



**GROUNDWORK USA & THE CENTER FOR  
CREATIVE LAND RECYCLING**

**BROWNFIELD CURIOUS:  
UNDERSTANDING THE  
BROWNFIELD REUSE  
PROCESS AND TIMELINE**

**August 13 , 2024**

# BROWNFIELD CURIOUS

THREE-PART WEBINAR SERIES



1

Introduce the **brownfields process** and explore why you should consider **brownfield revitalization to address community concerns** around food security, climate adaptation, and access to the outdoors.

2

This session will cover brownfield revitalization, including **steps, timelines, funding, stakeholders, and project variability.**

3

In this session, we'll **explore nonprofit roles in brownfield remediation**, dispel myths, and introduce cross-sector collaborators in the revitalization process.



# GROUNDWORK USA

---



*Groundwork USA  
envisions a world in  
which everyone lives in  
a community that is  
healthy, green, just, and  
resilient.*

# NONPROFIT BROWNFIELD TECHNICAL ASSISTANCE PROGRAM

## Nationwide technical assistance program specifically tailored to nonprofits

- Increase the capacity of non-profits working in communities with brownfields, to transform those spaces with **environmental and equity as guiding principles**
- **Transforming spaces into community assets** such as parks, trails, urban farms, community centers, recreational facilities, affordable housing and commercial space, farmers markets, arts and culture centers, and more
- **Improve public health** in their communities



Thank you to the EPA's Office Of Brownfields and Land Revitalization for providing grant funding to support Groundwork USA's brownfields and equitable development technical assistance program.



# HOW WE CAN HELP

Nationwide Technical Assistance for Nonprofits

**DIRECT TECHNICAL  
ASSITANCE**

**WEBINARS &  
WORKSHOPS**

**VISUAL  
RESOURCE HUB**

# Introducing the Environmental Justice & Land Use Learning Cohort!

**FREE** six-month virtual program designed to help nonprofit organizations effectively lead brownfield site reuse projects.

- **What we are looking for!**
  - Individuals representing nonprofits or community organizations
  - Participate in 6 small group workshops from October 2024 - March 2025
  - **APPLY BY SEPTEMBER 13th**
- **Participants will:**
  - Explore Real-World Tools and Case Studies
  - Create An Actionable Strategy
  - Receive Personalized Coaching
  - Build a Community of Peers





# Introducing the Environmental Justice & Land Use Learning Cohort!

## Land Reuse and Environmental Justice Learning Cohort Course Curriculum

- Session 1: **Introduction to Brownfields and Environmental Justice**
- Session 2: **Brownfield Site Visioning**
- Session 3: **Partnerships, Roles, and Responsibilities**
- Session 4: **Equitable Community Engagement**
- Session 5: **Communicating Site Risk to Stakeholders**
- Session 6: **Financing Brownfield Redevelopment | Stages, Stakeholders, and Strategies**



### The Land Reuse & Environmental Justice Cohort

Join our **FREE** learning cohort and master the art of leading transformative brownfield projects that align community priorities and environmental justice!

-  Explore Real-World Tools and Case Studies
-  Create An Actionable Strategy
-  Receive Personalized Coaching
-  Build a Community of Peers



Apply by 9/13/2024







# CENTER FOR CREATIVE LAND RECYCLING

RECLAIM. CONNECT. TRANSFORM.

## How we can help you

*CCLR is U.S. EPA's Technical Assistance to Brownfields Provider (TAB) for 8 states and numerous territories around the country.*

### Getting you started

Giving you the tools and connections to plan a redevelopment roadmap and champion the pathway.

### Helping you stay on track

Offering current information and expert advice on regulations, funding, remediation, and community engagement to meet your milestones.

### Getting the job done

Sharing common documents and introducing you to peers, industry experts, and developers.

## What we do

- One-on-one technical assistance
- National webinars
- Workshops and conferences
- Newsletters and online resources





# Brownfields Curious Community-Engaged Redevelopment Process

August 13, 2024





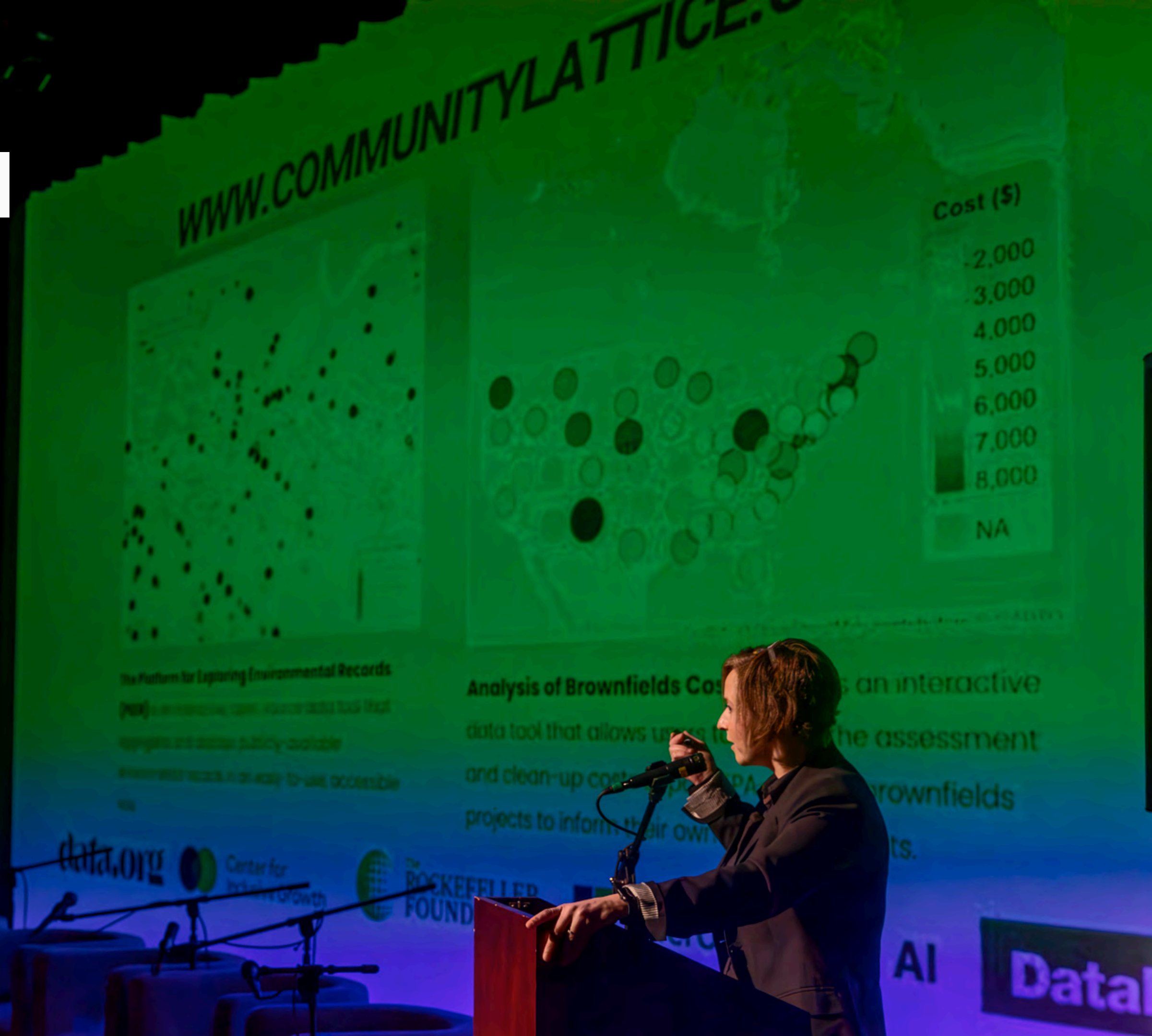
# INTRODUCTION

Danielle Getsinger, PG  
CEO  
danielle@adaapta.com

adaapta

At the intersection of economic development,  
planning, and environmental issues.

www.adaapta.com





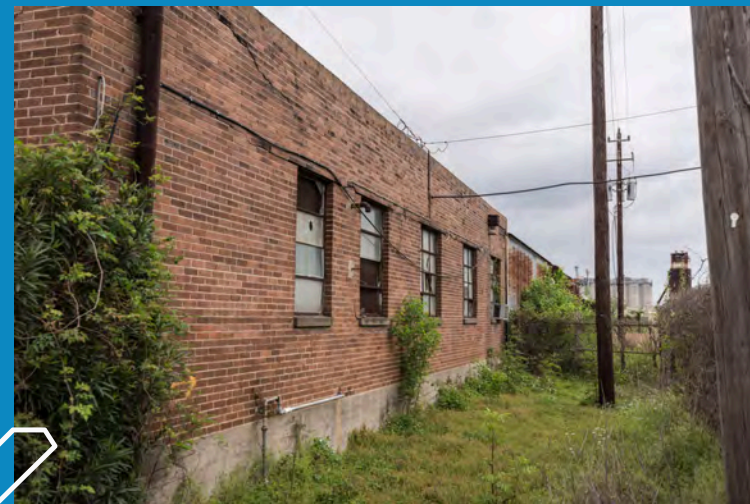
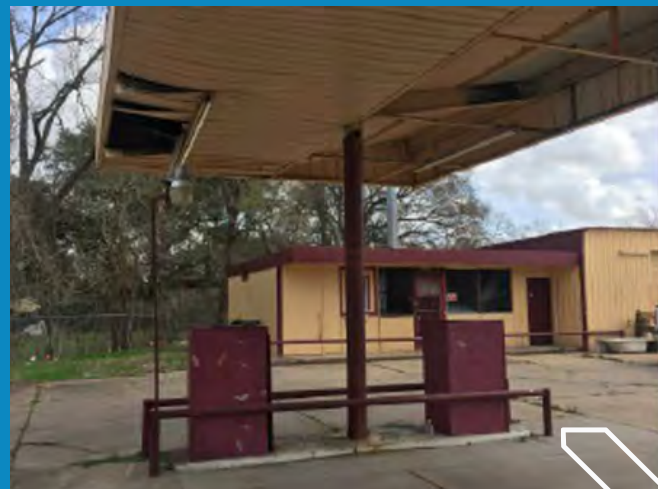
# AGENDA

1. Recap of Brownfields Basics
2. Brownfields Risk & Complications
3. The Brownfields Redevelopment Process
4. Additional Resources
5. Q & A



# WHAT IS A BROWNFIELD?

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. ~ US EPA



**A BROWNFIELD  
IS NOT A  
SUPERFUND!**





**“Every property is a brownfield until proven not guilty.”**

**~Danielle Getsinger**

## **Why?**

- Many underutilized properties are overlooked as brownfields, like vacant lots and old buildings.
- By taking a proactive approach to identifying potential environmental issues, developers can better mitigate their risk.
- A broader definition of brownfields will maximize use of incentive programs and grant funding.
- Reduce the stigma! Not all brownfields are contaminated and if contamination is discovered, it can be managed! These are NOT Superfund sites.

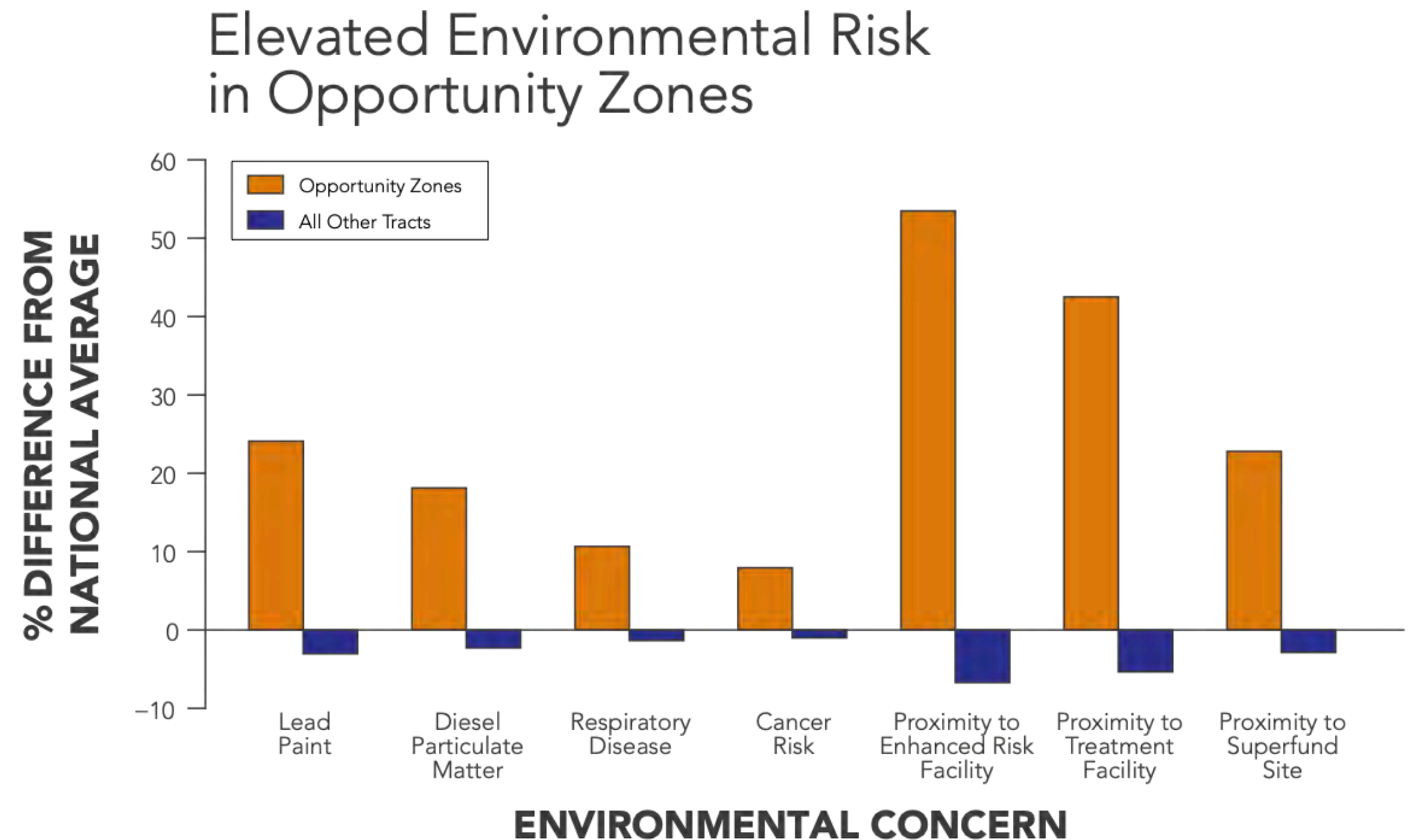


Get creative! Check out Pulaski County.  
[www.pulaskicounty.net/brownfields](http://www.pulaskicounty.net/brownfields)



# BROWNFIELDS & ENVIRONMENTAL JUSTICE

- Exacerbate economic distress
- Attract crime and vandalism.
- Associated with health disparities linked to environmental contamination like asthma, cancer, and neurological issues.
- Associated with restricted access to safe transportation, affordable housing, healthcare, and job opportunities.
- Perpetuates sense of hopelessness, disinvestment, insecurity, and community trauma.

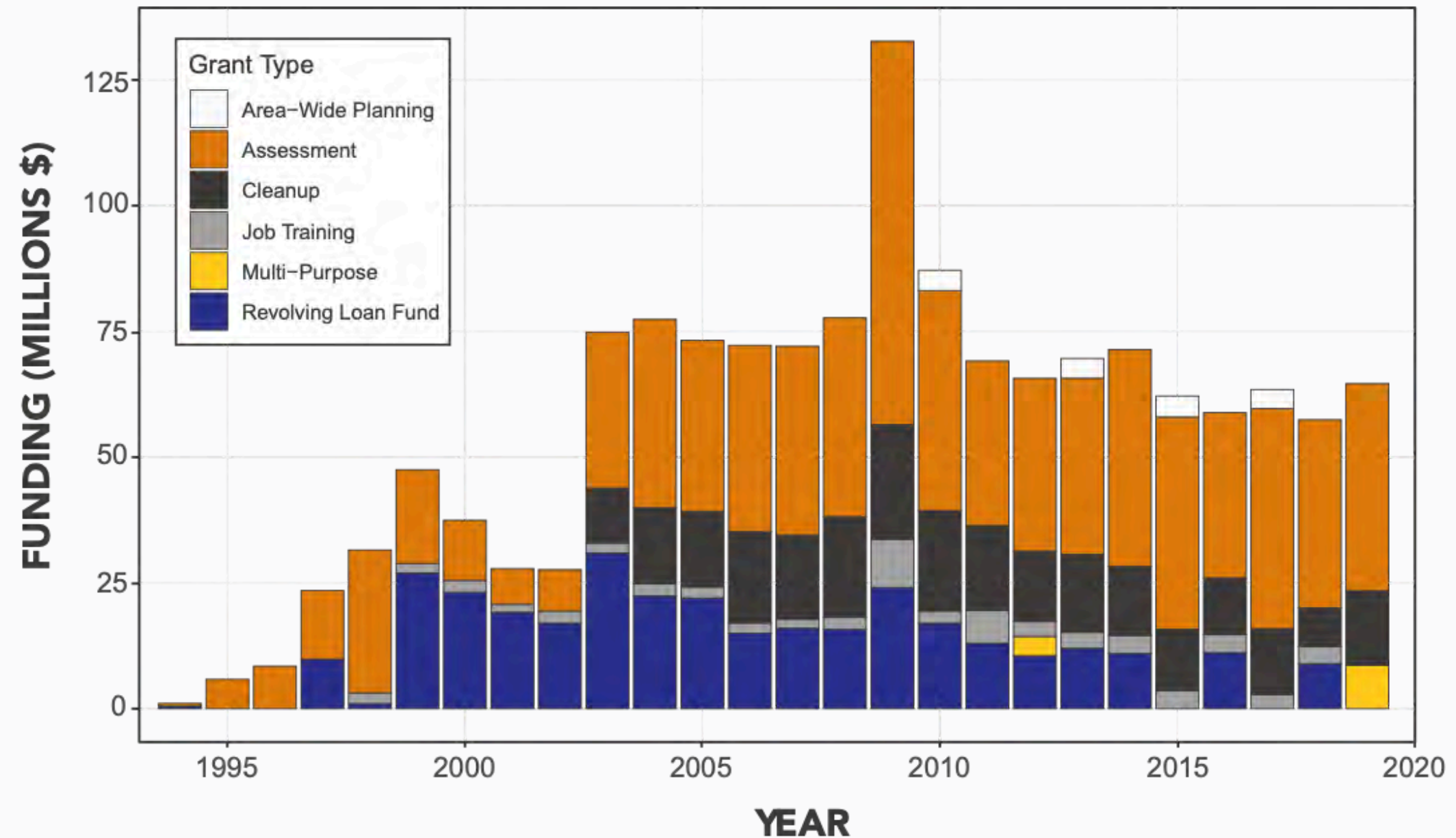




# BROWNFIELDS AS OPPORTUNITIES

- \$1 EPA = \$21 Funding Leveraged\*\*
- 221,328 jobs created\*\*
  - 11.2 jobs per \$100,000 of EPA funds
- Est. \$29 to \$97 million in additional tax revenue for local governments in a single year after cleanup\*\*
- 4 acres of greenfields saved for every acre of brownfields redeveloped
- Increased property values (5-15%)
- Reduction in vehicle miles traveled
- Reduction in stormwater impacts
- Reduction in crime
- Increase in affordable housing
- Increase in park space

