



# **NAVAJO NATION**

## **Division of Natural Resources**

# **Navajo AMLR Department**

**August 23, 2018**

**2018 Long-Term Stewardship Conference**



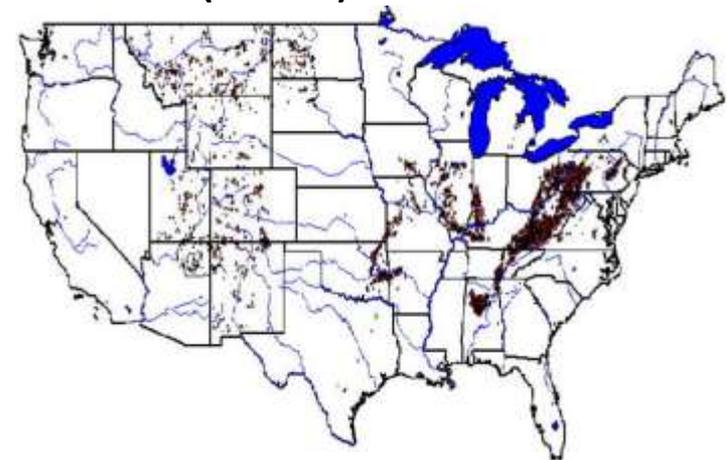
# Navajo Nation and AML Offices



# Surface Mining Control and Reclamation Act (SMCRA) of 1977

In 1977, Congress passed **the Surface Mining Control and Reclamation Act (SMCRA) of 1977, Public Law 95-87** to help regulate the Coal Industry and set up an Abandoned Mine Lands (AML) reclamation fund.

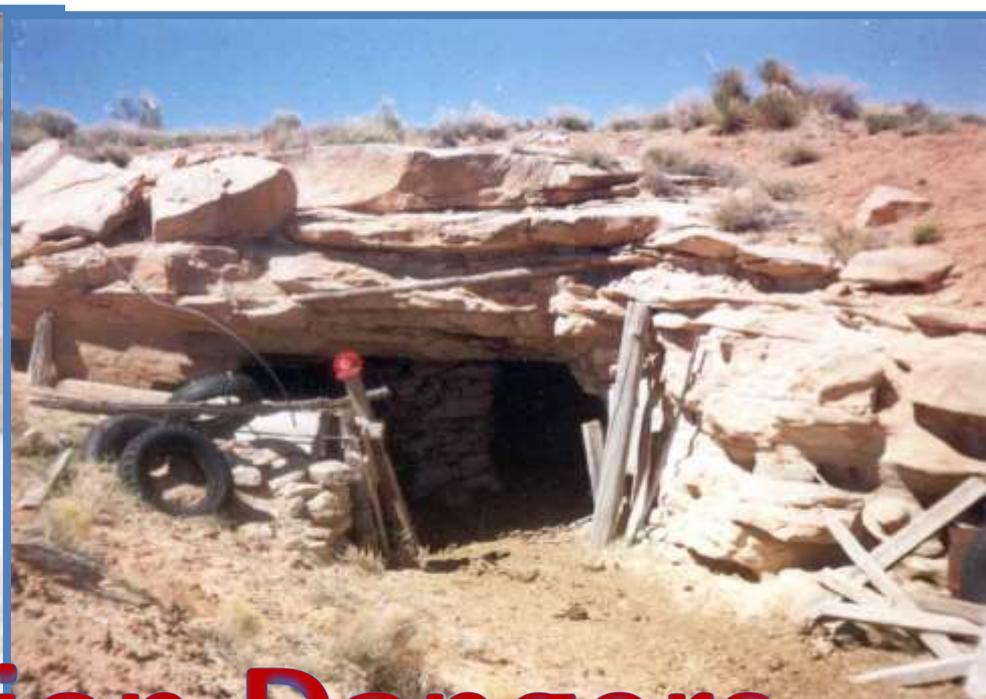
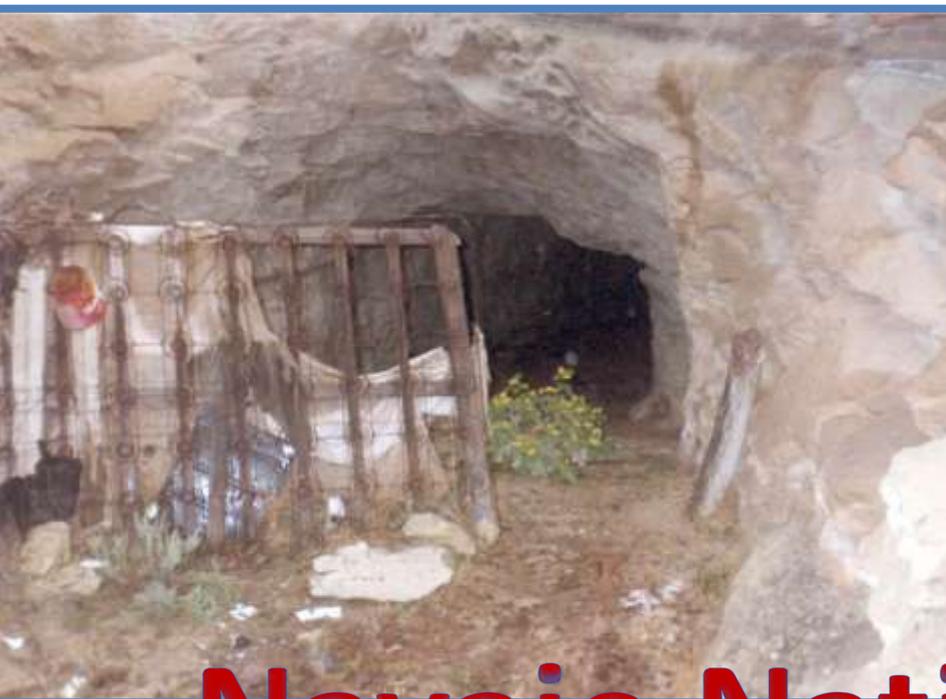
- Office of Surface Mining (OSM), Department of the Interior (DOI).
- 2 programs were created: Title V - regulating active coal mines and Title IV - reclaiming abandoned mine land (AML) sites.
- 32 States/Tribes – across the U.S.
- Navajo Nation – Tribal Trust lands and abandoned prior to Aug. 3, 1977.
- Prioritization Scheme



