

Riverside Mills: A Model for Successful Brownfields
Remediation & Restoration

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ABSTRACT

Decades of industrial use have left the site of Riverside Mills complex contaminated, which has led to under-use; vacancy and decay. The site faces foreclosure due to delinquent property taxes and is now little more than a nuisance, attracting illegal dumpers and drug users and creating a dangerous place for local children to play. The stigma of possible contamination has negatively impacted local economies and has impeded the implementation of a major project to create a greenway along the Woonasquatucket River. The rehabilitation of Riverside Mills is one focus of the Brownfields Showcase Communities program.

The ultimate goal of this thesis is to provide The Providence Plan, a nonprofit organization, with advice on how to successfully remediate and restore the former Riverside Mills site. In order to do so, this analysis examines whether or not Riverside Mills is a strong candidate for successful brownfields remediation. The secondary goal of the thesis is to evaluate the EPA Showcase Communities program with respect to Riverside Mills as a potential catalyst for progressive change.

A number of case studies, which show various approaches towards brownfields rehabilitation, are analyzed to determine the institutional characteristics necessary for successful brownfields' remediation and restoration. From this documentary research emerged a list of "key ingredients" for a successful project. These ingredients fall under four categories: Location, Costs & Finances, Regulatory Framework, and Institutional & Community Involvement. These "key ingredients" for success are used in evaluating Riverside Mills and the adjacent area.

The primary missing ingredient of the Riverside Mills project relates to the scope and length of cleanup, estimated at \$1.4 million, resulting in the lack of adequate funding from both the public and private-sector for remediation. Although it lacks the two most critical ingredients for a successful project, Riverside Mills fulfills the remainder of the list, and is therefore a potential candidate for brownfields remediation and restoration. Two issues must be addressed before the City of Providence forecloses on Riverside Mills: remediation of the Underground Storage Tanks (USTs), in particular the acquisition of a clear waiver of liability; and the securing of funds for the clean-up and redevelopment of Riverside Mills. One approach towards attracting outside capital is Tax Increment Financing. Another financing tool meriting further investigation is the funds designated for the clean-up or removal of leaking USTs, specifically the remainder of the \$1.3 million bond issued in 1989.

Based on the activities at Riverside Mills thus far, the Brownfields Showcase Communities program exhibits the potential to be a catalyst for change, presenting a myriad of benefits to the community adjacent to brownfields sites. Riverside Mills demonstrates the benefits of being a designated showcase community, while simultaneously exposing the shortcomings of the program.

INTRODUCTION

The United States General Accounting Office reports that roughly 450,000 brownfield sites exist nationwide, comprising an estimated five to ten percent of American's urban land area.¹ Brownfields, as defined by the United States Environmental Protection Agency (EPA), are "abandoned, idle or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination."² The substantial number of abandoned industrial sites that pepper the cityscape illustrate Rhode Island's industrial past and presenting the state with an opportunity to enhance the urban environment.

In June 1996, the State of Rhode Island was awarded a National Brownfields Assessment Pilot grant to target sites within the watersheds of the Woonasquatucket and Blackstone Rivers, which contain 50 known brownfields sites.³ And, in May of 1997, Rhode Island became one of the original 16 Brownfields Showcase Communities selected by the federal government as models for cleaning up and revitalizing urban industrial properties. The Showcase Community effort will focus on two sites in the City of Providence: Lincoln Lace & Braid and Riverside Mills in the Olneyville neighborhood. In this program, the federal government will target money and expertise to the communities from more than fifteen federal agencies such as the Environmental Protection Agency, Department of Housing and Urban Development, and Department of

¹ Office of Technology Assessment, State of the States on Brownfields: Programs for Cleanup and Reuse of Contaminated Sites. June 1995. Published in DC by the OTA.

² EPA State of Rhode Island Brownfields Showcase Communities Quick Reference Fact Sheet 1998. EPA March 1998. http://www.epa.gov/swerosps/bf/html-doct/taxfs_2.htm

Transportation. These agencies, along with parties at the local level, such as community groups, investors, lenders, and developers, will work to clean up abandoned industrial properties and return them to appropriate, productive use.

The Rhode Island Department of Environmental Management (RIDEM), as part of the Brownfields Pilot Project, designated the former Riverside Mills site located along the Woonasquatucket River, as an EPA brownfields site in the summer of 1996. (Map Figure 1). Decades of industrial use have left the site contaminated, which has led to under-use, vacancy, and decay. Riverside Mills faces foreclosure due to delinquent property taxes and is now little more than a nuisance, attracting illegal dumpers and drug users and creating a dangerous place for local children to play. The stigma of possible contamination has negatively impacted local economies and has impeded the implementation of a major project to create a greenway along the Woonasquatucket River.

The ultimate goal of the thesis is to provide The Providence Plan, a nonprofit organization, with advice on how to successfully remediate and restore the former Riverside Mills site. In order to do so, this analysis will examine whether or not Riverside Mills a strong candidate for successful brownfields remediation. The secondary goal of the thesis is to evaluate the EPA Showcase Communities program with respect to Riverside Mills as a potential catalyst for progressive change.

This technical report will hopefully be used as a reference by governmental and non-governmental agencies and others involved in the remediation and restoration of the site, such as financiers and developers.

³ EPA National Brownfields Assessment Pilot-- State of Rhode Island-- Quick Reference Fact Sheet.

Figure 1. Location Map, Riverside Mills



Modified from 7.5 Minute Topographic Map Listed Below
 Providence: 1957, Photorevised 1970 and 1975

Scale 1:24,000

Figure 1: Location Map
 Former Riverside Mills Complex
 Providence, RI

State of Rhode Island
 Department of Environmental
 Management

Source: RIDEM OWM, Rhode Island (1997).

The first chapter surveys the history of the Superfund program in order to explore its formative influence on the shape of the EPA Brownfields Program. This chapter also provides a brief overview of the Brownfields Programs. The topics addressed include the project's goals and benefits of being designated a Brownfields Showcase Community. The second chapter examines the experience of the brownfields program. The objective of this chapter is to analyze the successes and impediments to rehabilitating brownfields through the use of existing literature and to determine the institutional characteristics necessary for a successful remediation and restoration. The findings from this analysis, the "key ingredients" for success, are then used to evaluate Riverside Mills and the adjacent area in chapter three. The fourth, and final chapter synthesizes the previous chapter and presents recommendations regarding the appropriate process for remediating and restoring Riverside Mills. An evaluation of the EPA Brownfields Showcase Communities program, as based on the activities at Riverside Mills, concludes the chapter.