Disbursement of Brownfields Funding Through Time





# BROWNFIELDS RISK & COMPLICATIONS

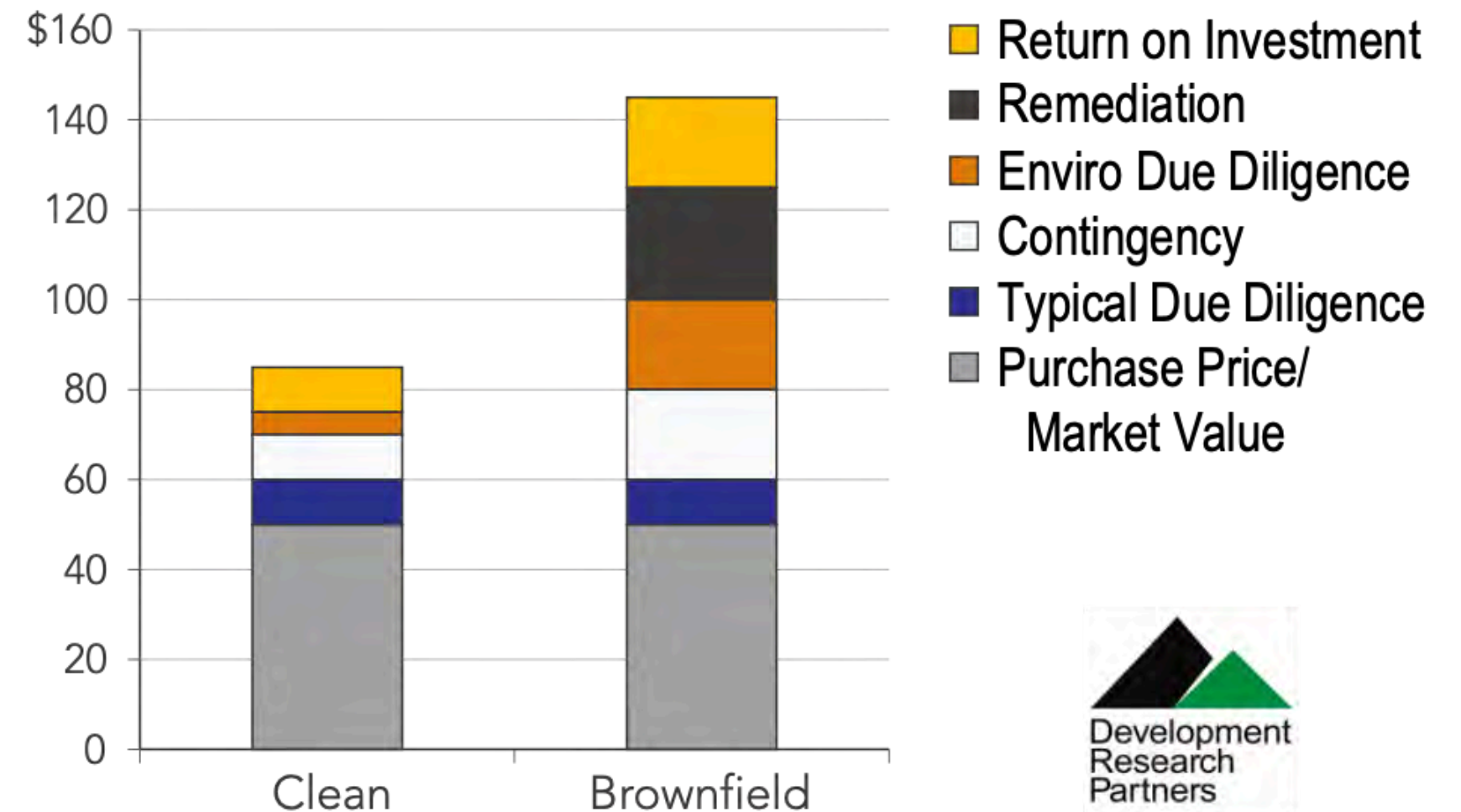




# “MAY BE COMPLICATED...”

- Financial risk
- Resale potential
- Property value
- Public perception/relations
- Downgradient properties
- Health of tenants/users
- Ecological receptors
- Project delays or complications
- Funding hold ups
- Community trauma

## Cost Impact on Developing Brownfields



**\$2,000 - Over \$100,000**  
**assessment & cleanup planning only**



# Brownfields & Environmental Liability

## CERCLA - 1980

- Applies primarily to contamination that has already occurred.
- “Superfund” – fund to clean up abandoned sites through recovering cleanup costs from potential responsible parties (PRPs)
- Includes “Brownfields” but cleanup of Brownfields happens at State level
- Applies to:
  - Past and present owners or operators
  - Sellers
  - Buyers
  - Lenders (as mortgage holders)\*
  - Trustees

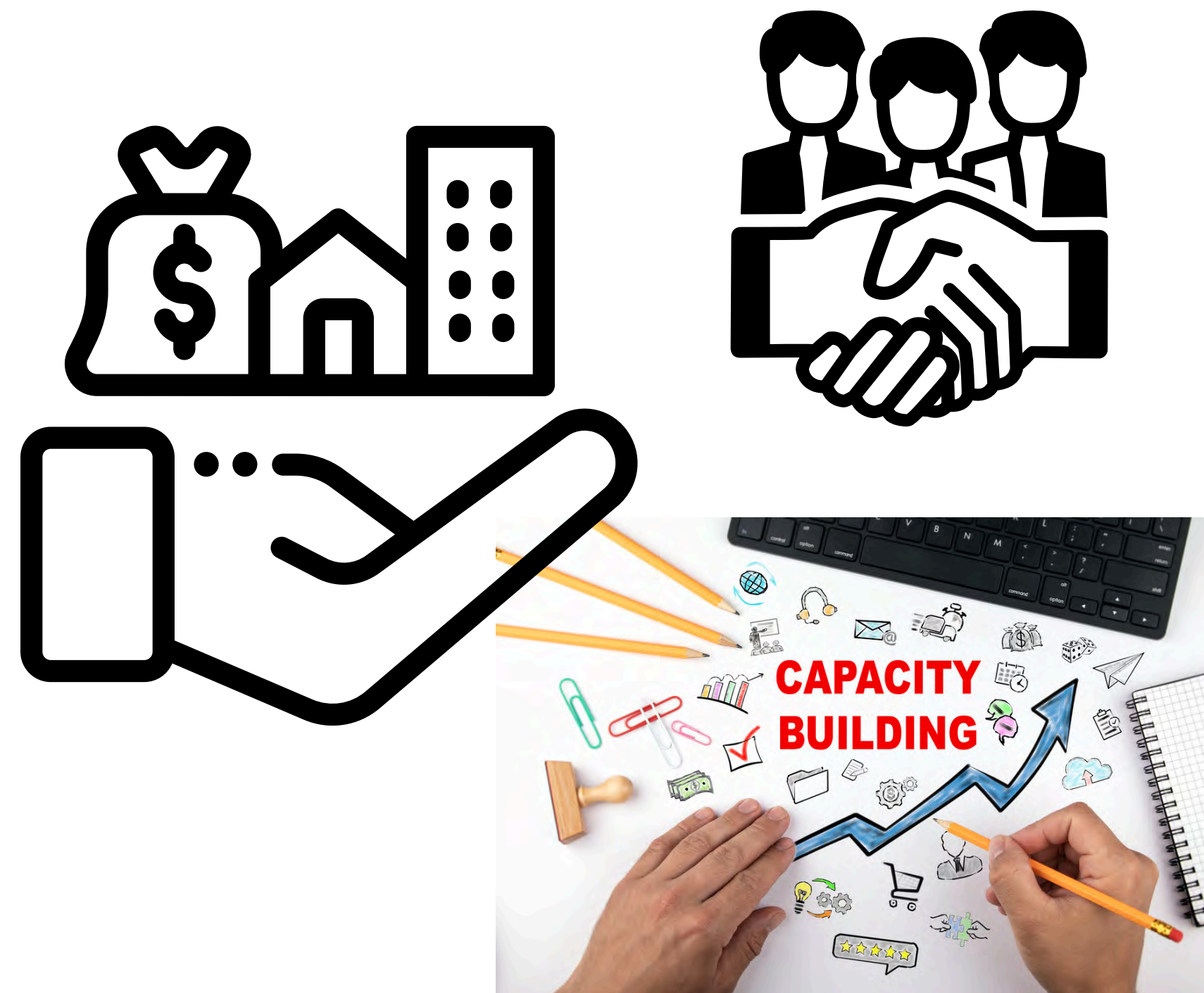
## 2002 Brownfields Amendment

- Small Business Liability Relief and Brownfields Revitalization Act (“Brownfields Amendment”)
- Modified CERCLA by addressing liability concerns associated with unused or underutilized properties.
- Defines a brownfield site as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.”



# BARRIERS FOR COMMUNITY DRIVEN DEVELOPMENT

1. Property acquisition
2. Funding & leveraging
3. Establishing partnerships
4. Organizational capacity



# What barriers have you encountered to developing brownfields?

39 responses





# OVERCOMING BARRIERS REQUIRE...

1. Creative Solutions
2. Diverse Capital Stacks
3. Multidisciplinary Team
4. Subject Matter Experts
5. Project Champion
6. Community Support
7. Mitigating Risk
8. Strategic Partnerships & Collaborations
9. And so much more!...





# BROWNFIELDS REDEVELOPMENT PROCESS





# THE BROWNFIELD PROCESS



## EPA BROWNFIELD GRANTS AND RESOURCES

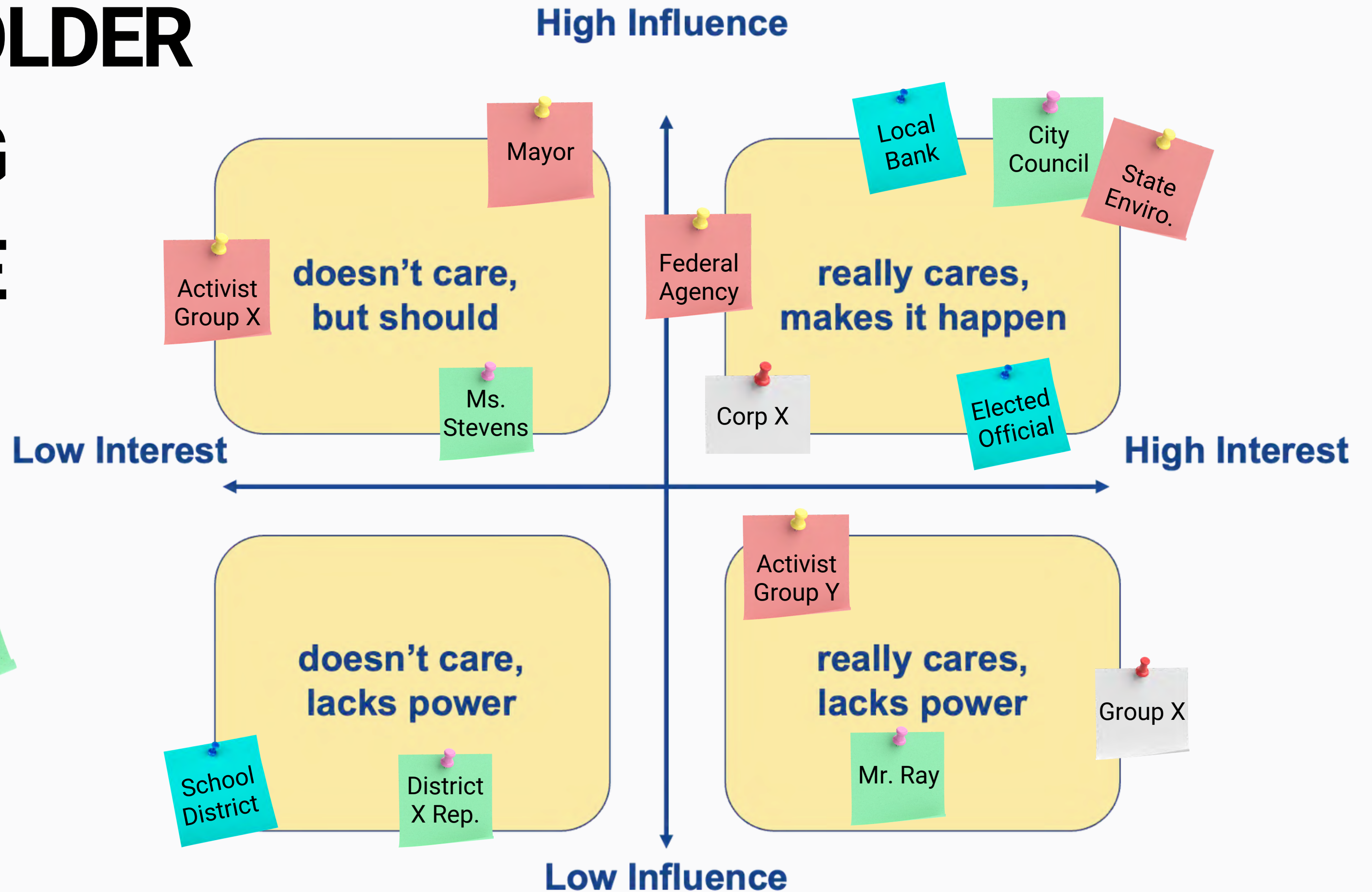
TARGETED BROWNFIELD ASSESSMENT = T    ASSESSMENT = A    CLEANUP = C    REVOLVING LOAN FUND = R    MULT-PURPOSE = M







# STAKEHOLDER MAPPING EXAMPLE



Team exercise to brainstorm level of outreach and involvement of stakeholders as defined by the project.



# COMMUNITY INVOLVMENT

Principles of Environmental Justice #7 demands the right (of community members) to participate as equal partners at every level of decision making, including needs assessment, planning, implementation, enforcement, and evaluation.

<https://www.ejnet.org/ej/principles.html>



## Community Owned

Local visions for change are defined and implemented by the community, who are in control of all resources, parameters and decisions.

## Community Driven

Local visions for change are created in partnership with community members and organizations, who share resources and collaborate to set parameters and make decisions.

## Community Shaped

Local visions for change are defined by the community within a set of parameters that provided by an organization to achieve shared goals.

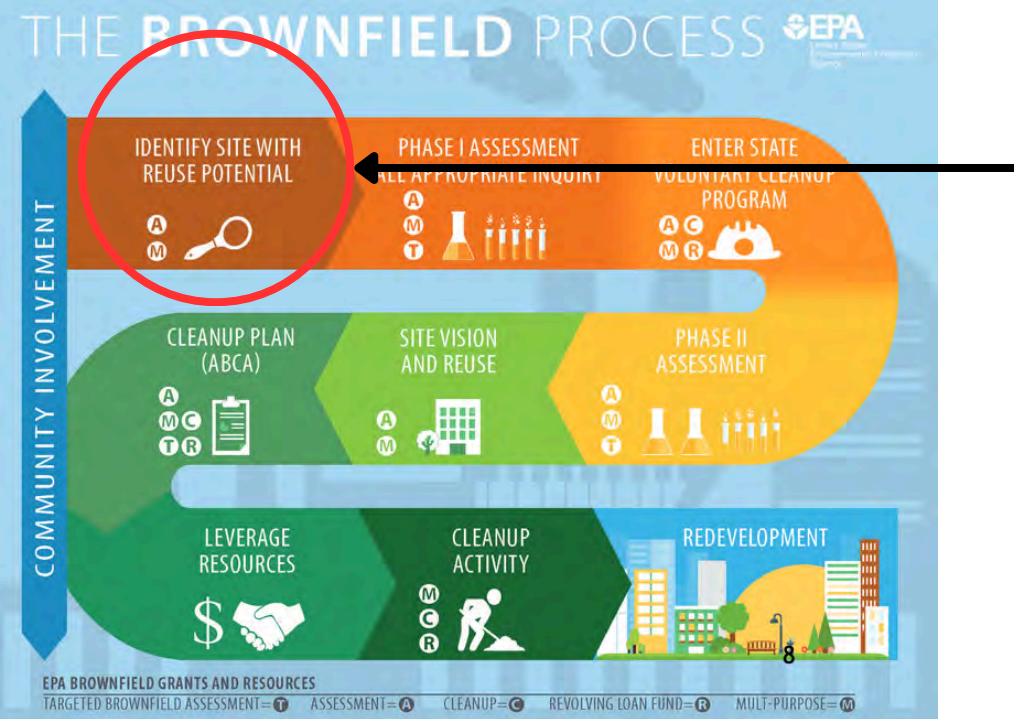
## Community Informed

Visions for change are adapted to suit the local context through community consultation.

← COMMUNITY-LED

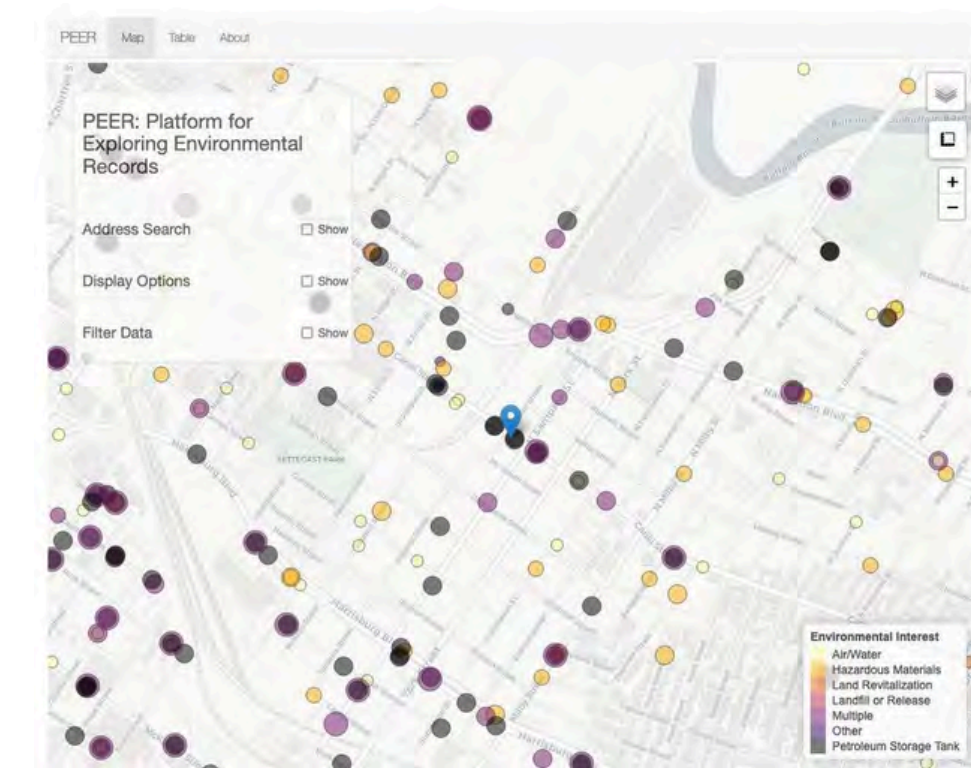
ORGANIZATION-LED →





# IDENTIFY SITE WITH REUSE POTENTIAL

1. Create an inventory of all potential properties your organization or community is interested in redeveloping.
2. Select properties for redevelopment based on your desired selection criteria.
3. Conduct preliminary research into ownership history, environmental records, and eligibility for EPA funding.



