

The Process of Recycling Degraded Properties



YOUR PRESENTERS



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BROWNSFIELD

BROWNFIELD

Poll the audience:
is it brownsfield or brownfield?

Huntington Bank FIELD

BROWNS

LEN FORD 80

CLAY MATTHEWS 57

BILL WILLIS 60

MARION MUTLEY 36

DANTE LAVELLI 86

OTTO GRAHAM 14

PAUL BROWN

JIM BROWN 32

PAUL WARFIELD 42

LOU GROZA 76

OSZIE NEWSOME 82

MAC SPEEDIE 88

10,363

CRC
MOR

IT TAKES ALL YEARS
BROWNS

BROWNS
END ZONE

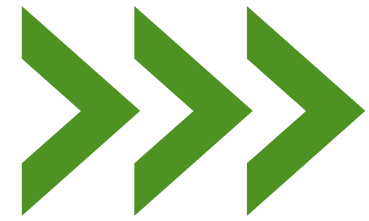


WHAT IS A BROWNFIELD?

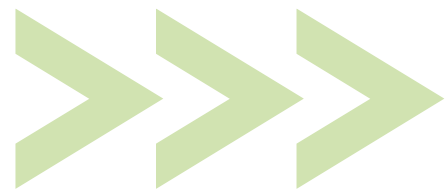
The U.S. Environmental Protection Agency defines a Brownfield as, “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance(s), pollutant(s), or contaminant(s).”



A BRIEF BROWNFIELDS HISTORY

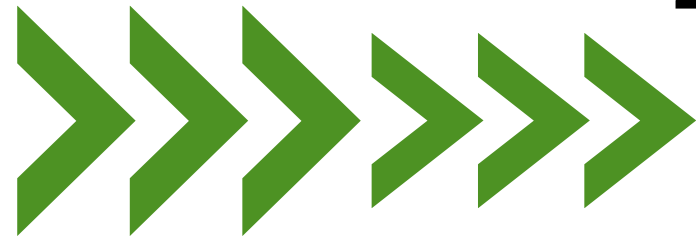


1980: Comprehensive Environmental Response Compensation and Liabilites Act (CERCLA), enacted by Congress. This created the EPA Superfund Program

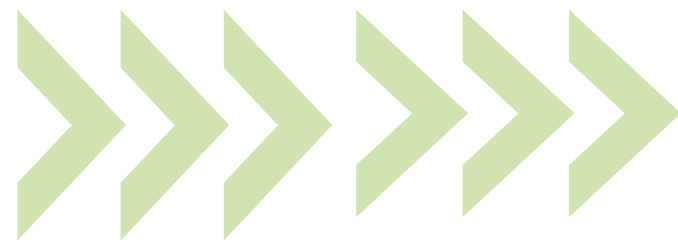


1990: U.S. Conference of Mayors identifies brownfields as one of the most critical problems facing cities

2002: Small Business Liability Relief and Brownfields Revitalization Act



2005: WV Brownfields Assistance Centers created by an act of the Legislature; One Center at WVU, one Center at Marshall University



2018: Brownfields Utilization, Investment and Local Development (BUILD) Act passed- This included amendments to Brownfields provisions of CERCLA.

WHERE ARE BROWNFIELDS?

Examples of Brownfields include:

- Gas stations
- Laundromats
- Abandoned mine lands
- Abandoned schools or commercial buildings
- Railroad Corridors/yards