CHAPTER I

THE EVOLUTION OF THE EPA SHOWCASE COMMUNITIES PROGRAM

Superfund is the nation's first program, and currently the primary federal law, that addresses the cleanup of hazardous waste sites. Laws and programs have evolved from the successes and shortcomings of Superfund, such as the EPA Brownfields Assessment Demonstration Pilots and the Brownfields Showcase Communities program. The beginning of this chapter, therefore, provides a brief description of the Superfund program to set the stage for an overview of the Brownfields Program.

The Superfund Program

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as Superfund. This law was established to eliminate the public health, environmental, and financial threats posed by hazardous waste sites, notably the well-publicized problems of Love Canal, New York, and Times Beach, Missouri. As of the 1998 fiscal year, the number of sites on the National Priority List has grown to 1,405, while cleanup or containment has been completed on just 498 sites (35%) since the program was signed into law.⁴ (Refer to Table 1 for a tabulation of Superfund and brownfields sites in the United States and Rhode Island as of 1999).

⁴ EPA Superfund Cleanup Figures. April 1, 1998. <http://www.epa.gov/superfund/whatissf/mgmttrpt.htm>

Table 1. Status of Superfund & Brownfield Sites in Rhode Island as of 1998

Type of Sites	United States	Rhode Island	Providence
NPL Sites ⁵	1,405 ⁶	12 ⁷	
CERCLIS ⁸	10,209 ⁹	189 ¹⁰	7 ¹¹
Archived CERCLIS Sites ¹²	31,099 ¹³	128 ¹⁴	12 ¹⁵
Vacant Lots		data not available	1,995 ¹⁶ (71 in Olneyville)
Brownfields	~450,000 ¹⁷	65 ¹⁸	undetermined

Superfund has recently come under a storm of fire by environmental scientists, business people, attorneys, journalists, environmentalists, and even some vocal EPA officials. Such scrutiny has led the 104th Congress to thoroughly evaluate and revise Superfund to address the program's shortcomings. Superfund's primary shortcoming is the delay in cleaning up and

⁵ The National Priorities list is an index of sites with known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States that appear to warrant immediate remedial actions. Brownfields, in comparison to NPL and CERCLIS sites, are not highly contaminated and do not need to be brought into the conventional federal Superfund program.

⁶ EPA Superfund Cleanup Figures. April 1, 1998 <http://www.epa.gov/superfund/whatis/f/mgmt/rpt.htm>

⁷ Environmental Law Institute Research Report. "An Analysis of State Superfund Programs: 50-State Study, 1998 Update." Washington, DC: Environmental Law Institute, 1998.

⁸ Superfund's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) is a database that tracks information on all Superfund Sites, both the most hazardous- NPL- and those where cleanup is easier and less urgent.

⁹ EPA "Inventory of CERCLIS and Archive (NFRAP) Sites by State- As of January 4, 1999."

<http://www.epa.gov/oerrpage/superfund/web/sites/topics/archinv.htm>

¹⁰ EPA "Inventory of CERCLIS and Archive (NFRAP) Sites by State- As of January 4, 1999."

<http://www.epa.gov/oerrpage/superfund/web/sites/topics/archinv.htm>

¹¹ EPA Superfund Web Page (<http://epa.gov/superfund>).

<http://www.epa.gov/superfund/sites/cursites/toc/riccity.htm#providence>

¹² EPA introduced the CERCLIS archiving effort in early 1995 as part of the Agency's Brownfields Economic Redevelopment Initiative. Archive candidates include sites where, following initial investigation, no contamination was found, or may contamination was removed quickly without requiring placement on the NPL; sites that have completely cleaned up and deleted from the NPL; and sites where the contamination was not serious enough to warrant Federal Superfund attention. (EPA's Superfund Reforms: Reform 2-4c, Refining CERCLIS.

<http://www.epa.gov/oerrpage/Superfund/programs/reforms/reforms/2-4c.htm>).

¹³ EPA "Inventory of CERCLIS and Archive (NFRAP) Sites by State- As of January 4, 1999."

<http://www.epa.gov/oerrpage/superfund/web/sites/topics/archinv.htm>

¹⁴ EPA "Inventory of CERCLIS and Archive (NFRAP) Sites by State- As of January 4, 1999."

<http://www.epa.gov/oerrpage/superfund/web/sites/topics/archinv.htm>

¹⁵ EPA Superfund Web Page (<http://epa.gov/superfund>).

<http://www.epa.gov/Superfund/web/sites/arcsites/riacity.htm#providence>

¹⁶ City of Providence, Vacant Lots Database, prep'd by Brown University Center for Environmental Studies, Urban Environmental Initiatives Grant. 1997.

¹⁷ Office of Technology Assessment, State of States on Brownfields: Programs for Cleanup and Reuse of Contaminated Sites. June 1995. Published in DC by OTA.

¹⁸ Environmental Law Institute Research Report. "An Analysis of State Superfund Programs: 50-State Study, 1998 Update." Washington, DC: Environmental Law Institute, 1998.

restoring hazardous waste sites, caused by liability provisions, stringent cleanup standards, and the stigma associated with listing on CERCLIS and the National Priority List. (Refer to Appendix A for further analysis of the criticism of the Superfund Program).

The EPA Brownfields Assessment Demonstration Pilots

The EPA Brownfields Assessment Demonstration Pilots, a strategy of the EPA Brownfields Economic Redevelopment Initiative (BERI), evolved as an experimental program that was derived in part through the critical review of the Superfund program beginning in 1993 by the Clinton-Gore administration. The pilot program was announced as part of round two of the Superfund reform and implemented in 1995.¹⁹

The program's strategies include clarifying easing liability rules regulatory burdens in an attempt to streamline or speed up the remediation process. In addition, the brownfields program creates incentives for economic revitalization and development through partnerships and funding pilot programs. The program targets assistance to cities that have identified contaminated sites and offer the greatest opportunity for remediation and economic activity. To date, the EPA has awarded 227 grants of \$200,000 each to brownfields pilots which demonstrate model opportunities to leverage financing; organize public- and private-sector support for specific cleanup projects, and illustrate the economic and environmental benefits of cleanup.²⁰ Cities can use the grant to implement reuse strategy that links community groups, investors, developers, regulators, and others interested in reclaiming contaminated sites and using them to stimulate new jobs and economic activity.²¹ The brownfields pilot projects have "leveraged over one billion dollars for redevelopment and created over 2,500 jobs" and have also empowered states,

¹⁹ Another activity included in the BERI is EPA's "archiving" or delisting of approximately 25,000-38,000 sites from the Superfund site inventory (CERCLIS) to remove the stigma of potential liability associated with the low-risk sites, thus improving their marketability.

