

# What Happens to a Mine after Mining? Making Mine Land Reclamation More of a Community Asset



**What's Next for Reclamation?**

Joint Conference

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# What Happens to a Mine after Mining?

A mine is only a temporary use of the land.

The operation of a mine site may last a few years or several decades or even, in some cases, a few centuries.

I've worked in some of each, a sand mine in Butte County, California, that opened in 2004 and hopefully will last at least ten more, and an anthracite mine in Northeast Pennsylvania that started in 1792 and is being reclaimed now.

We engage in mine closure when the resource is depleted or when the operation can't be profitable.

In abandoned mine lands, mines are closed when funding is available or when public pressure is brought to bear.

**What Happens to a Mine after Mining?**

**What Have We Done in the Past?**



# A Well-Known Use for Mine Lands





# Another Well-Known Use for Mine Lands





# A Third Well-Known Use for Mine Lands





# What Reclamation Have We Done in the Past?

## □ Active Mines

- Approximate Original Contour
- Vegetation Establishment Success
- Plant Trees
- Plant Shrubs

## □ Abandoned Mines

- Eliminate Hazards
- Re-establish Drainage

















# Past Efforts to Make Mine Land Reclamation More of a Community Asset

- Pennsylvania Operation Scarlift
- USBM Demonstration Projects
- SCS Rural Abandoned Mine Program
- SMCRA Set-Aside
- Pennsylvania Growing Greener
- OSMRE/VISTA





**SAMANTHA PROVES EGGAR TO HELP** — Attired in white construction helmet and white boots, Samantha Eggar operates hydraulic monitor playing giant stream of water on burning Marvine culm bank at Scranton. Dr. H. Beecher Charnbury, secretary of mines, tells star of "Molly Maguires" about \$500,000 project launching "Operation Scarlift." (AP Wirephoto)



Newspapers.com





McDade Park





Under the Rural Abandoned Mine Program (RAMP), this site, adjacent to Morris Run, Pa., was reclaimed to eliminate the eroding mine spoils and old building

**\$459,625 Morris Run RAMP Project**



# AMD Set-Aside Program













# Past Efforts to Make Mine Land Reclamation More of a Community Asset

- Mining Companies
- Other Private Landowners
- Some AML project co-op
- Some AML projects








**CenterPoint**  
commerce & trade park





 Anthracite Outdoor Adventure Area



# Simpson Coal Refuse Fire



# #2 Tunnel Avondale Mine 2014





# Making Mine Land Reclamation a Community Asset?

- POWER+
- Revitalizing the Economy of Coal  
Communities by Leveraging Local Activities  
and Investing More (RECLAIM)
- AML/Economic Development Pilot 2016
- AML/Economic Development Pilot 2017?
- RECLAIM 2?

# 2016 AML/Economic Development Pilot

- West Virginia
- Kentucky
- Pennsylvania



West Virginia: “While the DEP did not initiate the project ideas, solicit grant applications or provide any share of the funding, AML employees have served as facilitators throughout the application and approval process by helping applicants understand the project criteria and application requirements, working as liaisons between the applicants and OSMRE to accelerate the grant approval process, and to distribute the funding to the grant recipients.” West Virginia divided the \$30 million between six projects: two agriculture-related, two industrial park projects and two waterline expansions, with project “grants” between \$1 million to \$12 million.

