



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

# Brownfield Basics Webinar



# Agenda

Welcome

John Gross, DEP

What are Brownfields?

Melissa Dulinski, NJIT

Land Recycling Program (Act 2)

Mike Maddigan, DEP

Federal Funding Opportunities

Brett Gilmartin, EPA

State Funding Opportunities

Brian Eckert, DCED

Stewart Silk Mill Case Study

Betsy Schamberger,  
Moonstone Environmental

Wrap-up, Questions

Kim Hoover, DEP

## Brownfields Blueprint

Planning

Community  
Engagement

Funding

Assessment & Cleanup

Redevelopment

# What is a Brownfield?

## Federal Definition

“A brownfield is a property, the expansion, **redevelopment**, or reuse of which may be complicated by the presence or **potential presence** of a hazardous substance, pollutant, or **contaminant.**”







## Brownfields Blueprint

Planning

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Assessment & Cleanup

Redevelopment

# What is **NOT** a Brownfield?



## Private Homes

## Brownfields Blueprint

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# What is **NOT** a Brownfield?



## Greenfields

## Brownfields Blueprint

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# What is **NOT** a Brownfield?



## Superfunds Sites

## Brownfields Blueprint

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How many Brownfield sites are there?

**> 500,000 in the USA**

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## What are some of the **benefits** of Brownfields redevelopment?

- ***Environmental***
- Economic
- Safety
- Social



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## What are some of the **benefits** of Brownfields redevelopment?

- Environmental
- **Economic**
- Safety
- Social

**NOW HIRING**



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## What are some of the **benefits** of Brownfields redevelopment?

- Environmental
- Economic
- **Safety**
- Social



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## What are some of the **benefits** of Brownfields redevelopment?

- Environmental
- Economic
- Safety
- **Social**



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## Steps in the Brownfields Redevelopment Process

Planning & Community Engagement

Environmental Investigation

Environmental Remediation

Redevelopment

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# Site Identification, Community Involvement & Planning



- Compile a brownfield inventory
- Conduct community meetings
- Perform an assets & needs study
  - Form partnerships
  - Develop a plan for reuse
  - Target funding sources

## Brownfields Blueprint

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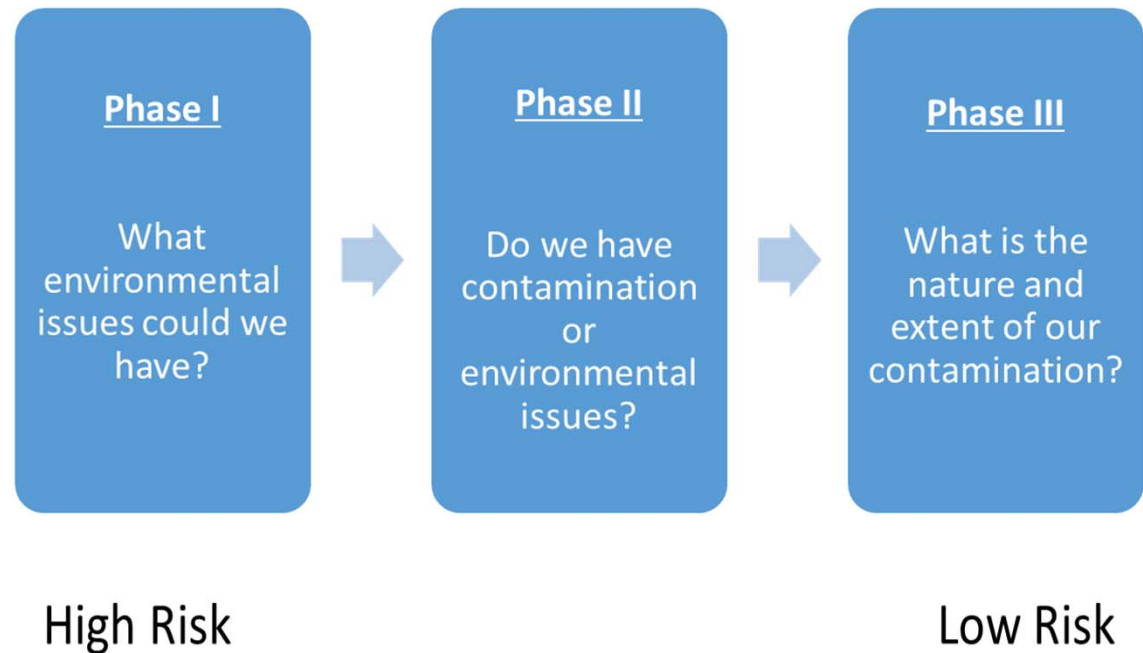
Funding

Assessment & Cleanup

Redevelopment

# Environmental Investigation

Always Do your Due Diligence BEFORE purchasing!!!