²⁰ EPA Brownfields Economic Redevelopment Initiative Quick Reference Fact Sheet. EPA March 1998. <http://www.epa.gov/swerosps/bf/htm>

²¹ EPA Brownfields Economic Redevelopment Initiative Quick Reference Fact Sheet. EPA March 1998. <http://www.epa.gov/swerosps/bf/htm>

local governments and stakeholders in economic redevelopment to work together to assess, clean up, and sustainably reuse brownfields.²²

The EPA Brownfields Showcase Communities Program

In May 1997, Vice President Gore responded to the pilot communities' request for more coordination and interaction among all levels of government, the private sector, and non-governmental organizations, by announcing a Brownfields National Partnership-- a two-year federal investment of \$300 million for brownfields cleanup and redevelopment. In this partnership, the federal government targets money and mobilizes expertise to selected communities, called Brownfields Showcase Communities. The federal partners along with parties at a local level, such as community groups, investors, lenders, and developers work to clean up brownfield properties and return them to appropriate, productive use. The Brownfields Showcase Communities program is the centerpiece of the Brownfields Initiative and provides a model for future redevelopment efforts. A summary of the key elements of the Brownfields Showcase Communities program, including the goals and structure of the initiative, is available in Table 2.

²² "Vice President Gore Announces Grants to 23 Communities to Expand Efforts to Clean Up and Redevelop Brownfields." (U.S. EPA listserver for EPA's Brownfields Initiative. Friday, March 12, 1999).

Table 2. Summary of Key Elements of the EPA Brownfields Showcase Communities program²³

Goals of Brownfields Redevelopment

- Encourages environmental cleanup and protection by counteracting suburban sprawl, or the development of “greenfields”²⁴
- Revitalizes deteriorating neighborhoods, both economically and socially
 - * Increase local and state tax revenues; “Over 100 cities collectively estimated that they would receive additional annual tax in the range of \$205-500 million if they could return their brownfields to productive economic use”²⁵
 - * Job creation; “112 cities indicated that 236,000 jobs could be created if their brownfields were redeveloped”²⁶
 - * Attract additional investment in local businesses, public infrastructure, and employment training, the so called “halo” effect;²⁷ “In Cleveland, just a few sites restored as part of the city’s brownfield pilot program have yielded more than 100 new jobs and \$645,000 in annual property tax revenues in one year”²⁸
- Create a coordinated comprehensive effort, restoring and reusing brownfields, by linking Federal, state, local and non-government organizations with community efforts
- Demonstrate the benefits of public and private partnerships in addressing brownfields challenges through the development of national models

Structure of the EPA Brownfields Showcase Communities program

- Clarify liability issues to ease regulatory burdens and attempt to streamline the remediation process.
 - * EPA has issued prospective purchaser guidance, promulgated an underground storage tank lender liability rule, and drafted soil screening guidance.
 - * EPA’s current guidance on agreements with prospective purchasers of contaminated property are “covenants not to sue” (CNTS) and “comfort letters.”
- Operate under a risk-based strategy in which certain contaminants may be left on-site, provided that the potential for human exposure or environmental harm is eliminated²⁹

²³ EPA Showcase Communities Quick Reference Fact Sheet. EPA March 1998.

<http://www.epa.gov/swerosps/bf/showcase.htm>

²⁴ Restoration of the physical environment, according to a Californian environmental justice movement, can be ‘anchor for an economic, social, cultural, and spiritual renewal of older urban areas.’ (Morrison, Richard. “Brownfields Redevelopment.” Speech at the UC Berkeley Extension Environmental Leadership Roundtable. March 15, 1996).

²⁵ The United States Conference of Mayors. “Recycling America’s Land: A National Report on Brownfields Redevelopment.” January 1998.

²⁶ The United States Conference of Mayors. “Recycling America’s Land: A National Report on Brownfields Redevelopment.” January 1998.

²⁷ Pepper, Edith. “Lessons from the Field: Unlocking Economic Potential with an Environmental Key.” Washington, DC: Northeast-Midwest Institute, 1997.

²⁸ Bartsch, Charles; Collaton, Elizabeth; Pepper, Edith. “Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities.” Washington, DC: Northeast-Midwest Institute, 1996.

²⁹ One strategy is to construct an impervious surface, such as an asphalt covering or a building. It is important to note that less stringent cleanup levels for commercial and industrial settings are usually accompanied by engineering or institutional controls, such as deed restrictions, to ensure that inappropriate uses never occur at the site. (Pepper,

Edith. "Lessons from the Field: Unlocking Economic Potential with an Environmental Key." Washington, DC: Northeast-Midwest Institute, 1997).

Table 2. Summary of Key Elements of the EPA Brownfields Showcase Communities program Cntd

- Assign a federal employee to each showcase community to assist with coordination of technical and financial support from the participating agencies
- Receive technical and financial assistance, grants, and cooperative agreements from more than fifteen participating Federal agencies³⁰
- Offer a Brownfields tax incentives under which, “environmental cleanup costs for properties in targeted areas are fully deductible in the year in which they are incurred, rather than having to be capitalized”³¹

In the following chapter, the approaches taken to rehabilitating brownfields sites are analyzed, while the institutional characteristics necessary for a successful remediation are presented in a table of “key ingredients.”

³⁰ EPA Showcase Communities Quick Reference Fact Sheet. EPA March 1998.
<http://www.epa.gov/swerosps/bf/showcase.htm>

³¹ EPA Brownfields Tax Incentive Quick Reference Fact Sheet. EPA 500-F-97-155. August 1997.
<http://www.epa.gov/swerosps/bf/showcase.htm>

CHAPTER II

A MODEL FOR A SUCCESSFUL BROWNFIELDS REMEDIATION AND RESTORATION PROJECT

The prioritization of brownfields sites is imperative given the burgeoning number of brownfields, coupled with the cities' limited financial and social resources available for remediation. Brownfields sites vary in size, resources, and community type, thereby making it difficult to develop one particular national model that can be generalized to these projects. Therefore, the objective is to put into practice lessons learned from previous brownfields redevelopment projects.