**2016 AML/Economic Development Pilot Projects**

<b>Project Name</b>	<b>Project Description</b>	<b>Estimated Cost</b>	<b>AML Pilot Funding</b>
<b>WEST VIRGINIA</b>			
<b>Patriot Gardens Golden Delicious Apple Project</b>	<b>Reclaim mine sites and plant trees to reintroduce Golden Delicious Apple trees to for future juice plant</b>	<b>\$7,795,000</b>	<b>\$5,295,000</b>
<b>Sullivan Industrial Park</b>	<b>Develop an Industrial Park with the National Guard as a tenant, Provide jobs to repair DOD equipment.</b>	<b>\$12,050,000</b>	<b>\$12,000,000</b>
<b>I-79 Technology Park Mine Reclamation and Economic Expansion</b>	<b>Expand existing business park by three future sites</b>	<b>\$16,492,000</b>	<b>\$3,994,000</b>
<b>Danese Public Service District-Highland Mountain Waterline Extension</b>	<b>Waterline extension- Highland Mountain</b>	<b>\$3,100,000</b>	<b>\$3,100,000</b>
<b>Danese Public Service District-Crickmer Road Waterline Extension</b>	<b>Waterline extension- Crickmer Road</b>	<b>\$1,000,000</b>	<b>\$1,000,000</b>
<b>Aquaponics on AML: Fish, Vegetables, Renewables and Mine Air/Water</b>	<b>Provide jobs for aquaponics system, raise fish &amp; vegetables</b>	<b>\$3,801,988</b>	<b>\$3,581,989</b>
<b>WEST VIRGINIA totals</b>		<b>\$44,238,988</b>	<b>\$28,970,989</b>



# 2016 AMLER: Golden Delicious Orchard



# 2016 AMLER: I-79 Technology Park Expansion





Kentucky utilized a solicitation of projects from state agencies and local governments that included • the project's purpose, • its link to AML, • its cost, • partnerships, • leveraged funds (if applicable), and • evidence of community improvement and support. "We are encouraging community leaders throughout the region to look at options that will have the best chances of bringing dramatic growth and jobs to Appalachia. For example, several communities may choose to band together to upgrade industrial sites, including providing the necessary infrastructure and possibly spec buildings, so that companies looking to expand in Kentucky can be up and running quickly." Kentucky divided their \$30 million among nine projects, with "grants" varying from \$500,000 to \$12,500,000.

## 2016 AML/Economic Development Pilot Projects

Project Name	Project Description	Estimated Cost	AML Pilot Funding
<b>KENTUCKY</b>			
Marion Branch Industrial Park	Construct a 60,000 sq ft spec building on a newly constructed Industrial Park in Pikeville.	\$39,500,000	\$5,000,000
Appalachian Wildlife Center	Create an elk/wildlife viewing area, visitor and learning center on 12,000 acres of AML.	\$24,000,000	\$12,500,000
E Kentucky Advanced Manufacturing Institute	Computer Numeric Controlled skills training program to train up to 100 CNC machinists per year	\$2,500,000	\$2,500,000
Impact Outdoor Adventures	Outdoor mountain bike adventure park, archery center, horse barn and equine center on 47 acres	\$500,000	\$500,000
Harlan Wood Products Project	Provide infrastructure, access, shell and water storage for wood pellet plant on reclaimed AML site	\$13,050,000	\$2,550,000
Leslie County Lineman Training	Establish electrical lineman training program. Train workers in fiber optics and splicing of dark fiber	\$1,150,000	\$1,150,000
South Fork Elk View Waterline and Campground	construct a campground and waterline in an elk viewing area/ ATV trail head	\$1,950,000	\$1,950,000
Royalton Trail Town, Inc.	construction of primitive and developed campsites, cabins for rent, and barn stalls.	\$1,900,000	\$1,900,000
Prestonsburg to David - Rails to Trails	purchase an 11.4 mile railway, develop a trail system, study a model Recreational Waterway.	\$1,950,000	\$1,950,000
<b>KENTUCKY totals</b>		<b>\$86,500,000</b>	<b>\$30,000,000</b>





**2016 AMLER: Lineman Training**



# 2016 AMLER: Appalachia Wildlife Center





Pennsylvania: After the rollout of the 2016 Budget proposal for the “POWER+ Plan, PADEP BAMR began to develop a list of potential projects based on previous discussions of potential projects with land owners, communities, and environmental groups. A list of over 100 potential projects was developed. Subsequent to the Omnibus’ passage, “town meetings” with environmental groups, mining professionals, and industry groups were held, discussing the process, potential rules and regulations, and types of projects that were being considered; and additional projects were submitted and considered. Internal BAMR and PADEP winnowed the 100+ projects to fourteen which were submitted to OSMRE for approval. The fourteen received “grants” of \$90,000 to \$5,000,000