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Engagement

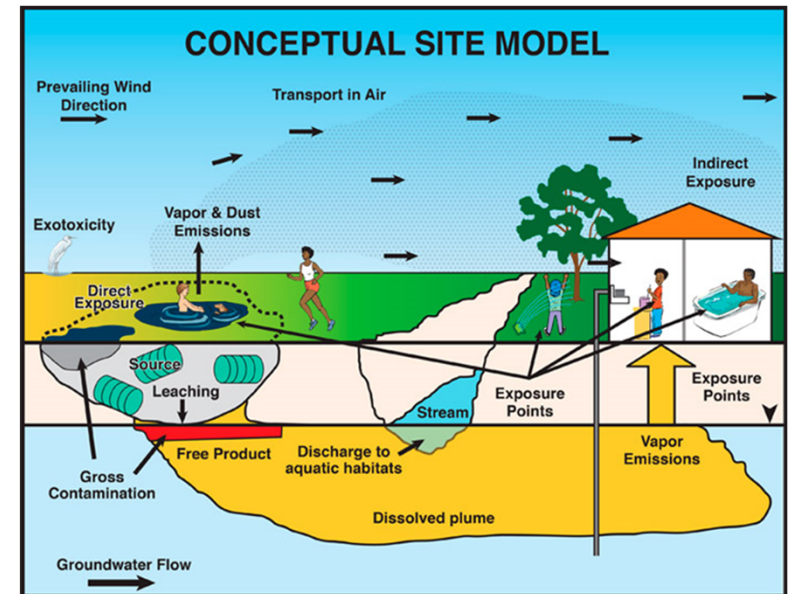
Funding

Assessment & Cleanup

Redevelopment

# Environmental Remediation

- Take ownership of the site (EPA Requirement)
- Remediate using PADEP standards
- Coordinate construction improvements w/ remediation



Source: ITRC Figure 5-1

## Brownfields Blueprint

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Redevelopment

# Redevelopment

- Honor your continuing obligations
- Deed Restrictions / Site Control
- Obtain permits before construction
- Execute plans developed early in the process



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## Technical Assistance to Brownfield Communities (TAB)

**TAB** is a technical assistance program created by EPA and funded through cooperative agreements with three TAB providers.

**TAB** providers serve as independent resources to any [state, regional, county, tribal, and local government entities, and nonprofit](#) attempting to cleanup and reclaim brownfields.

➤ **Assistance is free of charge!**



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## NJIT Technical Assistance to Brownfield Communities (TAB)

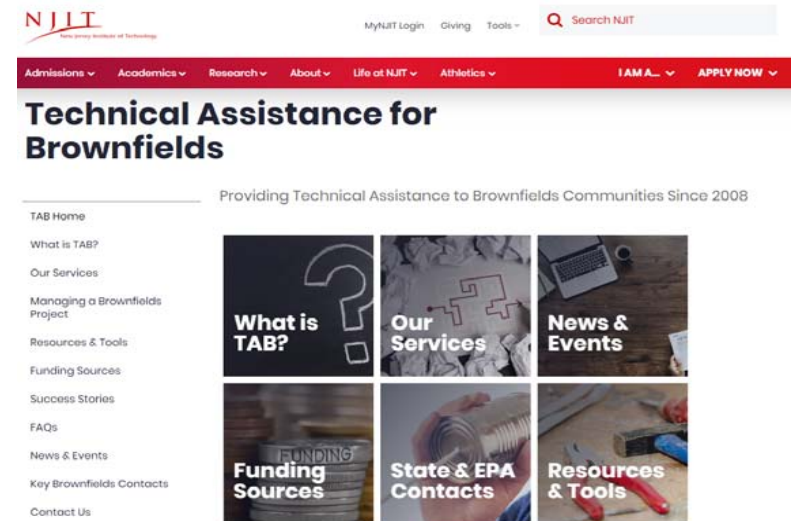
### NJIT TAB Resource Center

[www.njit.edu/tab](http://www.njit.edu/tab)

- ❖ info on all aspects of assessing and cleaning up a brownfield site
- ❖ news and upcoming events

### Resources and Tools

- ❖ Federal and state funding sources
- ❖ State brownfield programs
- ❖ State and EPA contacts
- ❖ Previously recorded webinars
- ❖ Downloads of workshop and seminar presentations
- ❖ PCBs brochures
- ❖ GI decision tree
- ❖ How-to videos



## Brownfields Blueprint

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Community  
Engagement

Funding

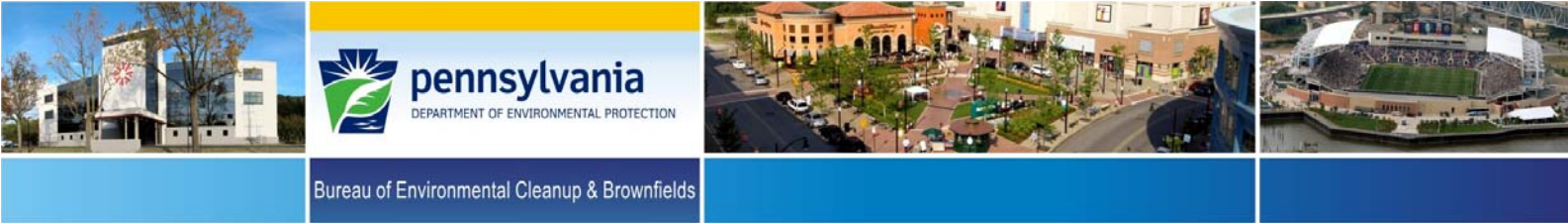
Assessment & Cleanup

Redevelopment



NJIT TAB helped communities win **\$12.5 million**  
in EPA grant funding through our services:

Resource Center  
Direct Technical Assistance  
Grant Writing Workshops  
Educational Forums



# Overview of Pennsylvania's Land Recycling Program



Tom Wolf, Governor

Patrick McDonnell, Secretary

# The Land Recycling Program

The Land Recycling Program was established by a series of legislation enacted in 1995