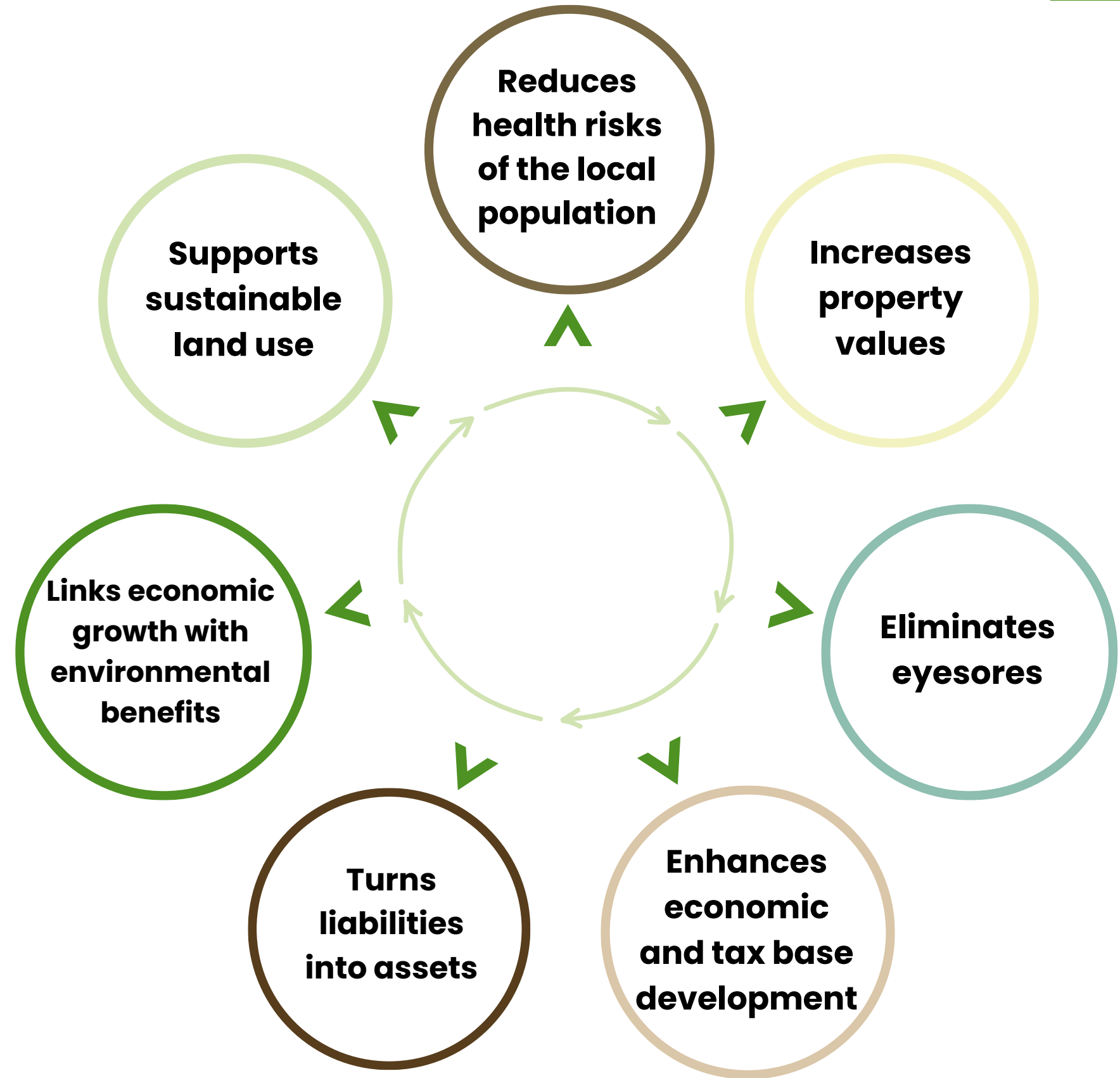
In other words, Brownfields are **everywhere!**

WHY DO BROWNFIELDS NEED TO BE ADDRESSED?