Environmental issues, while often important, are not the only obstacle to the brownfields projects. Local public officials, economic development practitioners, and plant owners who have sought to revitalize fallow industrial properties during the last few years face other barriers to development. A description of the impediments to brownfields implementation is presented in Table 4. Despite the difficulty in implementing brownfield reform, one cannot underestimate the importance of brownfields rehabilitation. The remediation and restoration of these contaminated industrial sites yields substantial social, economic, and environmental benefits.

Table 3. Impediments to Brownfields Implementation

- The cost of acquiring, cleaning, and redeveloping brownfields are expensive and time consuming relative to greenfields and frequently exceed a property's value³²
- Inadequate public- and private-sector funding³³
- The state and/or local governments do not finance the construction or improvement of infrastructure
- Financing to carry out both cleanup and redevelopment activities is not available at affordable rates, particularly in central cities
- Uncertain process: identification of toxic substances; best method of treatments; level of cleanup required
- Older urban areas where brownfields are usually located, pose quality-of-life issues, such as crime, the quality of education, and racial disharmony
- Negative public attitudes about the site's potential for successful remediation and redevelopment of a brownfields site and the government's ensuing role, and a general lack of support can stymie reuse efforts

Encouraging redevelopment of brownfields requires overcoming obstacles unique to sites with actual or perceived contamination, such as liability risk, regulatory uncertainty, difficulty finding financing, and the need for informed community involvement in the planning process. Over the past few years, several states have tried different approaches to contend with these issues, have learned valuable lessons, and have ultimately developed successful new tools and strategies that are now stimulating redevelopment, housing, and new jobs.

The following case studies were analyzed to determine the institutional characteristics necessary for a successful brownfields remediation and restoration: BASF South Works, Wyandotte, MI; Northeast Retail Project, Minneapolis, MN; Holden-Leonard Mill, Bennington, VT; Lawrence Gateway Project, Lawrence, MA; Federal Courthouse, Sacramento, CA; Ross's Landing & the Tennessee Aquarium, Chattanooga, TN; Louisville Dryer Company, Louisville, KY; and Lincoln Lace & Braid, Providence, RI. From this documentary research emerged a list of precursors for a successful brownfields remediation and restoration, referred to as "key

³² For a hypothetical project comparison between the redevelopment of a brownfield versus the development of a greenfield, see Bartsch, Charles; Collaton, Elizabeth; Pepper, Edith. "Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities." Washington, DC: Northeast-Midwest Institute, 1996.

³³ The United States Conference of Mayors. "Recycling America's Land: A National Report on Brownfields Redevelopment." January 1998.

ingredients.” “Success,” as defined in this context, is a project that encourages environmental cleanup and protection, and revitalizes deteriorating neighborhoods in blighted or distressed areas, both economically and socially. An increase in local and state tax revenues, job creation, and attracting investment in businesses, employment training, and public infrastructure serve as proxies for success.³⁴

The “Key Ingredients” for Success

The following “key ingredients” are divided into four primary categories, Location, Costs & Finances, Regulatory Framework, and Institutional & Community Involvement, each consisting of a subset of criteria. (Table 4).

³⁴ Bartsch, Charles; Collaton, Elizabeth; Pepper, Edith. “Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities.” Washington, DC: Northeast-Midwest Institute, 1996.

Table 4. “Key Ingredients” for the Successful Remediation & Restoration of a Brownfields Site³⁵

Property Location

- ◇ Situated in a “desirable” location (e.g., a prospering financial center, along a scenic waterfront, or by a busy highway interchange)³⁶
- ◇ Situated in a target community (e.g., a depressed area, Empowerment Zone, or Enterprise Community)³⁷
- ◇ Access to existing infrastructure such as transportation and public utilities
- ◇ Property and/or existing building has historical, cultural, and/or artistic significance³⁸

Costs & Finances

- ◇ Scope and length of cleanup-- length of time expected and severity of contamination³⁹
- ◇ Project “piggy-backs” on public-works initiatives⁴⁰
- ◇ Availability of public-sector financing⁴¹
- ◇ Availability of private-sector financing⁴²

³⁵ See Edith M. Pepper, “Lessons from the Field” for further examples and descriptions of successful approaches to brownfields remediation and restoration.

³⁶ The old industrial property located along the Tennessee River enhanced the economic viability of the Chattanooga, Tennessee redevelopment project.

³⁷ The City of Bridgeport, Connecticut assisted in redeveloping a portion of the neighborhood because the property is located in an economically depressed area targeted for revitalization.

³⁸ The construction of Ross’s Landing was significant for residents of Chattanooga because it is the original Cherokee landing point and the symbol of the city’s birthplace.

³⁹ The redevelopment of the Carol Cable plant in Warren, Rhode Island moved forward because of a new law that allowed cleanups to be tailored to end use and permitted the use of engineering and institutional controls where contaminants would be left in place.

⁴⁰ The redevelopment of the old Oxford Paper plant was made financially possible by “piggy-backing: with a nearby highway expansion project.

⁴¹ The State of Rhode Island utilized money from an environmental penalty from the Cape Oil Spill to clean up oil at the Lincoln Lace & Braid site. A number of projects were able to move forward because of various public funding initiatives, such as Community Development Block Grants (CDBG) and Revolving Loan Funds. See Edith Pepper’s “Lessons from the Field” for a description of case studies that have utilized public-sector funding initiatives.

⁴² Key sources of private-sector financing include: responsible parties, foundations, in-kind work, etc. See Edith Pepper’s “Lessons from the Field” for case studies that have benefited from private-sector financial support.

Table 4. “Key Ingredients” for the Successful Remediation & Restoration of a Brownfields Site Cntd.

Regulatory Framework

- ◇ Liability relief for the developer, lender/financier, and prospective owner⁴³
- ◇ Federal, state, and/or local initiatives or programs that:
 - ◇ Accelerate the process of acquiring and remediating property
 - ◇ “Dovetail” with the community’s vision and comprehensive master plans⁴⁴

Institutional & Community Involvement

- ◇ Strong project leadership and management⁴⁵
- ◇ Strong local government entity⁴⁶
- ◇ Coordinated, comprehensive effort⁴⁷
- ◇ Public/private partnerships between the state, city, and private parties⁴⁸
- ◇ Effective community participation⁴⁹

⁴³ The Holden-Leonard Mill in Bennington, Vermont was in holding patterns for years, despite having a party interested in buying the site. The enactment of the Vermont 1994 Contaminated Properties Program, facilitated the remediation procedure.

