Treatment
  - ❑ Water Supply
  - ❑ Electric/Gas Lines
  - ❑ Broadband
  - ❑ Electricity Generation
- Industrial Parks
- Food Production
- Visitor Attractions
- Training Center
- Outdoor Recreation
  - ❑ Trail Systems
  - ❑ Boat Launches
  - ❑ Public Parks
  - ❑ Campgrounds



Marion Branch Industrial Park Worksite in Kentucky

# INFRASTRUCTURE INVESTMENT AND JOBS ACT

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- Signed into law on November 15, 2021
  - Public Law No. 117-58
  - 135 Stat. 429
- Referred to as the Bipartisan Infrastructure Law (“BIL”)
- Covers a number of topics, including
  - Creates and funds an orphan oil and gas well remediation grant program
  - Creates but does not fund an abandoned hardrock mine reclamation grant program
  - Authorizes offshore leases, easements, rights-of-way to provide for carbon sequestration

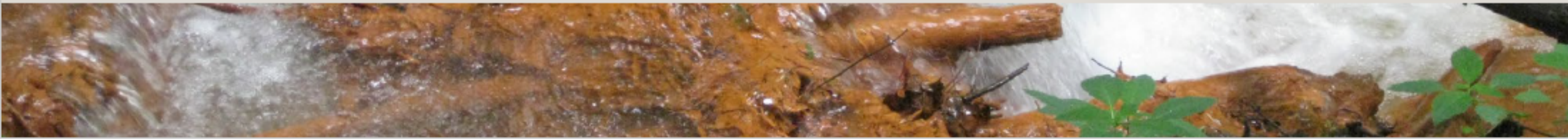




# ABANDONED MINE LAND (“AML”) RELATED PROVISIONS OF THE BIL

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- Amends Title IV of the Surface Mining Control and Reclamation Act of 1977 (“SMCRA”)
  - Reduces reclamation fees on each ton of coal produced by 20% (30 U.S.C. § 1232(a))
  - Authorizes OSMRE’s collection authority through September 30, 2034 (30 U.S.C. § 1232(b))
  - Extends normal reclamation fee-based grant distributions to State and Tribes through September 30, 2035 (30 U.S.C. § 1231(f)(2)(A))
- Deposits \$11,293,000,000 of general fund monies into the Abandoned Mine Reclamation Fund (“AML Fund”) primarily for distribution to States and Tribes as grants for 15 years for coal AML reclamation (codified as 30 U.S.C. § 1231a)



# DIVISION OF THE BIL AML FUNDS

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- \$11,293,000,000
  - \$25 million to provide States and Indian Tribes technical and financial assistance to make amendments to the AML inventory (e-AMLIS) (BIL § 40701(g))
  - Approximately \$388,790,000 to OSMRE for administrative expenses (3 percent)
  - Approximately \$56,00,000 to Interior's Office of Inspector General for oversight (0.5 percent)
  - Approximately \$10.9 billion for grants to States and Tribes with approved reclamation plans
    - Approximately \$725 million annually for 15 years (FY 2022-2036)
    - \$20 million minimum for each State/Tribe over life of program assuming sufficient unfunded coal AML projects