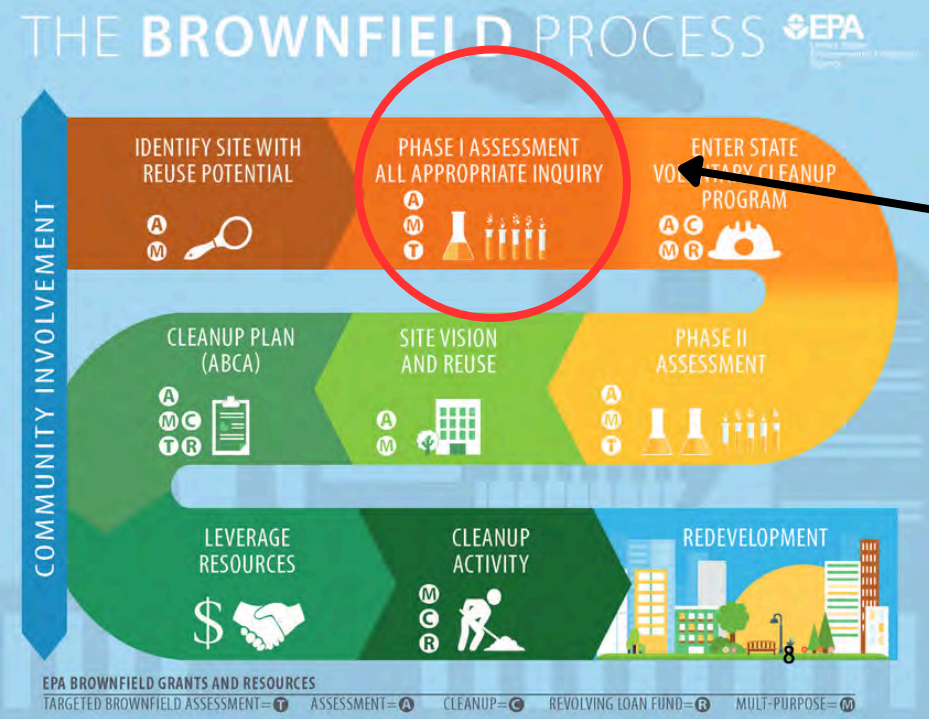
**The Platform for Exploring Environmental Records (PEER)** is an interactive, open-source data tool that aggregates and displays publicly-available environmental records in an easy-to-use, accessible way.



**COST: \$0 - low** \*Inventories can be expensive if GIS-based

**FUNDING SOURCE:** Private or EPA Grant





# PHASE I ASSESSMENT ALL APPROPRIATE INQUIRY (AAI)



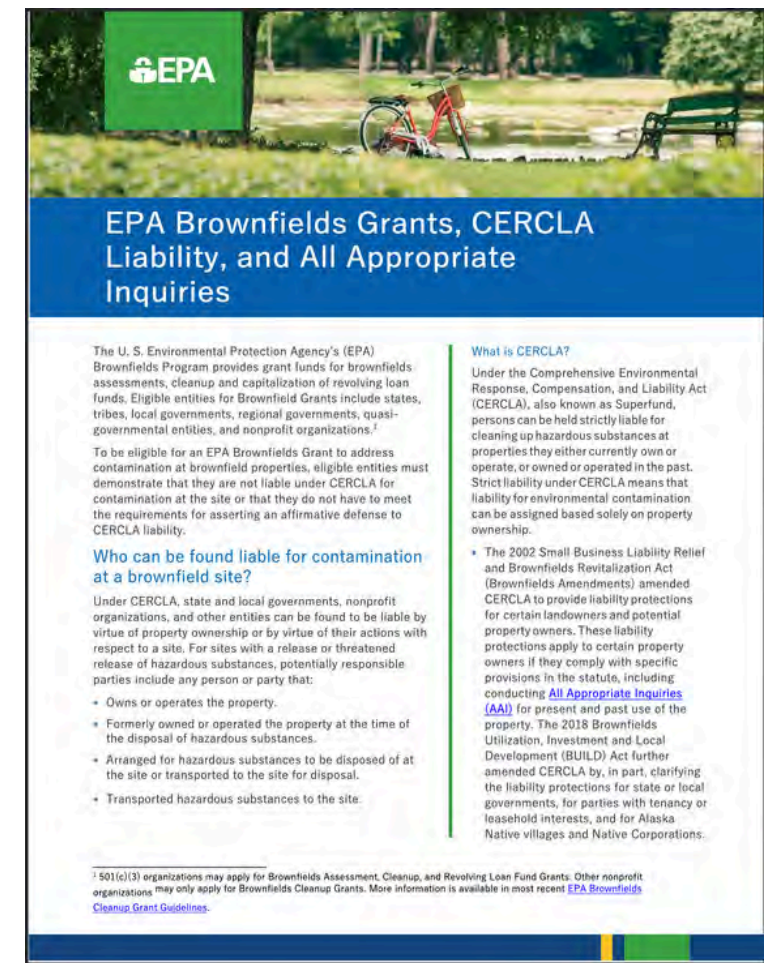
All appropriate inquiries (AAI) is the process of evaluating a property's environmental conditions, which may be relevant to assessing potential liability for any contamination.

**AAI is satisfied with Phase I Environmental Site Assessment Report compliant with ASTM Standard E1527-21**

## CERCLA LIABILITY PROTECTION:

- 1. Bona fide prospective purchaser** (Protection for the owner of the site with known contamination at the time of purchase)
- 2. Innocent landowner defense** (traditional)
- 3. Contiguous property owner protection** (Protects from off-site migration)

[www.epa.gov/brownfields/brownfields-all-appropriate-inquiries#background](http://www.epa.gov/brownfields/brownfields-all-appropriate-inquiries#background)

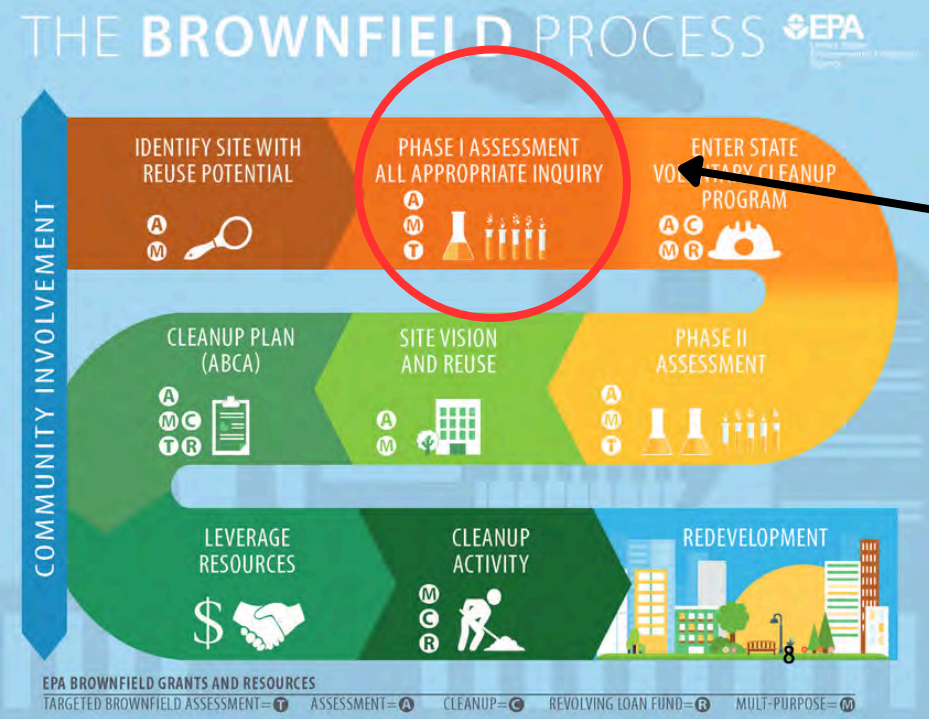


**COST: \$2,000 - 10,000**

\*cost varies with property size & complexities

**FUNDING SOURCE: Private or EPA Grant**





# PHASE I ASSESSMENT

## ALL APPROPRIATE INQUIRY (AAI), CONT.

ASTM Standard E1527-21 Phase I Environmental Site Assessment

\*conducted by an Environmental Professional defined by 40 CFR 312

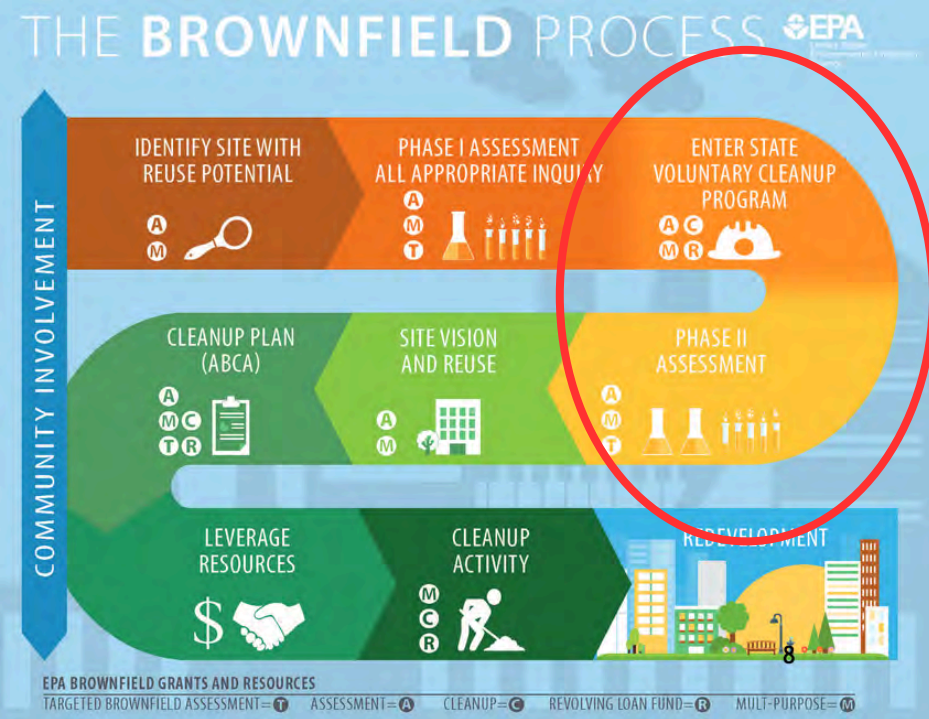
### What it is:

- Non-intrusive (no sampling) property research report
- Intended to determine current and past property use
- Intended to identify presence or likely presence of contamination
- Opens the door to Landowner Liability Protection for landowners and prospective purchasers
- Conducted prior to property transfer
- Required for financing and federal funding (specifically EPA Cleanup grants)

### What it is NOT:

- An environmental database report
- A checklist
- An ironclad defense against all liability
- Valid forever
- Afford protections to anyone who has a copy of the report.





# SITE ASSESSMENT

1. Sampling and analysis of potentially affected media
2. **Phase II Site Assessment** - to collect data to determine the presence of contamination based on Phase I findings.
3. **Additional Assessment** - to collect data to determine the nature and extent of contamination

## EXAMPLES



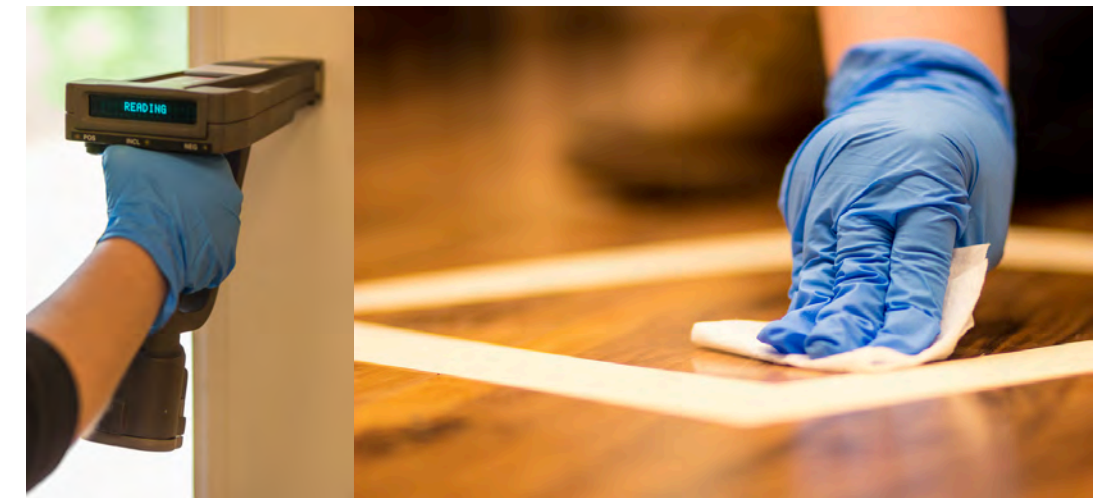
Soil



Soil-Gas



Groundwater



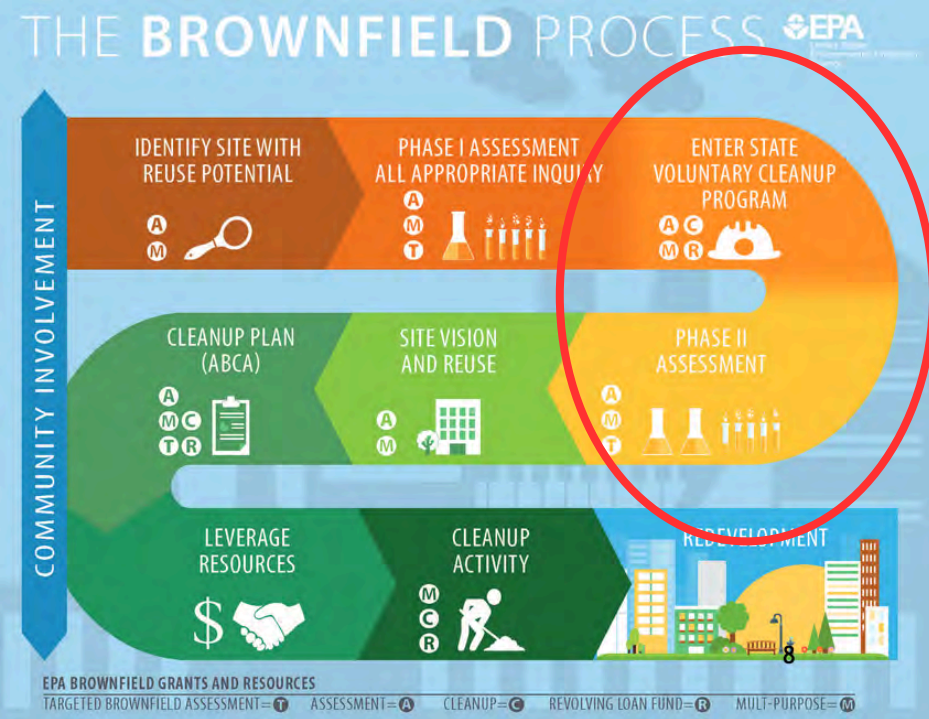
Building Materials

**COST: \$10,000 - 100,000**

\*cost varies with property size & complexities

**FUNDING SOURCE: Private, EPA Grant**





# SITE ASSESSMENT, CONT.

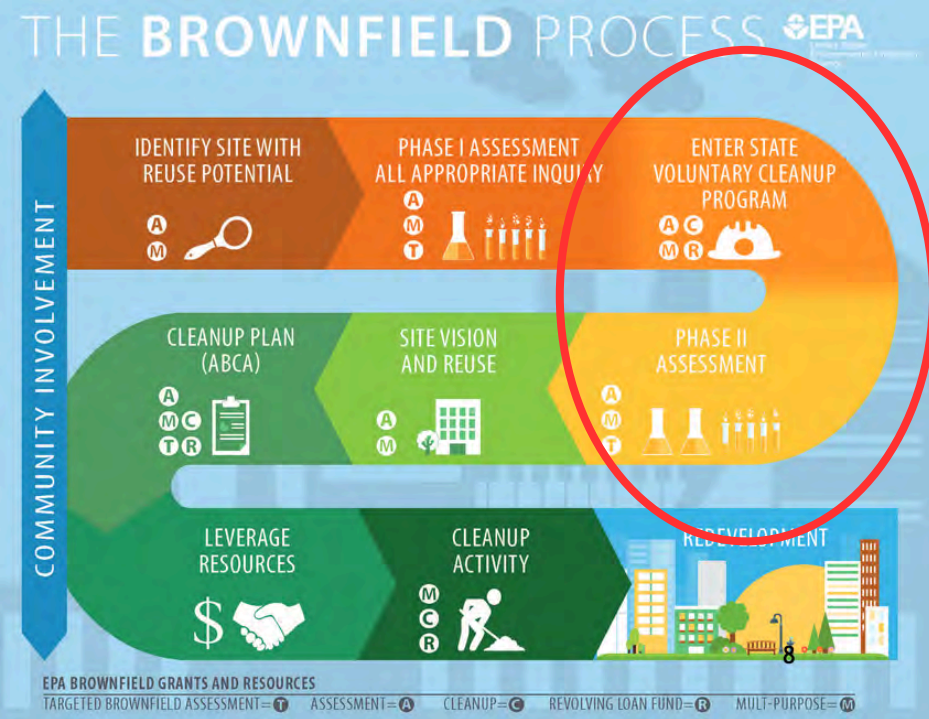
When contamination is discovered, state regulations will dictate the next steps for reporting to the state environmental agency and appropriate cleanup program (e.g., Voluntary Cleanup, Corrective Action, Petroleum Storage Tank, or State Health Department). Reporting and cleanup requirements are based on the type of contamination and the risk they pose to human and ecological health receptors.