⁴⁴ Ross’s Landing and the Tennessee Aquarium project in Chattanooga, Tennessee capitalized on the city’s Vision 2000 initiative.

⁴⁵ Officials at the Lawrence Gateway Project in Lawrence, Massachusetts used a portion of their CDBG funds to hire a full-time staff person to oversee the project.

⁴⁶ Louisville oversaw relations between the Kentucky Department of Environmental Protection, the Landbank Authority, and the prospective purchaser, the Louisville Dryer Company.

⁴⁷ For the Lawrence Gateway Project in Lawrence, Massachusetts, an inter-agency task force was critical in resolving overlaps in administrative jurisdictions, conflicting missions and mandates, and oversight. The creation of the Worcester Redevelopment Authority played an essential role in the Fallon/St. Vincent Medical City project by acquiring properties, coordinating remediation, and facilitating site redevelopment work.

⁴⁸ See BASF Southworks, Wyandotte, Michigan and Crosby Lake Business Park, St. Paul, Minnesota where a strong partnerships between business interest and public-sector objectives was an essential ingredient in the project’s success. A MOU between the city, the state, and Southern Pacific made possible the redevelopment of Southern Pacific’s rail yard in Sacramento, California.

⁴⁹ Community Participation was critical to the redevelopment of the Johnson Street Quarry, Minneapolis, Minnesota. A neighborhood task force met monthly in a televised public forum to discuss project plans; the city and developers unanimously agreed to meet the task force’s demands.

The following describes each key ingredient listed above.

Location

Location is a critical factor in determining the economic viability of a brownfields project. The cost of a redevelopment project is reduced if the property has access to existing infrastructure such as transportation and public utilities. The expected financial returns can exceed redevelopment costs, including cleanup if a brownfields is situated in a “desirable” location: near a prospering financial center, along a scenic waterfront, or by a busy highway interchange. In some cases, redevelopment is even more likely to occur if the brownfields is situated in a depressed area or targeted community, such as an Empowerment Zone or Enterprise Community,⁵⁰ this is due to the fact that they are targeted for federal and state assistance, which creates financing opportunities, based on federal/state interest in urban renewal and/or community. Furthermore, the economic viability of a redevelopment project can increase if residents have a strong sense of connection to their city’s rich historical, cultural, or artistic history and the site is on the National Register of Historic Places, is a Native American religious site, or has archeological importance. Redevelopment is therefore most likely to occur, in spite of environmental contamination, if the brownfields is situated in a strategic location.

Costs & Finances

A common obstacle encountered in brownfields redevelopment projects is the cost and the financing of site remediation. The complicated process and legal hurdles of acquiring, cleaning, and reusing brownfields can be prohibitively expensive in terms of site preparation expenses and fees, and costly in terms of time delays. Site assessment and cleanup requires

⁵⁰ The Economic Zone and Enterprise Community EZ/EC are presidential initiatives designed “to create self sustaining, long-term economic development in areas of pervasive poverty, unemployment, and general distress, and to demonstrate how distressed communities can achieve self sufficiently through innovative and comprehensive strategic plans developed and implemented by alliances among private, public, and nonprofit entities.” Under these programs, states offer substantial tax savings and incentives for companies that expand facilities and employment in

financial resources that many firms lack and, in most areas but particularly in central cities, adequate financing to carry out both cleanup and redevelopment activities is not available at affordable rates.⁵¹ Financial institutions are reluctant to make loans associated with potentially contaminated properties due to their concerns regarding a borrower's creditworthiness, and their ability to take on sufficient debt to carry out both cleanup and reuse activities, and the undesirable collateral should the borrower default on their loan.⁵² Financiers' practices and stipulations have often resulted in the wholesale denial of credit to projects at older industrial sites, referred to as 'redlining brownfields.'⁵³ Substantial financing from both the public- and private sector is therefore necessary to carry out remedial activities as well as redevelopment plans.

One innovative solution to obtaining public funding is to "piggy-back" on public works initiatives. These include transportation projects, historic preservation efforts, and green corridor planning. Additional examples of public funding initiatives include: Brownfields Economic Development Initiative (BEDI); Community Development Block Grants (CDBG); Revolving Loan Funds, Tax Increment Financing (TIF); Empowerment Zones and Enterprise Communities; and state financial incentives, such as tax credits and grants. The probability of securing public and private investment, as well as gaining political and community support, increases if a project "dovetails" with a community's vision for growth. This occurs when public-sector involvement sparks interest in the private-sector. Key sources of private funding include: responsible parties, purchasers, commercial banks, foundations, and in-kind work.

the distressed urban areas. (Empowerment Zone and Enterprise Community Web Page. "About the Initiative." <http://www.ezec.gov/About/ezfac.html>).

⁵¹ EPA EFAB Information Needs of Capital Providers. "Environmental Financial Advisory Board Publications: Information Needs of Capital Providers in Brownfields Redevelopment." September 1995. <http://www.epa.gov/efinpage/etabinfo.htm>

⁵² EPA EFAB Information Needs of Capital Providers. "Environmental Financial Advisory Board Publications: Information Needs of Capital Providers in Brownfields Redevelopment." September 1995. <http://www.epa.gov/efinpage/etabinfo.htm>

⁵³ Pierce, Neal. "Time to Recycle Abandoned Urban Industrial Sites." The Times-Picayune. August 16, 1993, Monday, THIRD. METRO; Pg. B7.

Regulatory Framework

Uncertainty about civil liability hinders companies and communities from obtaining the financing needed to clean up properties and to carry out retrofitting work. Private developers, even if determined to acquire an old property, are often rebuffed by lenders concerned about their inheritance of liability should they assume title through foreclosure, loss of collateral value, and the effect of cleanup costs on the project's economic viability.⁵⁴ Good projects are also frequently shelved or abandoned due to uncertainties about the length of time the regulatory process will take, or about its outcome. Regulatory factors that aid redevelopment include federal, state, and/or local initiatives which either accelerate the process of acquiring and remediating brownfields, or "dovetail" with a community's vision and comprehensive master plans. These initiatives, when coupled with policies that clarify brownfields regulatory procedures and establish liability relief for innocent parties, ultimately increase a property's marketability and invite financial backing.