In addition to being eyesores, Brownfields often cause:

- > **Health hazards**
- > **Environmental degradation**
- > **Safety liabilities**
- > **Increased crime**
- > **Decreased property values**
- > **Economic ripple effects**

BENEFITS OF ADDRESSING BROWNFIELDS



BROWNFIELDS and HEALTH

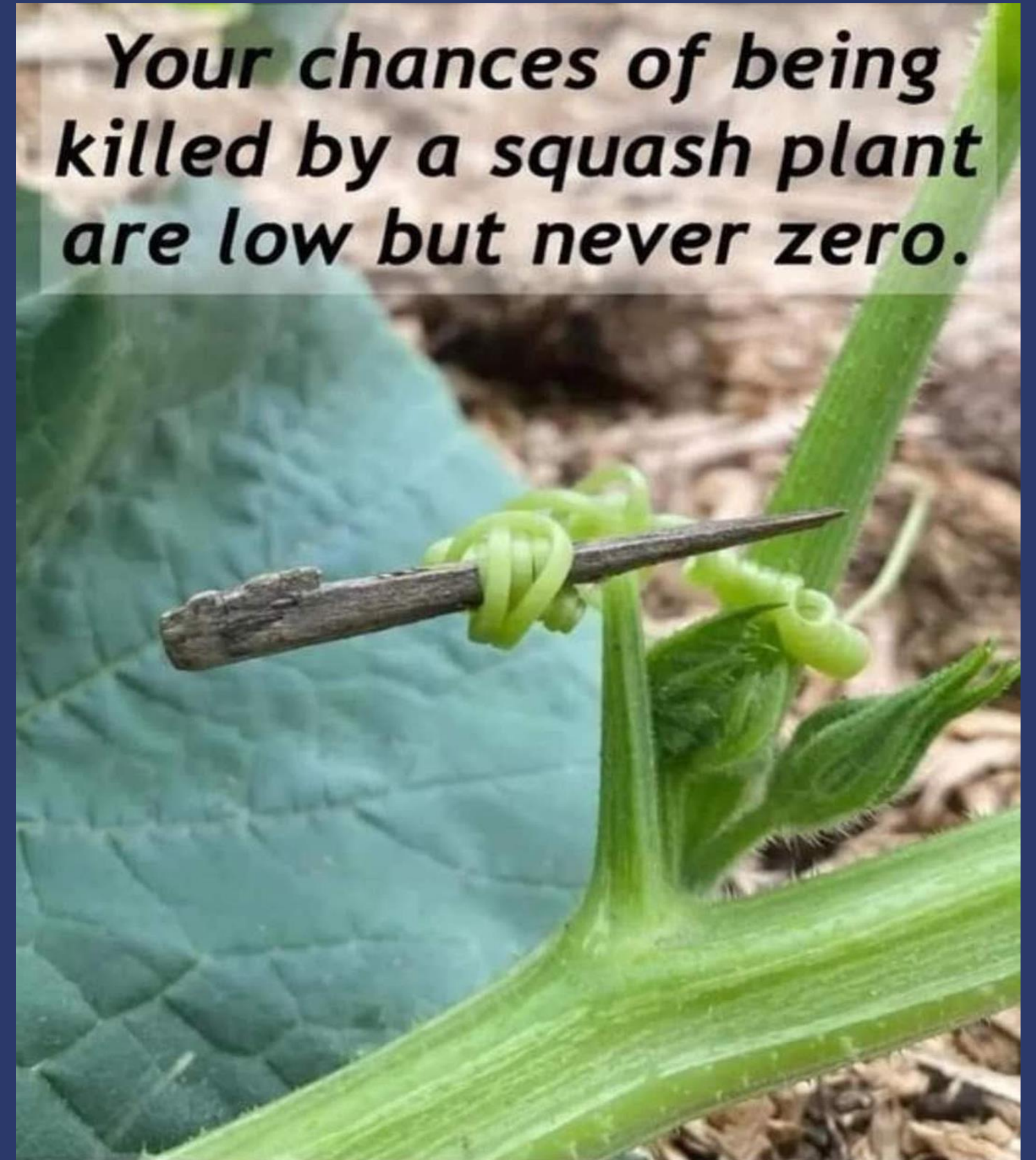
Contaminants often associated with Brownfields with known health effects include:

- PCB's
- Solvents
- Asbestos
- Heavy metals
- Lead-based paint
- Volatile / Semi-volatile Organic Compounds



**Environmental Assessment
helps us manage risk**

*Your chances of being
killed by a squash plant
are low but never zero.*



BROWNFIELDS and HEALTH

Asbestos

Used in insulation of heating and cooling systems, building materials, floor tile and mastic, roofing materials, equipment components, fireproofing, brakes, etc.

