

# Seeing Beyond the Scars: Three Decades of Transforming Abandoned Mine Lands in NEPA

2024 PA BROWNFIELDS CONFERENCE

Elizabeth W. Hughes, EdD Wednesday, March 27, 2024

# AGENDA









The Experiment of Earth Conservancy



What We've Achieved



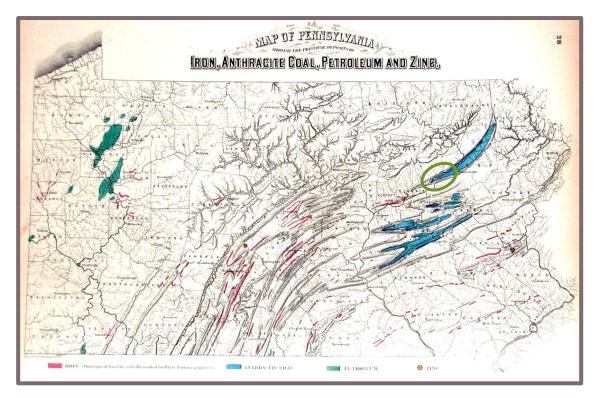
What's Next



Lessons Learned



#### The Anthracite Region of Northeastern Pennsylvania



"*Map of Pennsylvania Showing the Principal Deposits of Iron, Anthracite Coal, Petroleum and Zinc,*" by H. F. Walling and O. W. Gray, published by Stedman, Brown & Lyon, Philadelphia, PA, 1872. Retrieved from www.explorepahistory.com

- Settled in the late 1700s
- Flourished with rise of the coal industry, particularly anthracite: a hard, clean, long-burning, and thus efficient fuel source.
- At the industry's peak, over 100 million tons of coal were mined annually for distribution along the East Coast.