# VOLUNTARY CLEANUP PROGRAMS

Beginning in the mid-1990s, EPA increased its partnerships with states through VCPs to address the cleanup of brownfields and to strengthen and build program capacity. As part of that effort, EPA has entered into memoranda of agreement with individual states to encourage the voluntary cleanup of brownfields under VCP oversight.

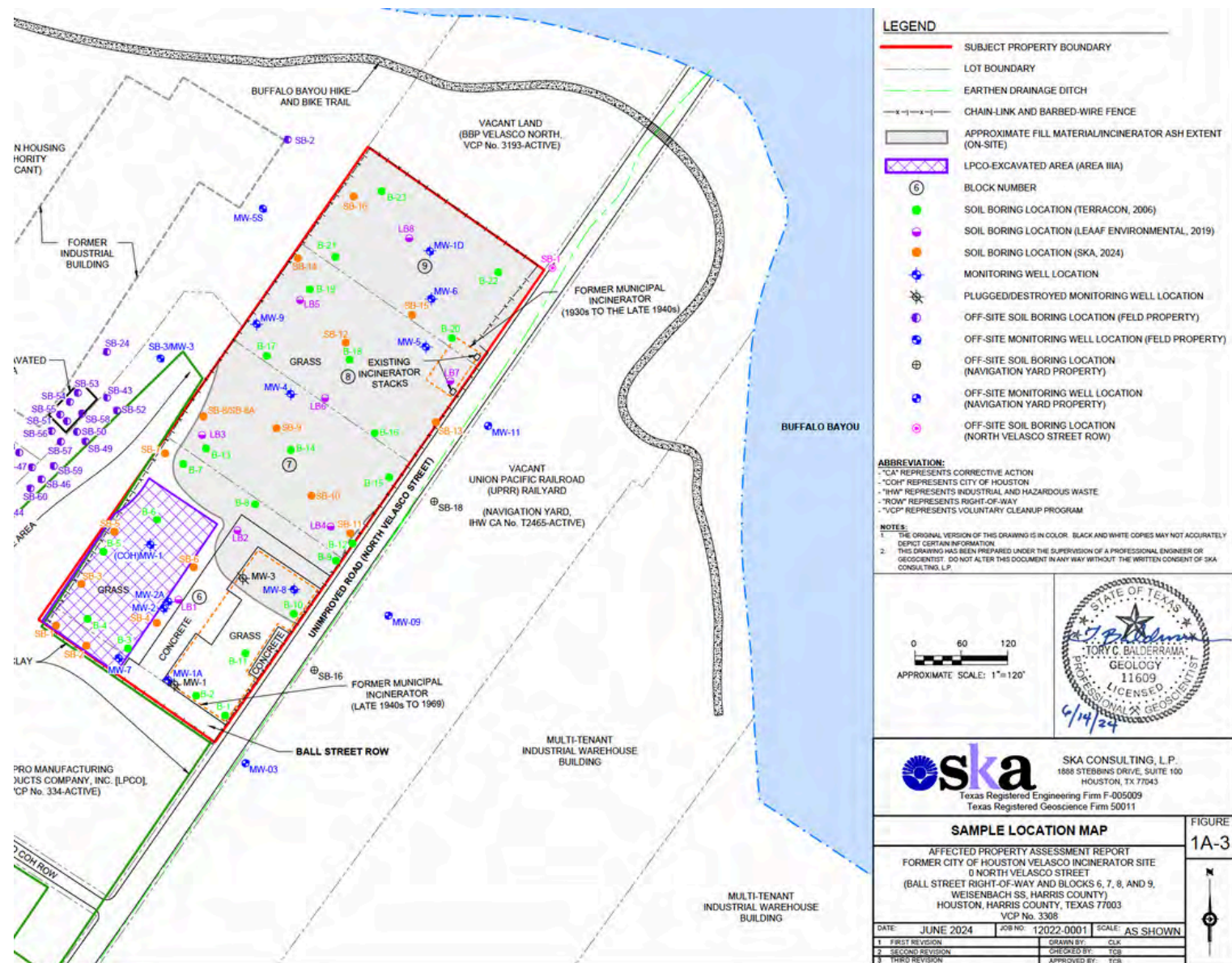




# SITE ASSESSMENT, CONT.

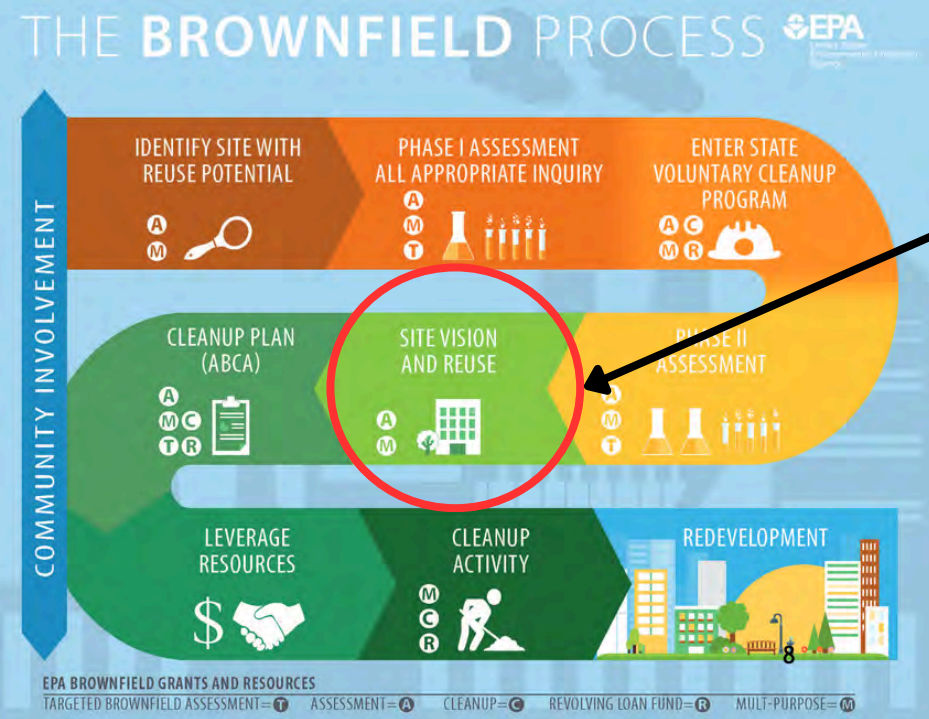
Example: Velasco Incinerator

[www.bankingvelasco.org](http://www.bankingvelasco.org)



- Chemicals of concern (COCs) exceeding their Tier 1 Human Health PCLs in soil are mostly found in the fill material/incinerator ash.
  - Pentachlorophenol (PCP)
  - Polychlorinated biphenyls (PCBs)
  - Equivalent 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD aka dioxins/furans)
  - Metals (antimony, arsenic, cadmium, copper, and lead)
- COCs in groundwater were non-detect or below drinking water standards.
- Based on the types of COCs found on site, there is no potential exposures to affected surface soil via inhalation of volatiles.





# SITE VISIONING & REUSE

“You might be a facilitator, you might be an academic, but you don’t study poverty, honey, you experience it. And we need to empower those who have to not carry just the burden, but carry the solution; allow them the space to present the solution.”

— RECoDE Interviewee, data.org

<https://data.org/reports/recode-report/>



### WHAT MAKES A COMMUNITY? ¿QUÉ CREA UNA COMUNIDAD?

Place a dot on your top 3 recreational and top 3 community amenities. Coloque un punto en los 3 servicios recreativos y comunitarios más importantes.

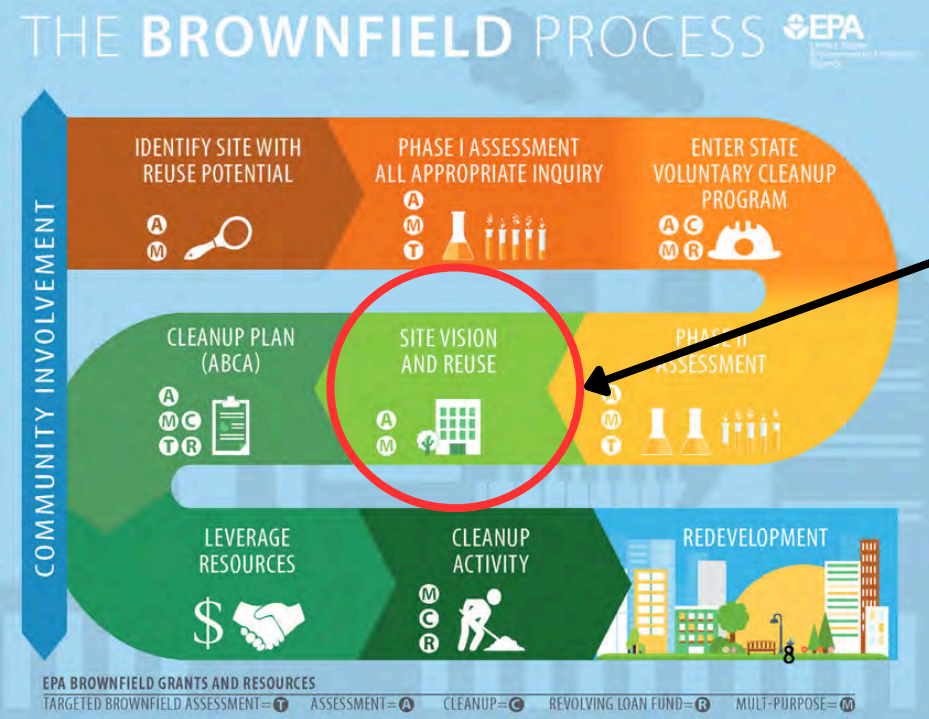
RECREATIONAL AMENITIES   SERVICIOS RECREATIVOS			COMMUNITY AMENITIES   SERVICIOS COMUNITARIOS		
FARMERS MARKET MERCADO DE AGRICULTORES	DOG PARK PARQUE PARA PERROS	WATER FEATURE FUENTES DE AGUA	CHILD CARE GUARDERIA	LIBRARY BIBLIOTECA	LOCAL SMALL BUSINESS PEQUEÑOS NEGOCIOS
COURTS AND FIELDS CANCHAS DEPORTIVAS	KID'S PLAY AREA ZONA DE JUEGOS PARA NIÑOS	PICNIC/FOOD TRUCK AREA PICNIC O CAMION DE COMIDA	CAFE CAFETERIA	FITNESS CENTER GIMNASIO	NUTRITIONAL CLASSES CURSO DE NUTRICION
COMMUNITY GARDEN JARDIN COMUNITARIO	WALKING TRAILS SENDEROS PARA CAMINAR	SHADED GATHERING SPACE AREAS DE REUNION	GROCERY STORE SUPERMERCADO	HEALTH CLINIC CLINICA	JOB/CAREER TRAINING ENTRENAMIENTO LABORAL/PROFESIONAL
BIKE RENTAL ALQUILER DE BICICLETAS	VIEWS OF DOWNTOWN VISTAS AL CENTRO	OTHER SUGGESTIONS? OTRAS SUGERENCIAS?	RESTAURANT RESTAURANTE	PUBLIC ART/MURALS ARTE PUBLICO/MURALES	OTHER SUGGESTIONS? OTRAS SUGERENCIAS?

**COST: \$0 - 60,000+**

\*Cost varies with the extent of engagement and/or professional services required

**FUNDING SOURCE:** Private, EPA Grant, Volunteers/In-Kind, Academia, Philanthropy, other public funding (City, State, HUD, etc.)





# SITE VISIONING & REUSE, CONT.

EPA-Funded Visioning & Reuse Planning Activities

[www.epa.gov/brownfields/eligible-planning-activities#Info](http://www.epa.gov/brownfields/eligible-planning-activities#Info)

## Planning to Initiate Revitalization:

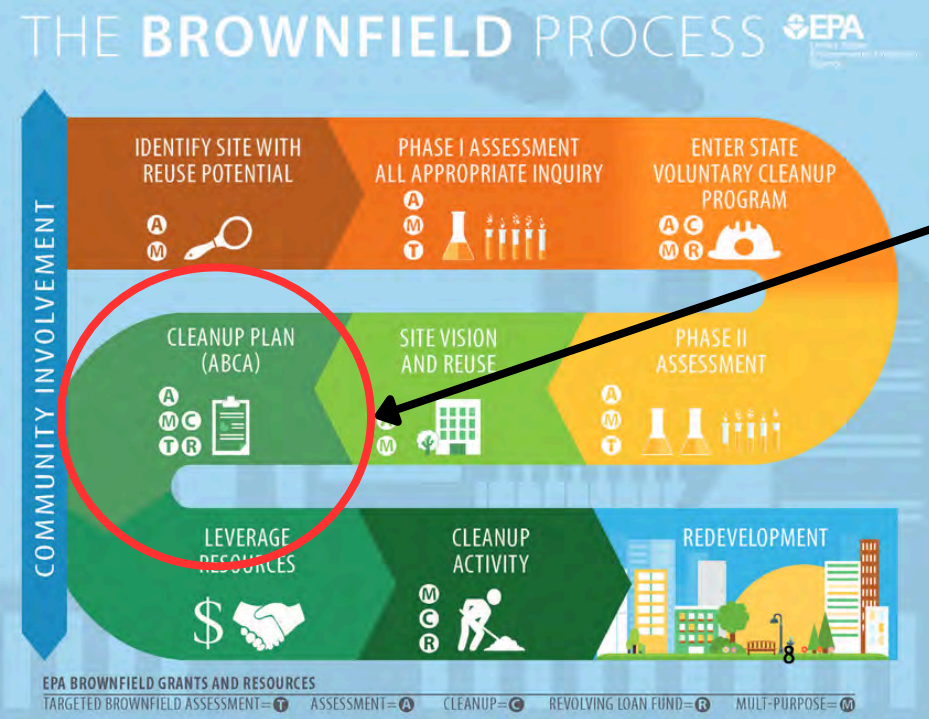
- Climate-Smart Brownfields Planning
- Equitable Development Activities
- Brownfields Area-Wide Planning
- Site Reuse Assessment
- Land Use Assessment
- Market Study
- Infrastructure Evaluation
- Community Health Assessment
- Site Disposition Strategy

## Planning to Prepare Revitalization:

- Site Reuse Vision
- Resource Roadmap
- Revitalization Plan
- Evaluation of Market Viability
- Economic Impact Analysis
- Fiscal Impact Analysis







# CLEANUP PLAN

Analysis of Brownfields Cleanup Alternatives (ABCA)

*“Remedy solution” must be technically and financially feasible for the desired reuse of the property, considering risk to future occupants.*



## Common Cleanup Options

- Institutional controls (e.g., deed restrictions)
- Removal of contaminated soil or media (including building materials)
- In-situ groundwater treatment
- Ex-situ treatment systems
- Capping and engineering controls
- Barriers and capture trenches
- Natural attenuation



**COST:** \$10,000 - \$100,000+

\*Depending on the level of engineering design and professional services.

**FUNDING SOURCE:**

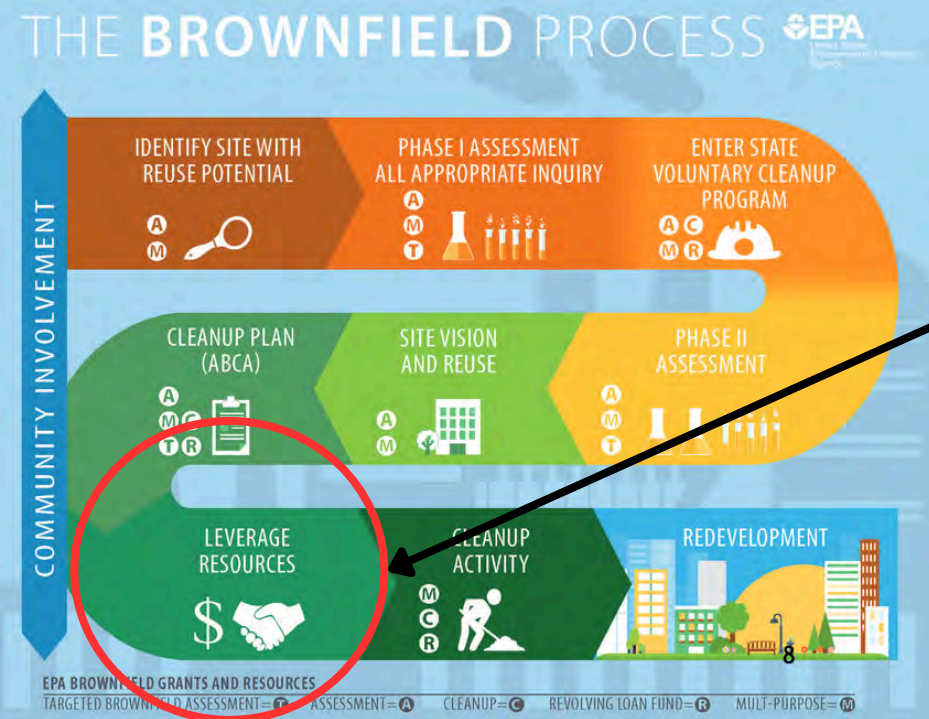
Private, EPA Grant, EPA Revolving Loan, Escrow, and other public funding.