- Exposure Pathway: inhalation of friable asbestos-containing materials
- Health Effects: lung scarring, mesothelioma, lung cancer

Remediation Actions

- Remove all friable asbestos; manage non-friable materials in-place



BROWNFIELDS and HEALTH

Lead-Based Paint

Used in various paints for residential, commercial, and industrial use. Found in most homes built before ~1978; banned in 1978

- Exposure Pathway: inhalation of lead dust and ingestion of paint chips
- Health Effects: damage to brain, nerves, organs, and bone; cancer causing

Remediation Actions

- Remove all damaged / deteriorated paint; incapsulate paint left in-place



BROWNFIELDS and HEALTH

Solvents

Used in degreasing and cleaning operations (dry cleaners, painting operations, mechanical/ industrial operations, lubricants, adhesives, etc.; includes many chlorinated compounds)

- Exposure Pathway: inhalation of vapors is primary route of entry
- Health Effects: damage to respiratory, eyes, carcinogen neurological effects, kidney and liver damage, et. al

Remediation Actions

- Remove all impacted materials, treat contaminants in-place, OR eliminate exposure pathway (capping, venting, etc.)



BROWNFIELDS and HEALTH Heavy Metal?

NOT this Heavy Metal



BROWNFIELDS and HEALTH

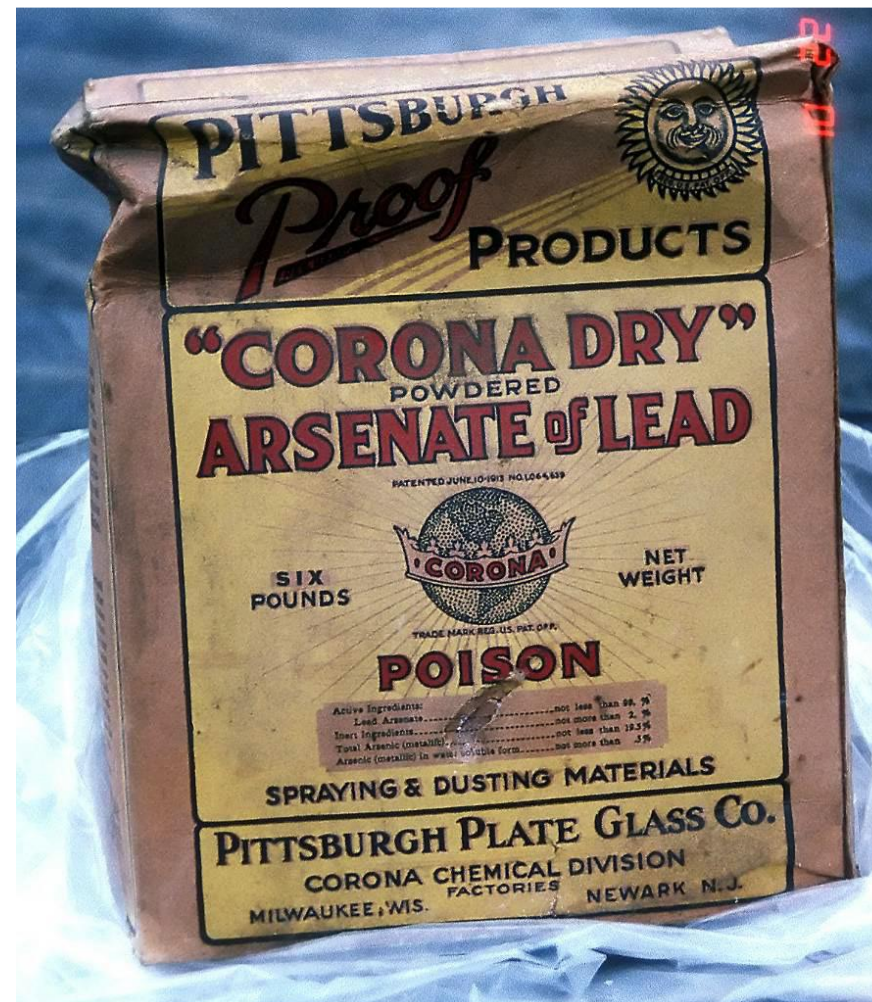
Heavy Metals

Arsenic, lead, chromium, cadmium et. al. used in pesticides, herbicides, paint/coloring agents, wood preservatives, agriculture use, chrome plating, mining, and manufacturing processes

- Exposure Pathway: ingestion and inhalation; dermal contact may be a secondary pathway
- Health Effects: damage to organs, and bone, blood disorders, neurological disorders; cancer causing (long-term persistence in the environment)

Remediation Actions

- Remove all materials, treat contaminants in-place, and /or eliminate exposure pathways (capping, venting, deed restrictions, etc.)



BROWNFIELDS and HEALTH

PCB's (polychlorinated biphenyls)

Used as insulating fluids in electrical equipment (transformers, capacitors); also used in paints, plastics, and rubber products; banned in U.S. in 1979; long-term persistence in the environment.

- Exposure Pathway: ingestion, inhalation, and dermal contact
- Health Effects: damage to immune, reproductive, and nervous systems, carcinogen

Remediation Actions