ACT 2 - Land Recycling and Environmental Remediation Standards Act

ACT 3 - The Economic Development Agency, Fiduciary and Lender Environmental Liability Protection Act

ACT 4 - The Industrial Sites Environmental Assessment Act



# ▶ Four Cornerstones of Land Recycling



## Act 3 Liability Protections

- Redevelopment and Industrial Development Authorities
- Any other Commonwealth or Municipal Authority acquiring title or interest in property
- Economic Development Agencies engaging in routine commercial lending practices are entitled to lender liability protections

## Program Goals

- Cleanup contaminated sites
- Return sites to productive use
- Create jobs and stimulate economic growth
- Preserve farmland and open space



## Voluntary Nature of Act 2

- Encourage remediators to perform voluntary cleanups
- Remediator may select areas of contamination within the property without having to characterize the entire property
- Liability Relief applies only to area addressed

## Act 2 - Remediation Options

- The remediator makes the choice of standard.....**NOT THE DEP**
- One or a combination of cleanup standards can be chosen
  - Background Standard
  - Statewide Health Standard
  - Site Specific Standard
- Special Industrial Area Provision



# Cleanup Standards

- Background Standard
  - Concentration of contaminant present but not related to release on site
- Statewide Health Standard
  - Medium Specific Concentrations (soil and water)
- Site-Specific Standard
  - Risk based approach tailored to individual sites

## Act 2 – Step by Step

- Publish Notice of Intent to Remediate
- Characterization, identify contaminants
- Select standard
- Establish points of compliance
- Remediate contamination, if needed

## Act 2 – Step by Step (cont.)

- Demonstrate attainment of remediation standard(s)
- Submit reports to the DEP
- Liability relief with approval of final report
- Property may need Environmental Covenant
- Post remediation care and monitoring may also be required

# Liability Protection

- Entities demonstrating compliance with a standard shall be relieved of further remediation of contamination identified in submissions to DEP
- Includes protection from citizen suits and contribution actions under PA law
- Reopeners may apply in specific circumstances

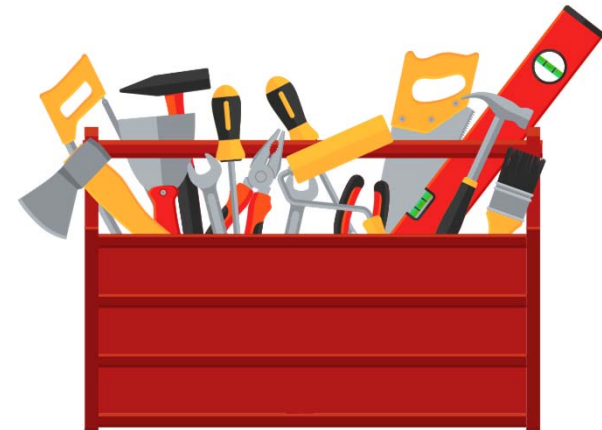
# Liability Protection

Liability protection applies to:

- Current owner
- Future owners
- Any person who participated in the cleanup
- Developer
- Occupiers
- Successors or assigns
- Public utilities performing work on the property

# Tools for Cleanup Challenges

- Buyer/Seller Agreements
- Special Industrial Area Agreements
- One Cleanup Program



## DEP Assistance

- Regional teams will assist with redevelopment projects
  - Assistant Regional Director, Local Government Liaison, Environmental Cleanup Program Manager
- Permitting
  - Permit Application Consultation Tool (PACT)
  - Pre-Application Conferences
  - Permit may be eligible for priority review

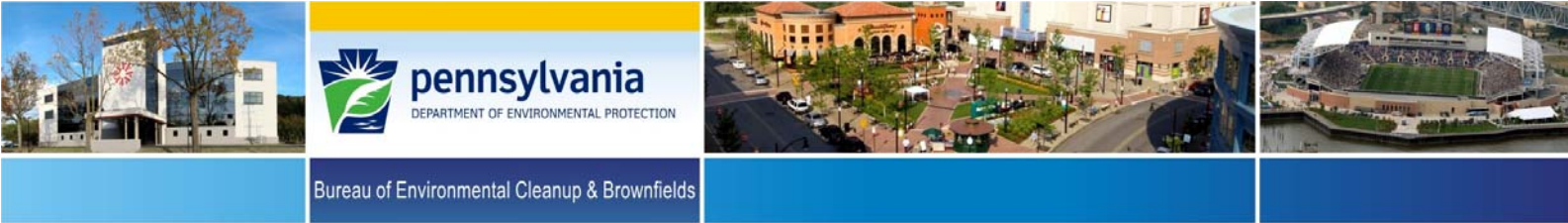
# DEP Assistance

- Outreach/Information
  - PADEP Land Recycling website
  - Brownfields Bulletin
  - Brownfield Development Guide
  - Training
  - PA Brownfields Conference

## Program Results

- ✓ To date, over 7400 projects have been approved
- ✓ Over 1672 Land Recycling projects underway





# Thank You

**Troy Conrad, Director**

**Bureau of Environmental Cleanup &  
Brownfields**

**Department of Environmental  
Protection Land Recycling Program**

[https://www.dep.pa.gov/Business/Land/  
Pages/default.aspx](https://www.dep.pa.gov/Business/Land/Pages/default.aspx)





# EPA Region 3 Brownfields

Transforming pollution to playgrounds,  
hazards to houses, and wasted-lots to  
community hot spots!

