



**Title: Brownfield Sites**  
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## I. EXECUTIVE SUMMARY

Environmental degradation and urban sprawl are pressing issues that challenge sustainable development. The brief will cover the challenges associated with the remediation and redevelopment of brownfield sites, and how these can be combated with effective planning, policy implementations, and incentivization.

## II. OVERVIEW

Brownfields are prevalent in the United States, and are issues that damage societies through economic, environmental, social, and impact potential land use. These lands can affect communities long after the companies vacate the area. When companies leave, they may clean up the “surface” mess, but the roles they play in how they get rid of their waste can either leave the area fine for recreational land use or become a harm to the society. Despite progress being made in cleaning up some brownfields, the financial costs, liability risks, and the navigation of dozens of environmental regulations often deter corporations from making the complete clean-up to help the community. Hence, this paper investigates brownfield areas in how and why companies tend to prefer leaving the contamination in order to understand how these issues persist and how changes can be made to clean up these messes effectively.

### *A. Relevance*

The passing of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 would transform brownfield sites into national attention. Commonly known as Superfund, this highlighted consequences of contamination from industries such as paper mills, as well as established that the polluters would be responsible for the costs of the cleanup. Despite the various programs—on the federal and state levels—that were meant to decrease brownfields, these late 1990s and later programs such as the Brownfields Program didn’t solve the issue. There’s an estimated 450,000 brownfield sites across the United States, meaning that while the issue has been recognized, there aren’t enough legal frameworks or financial incentives to adequately overcome the liability and financial barriers full clean-up would take. This means that effective policy intervention will be key to redeveloping these contaminated lands.

## III. HISTORY

### *A. Current Stances*

Despite the existence of the federal EPA's Brownfields Program and various state initiatives launched since the late 1990s, the national effort to aggressively clean up and repurpose these contaminated areas is failing to gain momentum. The sheer volume of neglected land—estimated at 450,000 brownfield sites across the United

States—is the clearest evidence that our current legal frameworks and financial incentives are simply not robust enough to tackle the scope of the problem.

This inaction, which is most obvious in our older industrial cities, mill towns, and coal mines, is sustained by two persistent failures:

First, the issue of cost is a fundamental financial deterrent. The huge, mandatory upfront costs for environmental testing and cleanup make brownfield projects inherently unattractive. Lenders and investors hold back capital because the risk is too high and the cleanup timelines are impossible to guarantee. This disparity fuels a vicious economic cycle where developers continue to prioritize cheap, uncontaminated greenfield sites, actively sacrificing existing urban land and accelerating unnecessary sprawl.

Second, the persistent threat of legal exposure acts as a crippling failure of policy design. Even with federal liability protections available, the shadow of CERCLA—and the constant danger of massive, unbudgeted cleanup costs—remains the single most effective reason qualified developers turn away. This failure to adequately deescalate risks in the process means these neglected lands continue to suppress property values and directly disadvantage the already struggling communities surrounding them.

#### IV. POLICY PROBLEM

##### *A. Stakeholders*

The attempt at revitalizing brownfields is shaped by the often conflicting interests of diverse stakeholders, who are often in conflict with one another. In particular, there's the governmental,

business, and local community sides of the situations, all of whom are stakeholders. Local governments and municipal agencies are required to maximize use of public infrastructures, and they want an increase in the local tax base, which often comes with the support for businesses. Meanwhile, developers, property owners, or anyone interested in the area has to take the financial burden in cleaning up the wastelands. Many of the businesses that are supposed to come into play and help out are reluctant or outright refuse to complete the project of removing the waste. This has yet to consider perhaps the group that bears most of the environmental impact brownfields give: the local community. Rather than a business-centric model, their use would be more community oriented and build off of public health. Lastly, there's the environmental agencies that have to ensure compliance and control over grant funding. They are typically the ones holding the companies responsible for any misuse. However, with all of these varying viewpoints from the stakeholders, it makes the brownfield problem more persistent as the issue prolongs without being solved.