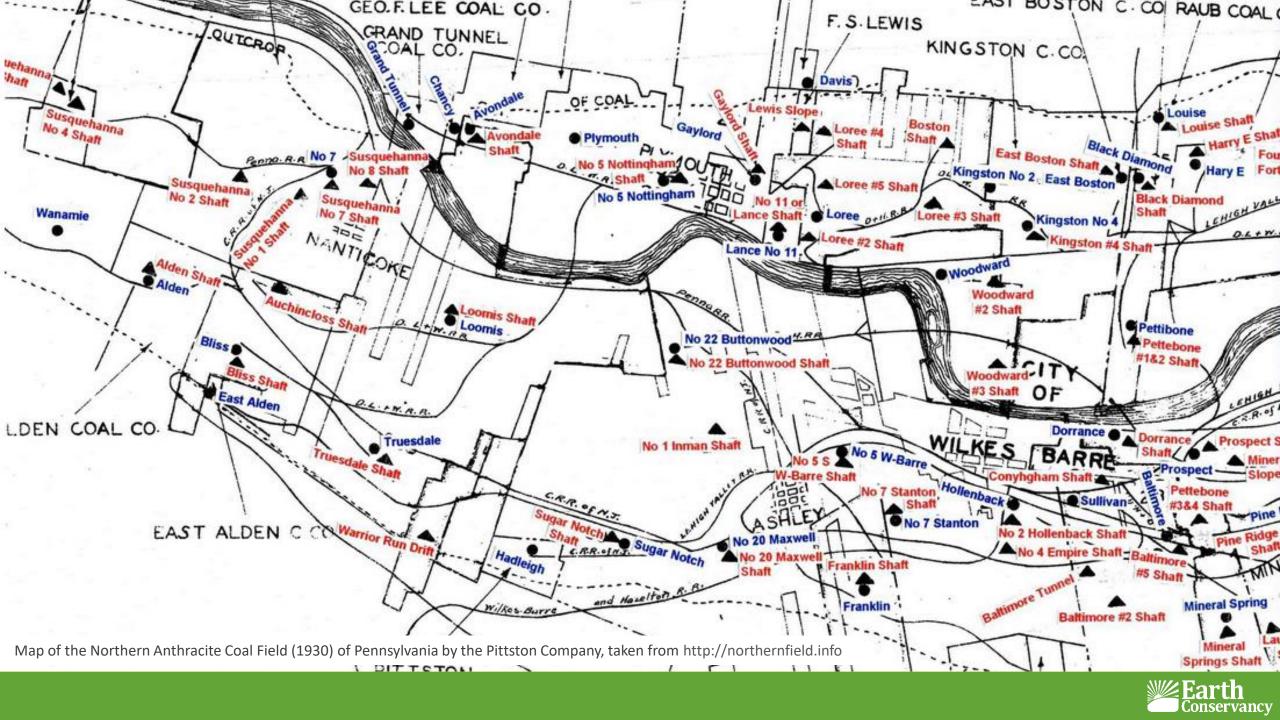














Tune in every

Sunday Atternoon

mage by HA.com





#### IT'S SWELL TO WAKE UP IN A NICE WARM HOUSE EASY TOO WITH Blue coal TRADE MARKED FOR YOUR PROTECTION

"blue coal" starts quicker, burns better, lasts longer—it makes home heating easy. \* "blue coal" warms up the house in a hurry. For trouble-free, many-soving heat in every room, order a supply of "blue coal" today.

Phone for a free demonstration of the "blue coal" deluxe heat regulator. Opens and closes furnace dampers automatically. Insures healthful temperature.

#### PAVONIA ICE & COAL 23rd and Howell Streets

Phone: 988

c. late 1960s., Silver Dollar Day, EC Archives



#### for the Preservation and En-McNamara, YMCA, Sunday. Wanamie Strip Mine Closing Durkin purchases 10 regional coal firms **Poses Question on Its Status** James Durkin, Sr., widely known in Olyphant Associates, Maple strip mine operation by Blue mer Wanamie Colliery yard. weeks' duration. this region, has announced he has Carbondale, Moffatt, Glico and purchased 10 major coal properties in Counties involved are Luzerne, six counties. He said coal production wanna, Carbon, Susquehanna, Sa would be increased by about four times kill and Wayne. UMWA official said rumors three months. the present volume.

with his two sons for income tax evasion sons. James Jr.

The closing of the Wanamie was being lined up at the for- the shutdown would be of three Coal Corporation has created a The sudden decision to close The closing, if permanent, a \$15 reacting to Wednesday's state wave of confusion and conflict the Wanamie strip mine caught would be the second of a New- wallet report that he is selling subing reports concerning the ulti- most people by surprise. One port Township mine in less than room, standard anthracite, closed the

Some reports indicate that the have been circulating about Forge Slope of Glen-Nan Coal A federal grand jury in Philade mine only is being closed tempo- Blue Coal "financial problems" Company, also owned by Durkin is currently under indictment last month accused Durkin and his rarily while equipment is re- and the possibility of a strip Durkin, was closed Feb. 22 and mine

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ed 200

**Beltrami's** 

**Flunk Tests** 

Five of nine coal samples

taken from breakers of Bel- ctaid he has

taken from breakers of Bel-trami Enterprises, Inc., flunked Lenow noth-

determine if the anthtracite met who don't

a test conducted last week to pustry.

680 in Huber Breaker at Ashley on bed- Thursday.

JOHN ANDERSON

The shutdown raised the immediate threat of a coal shortage in the Wyoming Valley

Beltrami, appearing before newsmen at the Huber Breaker scale house, announced in mased, it g In chine gun velopments chine gun rapidity these deoss of

Durkin Giving Up Coal Holdings; Production Drop Expected By BILL HALPIN On Monday District 25 United Mine Workers of

**Times Staff Writer** Production of coal in the Scranton area, once the men at Durkin's holdings in 'Anthracite Capital of the World," is expected to fall off drastically from an already Fire area and at Arcl short supply with the announcement in Wilkes-Barre today by James J. Durkin Sr. that he is, in effect, getting out of the coal mining business. Just last December, Mr.