# Grant Types

- ▶ Assessment Grant
- ▶ Cleanup Grant
- ▶ Revolving Loan Fund (RLF)
- ▶ Job Training Grant
- ▶ Multipurpose Grant
- ▶ Targeted Brownfield Assessments (TBAs)



# Assessment

- ▶ Community wide
  - ▶ \$300,000 for hazardous substances and/or petroleum
- ▶ Site specific
  - ▶ \$200,000 or \$350,000 with waiver
- ▶ Coalition
  - ▶ \$600,000
- ▶ Activities
  - ▶ Inventory, characterize, assess, reuse planning, cleanup planning, and conduct community involvement

# Assessment Planning Activities

## ▶ Initiate brownfields revitalization:

- ▶ Site Reuse Assessment
- ▶ Land Use Assessment
- ▶ Market Study
- ▶ Infrastructure Evaluation
- ▶ Community Health Assessment
- ▶ Site Disposition Strategy

## ▶ Prepare for redevelopment:

- ▶ Site Reuse Vision
- ▶ Revitalization Plan
- ▶ Resource Roadmap
- ▶ Evaluation of Market Viability



# Cleanup

- ▶ Up to \$500,000 per site
- ▶ Cost share
  - ▶ 20% - can be waived
- ▶ Period of performance
  - ▶ 3 years
- ▶ Activities
  - ▶ Cleanup activities, reuse planning, and community involvement



# Multipurpose

- ▶ Up to \$800,000
- ▶ Cost share
  - ▶ \$40,000 - can be waived
- ▶ Period of performance
  - ▶ 5 years
- ▶ Activities
  - ▶ Inventory, assessments, remediation, community involvement, reuse planning



# Revolving Loan Fund (RLF)

- ▶ Up to \$1,000,000
- ▶ Cost share
  - ▶ 20% - can be waived
- ▶ Period of performance
  - ▶ 5 years
- ▶ Activities
  - ▶ Capitalize a RLF program
  - ▶ Provide loans and subgrants to carry out cleanup activities



# THE BROWNFIELD PROCESS



## EPA BROWNFIELD GRANTS AND RESOURCES

TARGETED BROWNFIELD ASSESSMENT=**T** ASSESSMENT=**A** CLEANUP=**C** REVOLVING LOAN FUND=**R** MULT-PURPOSE=**M**

# Job Training Grants

- ▶ \$200,000 grants
- ▶ Period of performance
  - ▶ 2 years
- ▶ Activities
  - ▶ For training and placing underemployed residents in communities impacted by brownfields
  - ▶ HAZWOPER, OSHA health and safety, outreach



## CERCLA 128(a)

- ▶ Supports State and Tribal Response Programs
- ▶ Includes support for capacity building, site assessment, cleanup and related program development support
- ▶ Non-competitive allocation
- ▶ Eligible recipients are States, tribes, U.S. territories, and District of Columbia





# Brownfields Revitalization Assistance: Not Just Grants

Targeted Brownfields  
Assessment (TBA) Program

Regional Technical Assistance to  
Brownfields Communities (TAB)  
Providers

National Technical  
Assistance Providers

# Targeted Brownfields Assessment (TBA)

- ▶ Site assessment activities conducted by EPA contractor
  - ▶ Phase I assessments
  - ▶ Site sampling activities
  - ▶ Cleanup planning
- ▶ Work in coordination with state VCPs
- ▶ Rolling application process in Region 3
- ▶ NO COST to public entities, tribes, and nonprofit organizations



# Nationwide Technical Assistance Partners

- ▶ EPA funds these organizations so they can assist communities with their brownfields challenges - for FREE!

## Current grantee



Grant (new RFA to be issued summer 2020)  
New contract support (EPA-directed)



New contract support (EPA-directed)