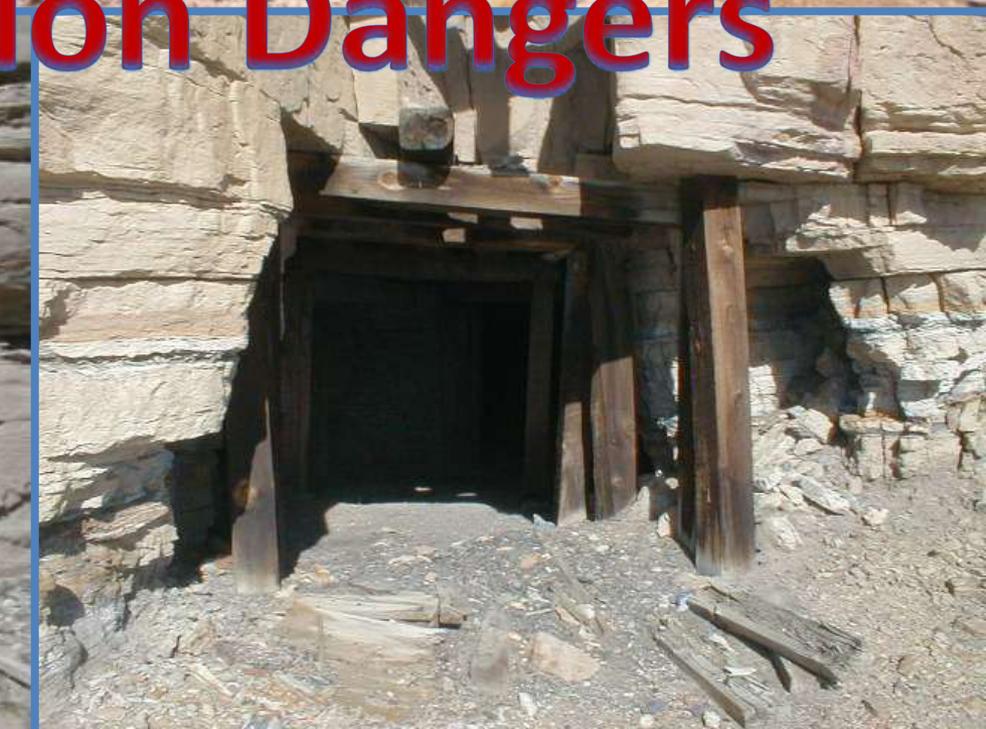


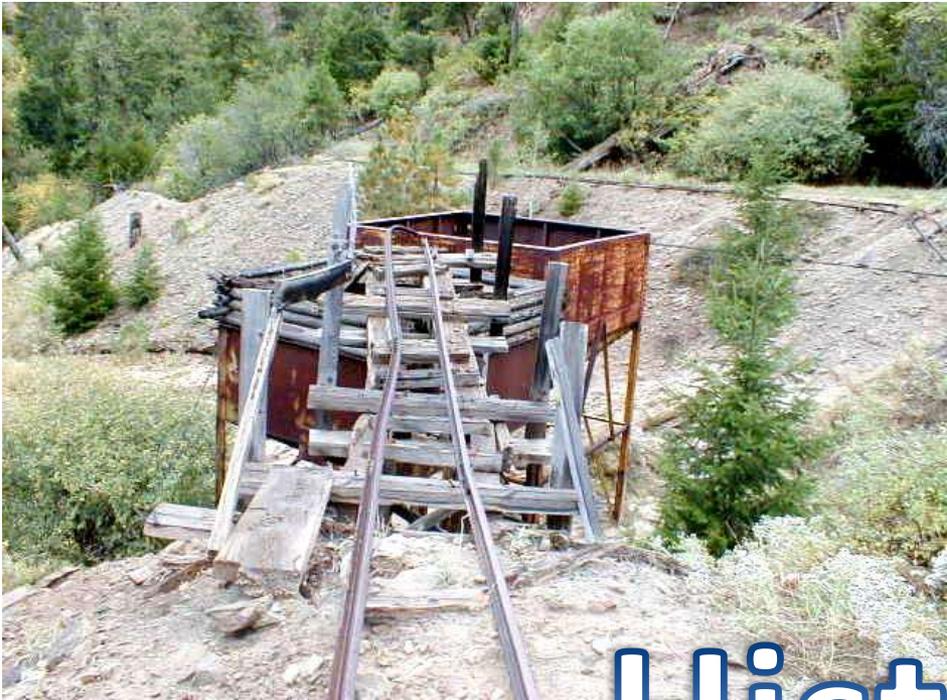
# Navajo Nation Dangers



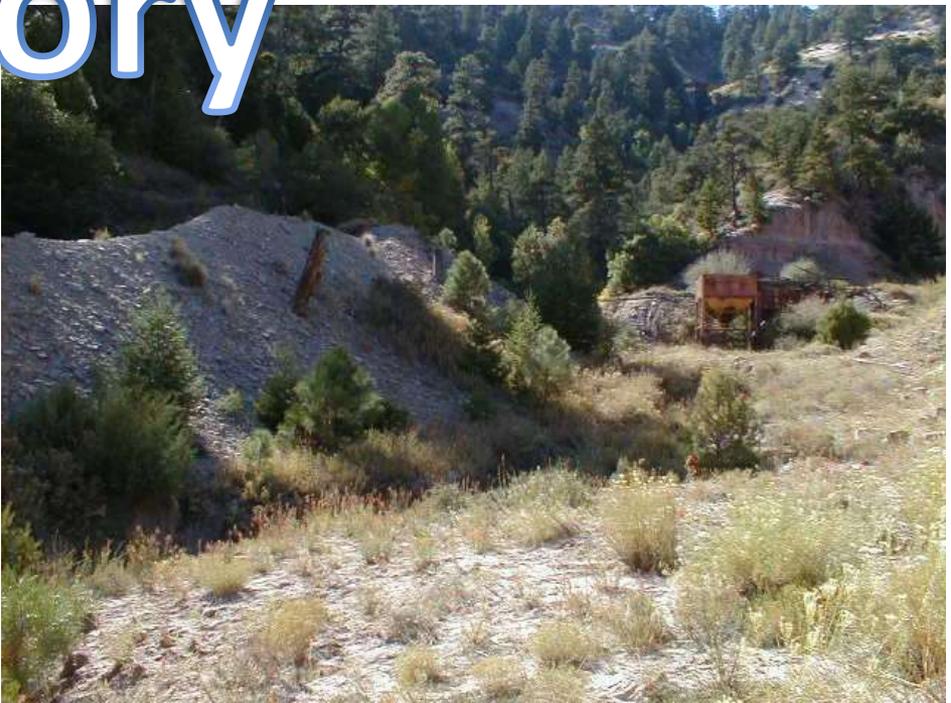


# Navajo Nation Dangers



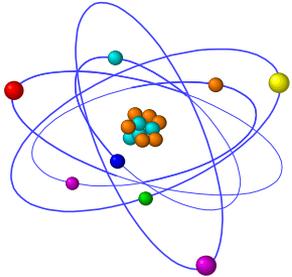


# History



# Health Physics Program

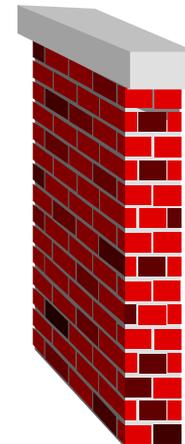
## Radiological Equipment



- Health Physics Monitoring
- Training
- In-house guidelines
- Staff knowledge
- Maps for technical designs
- Natural Sources – NORM, Bkgrd

## External Radiation Protection

- Time
- Distance
- Shielding



# Cut and Fill

Engineering Controls!