## 2016 AML/Economic Development Pilot Projects

Project Name	Project Description	Estimated Cost	AML Pilot Funding	Project Name	Project Description	Estimated Cost	AML Pilot Funding
<b>PENNSYLVANIA</b>							
Noblestown Road (Pittsburgh Botanic Gardens) - Phase II	Watershed Restoration, Water Quality Improvement and Land Restoration, Recreation, & Tourism	\$716,040	\$500,000	Fran Contracting Surface Mine Restoration (Rock and Camp Run Restoration)	Public Lands / Recreational Trails / Reforestation and Restoration of 6+ miles of Class A Wild Trout Stream	\$9,500,000	\$3,500,000
Clinton Road (Allegheny County Airport Authority [ACAA] Business Park)	funding for reclamation of the AML site in order to facilitate the business park development	\$32,000,000	\$500,000	Powderly Mine Fire Area Economic Development / Underground Mine Fire	Potential Business Park, Community Park and Athletic Fields	\$12,000,000	\$2,000,000
Spaces Corners South / Rayburn Township Joint Municipal Auth. Waterline	9-Mile Waterline Extension Project to provide potable water to 160 residences	\$5,000,000	\$640,000	Eckley/Hazleton Rail Trail/Hazle Creek Cleanup	Trails/Minewater Abatement/Economic Development	\$2,609,223	\$1,950,000
Point Stadium Mine Drainage Treatment	Treat the Point Stadium Abandoned Mine Discharge, two miles stream improvement.	\$12,000,000	\$2,000,000	Green Mountain Discharge/Audenried Discharge	AMD treatment / Drinking Water/ Hydropower	\$12,000,000	\$2,500,000
Ehrenfeld Refuse Pile	Develop Rails to Trails Parking Lot, future industrial development, watershed restoration	\$26,500,000	\$3,500,000	Tamaqua City Revitalization and Improvement Zone	Industrial/commercial Park, housing, & Transportation Improvements	\$20,000,000	\$3,810,000
Tresckow/Beaver Brook Surface Mine Restoration Project	Possible future industrial development	\$6,371,588	\$5,000,000	Bowman's Shaft/Pioneer Tunnel	Tourism/ Reconstruction of historic headframe at Pioneer Tunnel Tourist Mine	\$90,000	\$90,000
Pine Grove North (Glen Richey) - Waterline	9-Mile Waterline Extension to provide potable water 96 AML eligible residences. Phase 1 of 3	\$8,000,000	\$2,000,000	Black Dog Hollow/Fredericktown Coal Refuse Pile	future industrial development, Demonstration of bauxite residue to reclaim coal refuse	\$5,000,000	\$2,000,000
				<b>PENNSYLVANIA totals</b>		\$151,786,851	\$29,990,000



