

Brownfield Remediation & Reuse

Brownfield properties, often referred to as “brownfields,” are properties where the **presence or potential presence** of a hazardous chemical or pollutant makes it challenging, risky, and costly to redevelop.



While many people think of brownfields as large, abandoned factories or chemical processing plants, **the true scope of brownfield properties is more expansive**, often including abandoned gas stations, automotive repair facilities, dry cleaners, farms where pesticides were used, and residential structures built using lead or asbestos-containing materials.

Contamination or perceived contamination of brownfield properties results from manufacturing processes involving the use, storage, or mixture of chemicals which can create hazardous waste byproducts. At these sites, chemicals might have been intentionally dumped as waste before environmental regulations were in place, or accidentally spilled.



Why are Brownfields a Problem?



When active, brownfield sites might have been home to businesses and industries that used chemicals harmful to human health and the environment. Over time, arsenic, asbestos, lead, petroleum and hydrocarbons (PAHs), volatile organic compounds (VOCs), and other contaminants can infiltrate soil, groundwater, airborne particles, and structures due to spillage, improper storage, or container and property deterioration. **These pollutants can endanger community health if people are exposed to them.**

In addition to harming resident health, **brownfields also discourage economic investment** in areas that desperately need it. This lack of tax revenue creates further burdens on already challenged municipal budgets in underserved communities that lack access to basic services and amenities.

Learn more about land banks and brownfields at communityprogress.org/brownfields

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Where are Brownfields Located?

Existing in both rural and urban communities, brownfield sites are typically located in downtown areas, community gateways, and close to transportation modes such as highways, rail lines, and bodies of water.

While brownfields exist across the United States, they are [disproportionally located](#) in underserved, low-income communities of color.



450,000

The Environmental Protection Agency estimates there are [more than 450,000 brownfields](#) in the United States.



Why Land Banks are Uniquely Positioned to Tackle Brownfield Properties

Many communities dealing with brownfields know about their negative impacts, but lack the capacity, knowledge, and resources to remediate and redevelop them. **Local governments often have valid concerns about their liability** in entering the chain of title for these sites and the heavy lift of environmental investigation and cleanup.

[Land banks](#) have a unique opportunity to get involved in assessment, remediation, and redevelopment of brownfields. Land bank powers often include:

- Cost-effectively acquiring tax-foreclosed properties
- Extinguishing liens and clearing title
- Holding property tax-exempt
- Flexibly selling property to a responsible buyer or developer, driven not by highest price but by the outcome that most closely aligns with community goals
- Assembling numerous properties to accommodate larger redevelopment projects

- The potential capacity to manage both federal and state brownfield grants for assessment and remediation activities.

Land banks can play different roles depending on their powers and capacity. Some land banks might participate solely in helping a brownfield property through the assessment process, while others might leverage state and federal funds to do remediation. Still other land banks might assess and hold on to a brownfield property until a developer with an appropriate community-aligned plan for reuse of the property comes along.

When it comes to brownfields, land banks are well suited to hold properties, apply for assessment and remediation funding, and leverage technical resources and community input to return properties to productive use.

The Positive Impacts of Remediating and Reusing Brownfield Properties

Redeveloping brownfields improves community health and can help neighborhoods foster broader economic revitalization.

Economic Impacts



Redeveloping brownfield sites can [spark economic development](#), create jobs, increase tax revenue, raise surrounding property values, and diversify the local economy.

Environmental Impacts



Remediating and safely reusing brownfield sites reduces exposures to the pollution that harms resident health. Brownfield reuse can also help improve natural ecosystems and increase resilience to extreme weather events. For example, turning brownfields into green stormwater infrastructure can address persistent flooding, or making a brownfield a [micro-forest](#) can improve air quality, address heat islands (areas where built structures absorb and amplify the sun's heat, creating pockets of high temperatures), and create habitats.

Equity Impacts



Remediating and safely reusing brownfield sites helps to improve social equity by removing hazards and eyesores, alleviating community fears and worries, and transforming these vacant spaces into much-needed vibrant places. Brownfield sites can be safely reused to fill community needs like affordable housing, climate-resilient infrastructure, recreation, schools, health care facilities, and much more. There are also several [strategies brownfield stakeholders can use](#) to minimize displacement during brownfield redevelopment.