Institutional & Community Involvement

Of the case studies analyzed, the most crucial ingredient to brownfields remediation is institutional and community involvement. Projects have been successful because of certain key individuals whose strong leadership, persistence, and creativity propel a redevelopment project forward. A project's success is also attributed to a strong local government which locates potential buyers or end-users, helps interested buyers acquire the property, and helps companies remediate and redevelop brownfields. Local officials can also help parties navigate difficult regulatory requirements and facilitate community involvement. Another key to success is resolving administrative conflicts with respect to jurisdiction, and mandates; by: 1.) streamlining inter-agency coordination, or 2.) creating a single entity for oversight of brownfields initiatives

⁵⁴Bartsch, Charles; Collaton, Elizabeth. "Industrial Site Reuse, Contamination, and Urban Redevelopment: Coping With the Challenges of Brownfields." Washington, DC: Northeast-Midwest Institute, December 1994.

or an inter-agency task force. A comprehensive effort involving all key stakeholders can lead to greater community support of the project and possibly more expedient, cost-effective cleanups.⁵⁵

If economic redevelopment is not coordinated with environmental cleanup, a newly remediated empty lot often attracts illegal dumpers. This progression can be avoided through public/private partnerships between the state, city, and private parties. Memorandums of Understanding (MOU) between the city, state and private party, explain the objectives of the partnership and articulate the roles and responsibilities of the participating parties. Strong partnerships between business interests and public-sector objectives have been identified as an essential ingredient, while partnerships between project participants and politicians are also important in obtaining public funding.

Community-based, non-profit organizations play a paramount role in facilitating community involvement. Non-profit organizations can help engage community stakeholders, ensure that community needs are addressed, and assure the business and development sector participants that the community will support redevelopment efforts. Public outreach and involvement plans implemented from the outset can alleviate concerns among residents and reverse negative public attitudes that traditionally stymie redevelopment efforts. An effective participatory planning process that identifies and incorporates the state and surrounding communities' redevelopment priorities, builds local capacity and stimulates leadership in all sectors, thus propelling a project forward with strong public support.

The brownfields remediation projects analyzed have been successful despite all odds. In the State of Rhode Island, 5 sites are currently being redeveloped under the Brownfield's Pilot.⁵⁶

⁵⁵ Key stakeholders include city, state and federal agencies, banking, business and manufacturing, legal, insurance and real estate professionals, community industrial and economic development groups, trade associations, environment and public interest groups, and community health organizations. A coordinated, comprehensive effort involving all key stakeholders was the overwhelming theme at the Chicago Brownfields Forum in December 1994-June 1995.

⁵⁶ Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999.

Under the state program, the RIDEM has signed 41 Settlement Agreements and CNTs; of this number, 38 sites are either now operational or engaged in redevelopment.⁵⁷

In the next chapter, the approaches used at Riverside Mills, to this date, are examined through the application of the previously described “key ingredients.” A brief synopsis of the industrial history and current status of Riverside Mills will preface the site’s evaluation as a good candidate for brownfields remediation and restoration.

⁵⁷ Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999.

CHAPTER III

RIVERSIDE MILLS

Historical Background of Riverside Mills

Riverside Mills is located on a 5.8 acre parcel of land at 50 Aleppo Street⁵⁸ in Providence, Rhode Island. The property lies on the fringe of Olneyville Square, bordering the Olneyville and Hartford neighborhoods. The Woonasquatucket River flows adjacent to the site providing a wetlands and flood plain (Figure 2).

In 1863, Riverside Mills was founded as a woolen mill by George C. Chapin and Lewis Downes (Figure 3). The mill originally manufactured woolen coffin coverings and cassimeres, soon changing the product to astrakhan.⁵⁹ Riverside Mills was the first worsted plant in the United States to use the Bolete card feeder and the teasel cross jig and also the first to use the cold-air drying process.⁶⁰ By 1891, the mill employed 2,700 workers and covered seven acres with approximately eleven mill buildings and a 3-story brick office on Aleppo Street (Figure 4). The property passed through numerous hands over the course of the mill's lifetime. A tally in June 1989 indicates that 90 businesses were operating in the eleven mill buildings of Riverside Mills.⁶¹ "In the latter half of the century, the complex was used to house a variety of independent operations including manufacturing, metal plating, polishing, distributing, machining, casting, and soldering. Several art and music studios were also tenants at the

⁵⁸ Plat 63, Lot 326

⁵⁹ Cassimere is a light wool and Astrakhan is a cloth made of wool or wool and cotton, which has a curled or looped pile.

⁶⁰ Hopkins, Griffith Morgan. "City Atlas of Providence, Rhode-Island." Philadelphia, PA: G.M. Hopkins & Company, 1875.

⁶¹ Middleton, Tom. "Fire Destroys Mill Complex, Businesses." U.P.I. December 19, 1989, Tuesday, BC cycle, Regional News.

complex.”⁶² (Refer to Appendix B for a list of tenants at the Riverside Mills complex as of December 18, 1989).

Riverside Mills has been vacant of commercial activity since December 18, 1989 when a five-alarm arson fire destroyed all of the mill buildings, except the “office” building. The fire contributed to the loss of approximately 80 small businesses that leased portions of the nine mill buildings, many of them jewelry makers and artists, and 200 jobs.⁶³ Most of the businesses were not insured claimed a former owner, Donald B. Marshall of Attleboro, Massachusetts; Lewis told WJAR-TV, Providence that his insurance would cover only part of the loss.⁶⁴ “A city official said the owner of Riverside Mills had been cited numerous times [30-45] this year [1989] for building code violations, including problems with electrical wiring and chemical storage.”⁶⁵ According to Merlin DeConti Jr., director of the Department of Inspections and Standards, the Fire Department had also cited Lewis for violations regarding the improper storage of hazardous materials and improper placement of fire doors.⁶⁶ “A RIDEM inspection of the Riverside Mills site the day after the fire uncovered the fact that the following hazardous materials were present at the site: copper, brass, and sodium cyanide; acid cleaner; sulfuric, phosphoric and hydrochloric acid; trichloroethylene; assorted lacquers, thinners, and paints; amines; isopropyl alcohol; dielectric fluid; and lube oil.”⁶⁷ The sources of these hazardous materials are the activities of the various businesses operating in the complex prior to the fire.⁶⁸ The Underground Storage Tanks and concrete vault located on the site, however, in concert with mill

⁶² RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁶³ Reegan, Timothy; Sherman, Jane. “Brownfields Showcase Communities Application.” December 1997.