Durkin announced purchase of 10 regional coal companies "in a move to revive anthra-

tempts to meet with Mr. estate business and collect standstill in the upper valley, America, based at Hazleton. Durkin, regarding royalty royalties on mined coal. He a quick check by The Times was quoted as saying that he found that coal presently payments to the union, have been unsuccessful over the will have nothing to do with the Carbondale area, at Dun- past several months. the operation of any of the

reportedly over a Payment dispute. Paul Bradley, preside Lewis charges Durkin bondale area, said 204 m his local refused to cros do so by District 25 leader with coal price gouging

Pachack

threw up a picket line of 75

daff, the Carbondale Mine

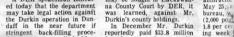
SCRANTON, Pa. (AP) - The head of currently is leasing Huber colliery from a northeastern Pennsylvania coal Blue Coal company denies allegations by

However, Durkin denied his company

available in the area is being

hauled here by distributors

RANTON TIMES, TUESDAY, JUNE 4, 1974

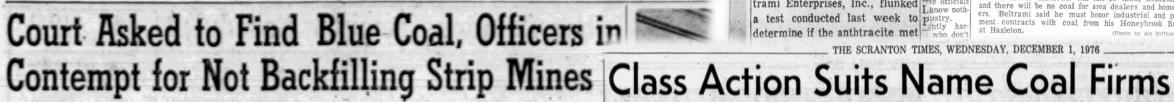


ing week not complied with. for the 10 coal companies correspon al a Durkin operalocated in six counties and inwas 149,00 uzerne County, was volving 30,000 acres of land The h last week from The companies are Glen Nan, total n equipment from Blue Coal Corp., Raymond washer ning operations or leasing any of its Colliery, Olyphant Associates shipped Maple City, Carbondale, Mofuary to after the departfatt, Glico and Gillen. short The U.S. Department of the ined a preliminary 2,418,000 tion from Luzerne Interior, Bureau of Mines, corresp Washington, reported total

or a c injunction production of Pennsylvania cent

#### General To Get Draft

#### TIMES-LEADER, EVENING NEWS, RECORD, WILKES-BARRE,



The State Department of En- As an example of the-moving kin, Sr., Durkin, Jr., Zink and Still further, the court is vironmental Resources has of equipment, DER contends a McAndrew the sum of \$100 per to prevent State Police asked Luzerne County Court to dragline and a bulldozer were day until the backfilling is com-issuing any special transp find Blue Coal Corporation, its moved from the Wanamie 14 pleted. The money shall be held tion permits to Blue Coal president, James J. Durkin, Sr. strip mine to the Retreat Moun- in escrow by the court until the any backfilling equipment mine on Foh 1 state certifier that the sites have

Penn Mart Realty Co., Palmerton, and the Philadelphia School District have filed class action suits in federal court against six indicted Pennsylvania anthracite coal producers, alleging they con-

Navigation-Dodson Co., both of Bethlehem; Lehigh Valley Coal Sales Co., West Pittston, and Reading Anthracite Coal Co., Pottsville.

The Penn Mart suit claims the action is brought in its own spired to fix prices at an arhohalf of all

federal grand jury in Harrisburg. A trial is scheduled for March 1977. Penn Mart's suit claims,

THE SCRANTON TIMES, WEDNESDAY, DECEMBER 1, 1976

heretary of

BCommunity

"There are various other persons, firms and corporations who are unnamed coconspira-

made statements in furtherance of said conspiracy." The complaint filed here said the plaintiff is unable to state the exact number of persons within the class without discovery of the

defendants' books and

of anthracite coal throughout the United States beginning in 1961 and at least continuing through 1974." "The plaintiff had no knowl edge of such unlawful con-



-The Huber Breaker is being EVENING NEWS, RECOday afterlayed off goingn up the Honey-/Hazleton. York City ay that he **Coal Samples** n" andn he pital next Oldirty blue ce covered drused Wil-

between 25-30

Beltrami Closes Huber Breaker;

\$15 Price Rise, Shortage Looms

the lice stated the woman had sev- about six feet tall, slender build tered at the Central City store in t oc- eral bruises on both arms and and wearing a short beard. | trance early Thursday morning. Apr

LOUIS BELTRAMI

re-

'TIRED OF FIGHTING' - Louis Beltrami, the area's largest coal producer, announces Thursday that he is closing the Huber Breaker at Ashley

Claiming he is "tired of fighting," Beltrami lashed out anew at the state which Wednesday released a report indicating he is selling substandard anthracite.