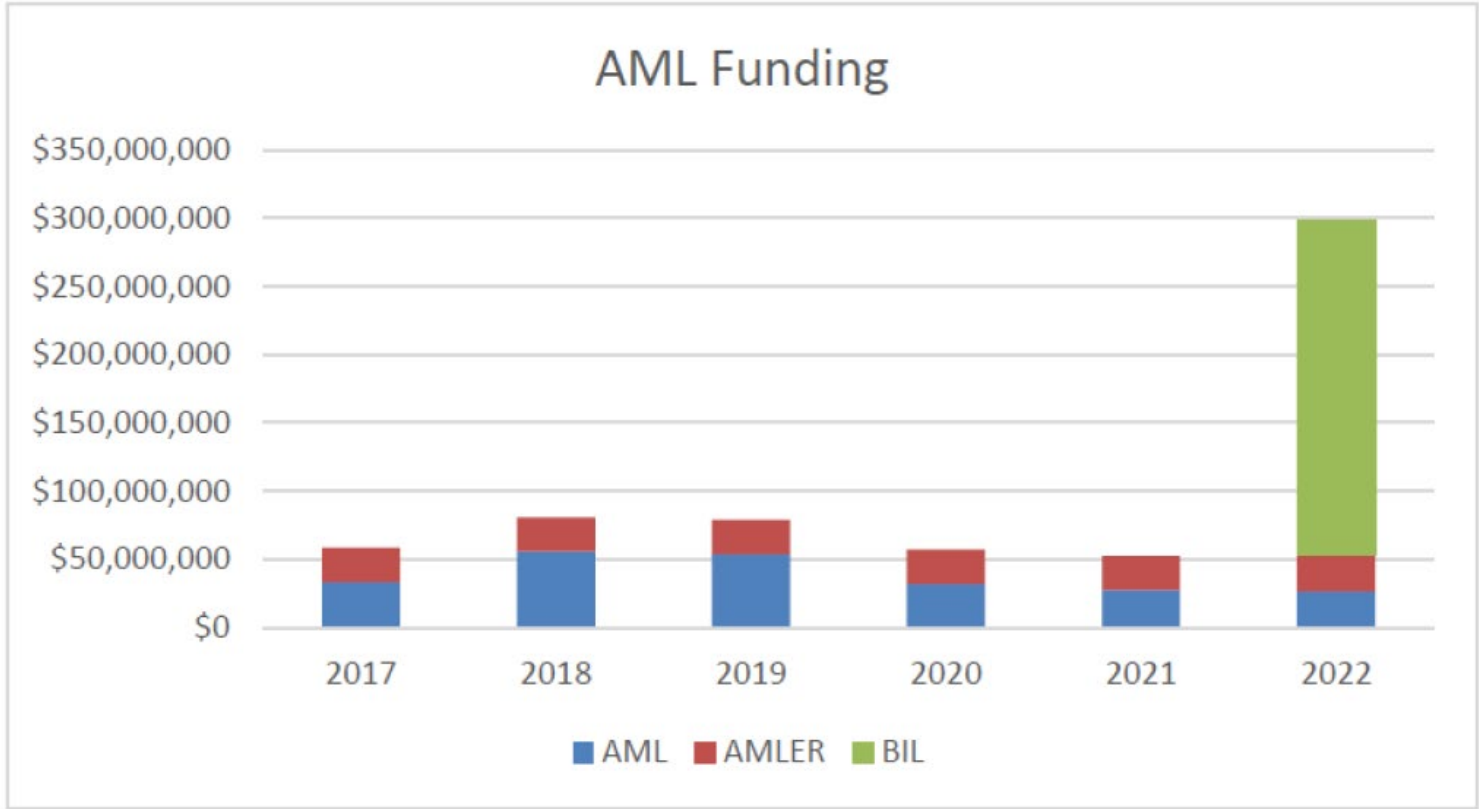
# DISTRIBUTION OF BIL AML FUNDS TO STATES AND TRIBES

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- OSMRE announced the FY 2022 BIL grant distribution amounts on February 7, 2022
  - Distributed to certified and uncertified States and Tribes with unfunded coal AML projects
  - Uses historic coal formula (based on tons produced prior to SMCRA's enactment)
    - Texas received \$986,000
    - Pennsylvania received \$244,904,000
- Not later than 20 years after BIL's enactment, OSMRE must evaluate grant payments to States and Tribes and, after that evaluation, States and Tribes must return unused funds to the AML Fund



