

Chapter I

Introduction

The United States Environmental Protection Agency (EPA) defines brownfields 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”¹. These problem properties are not uncommon. According to the General Accounting Office (GAO), there are close to 450,000 brownfields in the United States. One study puts the number of brownfields much higher, between 500,000 - 600,000 sites in the country.² Near Boston, Massachusetts, there is one and a half square mile section in the Dudley St. neighborhood that has 54 hazardous waste sites³.

The focus in this manual is on the lessor contaminated sites which are the vast majority of brownfields. The most severely contaminated sites from around the country have been categorized by EPA and placed on the National Priorities List (NPL). There are roughly 1,200 sites on this Superfund list.

The types of businesses that may leave behind hazardous substances, creating either these less contaminated sites or the more dangerous NPL sites include:

- Railroads.
- Gas stations.
- Dry cleaners.
- Oil refineries.
- Truck terminals.
- Wood treatment facilities.
- Liquid/Chemical storage facilities.
- Steel and heavy manufacturing plants.

¹*Summary of the Small Business Liability Relief and Brownfields Revitalization Act, Title II, Subtitle A, Section 211.* <http://www.epa.gov/brownfields/html-doc/2869sum.htm>.

²Simons, Robert. *How Many Brownfields Are Out There?.* Public Works Management and Policy. January 1998, pg. 267.

³Anthony, Carl. Suburbs Are Making Us Sick: Health Implications of Suburban Sprawl and Inner City Abandonment on Communities of Color. Originally prepared for Environmental Justice Resource Center’s Conference on Health and Sustainable Communities. Reproduced for United States Environmental Protection Agency Conference Brownfields 1997. Kansas City, Missouri. September 3-5, 1997. pg. 5.

What Are The Benefits Of Reusing Brownfields?

The benefits of redeveloping brownfields are both environmental and economic. Reusing brownfields:

- Protects human health and the environment.
- Increases the tax base in the local area.
- Restores or replaces dilapidated buildings and facilities.
- Strengthens central economic centers.
- Creates jobs.
- Utilizes existing infrastructure.
- Encourages inner city investment.
- Reduces suburban sprawl.
- Prevents the spread of the contaminants.

Promoting the productive reuse of brownfields is so important that the U.S. Conference of Mayors identified brownfields as a top priority for American cities⁴.

An Economic Development and An Environmental Issue

From the list provided above, it is clear that the ramifications of brownfields stretch across several areas of interest. The two most important players in brownfields redevelopment efforts are the environmental and economic development communities. For years, economic development practitioners and environmental professionals have been speaking different languages. Economic development practitioners would talk about real estate development topics such as parking and location. While environmentalists have been talking about issues such as biodiversity. Brownfields have forced these two groups to work together.

In order to protect open spaces from suburban sprawl and citizens from hazardous substances, environmental professionals are promoting brownfields redevelopment. Similarly, in order to improve the socioeconomic status of America's cities, the economic development community is promoting brownfields redevelopment. Thus, environmental cleanup must be seen as a step in the redevelopment process, not an obstacle. In order to achieve their goals, both groups have to work together. "Successful brownfields redevelopment is proof that economic development and the environment can, and indeed, must co-exist"⁵.

⁴Coles, Brent H. *Priorities for "The New American City"*. The United States Conference of Mayors, 2001

⁵United States Environmental Protection Agency. Proposal Guidelines for Brownfields Cleanup Revolving Loan Fund. The Brownfields Economic Redevelopment Initiative. Washington, D.C. April, 1997. pg. 2. EPA 500-F-97-147.

Why Are There So Many Brownfields?

“Underused or abandoned facilities are a national concern. They are testimony to the many changes in technology and world markets”⁶. As the previous quote indicates, many of the brownfields which currently inhabit America’s inner cities are products of industrial and commercial shutdowns and relocations into the suburbs where land is cheaper and taxes are lower.

Over the past several decades, the United States has restructured its traditional heavy manufacturing industries, causing older sites to be abandoned. This restructuring is the result of environmental regulations, changing markets, international competition, and innovative production technology. In turn, communities have experienced downsizings, shutdowns, and relocations, leaving underused or vacant industrial properties behind.

The owners of facilities have difficulty selling these properties because potential buyers are afraid of environmental contamination, so the owners abandon the land, undermining the tax base of the area. Orphaned facilities deteriorate, encouraging looting, vandalism, arson, dumping, and other abuses. The contamination may spread and worsen on these untended properties. This further decreases the value of the property and increases the cost of rehabilitation. At this stage, the property threatens the economic potential of adjacent parcels of land. It is now a significant legal, regulatory, and financial burden on the community and local taxpayers.

Because of the outward migration of businesses and manufacturers from older urban areas, there is an abundant supply of land in cities that could be used for redevelopment. Unfortunately, the real or perceived threat of environmental contamination has prevented this reuse.

Why has the Threat of Environmental Contamination Prevented Reuse?

Because there is lack of redevelopment finance and certainty and finality on liability, and a contaminated site is often expensive to cleanup. It is cheaper and easier to relocate to, or start a business at, a suburban location. In his testimony before the United States House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Technology, Environment, and Aviation, Charlie Bartsch summed up the situation well:

On the one hand, a manufacturer can acquire an untouched greenfield site, probably in a new industrial park far from the central city, and build a facility to suit with minimal fuss . . . Or, that same manufacturer can acquire a previously used site in an old, largely abandoned central city industrial district. The later site, almost assuredly contaminated, is probably available at little or no cost. However, the manufacturer will then spend time and money having it tested to

⁶Bartsch, Charlie. Testimony Before the U.S. House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Technology, Environment, and Aviation, On Reclamation and Reuse of Abandoned Industrial Sites. June 9, 1994. pg. 7.

find out exactly what substances it contains, spend considerable time and money cleaning it up and getting it ready to build on, spend more months pleading with bankers to lend on it, spend more time and money to provide additional documentation and monitoring, and spend the rest of his or her natural life worrying if some as-yet-undetected contamination will surface, undermining the value of the property and possibly bringing with it potentially costly liability claims. In many areas, in fact, site preparation costs per acre for long-time industrial sites in inner city areas can be quadruple those of a site of the same size in a new exurban industrial park⁷.

This manual is dedicated to figuring out how to overcome the barriers to the reuse of brownfields in order to protect human health and the environment and revitalize our nation's cities. Chapter II covers some types of contamination discovered at brownfields, their potential health effects, and remediation options. Chapter III describes the range of laws that can make people liable for cleaning up, or paying for, contamination. Chapter IV provides basic information on real estate redevelopment and is the precursor to Chapter V which details a variety of federal, state, local, and non-profit brownfields funding and redevelopment resources. Chapter VI deals with institutional capacity and community involvement, subjects that are critical given the increasing importance of local action in brownfields redevelopment. Finally, Chapter VII is a brief discussion of sustainable development and how brownfields fit into this long-term approach.

⁷Bartsch, Charlie. Testimony Before the U.S. House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Technology, Environment, and Aviation, On Reclamation and Reuse of Abandoned Industrial Sites. June 9, 1994. pgs. 2-3.