The Huber shutdown will idle 50 men, Beltrami said, \$210,000 and there will be no coal for area dealers and home owncation ers. Beltrami said he must honor industrial and govern-Flood H ment contracts with coal from his Honeybrook Breaker new fun at Hazleton.



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#### Abandoned Mine Lands

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# Impacted Watersheds







# **Reverberating Effects**

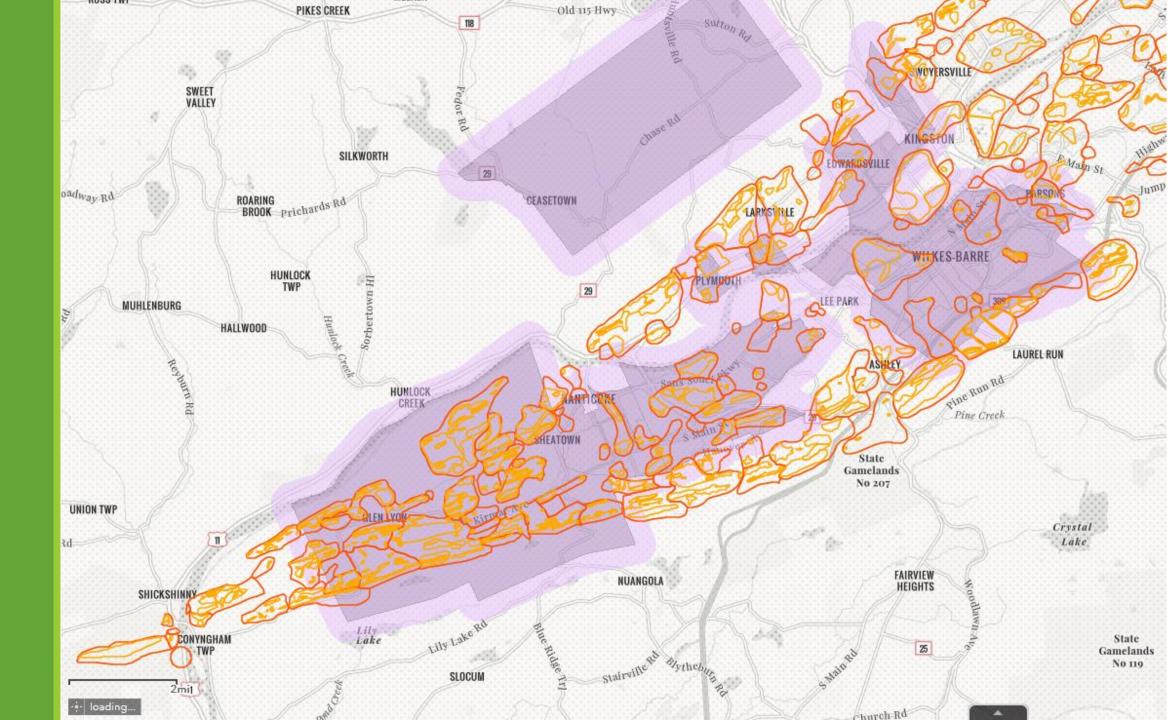
	Luzerne County	Wilkes-Barre	Nanticoke
<b>Population</b> (1920 v. 2021)	390,991 ◆ 324,825 (-17%)	78,888 ↓ 44,086 (-44%)	23,614 <b>10,588</b> (-55%)
Unemployment	5.9%	8.1%	6.7%
Median HH Income	\$56 <i>,</i> 534	\$42,430	\$49,934
Poverty	14.2%	20.4%	17.4%
College Graduate	24.0%	16.7%	18.6%



Huber Breaker, 1991; retrieved from the Library of Congress, https://www.loc.gov/item/pa2251/