# New Designs, Concepts, Technology

- **Geomorphic Contouring**
- **Low-Impact Development (LID)**
- **Rain Gardens, Bioretention, French Drains**
- **Mulching – rock, organic, straw, etc.**
- **Excavated or Disposal Areas**

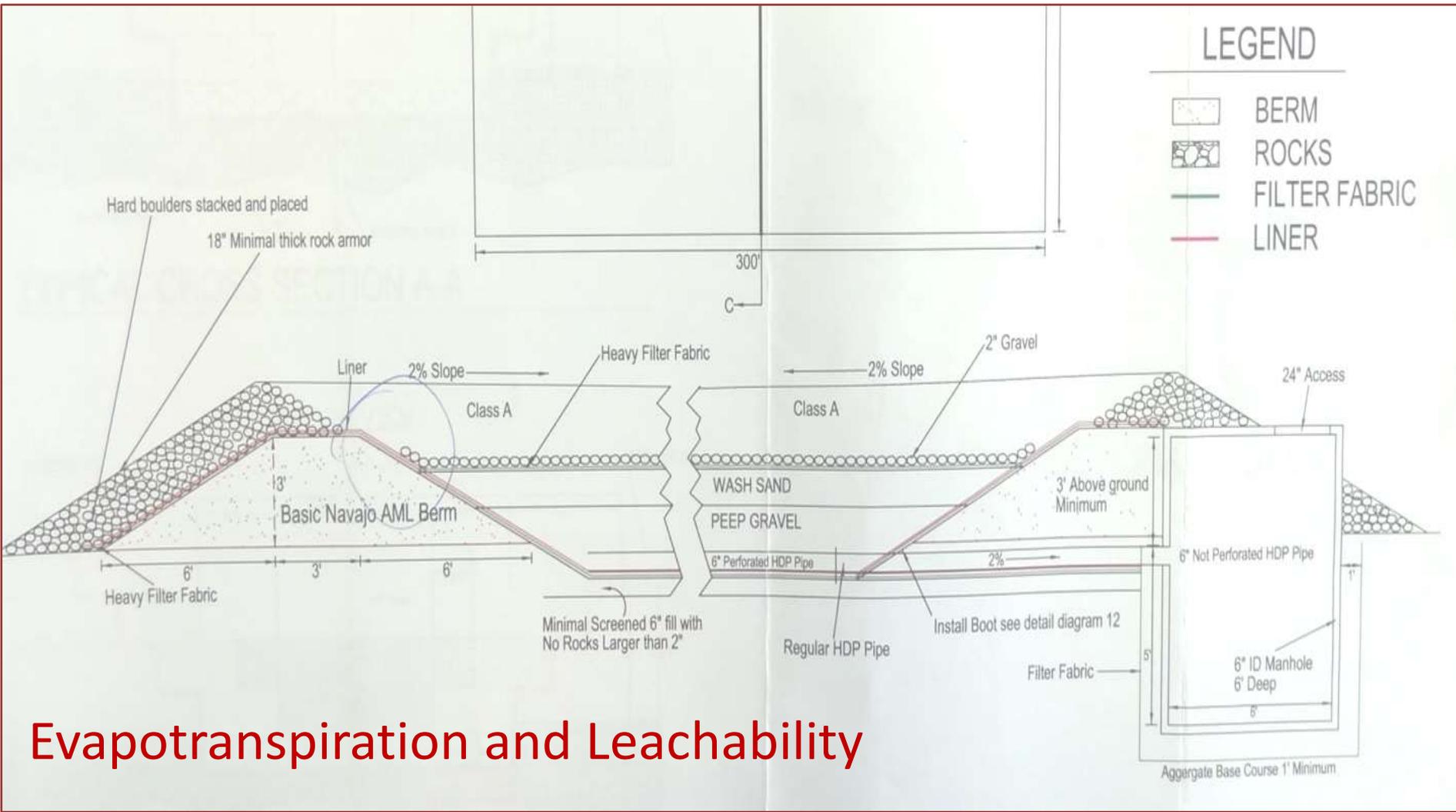




**Mini-Watershed Analysis**  
**NA-0907 Completed February 2009**

# NAMLRP Pilot Project

Concepts from past research and partnerships



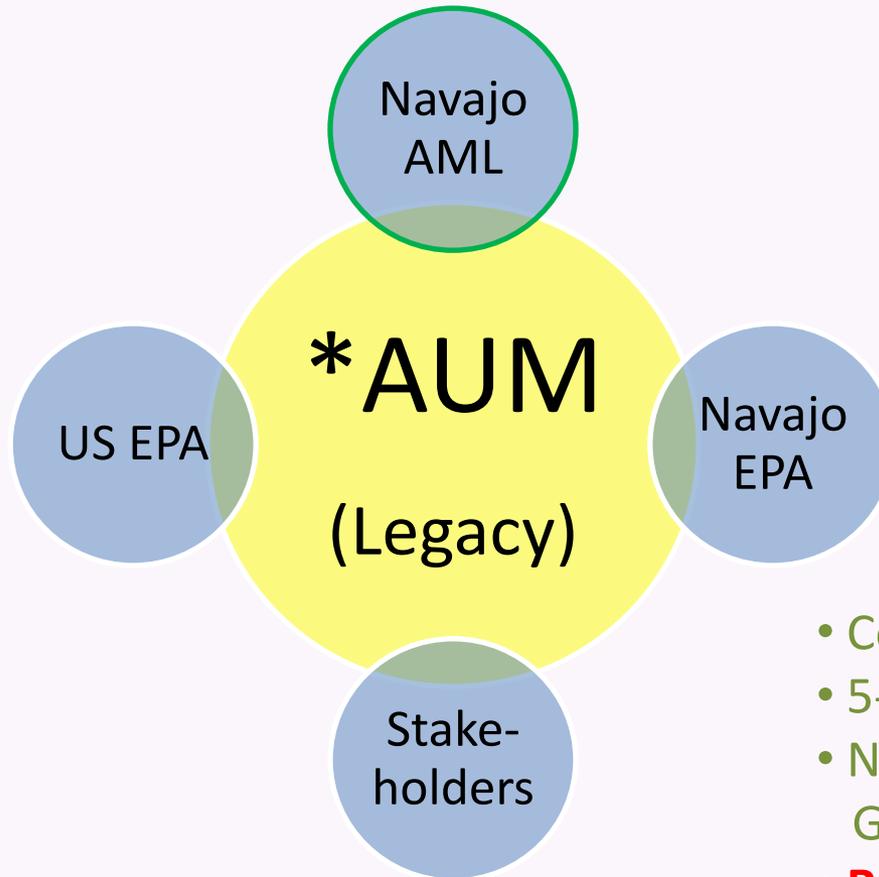
Evapotranspiration and Leachability





# Abandoned Uranium Mine (AUM) Partnerships

People



- SMCRA
- CERCLA
- RAMS
- Navajo Nation
- AUM
- DOE
- Partners
- NN Trustee, PRP's

- Congressional Hearing
- 5-year plan, **5 Fed Agy**
- Network Collaboration Group
- **Resource List\***
- Gatekeeper



# Navajo AML Recap

- Self Education, R&D, Conferences, Partners
- Geomorphic Reclamation and Designs
- Engineered Materials
- Natural Materials
- Stabilization/Maintenance
- Improved Equipment & Safety
- Mother Nature
- GIS Database
- *Public Relations, Education, Partnerships*



# Next Steps

- Communities – participation, post-land use
- Continued Education, Unity, Public Relations
- Navajo Nation EPA: Navajo CERCLA - Regulations
- Navajo Nation Uranium Commission
- Navajo Fundamental Laws –vs- Science/Engineering
- Environment – geology, chemistry, hydro-cycle, vegetation
- **Partners and Stakeholders** – old & new, don't reinvent
- Long Term Stewardship, Maintenance of AML/AUM
- Accountability, Transparent
- Funding
- Resources
- Goals: Reclamation, Remediation, Restoration
- Leaders – all levels (tribal, state, and federal)



# Cooperating Agencies of the Navajo Nation Five-Year Plan Community Outreach Network



Addressing the Impacts of Uranium Contamination on the Navajo Nation

Need Participation  
Education Opportunity!



# Navajo AMLR Dept. Science, Technology, Engineering and Math (STEM) Initiatives



## **SUPPORT:**

- NN OP/VP
- NN DNR
- DOE – LM
- NTEC

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# Questions

[www.aml.navajo-nsn.gov](http://www.aml.navajo-nsn.gov)