No change

## Fall 2020

# Land Revitalization

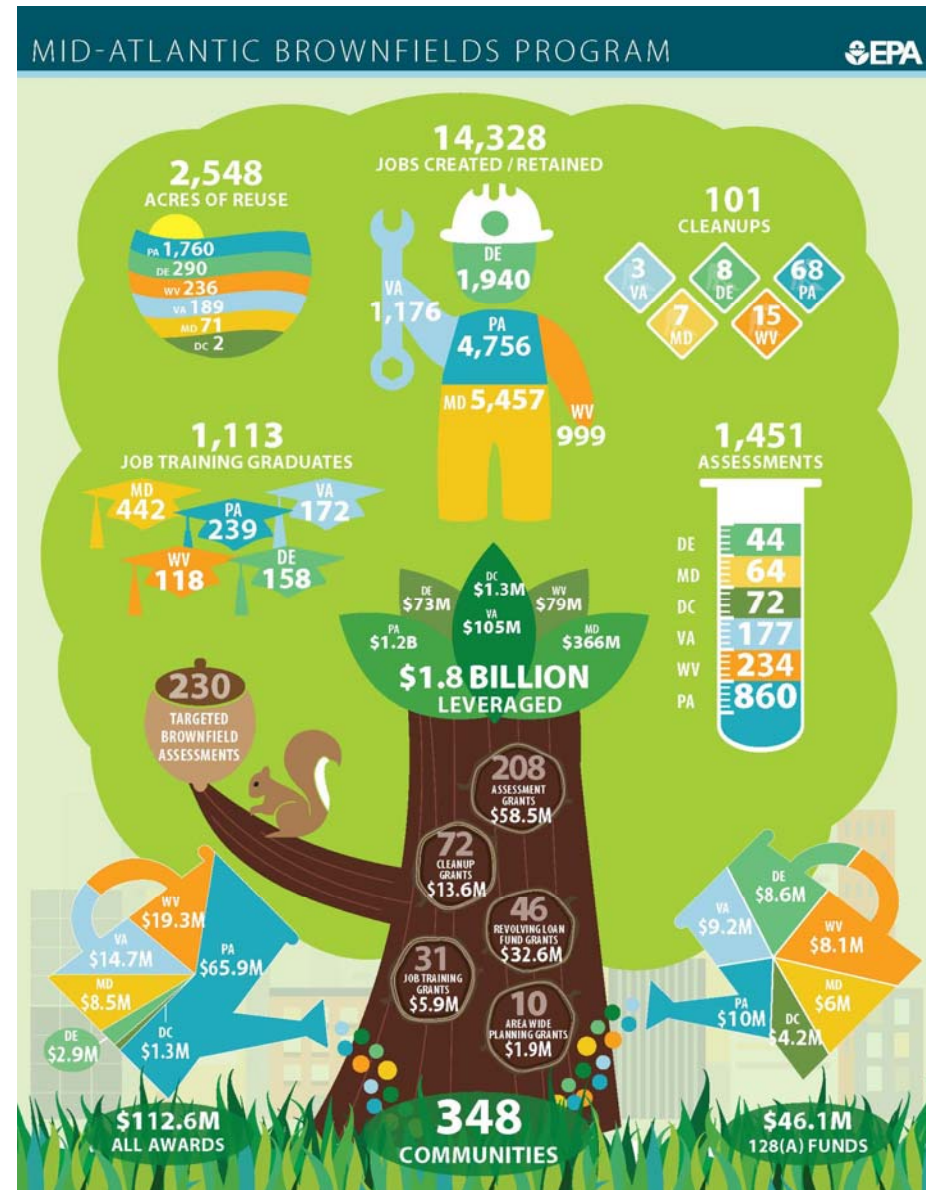
- ▶ EPA develops guides, tools, trainings and best practices that help communities cleanup and reuse contaminated sites.
  - ▶ Remove barriers to site reuse
  - ▶ Integrate sustainable approaches into site redevelopment
  - ▶ Leverage resources



These and other LR resources are on EPA's [LR website](#)

# Region 3 Brownfields Program Snapshot

- ▶ Over 2,000 sites assessed or cleaned up
- ▶ Over \$112 Million awarded to close to 350 community entities
- ▶ Annually, we manage 80-100 open grants valued at \$30M-\$40M



# Thank You!

- ▶ Brett Gilmartin
  - ▶ [Gilmartin.brett@epa.gov](mailto:Gilmartin.brett@epa.gov)
  - ▶ (215) 814-3405





# FINANCING BROWNFIELD REDEVELOPMENT

October 23, 2020

Brian Eckert  
Director, Site Development

## INDUSTRIAL SITES REUSE PROGRAM (ISRP)

### Purpose

- Provides funds for environmental assessment and remediation at sites where industrial activity was conducted prior to July of 1995.

### Eligible Applicants

- Municipalities
- Municipal Authorities
- Redevelopment Authorities
- Non-profit economic development agencies
- Private companies, real estate developers (**loans only**)

### Eligible Uses of Funds

- Phase I, II, & III Environmental Assessments
- Remediation/Removal of Hazardous Substances

# INDUSTRIAL SITES REUSE PROGRAM (ISRP)

## Types of Assistance

### Grants

#### Environmental Assessments:

- Cities of the 1st, 2nd, 2A, or 3rd Class
- Targeted communities as designated by DCED

#### Environmental Remediation:

- Public or non-profit entity when owning the site

### Loans

- All eligible applicants for remediation & assessments

## Amount & Terms of Assistance

- 25% match required
- Up to \$200,000 for assessment
- Up to \$1 Million for remediation
- All Loans = 2% rate
- Loan Terms:
  - 5 years = assessment loans
  - 15 years = remediation loans

# INDUSTRIAL SITES REUSE PROGRAM (ISRP)

## Since Program Inception

- Over 660 projects funded
- \$134.6M awarded
  - Assessment: \$26,320,345
  - Remediation: \$108,282,863
- 54 counties

## Applying for ISR Program

- Submit Letter of Intent to DCED
- DCED & DEP will review
- Submit a Single Application with required supplemental information

## BUSINESS IN OUR SITES PROGRAM (BOS)

### Eligible Applicants

- Municipalities
- Municipal authorities
- Redevelopment authorities
- Industrial development agencies
- Private developers (construction loans only)

### Eligible Projects

- Redevelops, reuses, or revitalizes a previously utilized site (i.e. former industrial, commercial, military, mining, railroad or institutional site or building) for future use by businesses or others; or undeveloped sites if development of the site is consistent with an existing comprehensive county/municipal plan zoned for such development.
- All site development activities required to make a site “shovel ready” which will generate economic growth, revitalize a downtown, or strengthen the community and that the proposed future use will increase employment opportunities.