⁶⁴ Middleton, Tom. “Fire Destroys Mill Complex, Businesses.” U.P.I. December 19, 1989, Tuesday, BC cyle, Regional News.

⁶⁵ Middleton, Tom. “Fire Destroys Mill Complex, Businesses.” U.P.I. December 19, 1989, Tuesday, BC cyle, Regional News.

⁶⁶ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁶⁷ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁶⁸ Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999.

operations.⁶⁹ The cause of the fire remains undetermined according to the Rhode Island Fire Department but is still under investigation.

The parcel of land is valued at \$612,900 and the site faces foreclosure due to delinquent real estate taxes by the owner, Barry Lewis.⁷⁰ Anyone who can pay approximately \$121,000 in taxes and money owed to those who have liens on the property, may foreclose on the owner and claim the property. (Refer to Appendix C for a documentation of deed records from 8/28/86-Present).

Decades of industrial use at Riverside Mills have led to under-use, vacancy and decay (Figure 5 and 6). Lack of fences or signs allows people to pass through the site or explore the piles of trash and debris. Riverside Mills is now little more than a nuisance attracting illegal dumpers and drug users, creating a dangerous place for local children to play. On recent occasions, RIDEM personnel have been called to remove drums of hazardous waste on the site and to replace tank covers which had been removed, exposing children to unacceptable risks.⁷¹ The stigma of possible contamination has impeded the implementation of a major revitalization project to create a greenway along the Woonasquatucket River.

⁶⁹ Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999.

⁷⁰ Tax Collector, City of Providence, November 2, 1998. Specifically Tax Collection Records for Barry Lewis, 1990-1998.

⁷¹ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

Figure 2. The Woonasquatucket River

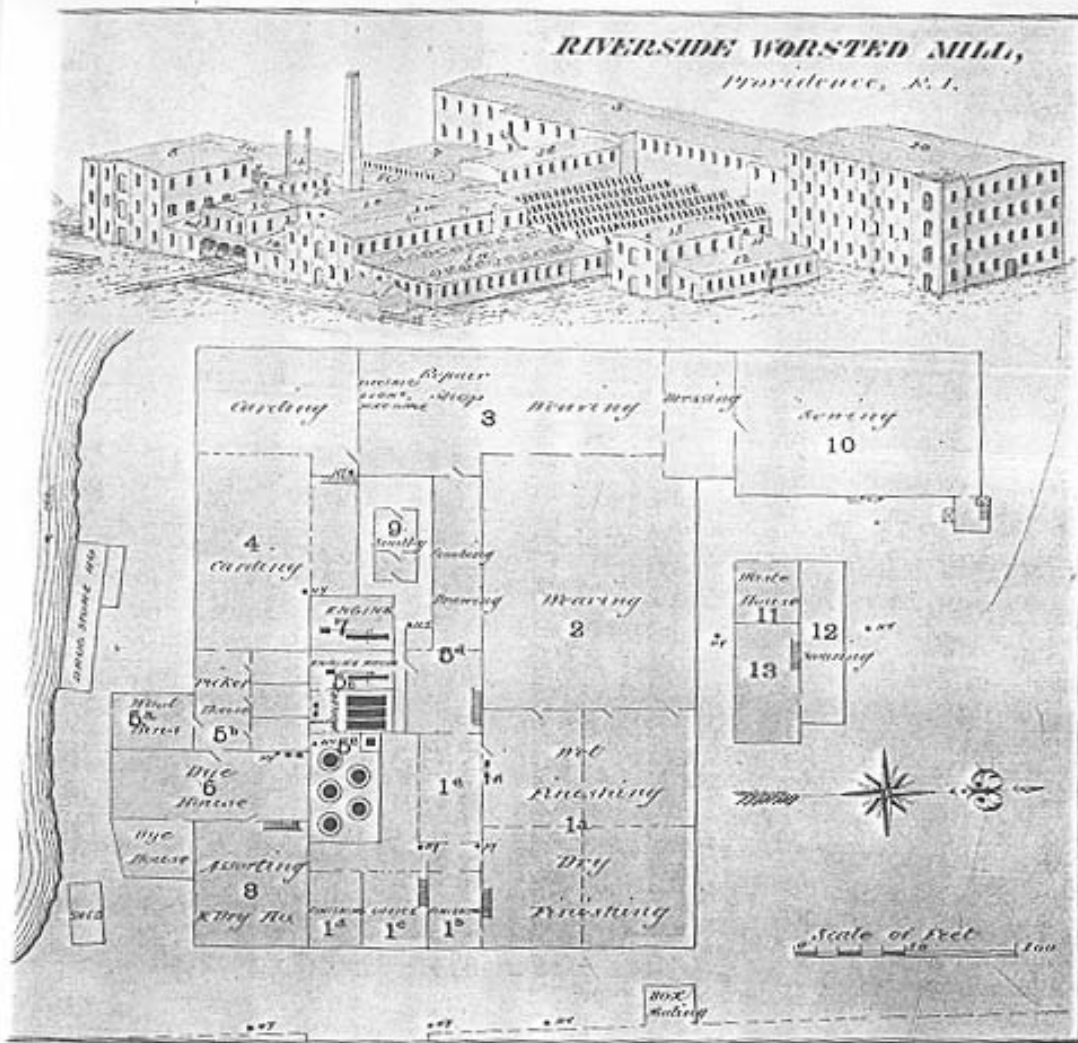


⁷⁰ Tax Collector, City of Providence, November 2, 1998. Specifically Tax Collection Records for Barry Lewis, 1990-1998.

⁷¹ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

Figure 3. Insurance Plan, Historical Riverside Mills

Source: Rhode Island Historical Preservation Society. "Providence Industrial Sites: Statewide Historical Preservation Report P-P-6." July 1981



Insurance plan (c. 1890) of the Riverside Mills, Alzoppo Street. Built in the 1860s with numerous additions in the 1870s and 1880s, the Riverside Mills illustrate a typical urban, late 19th-century, textile-mill configuration. Powered by steam rather than water, many urban mill buildings were arranged in rectangular clusters.

Figure 5. The Present “Office Building” at Riverside Mills



Figure 6. Rubble Scattered at Riverside Mills



Application of the “Key Ingredients” to Riverside Mills

Appendix D exhibits the application of the “key ingredients” to Riverside Mills.