- Remove all materials, treat contaminants in-place (chemical or biological), carbon filtration (for drinking water), OR eliminate exposure pathway (capping, venting, etc.)



BROWNFIELDS and HEALTH

Volatile/Semi-volatile organic compounds

Fossil fuels (gasoline, diesel, heating oil, etc.), combustion byproducts, hydrocarbon compounds including coal tar, creosote, manufacturing byproducts

- Exposure Pathway – Ingestion, inhalation, and dermal contact
- Health Effects – damage to immune, respiratory, and nervous systems; cancer causing

Remediation Actions

- Remove all materials, treat contaminants in-place, OR eliminate exposure pathway (capping, venting, deed restrictions, etc.)





REDEVELOPMENT

Redevelopment options can be tailored to community needs/priorities. Some examples include:

- Residential/Mixed Use
- Libraries
- Parks/greenspace/rail trails
- Downtown commercial
- Public safety

THE BROWNFIELD REDEVELOPMENT PROCESS





WHATEVER YOU DO...

DO NOT purchase a property
without first conducting
All Appropriate Inquiry
(AAI)/Phase I Environmental
Site Assessment (ESA)



WHY IS AAI/PHASE 1 SO IMPORTANT?

1. Awareness of potential hazards.

AAI/Phase 1 ESA identifies presence of potential contaminants

2. Liability protection

Purchasing property without conducting AAI/Phase 1 ESA could make you potentially responsible party (PRP). This could make you liable for contaminants on site.

3. Eligibility for funding

If EPA Cleanup Grant will be needed to help pay for remediation, no AAI/Phase 1 would make owner ineligible to apply for Cleanup Grant

AVAILABLE FUNDING

EPA

EPA Grants

Multi-Purpose, Assessment, Cleanup, Revolving Loan Fund (RLF), and Job Training

EPA Technical Assistance

Targeted Brownfield Assessment (TBA)

Other Sources

Tax Credits

Historic, Low-Income Housing (LIHT), New Markets, State-Specific

Loans

Traditional Lending, Socially-Minded Lenders (Those who have social impact component)

Private Investments

Equity Investors, Community Reinvestment Act (CRA)

Other Sources

Other Federal programs, State-specific programs, Community Development Block Grant (CDBG), USDA, Appalachian Regional Commission (ARC)

EPA Brownfields Grants



Multipurpose

Multipurpose Grants are appropriate for communities that have identified an area (neighborhood, neighboring towns, district, corridor) with one or more brownfield sites. Assessment and cleanup activities can be conducted with this grant.