# EJ Tracts & AML Areas



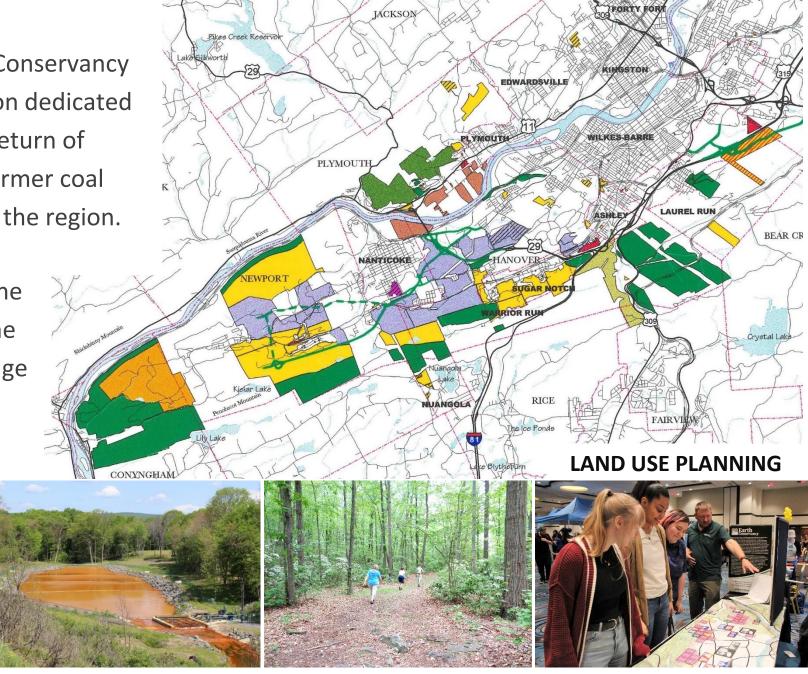
#### THE EXPERIMENT

The Earth Conservancy is a nonprofit institution to solve the human and environmental problems by developing creative, institutional, scientific, and technical mechanisms taking the risk to experiment and find new answers and thereby improve the quality of life in northeastern Pennsylvania initially and, ultimately, have applicability in similar situations throughout the United States and the world.

Standard Speaker, January 15, 1992

Founded in 1992, Earth Conservancy is a nonprofit organization dedicated to the reclamation and return of nearly 16,500 acres of former coal company-owned land to the region.

Our mission is to mend the environment, improve the community, and encourage economic growth.



MINE LAND RECLAMATION

WATERSHED RESTORATION

CONSERVATION

**EDUCATION & OUTREACH** 

# Huber Bank | Phases III & IV







2013 | 185 acres | Hanover Township Project Cost: \$9.4 million Funded by PADCED and Earth Conservancy



# Hanover 9 | Phases I & II







2014 • 149 acres • Hanover Township & City of Nanticoke Project Cost: \$1.6 million Funded by USEPA, PADEP, and Earth Conservancy



# Franklin Bank







2009 | 15 acres | Hanover Township Project Cost: \$337,000 Funded by USEPA and Earth Conservancy



# Greater Hanover Area Recreation Area







2011 | 65 acres | Hanover Township & Sugar Notch Borough

Project Cost: \$1.9 million

Funded by USDA, PADEP, PADOT, PADCED, Luzerne County, Private & In-Kind contributions, and Earth Conservancy





# **Bliss Bank**























# Espy Run





















# **Our Accomplishments**

9,377 ACRES CONSERVED

• Rebuilt **1.2 miles** of damaged stream channel

 Constructed three acid mine drainage treatment systems

**2,030 ACRES** RECLAIMED

- Completed 13 land use plans & feasibility studies
- Donated **755 acres** to 20 local entities, valued at \$3 million

- Built three trail systems, totaling **12.5 miles**
- Operate a compost facility serving Luzerne County residents and municipalities, processing 8,000 tons of green waste annually
- Have managed a small community garden for 23 years for local residents, offered free-ofcharge



\$62.3 MILLION INVESTED

Population	2010	2020	%
Hanover Township	11,076	11,445	+3.3%
Luzerne County	320,918	325,594	+1.5%
Pennsylvania	12702379	13002700	+2.4%
Unemployment	2010	2022	%
Unemployment Hanover Township	<b>2010</b> 6.1%	<b>2022</b> 5.2%	<b>%</b> -14.8%