##### *B. Risks of Indifference*

The risk of indifference on brownfields will create substantial long-term costs that may last for generations. The failure to act on brownfields may result in potential hazards for the community's health and safety, due to the wasteland that was left behind from the company. In addition, economic activity may begin to stagnate. In particular, these sites are not used by companies nor the people, which creates an empty space. Since no activity is happening, it stagnates the potential economy that could've

been generated. Moreover, the existence and lack of treatment towards brownfields may present a lasting effect in terms of racial environmental justice. In particular, marginalized communities often are the ones exposed to these brownfields, and may suffer more from the pollution because of this.

### *C. Nonpartisan Reasoning*

Brownfield redevelopment is imperative as it gives many benefits to the communities. They are dormant areas that can be used strategically to benefit everyone, especially the local community. Such results and benefits may be:

- 1) **Economic Benefit and Tax Base Growth:** By utilizing existing urban infrastructure more efficiently, successful cleanup immediately increases property values, substantially broadens the local tax base, and creates both construction and long-term operating jobs. Furthermore, the conversion of blighted, tax-exempt land into productive, revenue-generating commercial or residential space reduces the burden on other taxpayers, establishing a stable and self-sustaining economic base that requires less reliance on temporary subsidies.

- 2) **Environmental Stewardship and Public Health:** Cleaning up contaminated land represents a direct and visible commitment to improving local environmental quality and decisively reducing public health risks associated with chronic exposure to toxins. This universal outcome aligns with broad goals of sustainability by safeguarding groundwater and reducing contamination migration, thereby avoiding far greater

public expenditure on environmental emergency response and long-term health care costs.

- 3) **Efficient Land Use and Community Revitalization:** Repurposing vacant land within city limits promotes smart growth and restores neighborhood vitality. This strategy counters the destructive trend of Urban Sprawl, leveraging existing infrastructure capacity instead of incurring the immense cost of building new roads, utility lines, and public services in undeveloped "greenfields."
- 4) **Enhancement of Social Capital and Community Resilience:** The transformation of a stigmatized brownfield into a usable community asset—such as housing, commercial space, or public parks—fundamentally reverses the psychosocial damage caused by blight. This not only encourages neighborhood confidence but also enhances social cohesion by providing safe, shared spaces, demonstrating the local government's commitment to intergenerational stability.

### V. TRIED POLICY

To begin with, a legislative cleanup initiative that saw the creation of the State Voluntary Cleanup Programs (VCPs) were quite successful in removing a hurdle between developers and the cleanup. It ensured that developers wouldn't be sued as long as they followed the legal state standards. This helped with private investment but was hindered by the lack of financial capital or procedural simplification that was required for the cleanup.

Similarly, the Federal Brownfields Tax Incentive project was designed to intrigue investors by deducting the cost of environmental cleanup from their taxable income. It provided the financial motivation for cleanup from the private sector during the course of its implementation (1997-2009). However, it wasn't sustainable for local policy as it relied on federal tax incentives. Without it, private interest decreased and cleanup reverted back to before this incentive happened. Both of these attempts are key to understanding the necessity of independent, stable local solutions that can address both liability and finance simultaneously.

## VI. POLICY OPTIONS

### **Standardization of Local Zoning and Permitting**

Private developers are usually inhibited by the timeline and potential complexity over a fragmented process through navigating multiple departments. This makes it financially risky and lengthy for developers. Since they are deterred, the wasteland usually stays as is, contaminated and unable to be used by the general public.

To overcome this, I recommend mandating a standardized, expedited, and data-driven permitting and zoning approval process. This will be through the establishment of a single point of contact that will be used to monitor and fix brownfield sites. Although the local planning department will likely be put into action, the process should be overseen by an appointed "brownfield coordinator," or municipal task force.

### **Tax Abatement and Increment Financing Incentives**

The enormous initial capital expenditure required for environmental cleanup often adds a premium of 15% to 20% to the total project cost, rendering traditional bank financing inadequate and keeping sites economically non-viable. This often deters developers or others from spending the money for environmental cleanup due to the increased costs. To counter this, I recommend using flexible local funding through tax increment financing that would earmark the incremental property tax gain over the course of fifteen years. This would help to service cleanup bonds and offset upfront costs. While this will primarily be initiated by the Local Planning and Economic Development Departments, it should also be overlooked by the Municipal Finance Department to report the tax increment generated against the projects.