# 2016 AMLER: Pioneer Tunnel Headshaft



# 2016 AMLER: Hazleton Rails-Trails





So, do YOU think

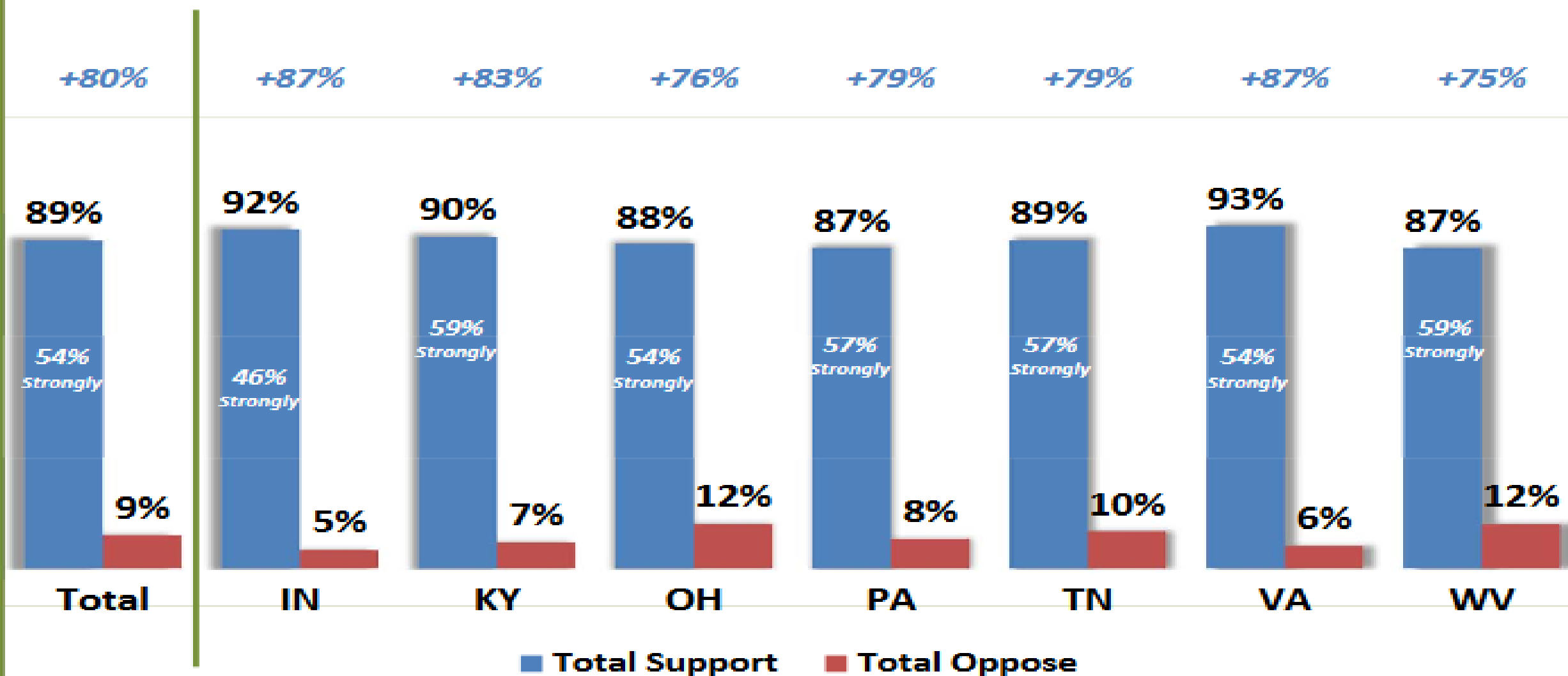
☐ these projects are the right kind of projects to revitalize the coal regions

☐ these will do a good job of revitalizing the coal regions?

☐ that there are better types of projects?

☐ Do the people think these were the right thing to do?

# Support for the RECLAIM Act is significant and intense in every state.



Does this proposal sound like something you would support or oppose?



# This strong support is likely grounded in the sense that nearly all aspects of the legislation are very important.

## Potential Benefit Ranked By Extremely/Very Important

	% Extremely/Very Important	% Extremely Important
Restore streams and rivers polluted by toxic drainage from old mines.	86%	52%
Provide job opportunities to former coal-miners and workers.	86%	47%
Create economic opportunities for local small businesses so they can create more jobs.	81%	39%
Clean-up hazardous abandoned mines.	77%	44%
Diversify the economy so there are many new and different types of employers, rather than relying on coal mining.	72%	36%
Allow communities to voluntarily apply for grants for economic redevelopment projects that best meet their needs.	69%	29%
Provide areas for outdoor recreation for those who come to hike, camp, hunt, ride off-road vehicles and enjoy natural areas near mountains.	43%	17%

Here are a number of specific possible benefits of releasing funding from the Abandoned Mine Reclamation Fund to help revitalize coal communities. Please tell me how important you think each one of these is: is it extremely important, very important, somewhat important, or not important?