# Example Cleanup Plan: Velasco Incinerator, Houston

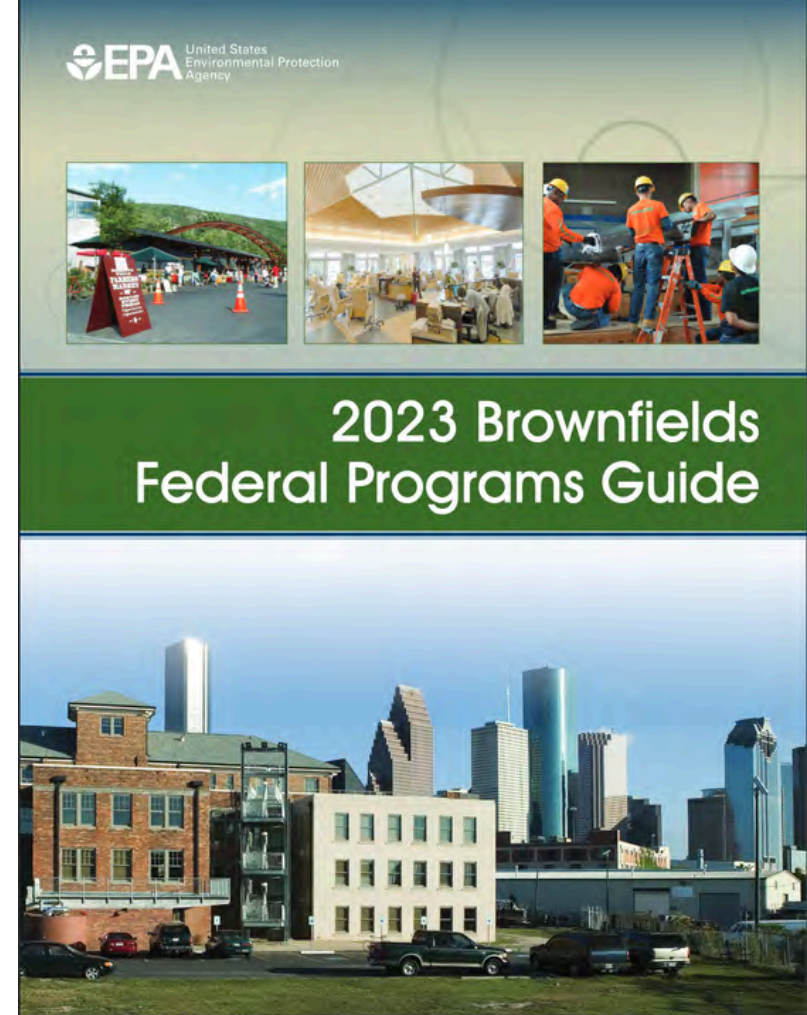
Action	Pros/Cons	Timeline	Cost	Other Costs
OPTION 1 - Cap Entire Site with no reuse	<b>Pro:</b> Cheapest option <b>Con:</b> No beneficial use for community	2-3 years	\$3 M	Ongoing operation and maintenance (O&M) of cap required for 30 years
OPTION 2 (Preferred) Limited soil removal, capping and support of park system infrastructure	<b>Pro:</b> Reuse options available for community benefit, revenue generation, and climate action <b>Con:</b> Post-closure action and limited use	3-4 years	\$5 M	Ongoing O&M required (add to parks maintenance budget)
OPTION 3 - Remove all waste for unrestricted development	<b>Pro:</b> Residential use possible <b>Con:</b> Expensive & exposure of waste during off-site removal to nearby residents	4+ years	\$20 M+	No post-closure action





# LEVERAGING RESOURCES

[www.epa.gov/brownfields/brownfields-federal-programs-guide-2023](http://www.epa.gov/brownfields/brownfields-federal-programs-guide-2023)



## Funding Needs (Simplified):

1. Due Diligence (pre-purchase)
2. Planning and permitting
3. Assessment & regulatory compliance
4. Cleanup
5. Legal and professional services
6. Construction and development
7. Community involvement activities

## Funding Options

1. Federal or State Grants
2. Philanthropy
3. Tax Credits
4. Traditional Financing
5. Private Financing
6. EPA Funded Revolving Loan Programs (Cleanup)
7. Technical Assistance

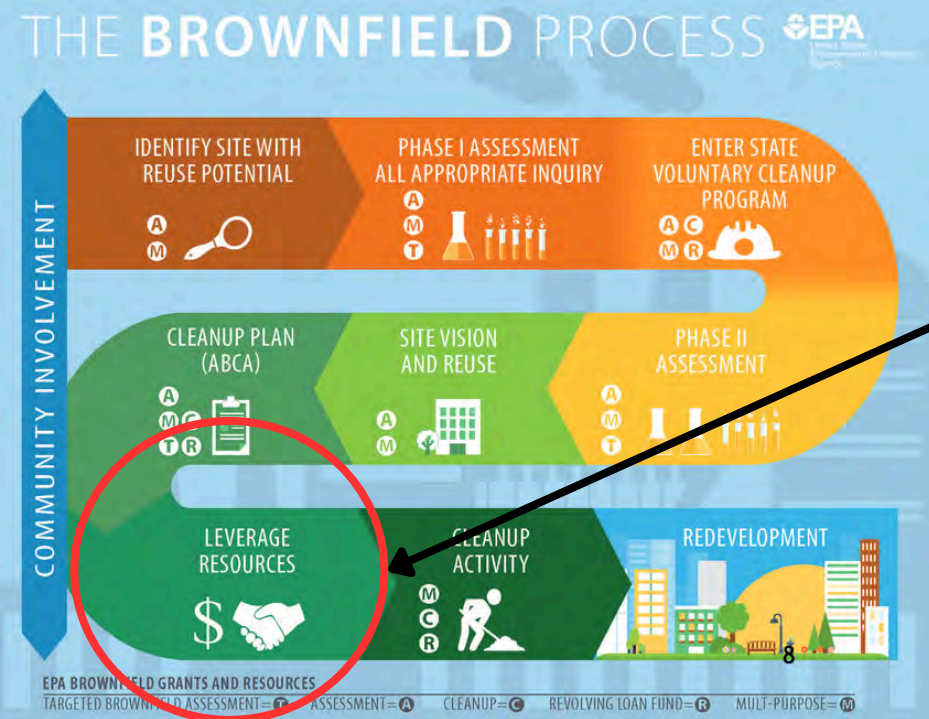
**COST:** \$10,000 - \$100,000+

\*Costs for grant writing or matching may be required.

**Funding Source (for fundraising efforts only):**

Private or philanthropic





# LEVERAGING RESOURCES, CONT.

## Tips

1. Create your pitch (1-2 pager)
2. Understand your funding needs
3. Support your story with DATA
4. Shop your project around
5. Research Funding Opportunities
6. Apply! There's value in trying.
7. Conduct debriefs if not awarded funding
8. Repeat!

**RESILIENT HOUSING** [address]  
1 acre

SEEKING FUNDING  
**\$50M**  
 By 2025

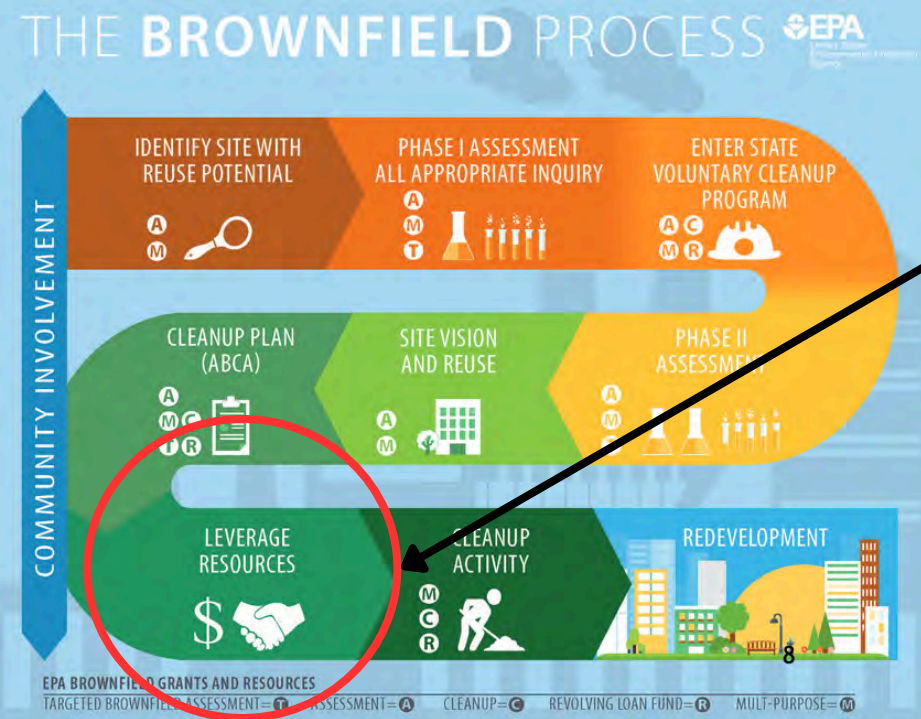
The church acquired the property at a tax auction in 1996. The facility has served the community in times of need as a food and supply distribution center. In 2023, the church started working with the City of Houston and the U.S. EPA brownfields redevelopment programs to assess building conditions and plan reuse strategies. The church is currently seeking project funding to develop low-income, resilient housing with a goal of project completion by 2026.



# TYPES OF EPA BROWNFIELD GRANTS

- [Assessment Grants](#) - Provide funding for brownfield inventories, planning, environmental assessments, and community outreach
- [Cleanup Grants](#) - Provide funding to carry out cleanup activities at brownfield sites owned by the applicant
- [Multipurpose \(MP\) Grants](#) - Provide funding to conduct a range of eligible assessment and cleanup activities at one or more brownfield sites in a target area
- [Revolving Loan Fund \(RLF\) Grants](#) - Provide funding to capitalize loans that are used to clean up brownfield sites
- [Job Training \(JT\) Grants](#) - Provide environmental training for residents impacted by brownfield sites in their communities
- [State and Tribal Response Program Grants](#) - Provide non-competitive funding to establish or enhance State and Tribal Brownfields response programs





# LEVERAGING RESOURCES, CONT.

Technical Assistance to Brownfields Programs  
 EJ Thriving Communities Technical Assistance Centers

### Regional TCTAC Selections

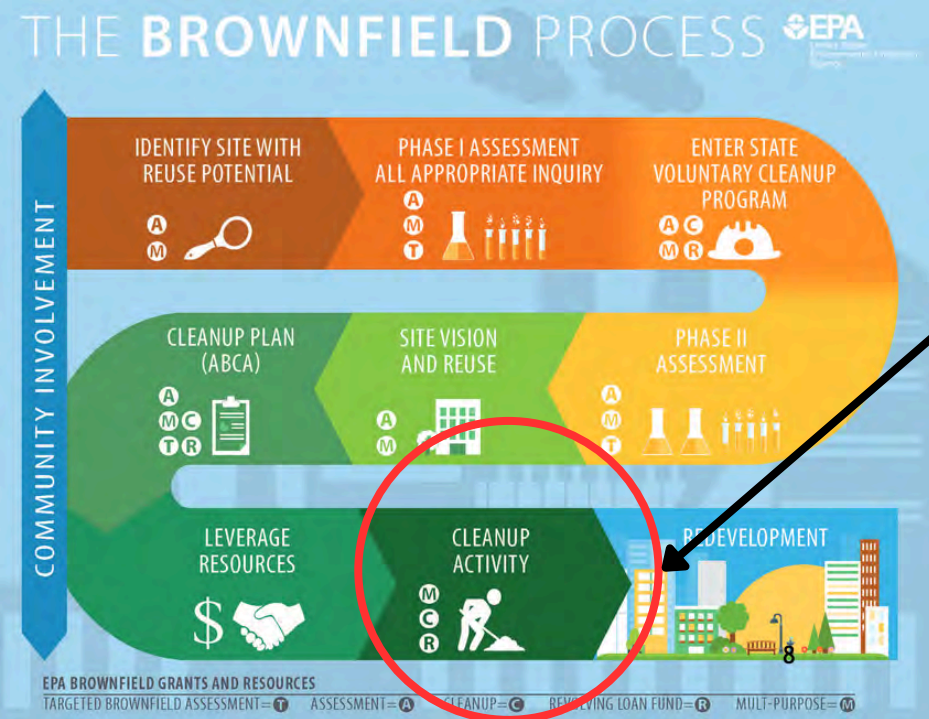
<p><b>Region 1</b></p> <ul style="list-style-type: none"> <li>University of Connecticut</li> </ul> <p><b>Region 2</b></p> <ul style="list-style-type: none"> <li>West Harlem Environmental Action, Inc.</li> <li>Inter-American University of Puerto Rico-Metro Campus</li> </ul> <p><b>Region 3</b></p> <ul style="list-style-type: none"> <li>National Wildlife Federation</li> </ul> <p><b>Region 4</b></p> <ul style="list-style-type: none"> <li>Research Triangle Institute</li> </ul> <p><b>Region 5</b></p> <ul style="list-style-type: none"> <li>Blacks in Green</li> <li>University of Minnesota</li> </ul>	<p><b>Region 4 &amp; 6</b></p> <ul style="list-style-type: none"> <li>Deep South Center for EJ</li> </ul> <p><b>Region 6</b></p> <ul style="list-style-type: none"> <li>New Mexico State University</li> </ul> <p><b>Region 7</b></p> <ul style="list-style-type: none"> <li>Wichita State University</li> </ul> <p><b>Region 9</b></p> <ul style="list-style-type: none"> <li>University of Arizona</li> <li>San Diego State University</li> </ul> <p><b>Region 10</b></p> <ul style="list-style-type: none"> <li>Willamette Partnership</li> <li>University of Washington</li> </ul>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



[www.epa.gov/system/files/documents/2023-04/EJ TCTAC Selection Fact Sheet.pdf](http://www.epa.gov/system/files/documents/2023-04/EJ_TCTAC_Selection_Fact_Sheet.pdf)

[www.epa.gov/brownfields/technical-assistance](http://www.epa.gov/brownfields/technical-assistance)





# CLEANUP

In 2021, Community Lattice (now Adaapta) was funded by Data.org to work with DataKind to conduct a study of the EPA's ACRES database (25+ years of brownfields data) to understand the cost of cleanup. The following slides present our findings.

[www.datakind.org/2022/02/23/predicting-the-costs-challenges-of-brownfield-cleanups-using-open-data-a-datadive-case-study/](http://www.datakind.org/2022/02/23/predicting-the-costs-challenges-of-brownfield-cleanups-using-open-data-a-datadive-case-study/)

We also created the ABC Tool: [www.communitylattice.com/abc-tool](http://www.communitylattice.com/abc-tool)

**COMMUNITY LATTICE**

Work Resources About Press Contact

## Analysis of Brownfields Costs (ABC) Tool

The purpose of our Analysis of Brownfields Costs (ABC) Tool is to allow users to explore how much past EPA-funded brownfields projects have cost to assess and clean up so users can use data-backed budget estimates for their own projects. **It is intended to be used for informational purposes only.** Costs on past projects do not guarantee similar costs on future projects; cost information is subject to human error and inconsistencies in its original reporting; users are solely responsible for conducting independent research with qualified professionals to determine site specific assessment and cleanup costs.

**Launch ABC Tool**

### ABC: Analysis of Brownfields Costs

Single Variable Multivariable Geography About

Assessment/Cleanup Phase: Cleanup

Analyze By: State

Location of Interest: Texas

Add similar locations to analysis

States with fewer than 20 sites will not be shown on the national map when analyzing by Cleanup

National Map Local Map Location Summary Location Sites

#### Cleanup Costs for Texas

Cost (\$)

- 2,000
- 4,000,000
- 6,000,000
- 8,000,000
- 10,000,000

**COST:** \*Costs vary widely

**Funding Source:** Various (see Leveraging Resources)



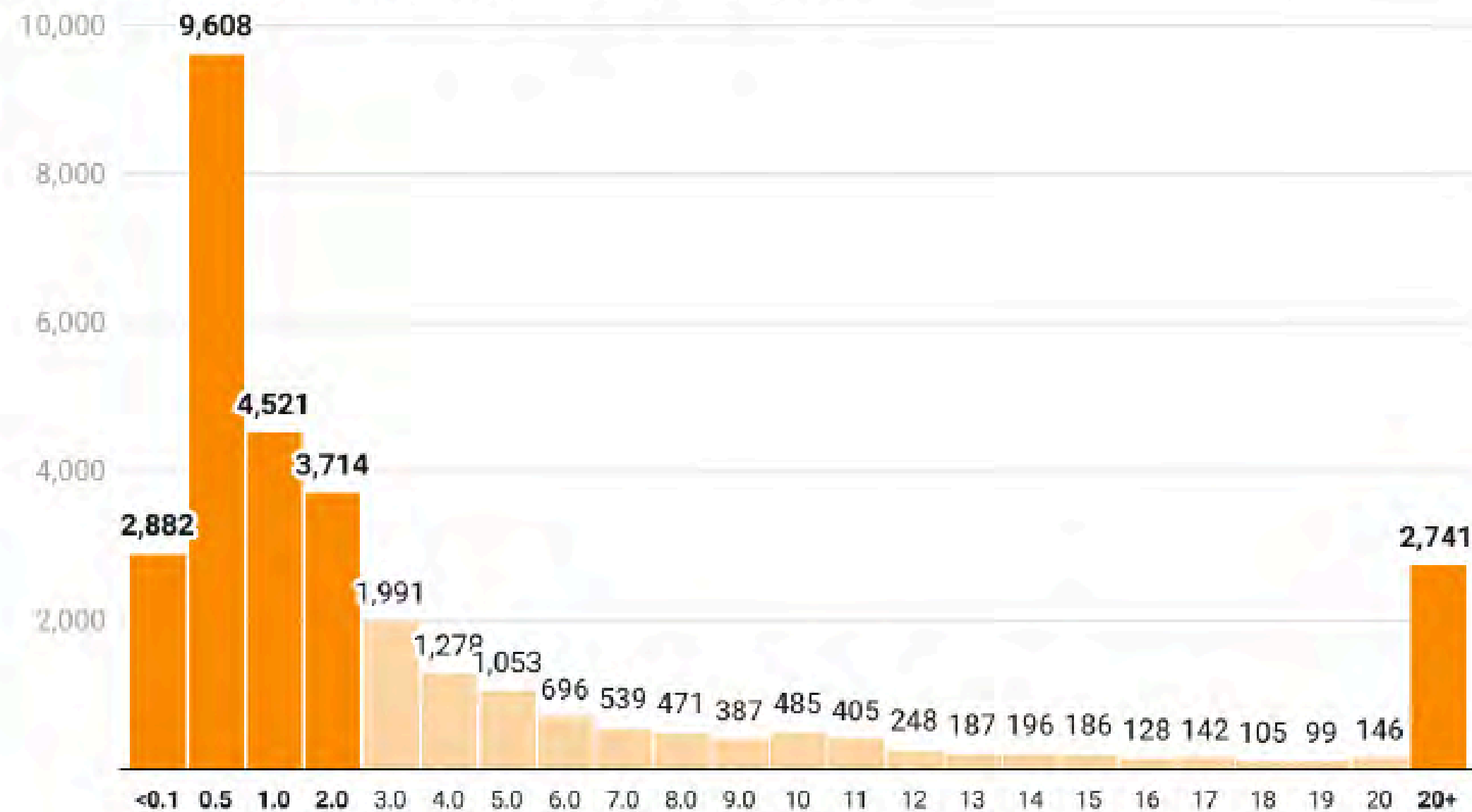
# ACRES EXPLORATORY DATA ANALYSIS (EDA) FINDINGS

by Community Lattice & DataKind

## Number of ACRES records by property size

**DISCLOSURE: ACRES Data is MESSY! These results give an idea of the cost of cleanup but should not be relied on for decision making.**

ACRES Properties by Size (acres)



Most properties are less than two acres or more than 20 acres and the largest property is 168,000 acres.