### **Local Land Bank Creation**

A considerable portion of contaminated properties remain dormant due to fractured titles, complex liens, and the status of "orphan sites," rendering them completely inaccessible to responsible private developers seeking clear legal recourse. Due to this, I recommend establishing a dedicated Local Land Bank that would receive the necessary legal authority to be in charge of making sure the land is ready for blight remediation, clear titles, and prepare brownfield properties for recreational use. This practice will be largely responsible by the local government, but may be overseen by another authority of the land bank that the municipal council will establish. This should also be funded through capitalization of initial seed funding and future land sales.

## VII. CONCLUSIONS

In this paper, I have explored a plethora of topics underlying brownfields and how their treatment or lack of treatment affect developers as well as the local community, going into an in-depth analysis over different financial and restrictive governmental policies that would help these brownfields. However, out of these options, the one that is the most implementable in its scope is through the Standardization of Local Zoning and Permitting, which is overseen by a municipal Brownfield Coordinator or task force.

With that said, the revitalization of brownfields is a vital concept for growth for the local community. In order to approach this challenge, we mustn't ignore the factors of liability and need to gain a further understanding of it. Though we have a long way to go in fully overcoming the barriers of high cleanup costs and regulatory complexity, this can be achieved by focusing on rigorous policy structure and its implementation, limiting adverse socio-economic factors like developer hesitancy and perceived risk, and providing targeted incentives to municipalities and private actors to undertake the necessary remediation. I believe that the barriers that we need to overcome can be solved in pragmatic fashion, through the utilization of zoning regulations and potential financial help through help from the state-level. This will greatly allow the development of strategies for cleanup of brownfields.

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#### REFERENCES

- [1] BNY Mellon. "Tax Increment Financing (TIF): A Powerful Tool for Brownfield Redevelopment." Accessed October 19, 2025.
- [2] Center for Community Progress. "How Land Banks Are Strengthening America's Neighborhoods." March 2014.
- [3] Haninger, K., L. Ma, and C. Timmins. "The Value of Brownfield Remediation." *Journal of Environmental Economics and Management* 85 (2017): 202–221.
- [4] Michigan House Fiscal Agency. "Fiscal Focus: Brownfield Redevelopment Financing: Tax Increment Legislation and Use." March 2018.
- [5] Painter, W. G., and Thomas W. Jones. "Land Bank 2.0: An Empirical Evaluation." Working Paper 12-30R. Federal Reserve Bank of Cleveland, September 2014.
- [6] Sreerama, Krishna K., and Michael C. S. H. K. S. G. P. H. F. D. W. "The Dynamics of Brownfield Redevelopment." *Sustainability* 3, no. 6 (2011): 914–945.
- [7] Sroka, Michael, and Ryan O'Connor. "TIF for that: Brownfield redevelopment financing in North America and Calgary's Rivers District." ResearchGate. Accessed October 19, 2025.
- [8] U.S. Environmental Protection Agency (EPA). "Accomplishments." Accessed October 19, 2025.
- [9] U.S. Environmental Protection Agency (EPA). "Anatomy of Brownfields Redevelopment." Fact Sheet, October 2006.
- [10] U.S. Environmental Protection Agency (EPA). "Brownfields Program

Accomplishments and Benefits.” Report,  
February 2019.

[11] U.S. Environmental Protection Agency  
(EPA). “Forecasting Benefits and Public  
Returns for Brownfield Redevelopment:  
Overview and Case Studies on Economic  
and Fiscal Impact.” Report, June 2024.

[12] U.S. Environmental Protection Agency

(EPA). “Plan for Brownfields Redevelopment  
Success: Economic Impact Analysis.” Fact  
Sheet, April 2024.

[13] U.S. Environmental Protection Agency  
(EPA). “Plan for Brownfields Redevelopment  
Success: Fiscal Impact Analysis.” Fact Sheet,  
April 2024.