What Does the Brownfield Remediation and Redevelopment Process Look Like?

The starting point of any brownfield remediation and reuse strategy is [planning](#). This includes conducting a brownfield inventory in your community, identifying stakeholders, [engaging residents](#), prioritizing sites for reuse, and beginning to develop a vision for what the community needs—and how this site fits into it. The path to reuse varies from project to project, however, most projects follow the following steps:

1

Characterize and Engage

Once a site has been selected for remediation, the first step is a Phase 1 Assessment, which identifies recognized environmental conditions (RECs), or the potential for contamination on the site. **You do not need to own the property to conduct a Phase 1 Assessment.** More information from the EPA about liability protection can be found [here](#).

The Phase I Assessment is also a good time to begin engaging the community in site reuse planning activities and keep them informed as the project progresses.



Note

Although these steps often happen in order, sometimes new contaminants are discovered in the redevelopment phase and the assessment and remediation steps need to be repeated to address them.

2

Assess and Investigate

If Phase 1 identifies potential contaminants, a Phase 2 Assessment may be conducted, which includes conducting sampling to confirm that contamination or RECs exist on the site. If contamination is confirmed, a remedial investigation is conducted, where extensive sampling can determine the extent of the contamination. **You do not need to own the property in order to conduct a Phase 2 Assessment, but you need to be able to access the property.**



3

Remediate

After determining the extent of contamination, contaminant cleanup levels are established for the site. These [cleanup levels](#) are typically set by the state or Tribe overseeing the cleanup and are based on [how the property will be reused](#). [Cleanup activities](#) may include removing underground fuel storage, lead paint/pipes, or contaminated soil.

Remediation standards are set based on the possibility of human or environmental exposure to any remaining contaminants. For example, a playground will be cleaned to a higher standard since children can directly interact with the soil and breathe dust; whereas a warehouse reuse can be less strict due to adult workers having no exposure to remaining contaminants in the ground covered by the building or parking lot asphalt.



4

Redevelop

The [site is redeveloped](#) to a use consistent with the community's vision.



Resources

Taking on a brownfield project presents unique challenges. Fortunately, there are many resources available to communities up to the task. Brownfield resources are available to eligible entities—including land banks—in the form of funding and technical assistance at both the federal and in many cases state level.

The US Environmental Protection Agency offers the following resources:

Multipurpose, Assessment, RLF, and Cleanup (MARC) Grants: Funding to address sites contaminated by a variety of hazardous substances.

Technical Assistance to Brownfields Communities (TAB) Program: TAB providers give expert technical assistance and guidance to help communities, prepare brownfields grant applications, perform site inventories, design site investigations, conduct sampling and field analysis, and plan cleanup and redevelopment at no cost to communities.

Land Revitalization Technical Assistance (LR TA): Technical assistance to help a community determine which types of brownfield site reuses are feasible, given local conditions, infrastructure availability, community site design preferences, and funding or financing resources.

Brownfields Job Training Grants: Job Training Grants provide environmental training for residents impacted by brownfield sites in their communities.

Brownfields Federal Programs Guide 2023: This guide provides information on programs and tax incentives offered by various federal agencies that are relevant to brownfields cleanup and revitalization.

Many states have voluntary cleanup programs that provide funding as well as protection from liability. For example:

The Alabama Department of Environmental Management's (ADEM) Brownfields Redevelopment and Voluntary Cleanup Program (VCP) provides oversight for the voluntary assessment and cleanup of contaminated brownfields sites. Entry into the VCP provides some liability protection for past environmental harm at the site.

The Kentucky Energy and Environment Cabinet (EEC) Redevelopment and Reuse Law established the 415 Program, which provides qualifying property owners and qualifying prospective property owners with documentation that they will not be liable for investigating and remediating preexisting contamination.

The North Carolina Department of Environmental Quality (NC DEQ) has a voluntary cleanup program called the **Inactive Hazardous Sites Program** to assess and remediate properties that have had historical or recent accidental releases of hazardous substances. It is separate from the state's Brownfields Redevelopment Section, which is only available to parties who did not cause or contribute to the contamination at the site and who desire to redevelop the property.



Note

For examples of how land banks have been involved in brownfield remediation and reuse, see our companion brief on [Land Banks and Brownfields](#).

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