\*2010 Median Income adjusted for inflation

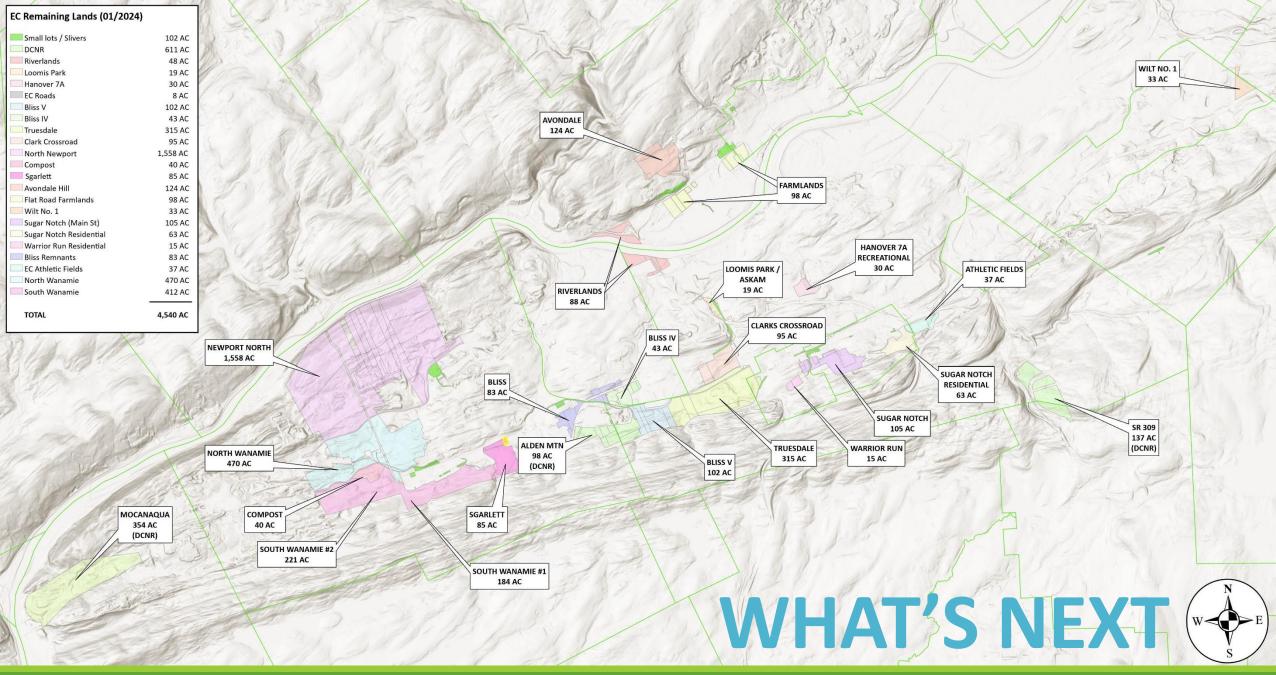
Income	2010*	2022	%
Hanover Township	\$50,653	\$65,439	+29.2%
Luzerne County	\$57,002	\$60,836	+6.7%
Pennsylvania	\$68,037	\$73,107	+7.5%
Poverty	2010	2022	%
Hanover Township	15.3%	14.4%	-5.9%
Luzerne County	13.6%	14.5%	+6.6%
Pennsylvania	12.1%	11.9%	-1.7%
College	2010	2022	%
Hanover Township	16.3%	19.1%	+17.2%
Luzerne County	20.2%	24.5%	+21.3%

26.4%

33.8%

+28.0%

Pennsylvania







#### Site

- Former strip pit, used as dump after Hurricane Agnes
- Started planning in January 2020
- Completed Master Site Development Plan in 2023 (PADCNR)

#### Challenges

- Reclamation vs. Development Funding
  - Ownership & Future Grants
    - Maintenance