### Fund Limits

- Loan - No maximum or minimum
- Grant – 40% of eligible costs or \$4M
- Funds available from portfolio loan repayments

## BUSINESS IN OUR SITES PROGRAM (BOS)

### Eligible Uses of Funds

- Acquisition of land and buildings, rights of way, and easements.
- Construction or rehabilitation of: storm water; sanitary sewer; water supply; energy facilities that generate or distribute power; transportation systems including on-site & off-site roads, signals, rail, port; gas, and communications infrastructure.
- Demolition of structures and removal of abandoned foundations, clearing and preparation of land.
- Environmental site assessment and remediation, related engineering, design, and inspection costs, signage, landscaping, street lighting, administrative costs and other related professional services.

### Ineligible Uses of Funds

- Fees for securing other financing, interest charges on borrowed funds.
- Tap-in-fees, unpaid taxes or municipal liens.
- Costs incurred prior to approval of loan.

## BUSINESS IN OUR SITES PROGRAM (BOS)

### Requirements

- Loans will be “patient” – no repayment until first parcel is sold or leased, up to 5 years.
- Repayment of loans shall not exceed 20 years.
- Interest rate: 2% or 3%. If secured by 2nd mortgage, rate will be 8% or 9%, dependent upon the unemployment rate of the county where the project is located.
- Loans are to be secured by a mortgage lien on the project site.
- Applicant must provide proof that the county has been notified about the intended project.
- The intended reuse of a project site may not be residential.

## BUSINESS IN OUR SITES PROGRAM (BOS)

### Since Program Inception

- \$569.6M awarded
- 122 projects
- \$2.5B private investment leveraged
- 34,362 jobs created

### Applying for BOS Program

- Program is currently closed.

## OTHER FUNDING SOURCES

### Other Funding Sources

- Greenways, Trails, & Recreation Program
  - ✓ \$250,000 Grants

### Other Information

- All guidelines can be downloaded at <http://dced.pa.gov>
- On-line Single Application located at [www.esa.dced.state.pa.us](http://www.esa.dced.state.pa.us).
- **Brian D. Eckert**, Director      717.720.1400; [breckert@pa.gov](mailto:breckert@pa.gov)

# Stewart Silk Mill Redevelopment

*How multiple funding sources, public private partnerships, and Act 2  
made possible the redevelopment of a former silk mill in Easton, PA*

Presented by Betsy Schamberger, P.G.  
Moonstone Environmental, LLC  
October 29, 2020

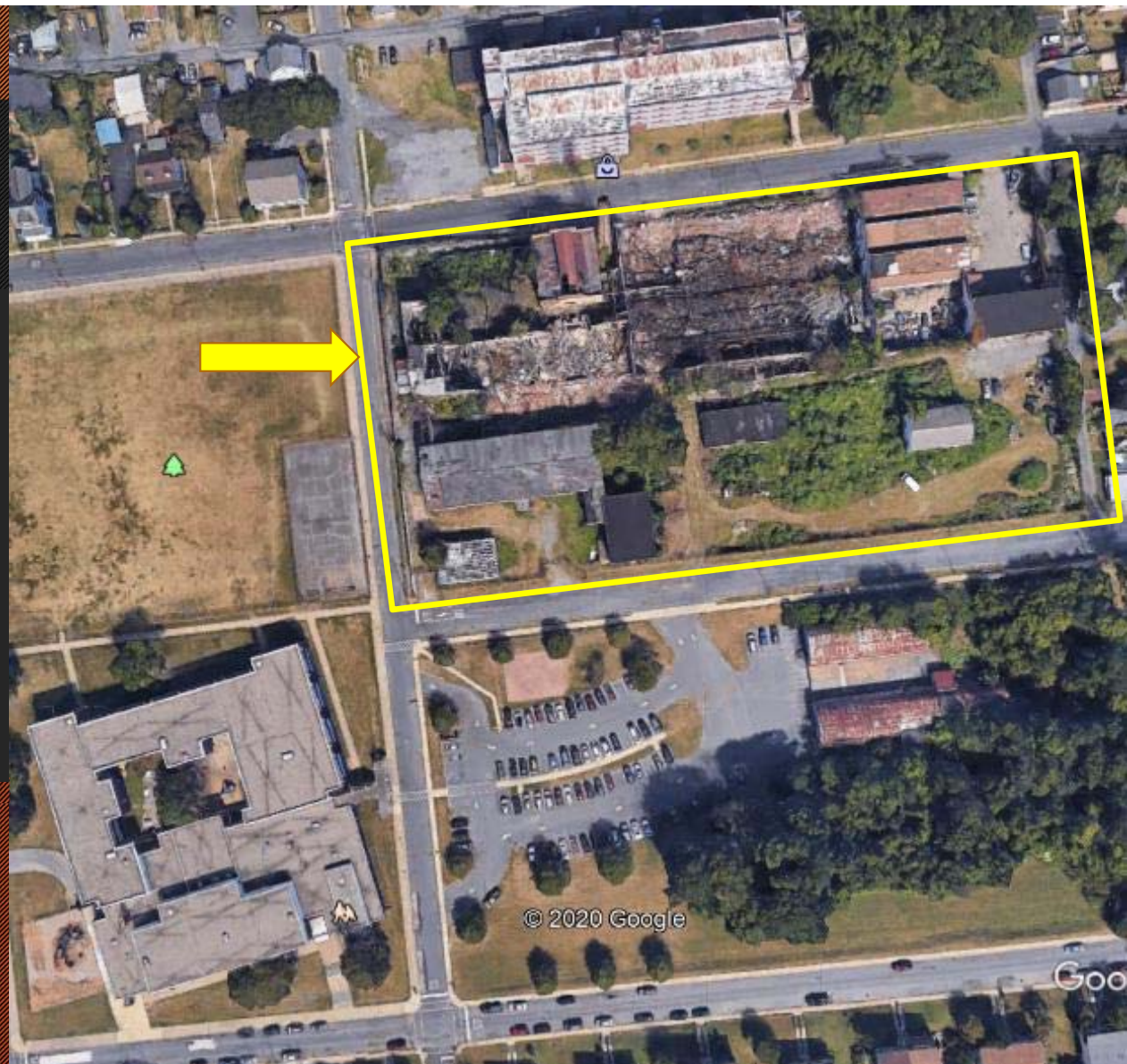
# The Site

Stewart Silk Mill  
(a.k.a. Black Diamond Mill)