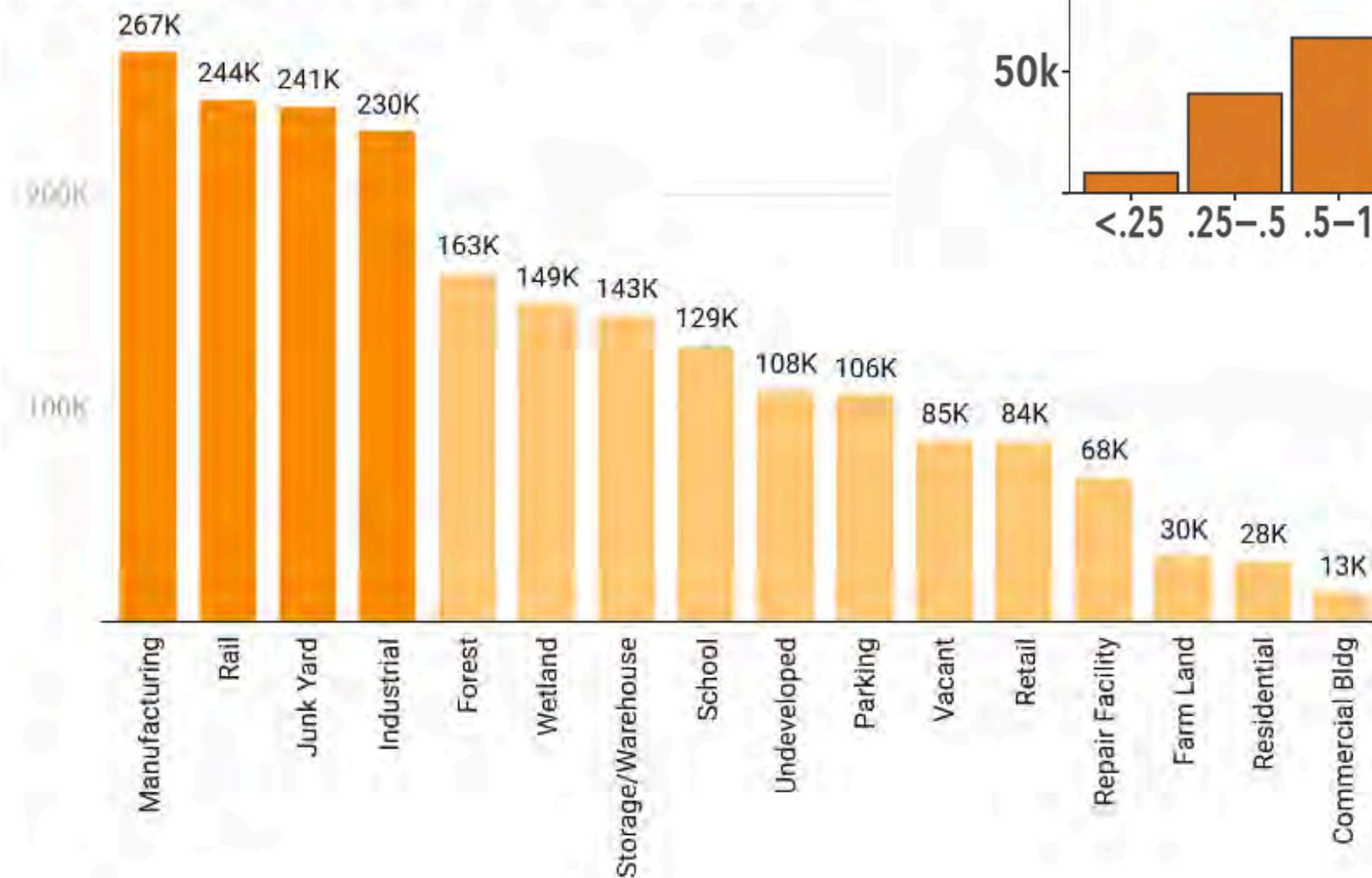


# EDA FINDINGS, CONT

## Site-specific influences on cleanup costs

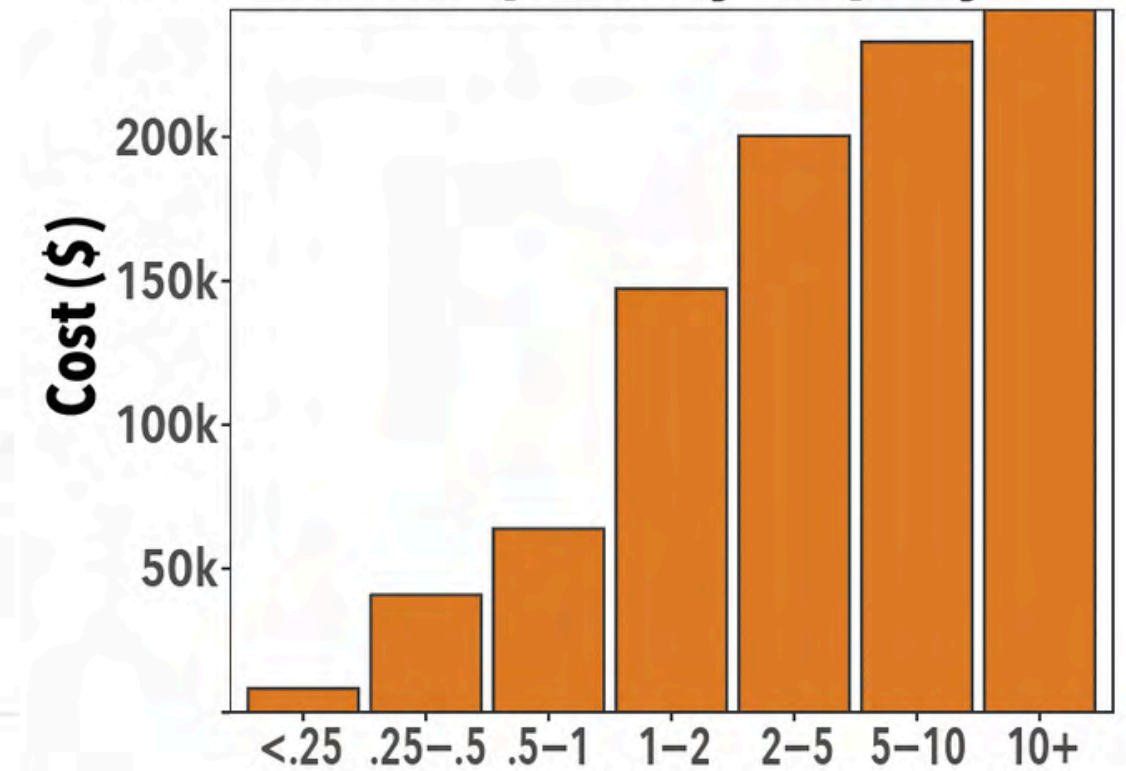
- Cleanup costs increase with the size of the property
- Manufacturing facilities, rail and junk yards, and industrial sites are the most expensive to clean up
- Residential and commercial buildings are the least expensive to clean up

Median Cost by Past Use Description



Created with Datawrapper

Median Cleanup Cost by Property Size

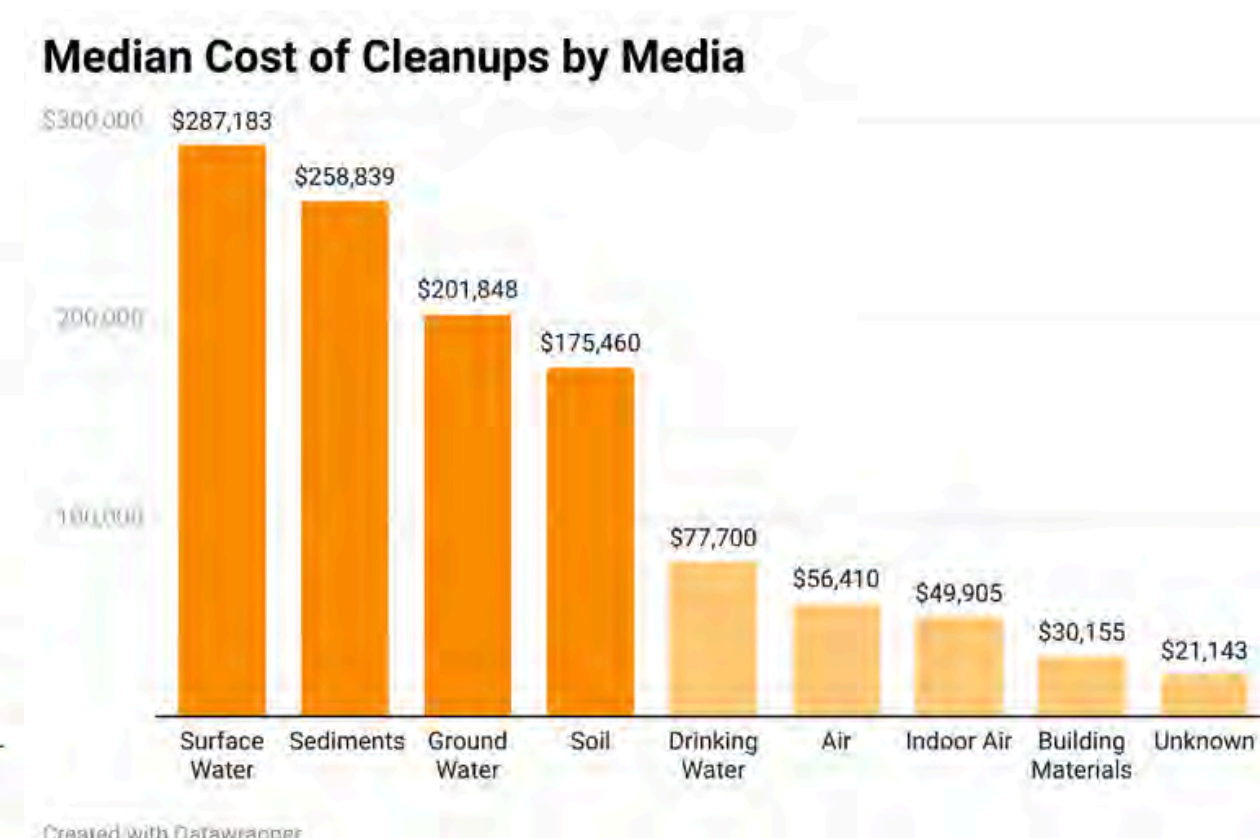
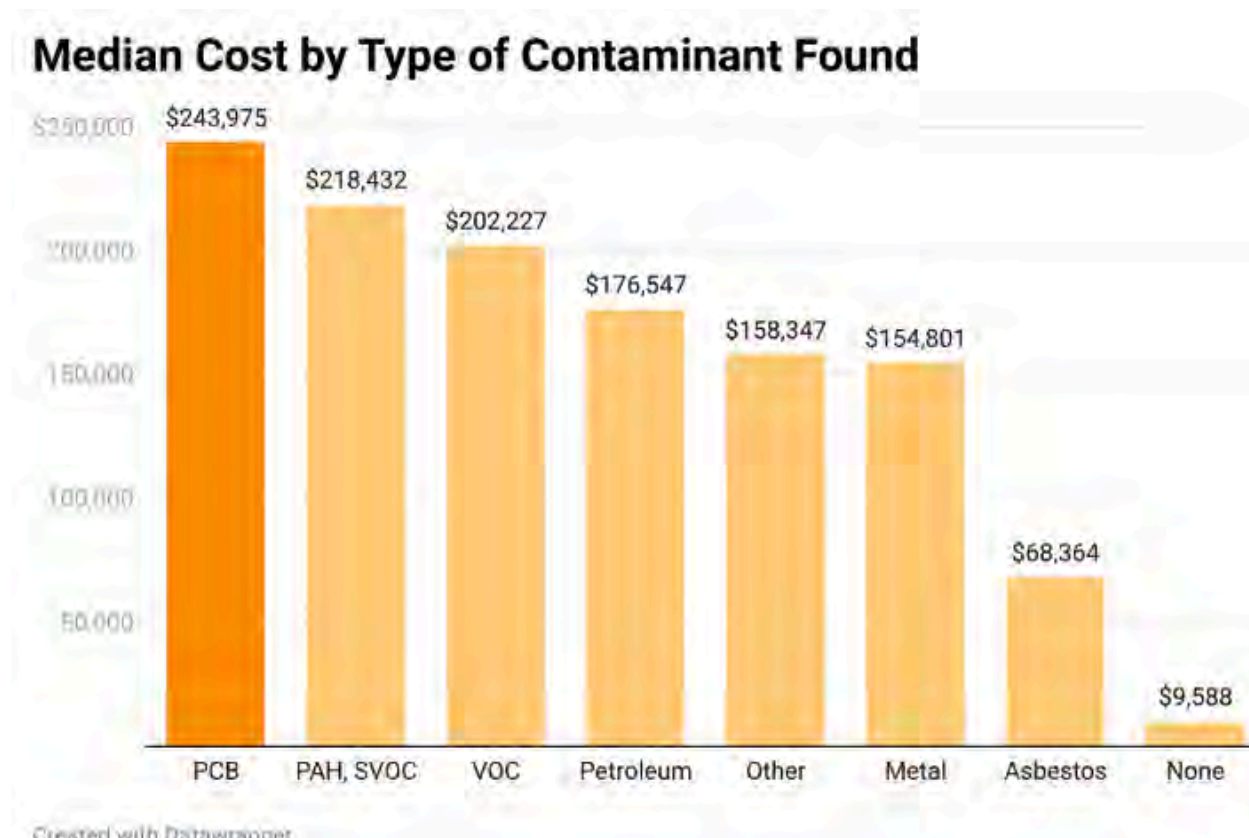
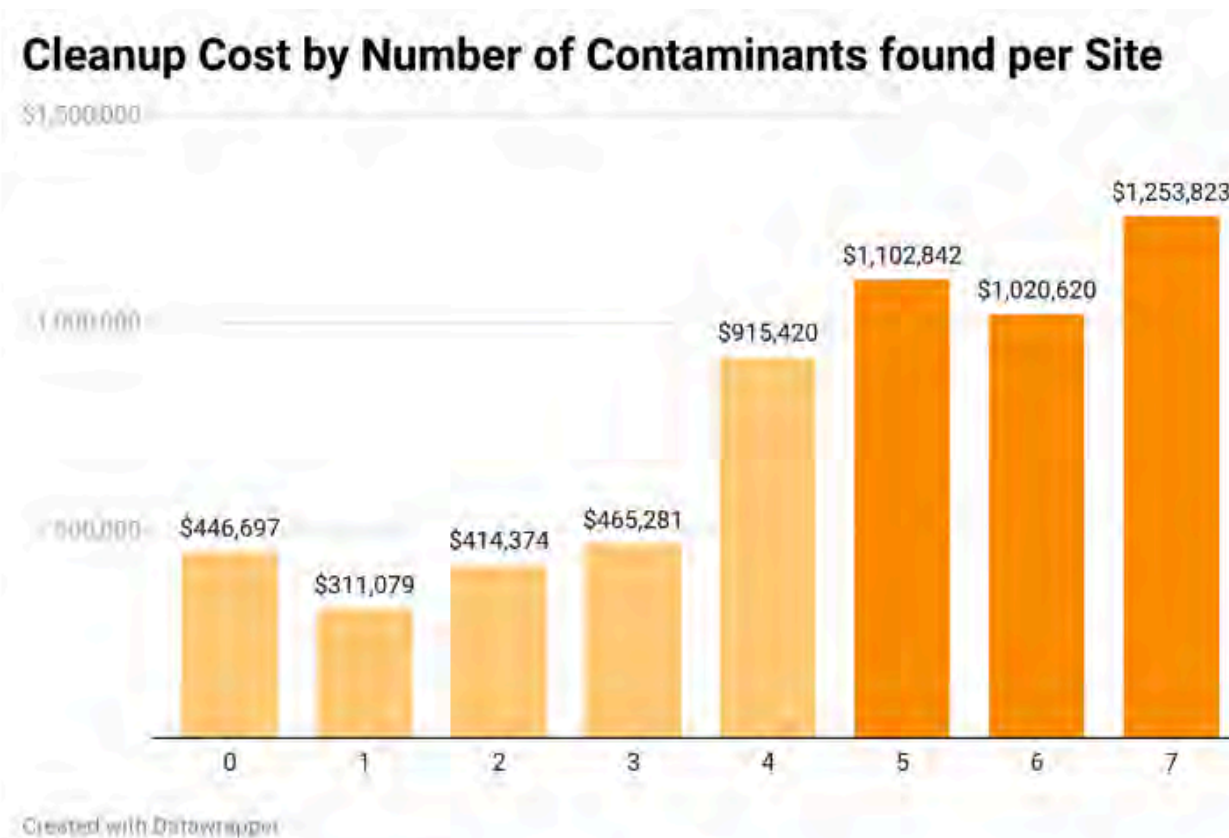




# EDA FINDINGS, CONT

## Cost by Contaminants & Media Affected

- Cleanup cost increases with # contaminants found
- Organic compounds are the most expensive to clean up, metals are midrange, and asbestos is the least expensive
- Contaminants in surface water and sediments are the most expensive to clean up; air and building materials are the least expensive





# EDA FINDINGS, CONT

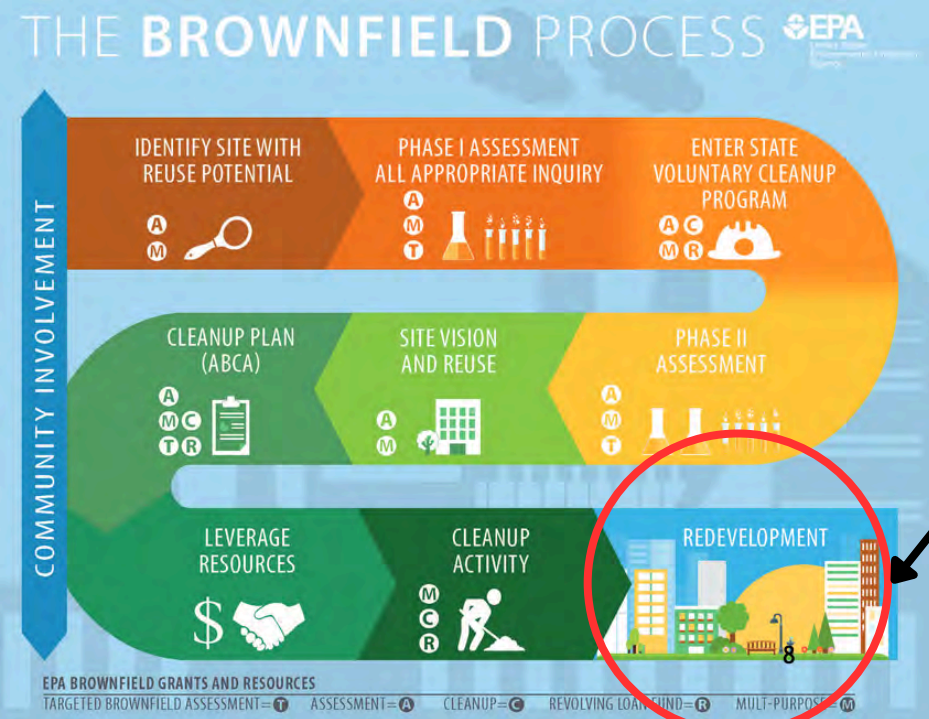
## Cleanup Duration

Number of Cleanups by Cleanup Duration



Created with Datawrapper





# REDEVELOPMENT

Brownfield redevelopment (or revitalization) refers to the process of returning the property to a safe and sustainable use after site assessment and cleanup. (U.S. EPA)

## Ongoing Considerations

- Ongoing community engagement & partnerships
- Discovering a new environmental condition
- Record keeping and grant reporting
- Construction & project management
- Public health and safety
- Climate adaptation & resiliency
- Don't forget to celebrate the wins!