#### HANOVER 7A





#### NANTICOKE CREEK WATERSHED

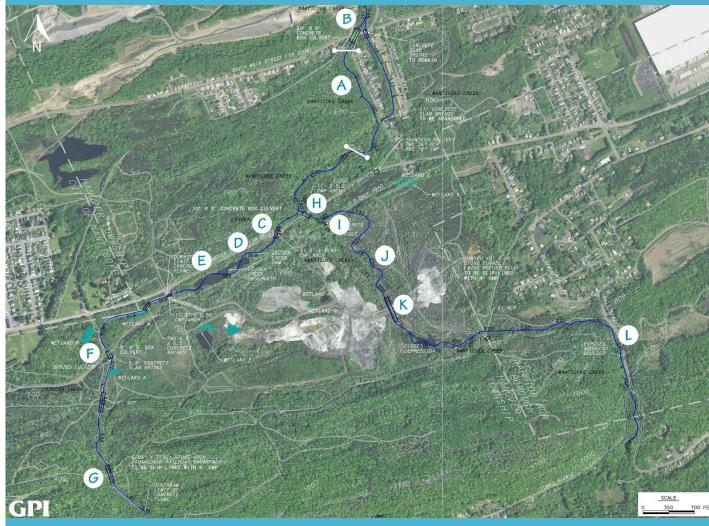


#### Site

- 15,000LF of mining-impacted stream channel, including flow loss, dry beds, impoundment
- Funding: \$1.96M USEPA BF; \$17.5M PADEP AML

#### **Future Work**

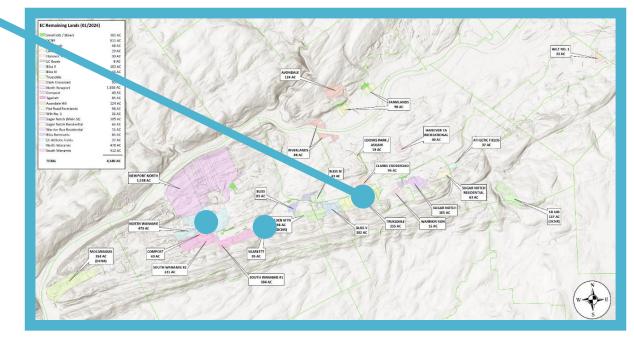
- Reclamation of Truesdale Bank
- Downstream AMD treatment system











# **SOLAR**

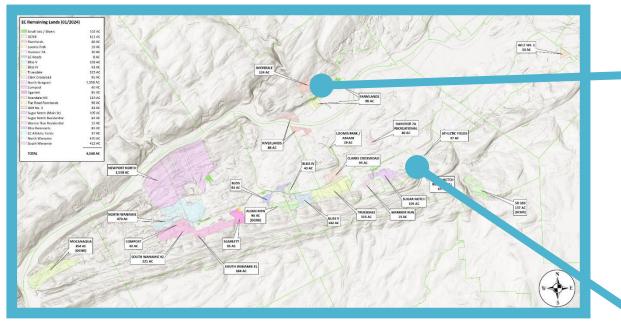
#### **Opportunities**

- Completed feasibility study for solar development on 6,000 acres (ARC Area Development)
- Three potential sites identified

#### Constraints

- Reclamation needed
- PA solar legislation in holding pattern





# HOUSING

#### Needs

- Completed Housing Analysis in 2023 (USEPA TA Program)
- Very old housing stock
- Current deficit of 7,452 units
- Additional need from population growth of 1.4K 2.4K units

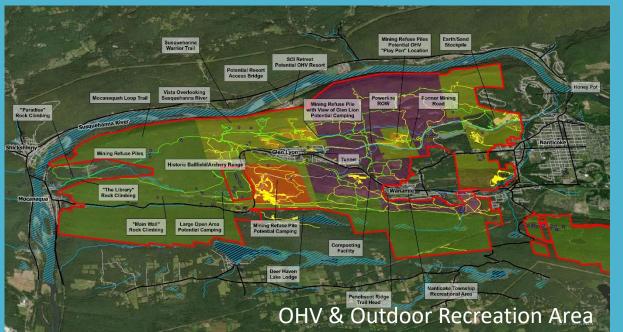
#### Constraints

Utility & transportation extensions











# **NEWPORT TOWNSHIP**

#### **Opportunities**

- Completed OHV Area Study (PADCNR)
- Awarded \$1.3 million AML grant (PADEP)

#### Constraints

- Utility & transportation development required
- Multiple land owners, including PA DCNR
- Facility ownership



# LESSONS



#### **FOCUS**

grounded • strategic • mutable



#### **PLAN** early • iterative • flexible



#### **EXPERIMENT**

open ● informed ● bounded



# **COMMUNICATE**

acknowledge • honest • consistent



# **COLLABORATE**

intentional • mutual • measured



# PERSIST

responsive • realistic • sustainable



# Thanks!

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