Assessment

Assessment Grants provide funding for brownfield inventories, planning, environmental assessments, and community outreach.

Planning activities: EPA supports projects that have a strong planning component. Applicants may allocate project budget on EPA eligible planning activities for priority brownfield sites(s) within target area.

Revolving Loan Fund (RLF)

Revolving Loan Fund Grants provide funding for a grant recipient to capitalize a revolving loan fund and to provide loans and subgrants to carry out cleanup activities at brownfield sites. Through these grants, EPA strengthens the marketplace and encourages stakeholders to leverage resources to clean up and redevelop brownfields. When loans are repaid, the loan amount is returned to the fund and re-lent to other borrowers, providing an ongoing source of capital within a community.

EPA Brownfields Grants



Cleanup

Cleanup Grants provide funding to carry out cleanup activities at brownfield sites owned by the applicant.

- Performance period is up to 4 years.
- Sites may not receive this funding more than once.
- Applicants may request up to \$500,000, up to \$2 million or up to \$4 million to address one or more brownfield sites contaminated by hazardous substances, pollutants, contaminants or petroleum.
- Applicants may submit only one Cleanup Grant application each competition cycle.

Job Training

EPA's Brownfields Job Training Program provides technical assistance to help nonprofits, local governments, and other eligible organizations build local workforces to perform assessment, cleanup, or preparation of contaminated sites (including brownfields) for reuse.

Benefits of the Brownfields Program

- Revitalize communities
- Create jobs and increase local revenue
- Revitalize urban areas
- Protect the environment using greenspaces
- Community Health: by improving walkability and neighborliness while at the same time decreasing crime
 - Projects leveraged \$20 per EPA dollar expended
 - Leveraged nearly 200,000 jobs nationwide
 - Residential property values increased by 5% to 15% when brownfield sites are cleaned up

Project Review





Hinton High School Summers County, WV

- Conceptual design for reuse as a community center with a theater and public meeting space
- Conducted the following environmental assessments: Phase I ESA, Asbestos, Lead-based Paint, and Radon
- Property Condition Assessment report





**Krodel Park
Point Pleasant, WV**



THE WV BROWNFIELDS ASSISTANCE CENTER CAN HELP

Free technical assistance to all communities throughout West Virginia

- Resource Identification
 - Grant writing assistance, grant review, resource road maps
- Local Brownfield Program Support
 - Inventory development, questions on sites, technical support



QUESTIONS?

2026 WV Brownfields & Main Street Conference



WEST VIRGINIA
BROWNFIELDS

SEPTEMBER

8-10

2 0 2 6

Come see us in Huntington this fall!

Marshall

Thank You!

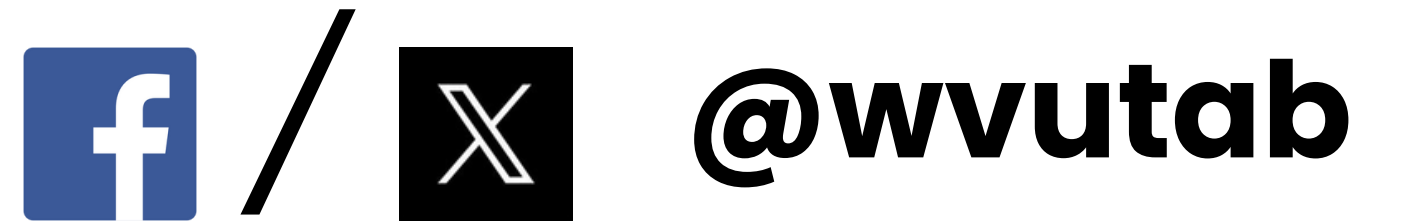


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Contact Us



<https://brownfields.wvu.edu>



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