St. Elizabeth's Hospital, Houston, Texas  
Fifth Ward Community Redevelopment Corporation

**COST:** \*Costs vary widely

**Funding Source:** Various (see Leveraging Resources)



# **ADDITIONAL RESOURCES**





# REVITALIZATION-READY

A Guide to Revitalizing Land  
in Your Community



[https://www.epa.gov/system/files/documents/2021-12/revitalization-ready\\_guide-final-508compliant-12-10-21.pdf](https://www.epa.gov/system/files/documents/2021-12/revitalization-ready_guide-final-508compliant-12-10-21.pdf)





## 2023 Brownfields Federal Programs Guide



[www.epa.gov/brownfields/  
brownfields-federal-programs-  
guide-2023](http://www.epa.gov/brownfields/brownfields-federal-programs-guide-2023)





## From Brown to Blooming:

Groundwork USA's Field-Tested Guide  
for Getting from Brownfield to Neighborhood Asset



Cate Mingoya  
Director of Capacity Building  
Groundwork USA



<https://groundworkusa.org/eqdevtools/from-brown-to-blooming-groundwork-usas-field-tested-guide-for-getting-from-brownfield-to-neighborhood-asset/>



# Make Your Market: A CCLR Guide to Revitalizing Underutilized Properties

Brownfields exist in nearly all communities. Follow these steps to develop market interest in your brownfield(s) for redevelopment.



CENTER FOR CREATIVE  
LAND RECYCLING  
RECLAIM. CONNECT. TRANSFORM.

September 2023

[www.cclr.org/wp-content/  
uploads/2023/10/  
CCLR\\_InventoryGuide\\_2023\\_FINAL.  
pdf](http://www.cclr.org/wp-content/uploads/2023/10/CCLR_InventoryGuide_2023_FINAL.pdf)



**data.org**

## Rising Equitable Community Data Ecosystems (RECoDE)

*The Voices We Trust: Building Equity-Centered  
Community Data Ecosystems That Work for Everyone*

*Ginger Zielinskie and Lindsey B. Gottschalk*



Data Across  
Sectors for Health

Health  
Leads

NADPH  
NATIONAL ALLIANCE FOR  
DISPARITY-FACILE HEALTH

Robert Wood Johnson Foundation

<https://data.org/wp-content/uploads/2022/02/ReCode-Report.pdf>





## EPA Brownfields Grants, CERCLA Liability, and All Appropriate Inquiries

The U. S. Environmental Protection Agency's (EPA) Brownfields Program provides grant funds for brownfields assessments, cleanup and capitalization of revolving loan funds. Eligible entities for Brownfield Grants include states, tribes, local governments, regional governments, quasi-governmental entities, and nonprofit organizations.<sup>1</sup>

To be eligible for an EPA Brownfields Grant to address contamination at brownfield properties, eligible entities must demonstrate that they are not liable under CERCLA for contamination at the site or that they do not have to meet the requirements for asserting an affirmative defense to CERCLA liability.

### Who can be found liable for contamination at a brownfield site?

Under CERCLA, state and local governments, nonprofit organizations, and other entities can be found to be liable by virtue of property ownership or by virtue of their actions with respect to a site. For sites with a release or threatened release of hazardous substances, potentially responsible parties include any person or party that:

- Owns or operates the property.
- Formerly owned or operated the property at the time of the disposal of hazardous substances.
- Arranged for hazardous substances to be disposed of at the site or transported to the site for disposal.
- Transported hazardous substances to the site.

### What is CERCLA?

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, persons can be held strictly liable for cleaning up hazardous substances at properties they either currently own or operate, or owned or operated in the past. Strict liability under CERCLA means that liability for environmental contamination can be assigned based solely on property ownership.

- The 2002 Small Business Liability Relief and Brownfields Revitalization Act (Brownfields Amendments) amended CERCLA to provide liability protections for certain landowners and potential property owners. These liability protections apply to certain property owners if they comply with specific provisions in the statute, including conducting [All Appropriate Inquiries \(AAI\)](#) for present and past use of the property. The 2018 Brownfields Utilization, Investment and Local Development (BUILD) Act further amended CERCLA by, in part, clarifying the liability protections for state or local governments, for parties with tenancy or leasehold interests, and for Alaska Native villages and Native Corporations.

<sup>1</sup> 501(c)(3) organizations may apply for Brownfields Assessment, Cleanup, and Revolving Loan Fund Grants. Other nonprofit organizations may only apply for Brownfields Cleanup Grants. More information is available in most recent [EPA Brownfields Cleanup Grant Guidelines](#).

[www.epa.gov/brownfields/  
brownfields-all-appropriate-  
inquiries#background](http://www.epa.gov/brownfields/brownfields-all-appropriate-inquiries#background)



# ASTM International Technical Committee E50 on Environmental Assessment, Risk Management and Corrective Action

## Scope

The promotion of knowledge, stimulation of research, and development of standard guides, specifications, practices, test methods, classifications, and definitions relating to environmental assessment, risk management and corrective action. The scope of the Committee includes, but is not limited to multi-media environmental assessment and risk management issues including environmental assessment, environmental management, corrective action due diligence, and sustainability.

These activities will be coordinated with and if available use the standards of other ASTM technical committees and organizations whose fields of endeavor are closely allied to or compliment environmental assessment and environmental management.



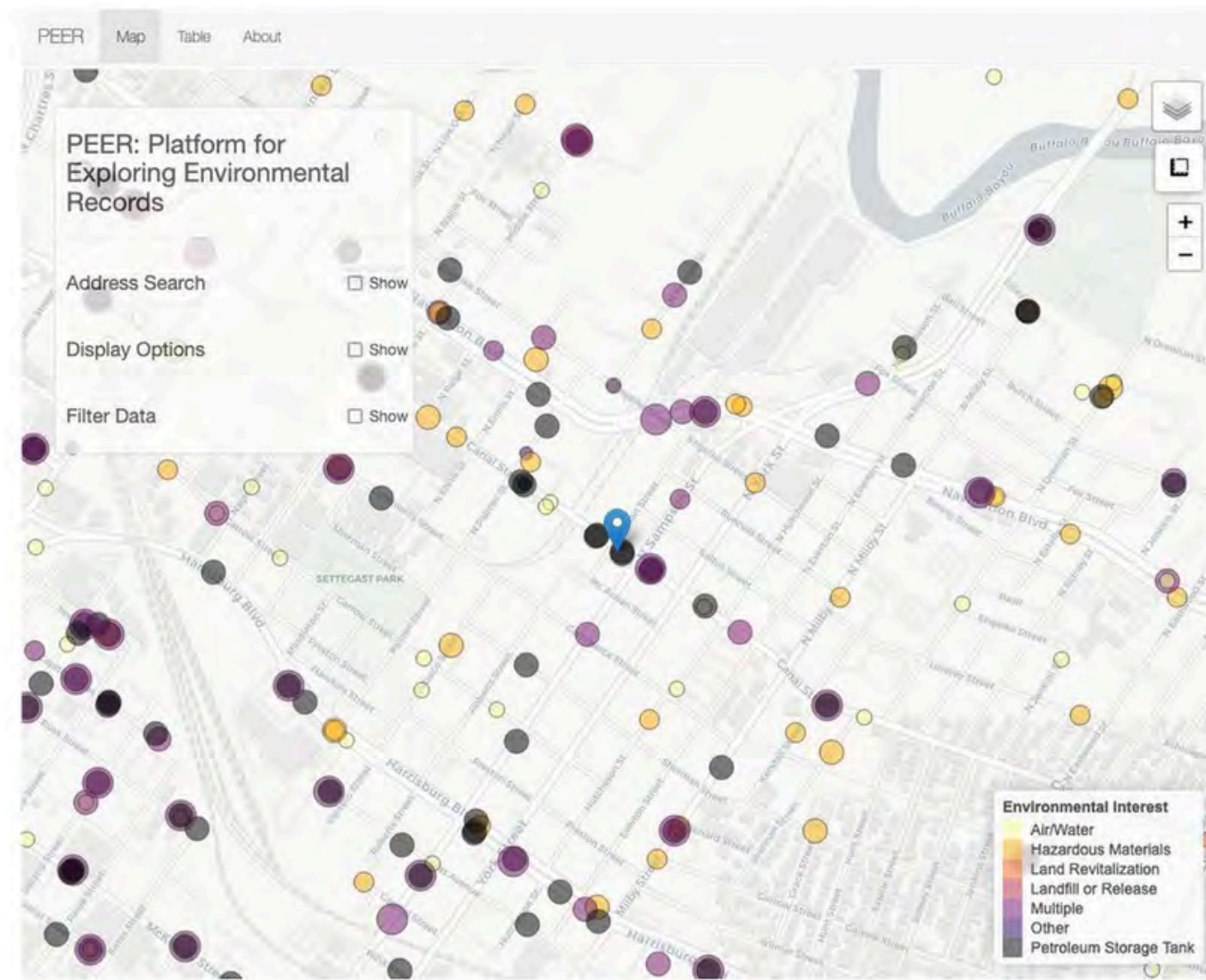
Learn more about Committee E50  
[www.astm.org/committee-e50](http://www.astm.org/committee-e50)



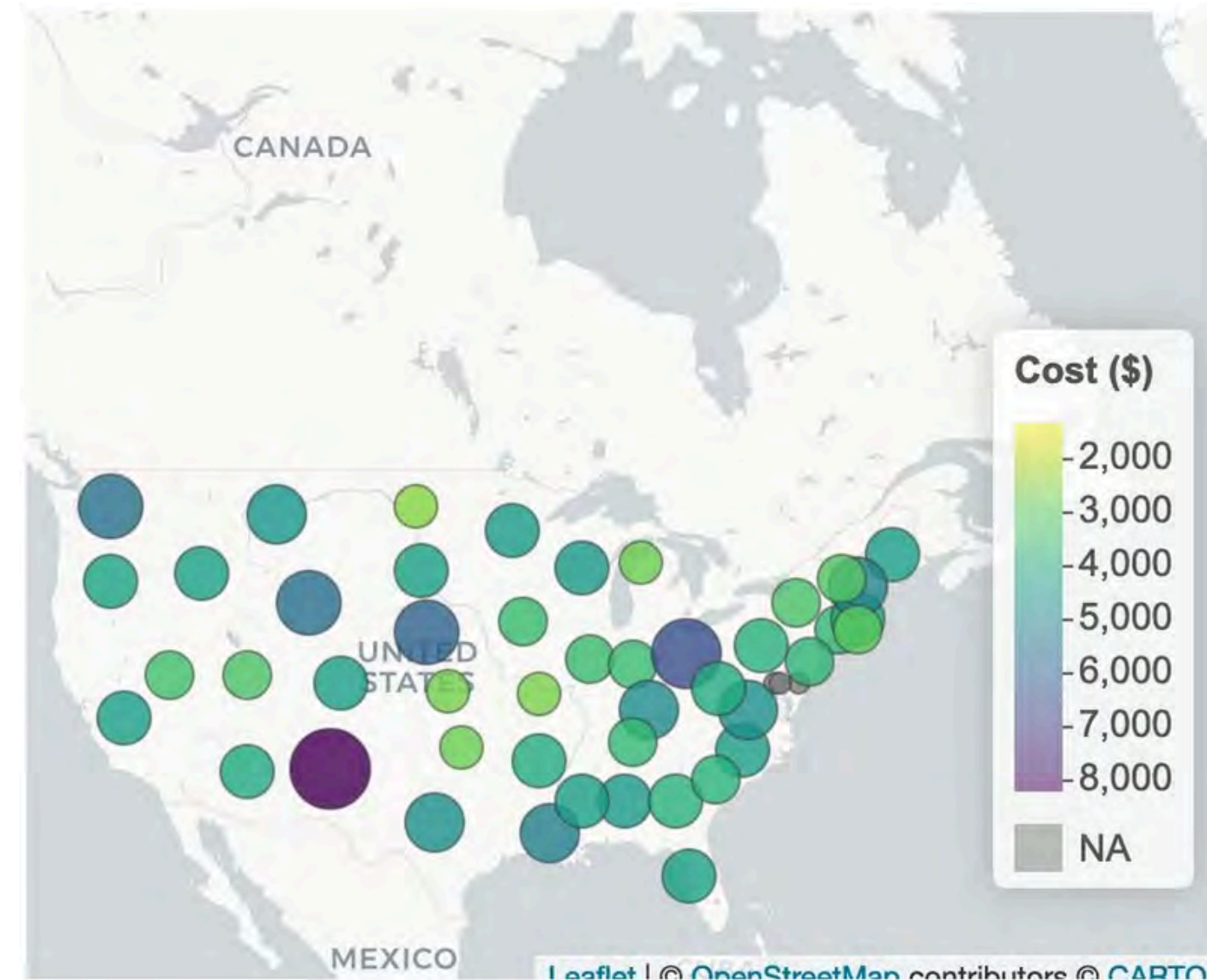
## How ASTM Standards Work with Brownfields







**The Platform for Exploring Environmental Records (PEER)** is an interactive, open-source data tool that aggregates and displays publicly-available environmental records in an easy-to-use, accessible way.

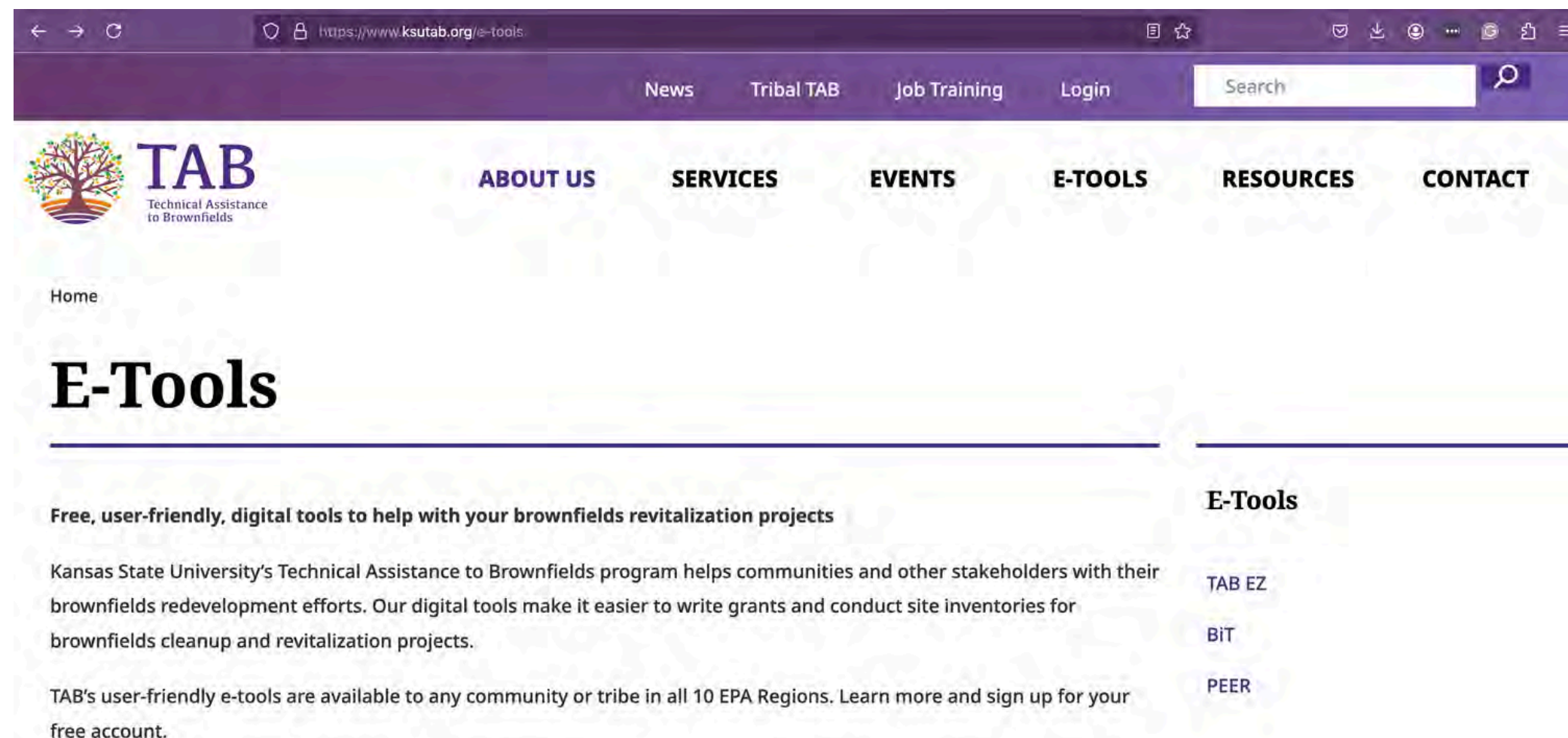


**Analysis of Brownfields Costs (ABC)** is an interactive data tool that allows users to explore the assessment and clean-up costs of past EPA-funded brownfields projects to inform their own project budgets.