# WWMKD?

## (What Would Mike Korb Do?)

- ☐ Mine Pool Geothermal District Heating Demonstration
- ☐ Mine Pool Pumped Storage Pilot
- ☐ Concrete City Park
- ☐ Eckley Breaker Restoration/Heritage Education Center
- ☐ Jeddo Tunnel AMD Treat/Geothermal/ Hydropower/  
Environmental Education Center/ Eco-Industrial Park
- ☐ Whaleback Geological Park
- ☐ Cranberry Ball Park
- ☐ Centralia Mine Fire Tourist Area





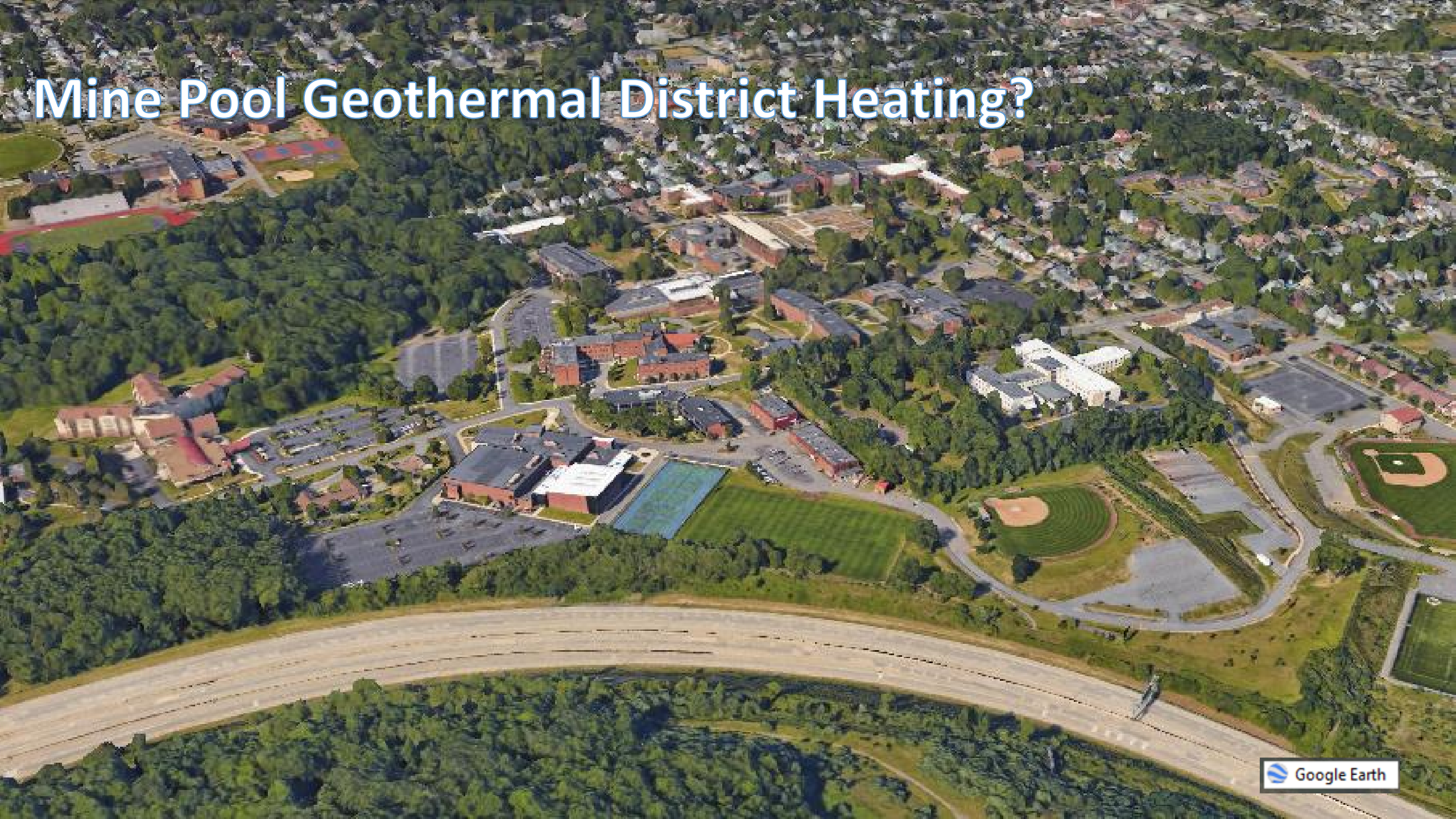
Marywood Geothermal



**Marywood Geothermal**



# Mine Pool Geothermal District Heating?





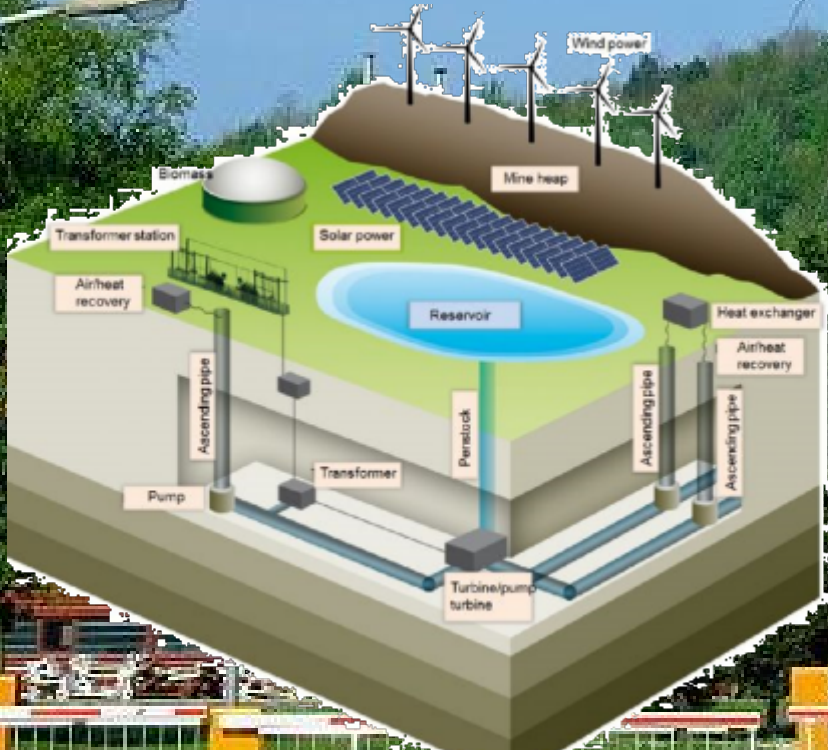
# Mine Pool Geothermal District Heating?