A 4-acre historical industrial property in  
South Side Easton, PA

In a mostly residential neighborhood

An elementary school is located  
across the street



# The Site

## HISTORY

- First developed c.1895 as a silk mill
- Operated until the 1960s/70s
- Operations included cleaning raw silk, dyeing, and transporting finished products.
- Acquired by Black Diamond Enterprises, Ltd., a commercial stainless steel fabrication company, in 1995. Black Diamond operated there until 2013.

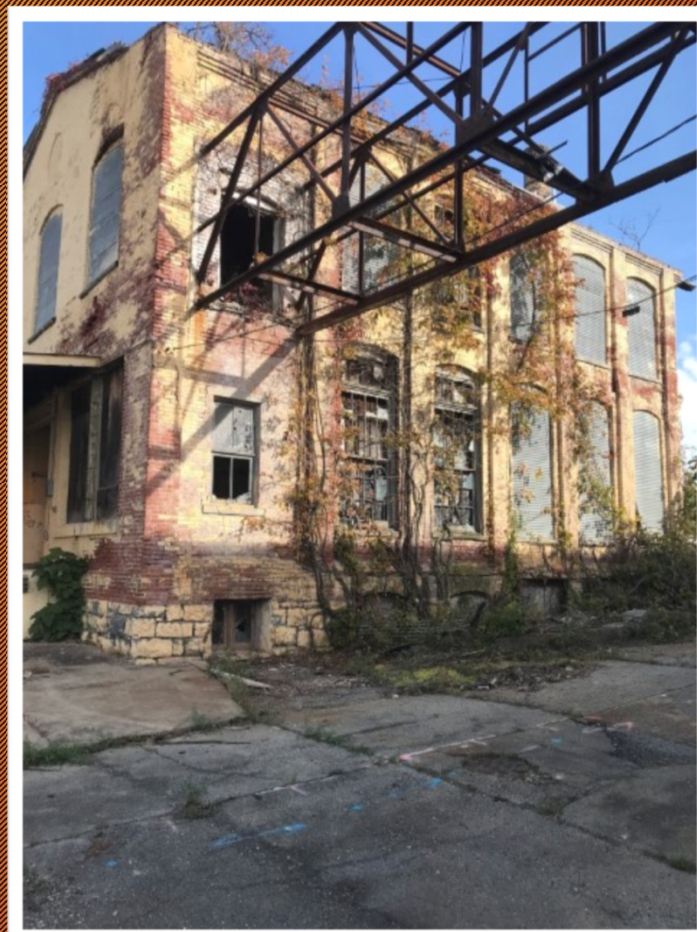
## STRUCTURES

- Developed with approximately 10 buildings
- Several of these had collapsed or suffered structural damage over the past two decades
- Site has now been cleared for redevelopment

Before...



Before...



# The dreaded list of acronyms

## FUNDING ACRONYMS

DCED	Dept. of Community & Economic Development
ISRP	Industrial Sites Reuse Prog.
KOEZ	Keystone Opportunity Expansion Zone
LERTA	Local Economic Revitalization Tax Assistance
PHARE	PA Housing Affordability & Rehab. Enhancement Fund
PHFA	PA Housing Finance Agency
PPP	Public Private Partnership
RACP	Redevelopment Assistance Capital Prog.

## ENVIRONMENTAL ACRONYMS

APEC	Area of potential environmental concern
DEP	Dept. of Environmental Protection
PCB	Polychlorinated biphenyls
RCRA	Resource Conservation & Recovery Act
SHS	Statewide Health Standard
SSS	Site-Specific Standard
SVOC	Semivolatile organic compounds
VOC	Volatile organic compounds

# Redevelopment Team

- TCH REALTY & DEVELOPMENT CO., LLC planned commercial development: retail, medical clinic, restaurant, grocery store (site is in food desert)
- Feasibility plan indicated need for affordable housing
- TCH located a partner familiar with affordable housing: PIRHL
- Team hired GMS Funding Solutions to assist with locating and managing funding sources
- Project split into two tracts:
  - TCH to do commercial development
  - PIRHL to do affordable housing

TCH Realty &  
Development  
Co, LLC

**pirhl**

**GMS**

*Funding Solutions*

# The Funding Process

- Applied for RACP funding for commercial tract
- Applied for PHARE funding for affordable housing tract
- Applied for PHFA Tax Credits for affordable housing tract
- PHFA questioned how the environmental cleanup budget was established (no environmental assessment done)
- Team identified ISRP as source of funds for assessment and remediation
- Resulting assessment strengthened PHFA application

Some funding sources required municipal participation/ownership; lead to Public Private Partnership (PPP) with City of Easton.