# TRAINING FOR PEER

[www.communitylattice.com/peer-tool](http://www.communitylattice.com/peer-tool)



The screenshot shows the website <https://www.ksutab.org/e-tools>. The header includes navigation links for News, Tribal TAB, Job Training, Login, and a search bar. The main navigation menu contains ABOUT US, SERVICES, EVENTS, E-TOOLS, RESOURCES, and CONTACT. The E-Tools section is highlighted and contains the following text:

**E-Tools**

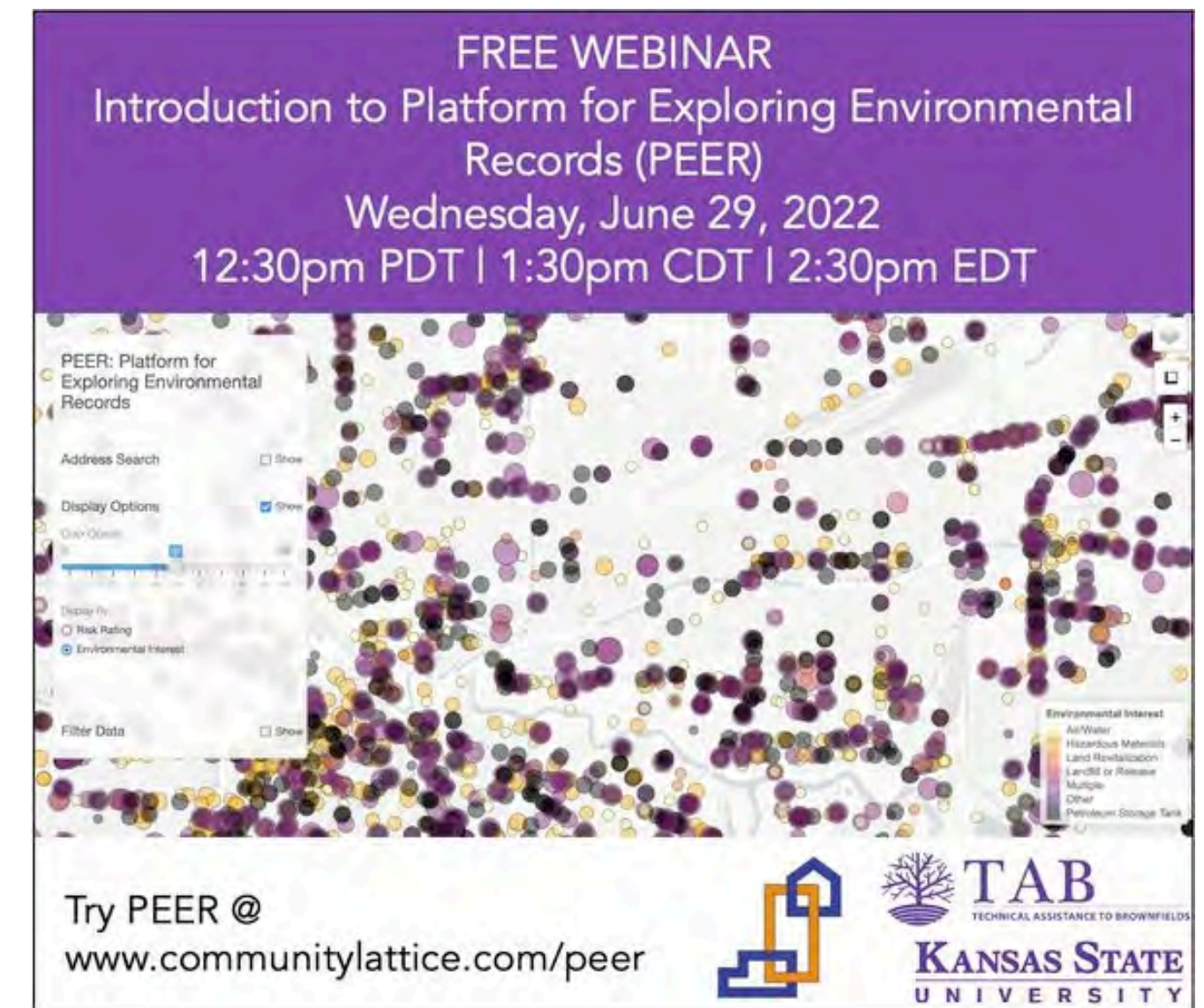
Free, user-friendly, digital tools to help with your brownfields revitalization projects

Kansas State University's Technical Assistance to Brownfields program helps communities and other stakeholders with their brownfields redevelopment efforts. Our digital tools make it easier to write grants and conduct site inventories for brownfields cleanup and revitalization projects.

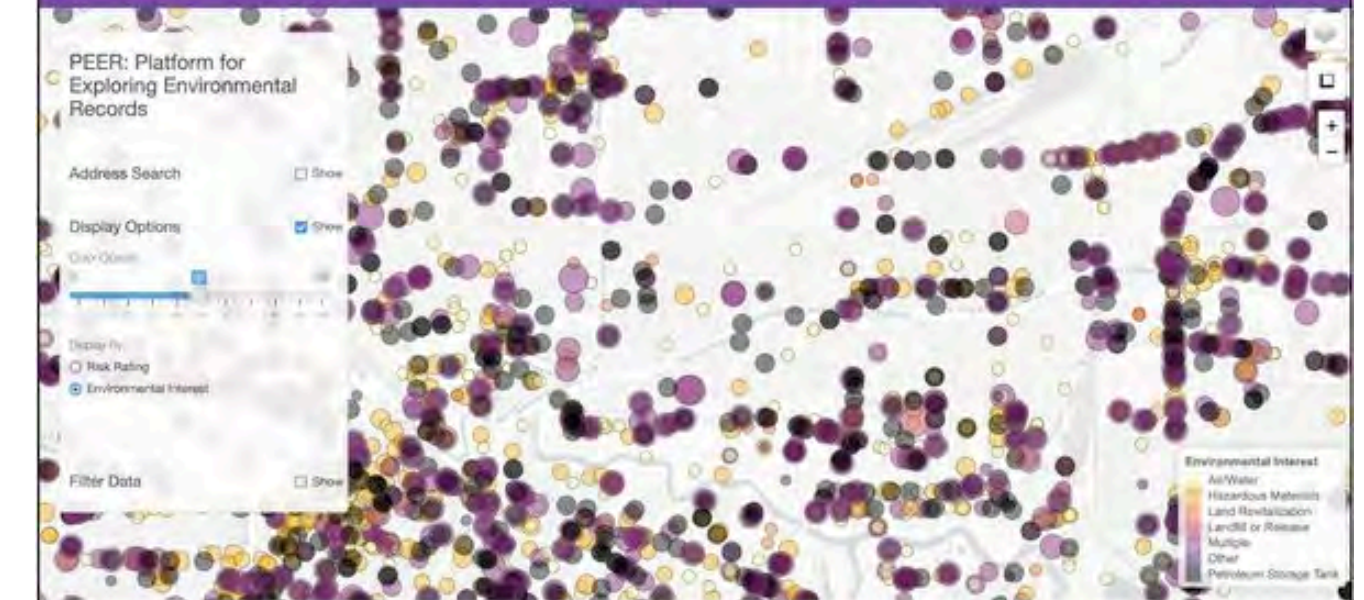
TAB's user-friendly e-tools are available to any community or tribe in all 10 EPA Regions. Learn more and sign up for your free account.

**E-Tools**


- TAB EZ
- BIT
- PEER



**FREE WEBINAR**  
Introduction to Platform for Exploring Environmental Records (PEER)  
Wednesday, June 29, 2022  
12:30pm PDT | 1:30pm CDT | 2:30pm EDT

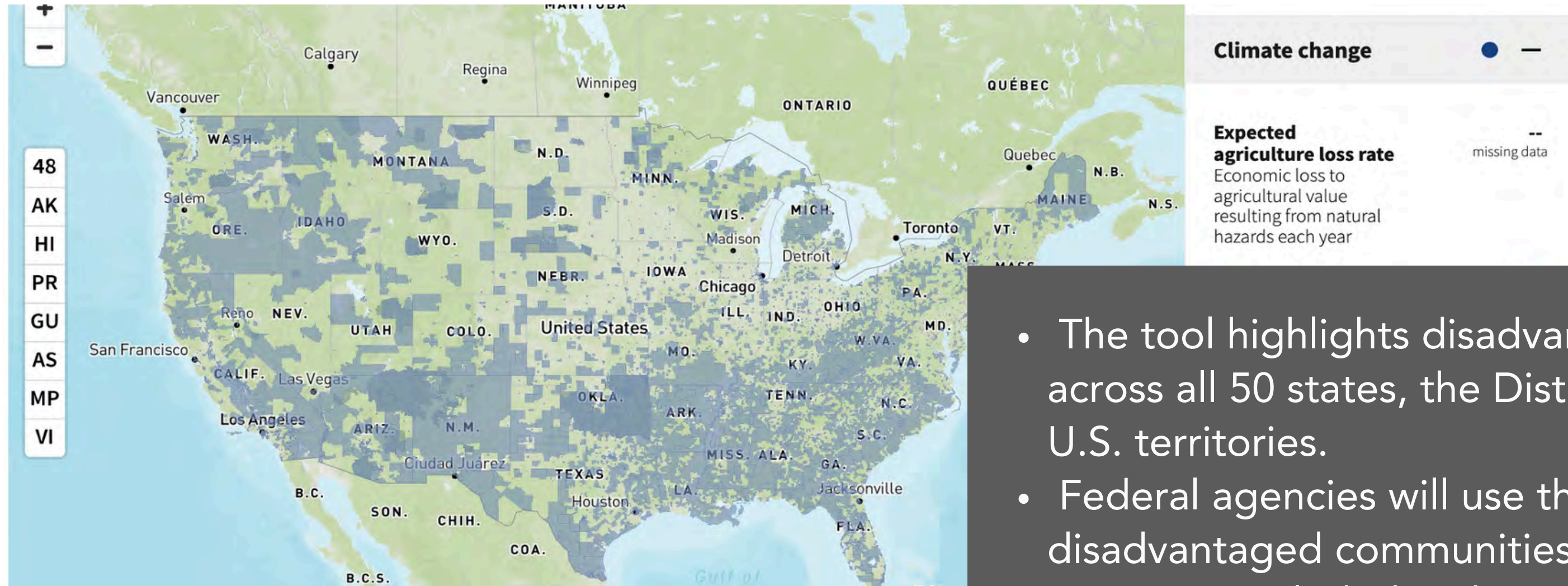


Try PEER @  
[www.communitylattice.com/peer](http://www.communitylattice.com/peer)





# Climate and economic justice screening tool (CEJST)

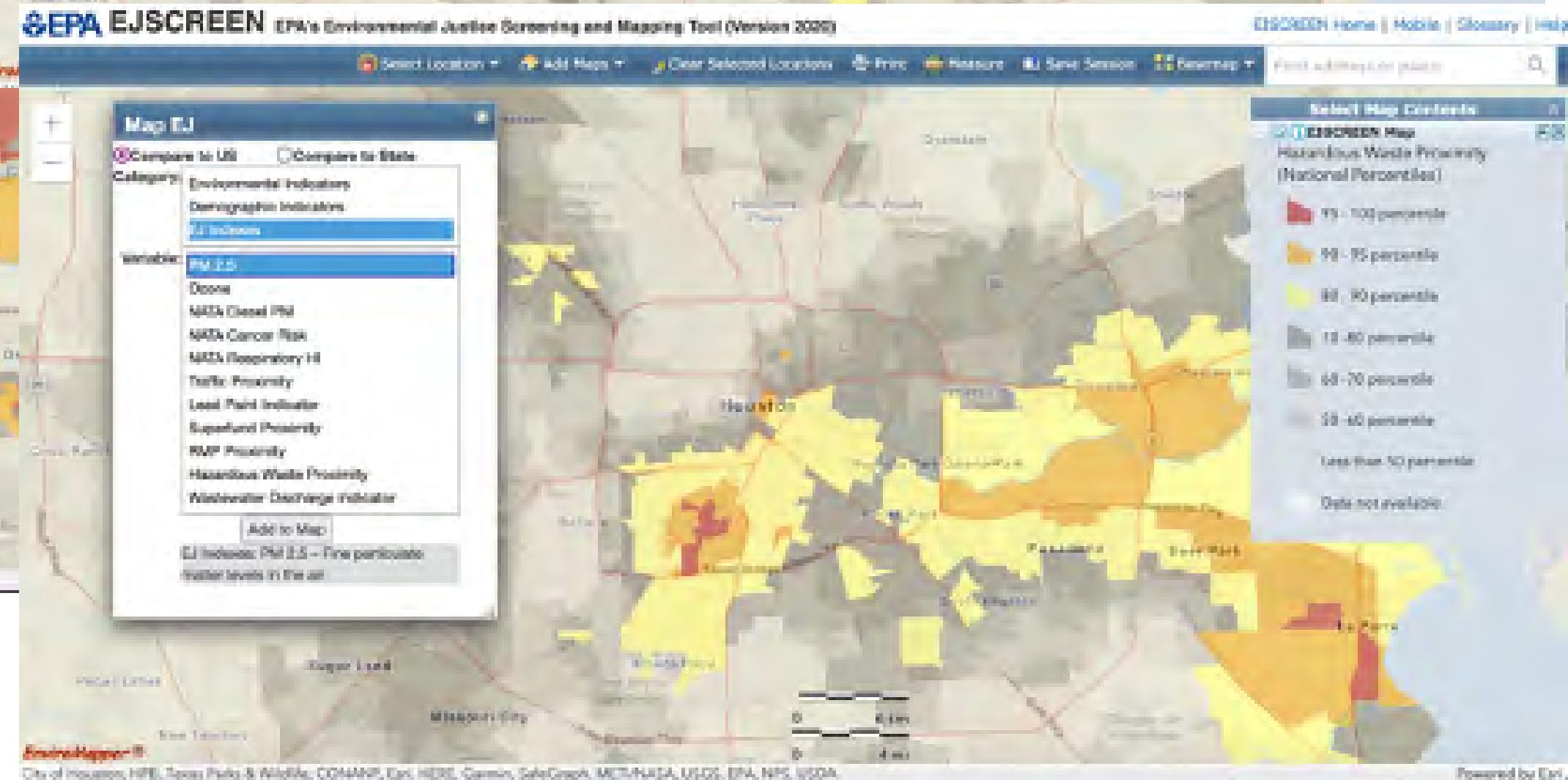
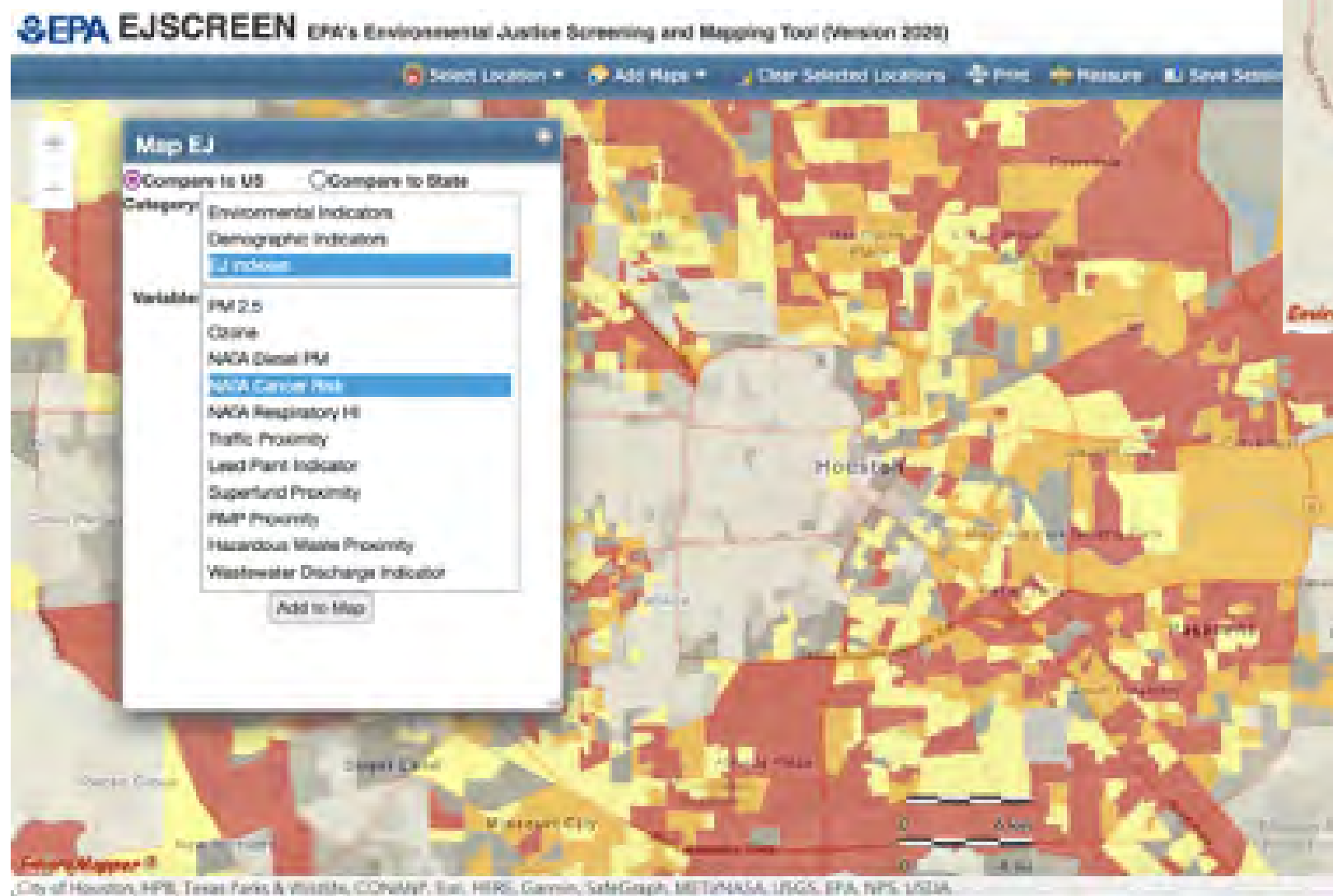


- The tool highlights disadvantaged census tracts across all 50 states, the District of Columbia, and the U.S. territories.
- Federal agencies will use the tool to help identify disadvantaged communities that will benefit from programs included in the Justice40 Initiative.
- The Justice40 Initiative seeks to deliver 40% of the overall benefits of investments in climate, clean energy, and related areas to disadvantaged communities.

<https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>



# EJ Screen - Explore Environmental & Social Disparities



<https://www.epa.gov/ejscreen>





[https://  
movementstrategy.org/wp-  
content/uploads/2021/08/  
The-Spectrum-of-  
Community-Engagement-  
to-Ownership.pdf](https://movementstrategy.org/wp-content/uploads/2021/08/The-Spectrum-of-Community-Engagement-to-Ownership.pdf)





## EPA's Environmental Justice Collaborative Problem-Solving Model



United States  
Environmental Protection Agency  
2201A  
Washington, DC 20460

EPA-300-R-06-002  
June 2008  
[www.epa.gov/compliance/environmentaljustice](http://www.epa.gov/compliance/environmentaljustice)

<https://www.epa.gov/sites/default/files/2016-06/documents/cps-manual-12-27-06.pdf>



This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreements TR-84022301 and TR-84027101 to Groundwork USA and the Center for Creative Land Recycling. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