Penn State Fayette, The Eberly Campus



# Mine Pool Pumped Storage

RAG Prosper-Haniel



50 meters mine heap  
1000 meters down



# Concrete City Park








## Eckley Breaker Restoration


# Jeddo Tunnel






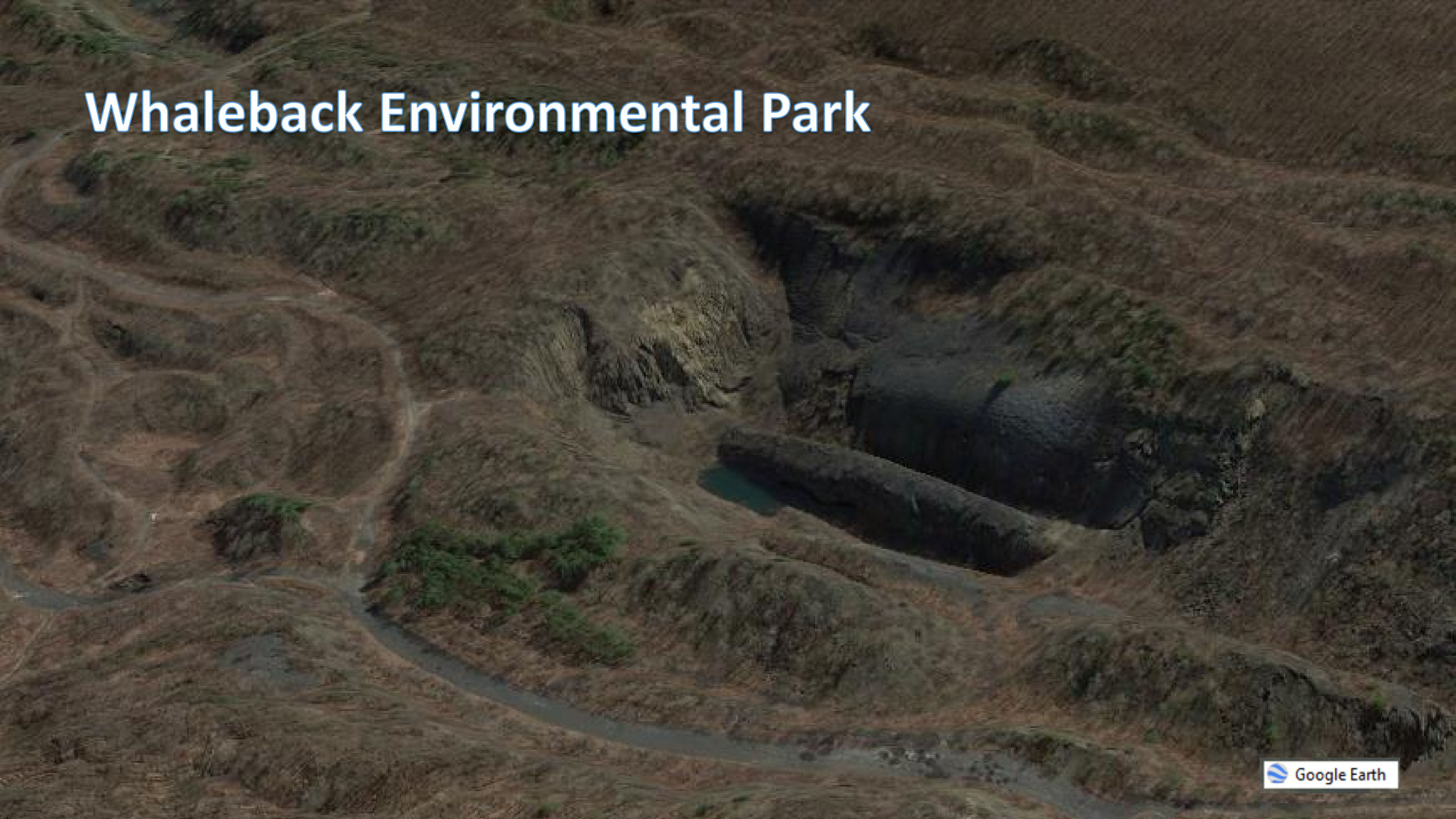
# Jeddo Tunnel

 Drums Elementary School

 Jeddo Tunnel Discharge

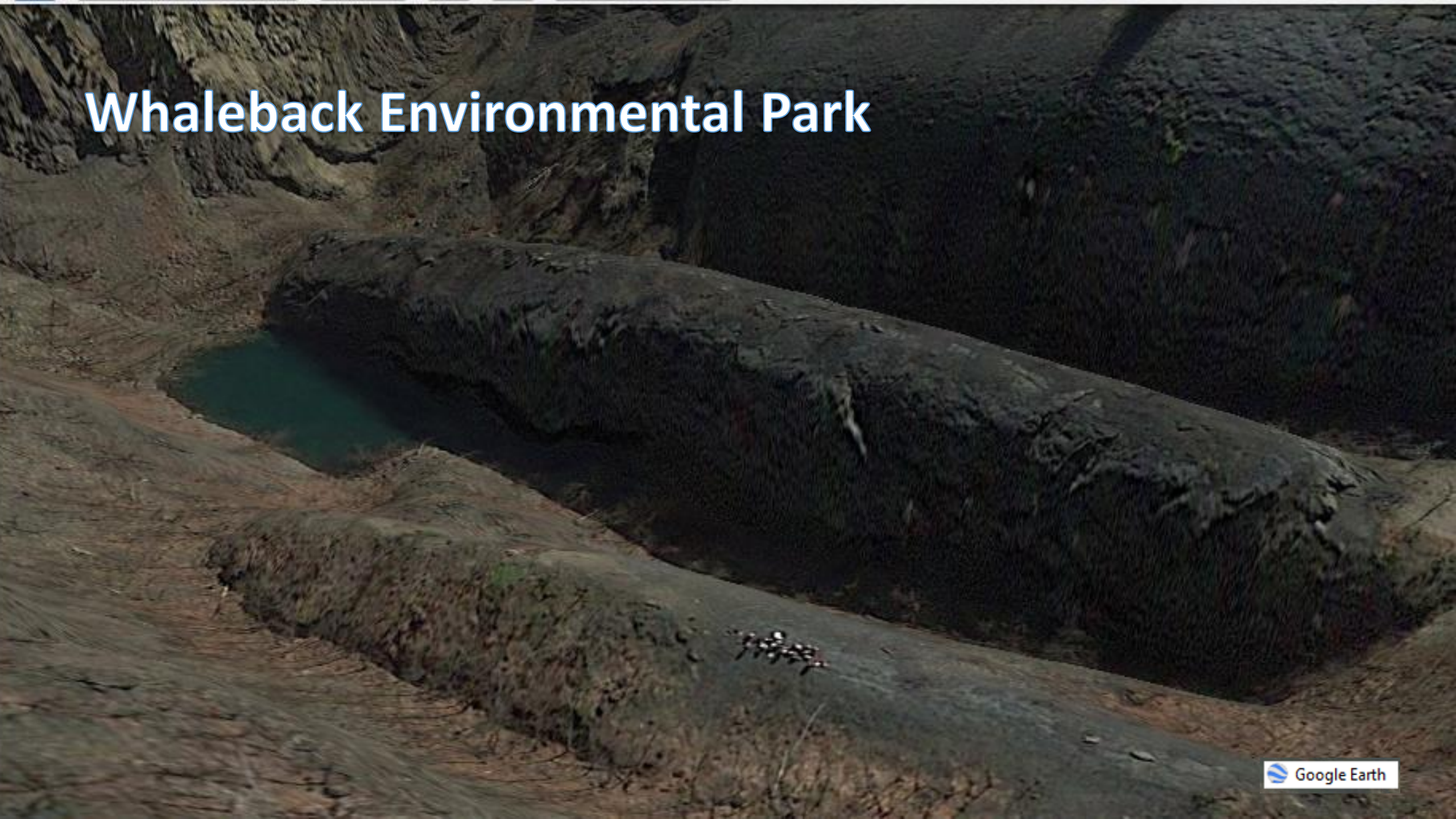
Keystone Job Corps 

# Whaleback Environmental Park





# Whaleback Environmental Park



# Cranberry Ballpark, 1937



Newspapers.com

Spectators jammed the stands and surrounding area to watch a baseball game at the Cranberry Ballpark in 1937. The photograph was taken by the Brandau Studios, Hazleton, and provided by Ed Tyson Majchrowicz.



# Cranberry Ballpark





# Centralia Tourist Area







Centralia Tourist Area

So, What's the Magic Formula???





**I don't have a magic formula to determine what projects will facilitate the revitalizing of our distressed neighborhoods, but there are tools that we should utilize. Community-based planning tools that offer participatory, action-oriented, specific and local strategies for creating revitalized and sustainable neighborhoods. We need to make sure we use these tools, that our state's community resources departments (in Pennsylvania, ours is named the DCED – the Department of Community and Economic Development) have expertise and experience utilizing, to help tell us what kind of projects will work.**

## **Use the lessons learned from the Pilot Program**

**Mine closure plans which incorporate sustainability and AML reclamation that includes economic development components require collaboration with all our customers:**

- abandoned mine landowners,**
- local and regional development NGOs,**
- local, state and federal elected and regulatory officials,**
- potential investors,**
- mining companies,**
- OSMRE,**
- the general public,**
- civic and heritage organizations,**
- watershed and other environmental advocates,**
- the press,**
- and, I'm afraid, et cetera.**



**I can't recall one time I've heard a member of the public talk about what a good job the mines or the government was doing with mine reclamation. In fact, I'm not sure I ever heard a similar discussion about reclamation good or bad. We tend to have little public exposure. I know that I was told by a Congressman one time that it was the government's job to "HAVE NO COMPLAINTS!" I guess if there's little exposure there's less chance to have complaints, but if we want to "Make Mine Land Reclamation More of a Community Asset," we need to get the community involved, whether we like it or not.**





Thanks for Listening!

QUESTIONS???

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