# Bipartisan Infrastructure Law (BIL)



# USE OF BIL AML FUNDS

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- Activities described in subsections 403(a) and (b) and section 410 of SMCRA
  - Reclamation of eligible lands and water (as defined in section 404 of SMCRA) that reflect the following priorities in the order stated:
    - Priority 1 (P1) – protection of public health, safety, and property from extreme danger of adverse effects of coal mining practices and the restoration of adjacent land and water resources
    - Priority 2 (P2) – protection of public health, safety, and property from adverse effects of coal mining practices and the restoration of adjacent land and water resources
    - Priority 3 (P3) – Restoration of land and water resources and the environment previously degraded by adverse effects of coal mining practices
  - Water supply restoration
  - AML Emergencies that constitutes a danger to public health, safety, or general welfare and no one else will act expeditiously



# USE OF BIL AML FUNDS

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- Allows States and Tribes to aggregate bids for contracts into larger state or regional contracts
- In addition to P1-P3, water restoration, and emergency projects, “priority may also be given to reclamation projects . . . that provide employment to current or former members of the coal industry” (BIL § 40601(f))
- P3 projects can be “stand-alone” projects
- Does not allow deposit of 30 percent of the money into State/Tribal Acid Mine Drainage (AMD) set-aside accounts (30 U.S.C. § 1232(g)(6))
  - H.R. 7283 – Safeguarding Treatment for the Restoration of Ecosystems from Abandoned Mines Act or STREAM Act



# OTHER PROVISIONS OF THE BIL AFFECTING STATE AML PROGRAMS AND REGULATORY AUTHORITIES

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- OSMRE is required to conduct a study on the feasibility of revegetating reclaimed mine sites (both Title IV and Title V sites) and submit a report to Congress within one year (BIL § 40802)
- Davis-Bacon Act (40 U.S.C. §§ 3141–3148) applies to all construction and repair projects receiving funds as a result of the BIL (BIL § 41101)
  - Applies to BIL-funded AML projects and fee-based AML projects
  - Davis-Bacon Act sets prevailing wage standards for workers employed by contractors and subcontractors



# OTHER PROVISIONS OF THE BIL RELATED TO MINE LANDS

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- Amended the National Geologic Mapping Act of 1992 to require the U.S. Geological Survey (USGS) to map AML sites and mine waste, prioritizing locations where multiple critical mineral and metal commodities are anticipated to be present (BIL § 40202);
- Critical minerals and recycling research grant program (BIL § 40210(d));
- Report on the viability of siting solar energy on current and former mine land (BIL § 40341);
- Department of Energy program to demonstrate the technical and economic viability of carrying out clean energy projects on current and former mine land (BIL § 40342)





# Bipartisan Infrastructure Law (BIL)

	AML Program (Fee Collection)	AML Economic Revitalization Program (AMLER)	Bipartisan Infrastructure Law (BIL)
Funding in FFY 2022 (millions)	\$ 26.5	\$ 26.6	\$ 244.9
<b>Total:</b>			<b>\$ 298.0</b>
Pre-1977 Coal AML Problems	Yes	Yes	Yes
Emergency Problems (Sec. 410)	Yes	Yes*	Yes
Priority 1 - Extreme Health and Safety (Sec. 403(a))	Yes	Yes*	Yes
Priority 2 - Health and Safety (Sec. 403(a))	Yes	Yes*	Yes
Priority 3 - Environmental Degradation (Sec. 403(a))	Only when associated P1 or P2 work	Yes*	Yes
Priority 3 - AMD treatment and OM&R	Only in QHU using AMD Set-aside funds	Yes*	Yes
Impacted water supplies (403(b))	Yes	Yes*	Yes
Revitalization and Economic Development Costs	No**	Yes	No**
Contribute to AMD Set-aside account	Yes (30%)	No	No

\* Projects must have a nexus to community economic development

\*\* No additional economic development work beyond what is intrinsic to the reclamation work

THANK YOU!  
QUESTIONS?



Flight 93 Tree Planting Event (2022)

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