# Funding Awarded

\$15.35 million in grants; \$1 million in loans

## RACP Grant

**\$2 Million**

Grant, not a loan  
Awarded to City, not developer - requires PPP  
Awarded to fund development of retail, medical clinic, restaurant, and grocery store in residential area (food desert)

## ISRP Grants

**\$150,000**

ISRP Assessment Grant - awarded to City on behalf of developer

**\$1 Million**

ISRP Remediation Grant - awarded to City and City must own the property

## PHARE Loan

**\$1 Million**

Loan from the state  
Funded by real estate transfer taxes  
"Soft" money

## Tax Credits

**\$12.2 Million**

PHFA-administered federal tax credit program  
Awarded to banks, who must invest funds in local or regional community development in exchange for tax credits  
Runs for 10 years (\$1.25 million credit/year)  
Bank will receive \$12.5 million in tax credit; developer received \$12.2 million grant (does not need to be repaid)

## Tax Incentives

### KOEZ

- Keystone Opportunity Expansion Zone
- Certain state and local taxes waived

### LERTA

- Local Economic Revitalization Tax Assistance
- Local taxes may be waived

# The Environmental Process - Assessment

- Phase I ESA
  - Identified several Recognized Environmental Conditions, from which Areas of Potential Environmental concern (APECs) were defined.
  - APECs included:
    - Lead paint impacts below former water tower
    - Several buildings where industrial and auto repair activities took place, including ASTs
    - Current and former electrical transformers
    - Historic fill on northwest portion of Site
    - Two fuel oil USTs

# The Environmental Process - Assessment

- Phase II Assessment under ISRP Assessment Grant
  - Geophysical survey - nothing new identified
  - Removal of "4,000-gallon fuel oil UST"; turned out to be a vaulted 1,000-gallon gasoline UST
  - Soil sampling via GeoProbe:
    - 50 soil boring locations; 102 samples collected
    - 82 samples submitted for analysis of VOCs, SVOCs, PCBs, RCRA Metals and/or Pb

Assessment identified 5 areas requiring excavation and disposal of contaminated soils, and a 10,000-gallon heating oil UST that needed to be removed.

# The Environmental Process - Assessment

Soil exceedances of the Residential Statewide Health Standard (RSHS):

- arsenic
- lead
- benzo(a)anthracene
- benzo(a)pyrene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- carbazole
- chrysene
- dibenzo(a,h)anthracene
- indeno(1,2,3-cd)pyrene

Other SVOCs, metals, PCBs, and VOCs, were below the RSHS or were not detected.

Contaminant	Method of Attainment	Institutional Controls
SVOCs and Lead in Soil	Targeted remedial excavations at five locations to remove soil containing exceedances	N/A
Arsenic in Soil	Risk assessment calculations demonstrated no health risk for residential land use	Deed acknowledgement stating that a risk assessment was performed

# The Environmental Process - Remediation

- Remediation under Act 2 using ISRP Remediation Grant
  - Removed 10,000-gallon heating oil tank
  - Excavated and disposed of soil from 5 APECs with exceedances for SVOCs/Pb
  - Attained Residential Statewide Health Standard for:
    - VOCs, SVOCs, PCBs, metals (except arsenic)
  - Attained Residential Site-Specific Standard for:
    - Arsenic

Post-remedial risk assessment demonstrated that the arsenic concentrations remaining in soil attained the SSS without the need for pathway elimination, engineering controls, or institutional controls. However, an environmental covenant was needed to document that a risk assessment was performed.

# The Environmental Process - Remediation

- Additional remediation covered by ISRP Remediation Grant
  - Workplan submitted to DEP to indicate additional non-Act 2 remedial work that would be conducted using ISRP funds; approved by DEP
  - Additional work included removal of debris and demolition of structurally unsound buildings (all buildings) that created unsafe conditions for site workers, including risk of further collapse, building fires, asbestos exposure, etc.
  - Asbestos survey completed to characterize extent of asbestos present in buildings and debris prior to demolition
  - Remediation overseen by ISRP Grantee's (City's) consultant to ensure proper work methods and health and safety procedures

# The Environmental Process - Act 2 Reporting

- Act 2 Reporting
  - Submitted Remedial Investigation Report/Cleanup Plan (RIR/CP) for DEP approval prior to remediation
  - Submitted supplemental Workplan to DEP to get approval for non-Act 2, ISRP-funded work
  - Submitted Risk Assessment & Final Report after remediation was complete
  - Post-Remedial Care Plan - not needed because no engineering controls were needed to attain the standard
  - Submitted Environmental Covenant to acknowledge use of risk assessment
  - Developer received Release of Liability from DEP

# Current Progress...



# Current Progress...



# Conclusions

This project would not have been financially feasible without the funding and tax programs provided by DCED, PHFA, the Commonwealth of Pennsylvania, the Governors' office, the City of Easton.

The environmental issues at this site were manageable due to the flexibility of the Act 2 program, which allows for site-specific attainment rather than strictly requiring attainment of numeric standards.

It takes a village to complete a brownfields redevelopment.  
Seek assistance, collaborate,  
and be prepared for surprises.

Presented by Betsy Schamberger, P.G.  
Moonstone Environmental, LLC



[betsy@moonstoneenviro.com](mailto:betsy@moonstoneenviro.com)  
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610-216-9150 (cell)

# Questions? Use Chat Box

## CONTACT INFORMATION

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