Property Location

Riverside Mills fulfills the attributes for brownfields location. As mentioned previously, the Woonasquattucket is adjacent to the site, flowing along the southern and eastern borders of the property. This portion of the river is classified as a Class B1{a} meaning that it is a suitable habitat for fish, wildlife, recreational boating, and industrial processes and cooling.⁷² The area surrounding Riverside Mills is designated mixed use zoning, comprised of Manufacturing (M1) to the southeast and Residential-Multi Family (R-M) to the northwest.⁷³ (Appendix E) Also to the northwest is a vacant lot vegetated with wetland plants.

Within the past year, Olneyville has received targeted federal assistance as a Federal Enterprise Community and a community located in the Rhode Island Enterprise Zone. In addition, in the fall of 1998, Olneyville received a \$3 million grant from an Empowerment Zone application to help revitalize the neighborhood. A profile of the Olneyville neighborhood from the 1990 census reveals a diverse population and a community in poverty, with low educational and high unemployment levels, and a community in poverty.⁷⁴ The area adjacent to Riverside mills has become a “shooting gallery” for drug users, while stolen cars are stripped and dumped at the brownfields sites.⁷⁵ This activity attests to the increased drug use, crime and prostitution in Olneyville, presenting a major obstacle to attracting businesses in the area.

Effective reinvestment in the area is also impeded by visual degradation, vacant housing stock, and abandoned lands along the river. On the upside, Olneyville has convenient access to interstate highways, a high traffic count with which to draw people into the area, and an

⁷² RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁷³ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁷⁴ Olneyville’s population is comprised of 34.9% Hispanic, 12.3% African American, and 7.2% Asian. Within this population, 49% have a high school diploma and 35% live below the poverty level. The percentage of persons living below the poverty level increases as one moves closer to the river in the neighborhood surrounding Riverside Mills. (U.S. Bureau of the Census, 1990).

⁷⁵Reegan, Timothy; Sherman, Jane. “Brownfields Showcase Communities Application.” December 1997.

available semi-skilled work force, while Riverside Mills itself has access to public utilities, including public water, city sewer, electricity and telephone.⁷⁶

It is also important to mention that the Woonasquatucket River has also received recognition and assistance within the past year. In August 1998, President Clinton designated the Woonasquatucket River, along with 13 other rivers in the nation, as an American Heritage River.⁷⁷

Costs & Finances

A major impediment to the remediation of Riverside Mill's is obtaining the financing needed to clean up the site. This hurdle is attributed to the scope and length of cleanup, which has discouraged lenders from financing the potentially risky project.

An evaluation of Riverside Mills in August of 1997 by the RIDEM Office of Waste Management (OWM), as part of the Brownfields Assessment Pilot grant, revealed a severely contaminated property.⁷⁸ The investigation identified four areas of concern that which include: four underground storage tanks (USTs); an underground concrete vault with an unidentified amount of No. 6 fuel oil; widespread presence of volatile organic compounds in the groundwater; and soil contaminated with oil and total petroleum hydrocarbons.⁷⁹ (Refer to Appendix F for the areas of environmental concern and Appendix G for a documentation of the chemicals and hazardous substances used at the Riverside Mills complex prior to the 1989 fire). The USTs collectively contain approximately 120,000 gallons of No. 6 fuel oil, which the City is facilitating an attempt to market.⁸⁰ As part of the investigation, RIDEM OWM proposed multiple remedial alternatives for the four areas of concern. All remedial alternatives evaluated

⁷⁶ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁷⁷ As part of the American Heritage Rivers Initiative, the local community surrounding these rivers will receive focused assistance of federal agencies in their effort to restore and protect the river. (Whitehouse Web Page (<http://whitehouse.gov>) State of the Union Address: "American Heritage Rivers." February 4, 1997. <http://www.whitehouse.gov/CEQ/Record/ahr.html>)

⁷⁸ "It is the view of the Department [DEM] that this report [remedial evaluation report] will serve to define 'Existing Contamination' for the purposes of a Brownfields Settlement Agreement and Covenant Not to Sue and is not a representation that the site does not contain additional potential releases of oil of hazardous materials." (RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997).

⁷⁹ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

assume that contaminated soils at the site shall be remediated up to par with RIDEM's clean up standards of direct exposure criteria for residential land uses, given Riverside Mills is slated to be used as part of a recreational greenway.⁸¹ In addition, an institutional control in the form of land usage restrictions must be attached to the deed which restricts the use, occupancy, and activities at the site. The type and degree of contamination and the proposed reuse of the site requires an innovative remedial design that will most likely exceed DEM's originally estimated \$1.4 million, including an estimated \$500,000 to remove and dump the debris illegally dumped at the site since 1989.⁸² RIDEM has identified Barry Lewis as a Potentially Responsible Party (PRP) for the contamination of Riverside Mills and does not foresee pursuing the companies that occupied the mill complex prior to the fire.⁸³

Once remedial activities are complete, the restoration of Riverside Mills is able to proceed because of finances available from a public-works initiative proposed by the Providence Plan.⁸⁴ The \$10 million Woonasquatucket River Greenway Project is a catalyst for progressive change along the river corridor, and thereby implements the communities' comprehensive master.⁸⁵ The Greenway Project is a 4.4-mile greenway with paths and green spaces stretching from the Johnston/Providence line to Waterplace Park in downtown Providence (Appendix H). The Greenway master plan recommends that Riverside Mills be developed in two economic development parcels: a 28,000 square foot parcel, which includes the 5,000 square foot former office building; and a 43,000 square foot parcel, which the City has identified for commercial

⁸⁰ RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997.

⁸¹ Direct exposure numbers are based on a child's degree of interaction with said contaminants. One approach to preventing direct exposure to any remaining contaminated soils is to encapsulate the majority of the site. (RIDEM OWM Remedial Evaluation Report of the former Riverside Mills Site; Providence, RI. August 1997).

⁸² Mari-Joan Bull, City of Providence Department of Planning and Development. Personal Communication. February 17, 1999.

⁸³ RIDEM does not intend to name these companies PRPs because there is uncertainty regarding whether soil and groundwater contamination occurred prior to or is a resultant of the fire. (Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999).

⁸⁴ The Providence Plan is a non-profit organization working to revitalize the City of Providence, creating hope and opportunity, through a series of partnerships with the public- and private-sector.

⁸⁵ The Woonasquatucket River Greenway is a "proactive urban revitalization effort focusing on environment improvements to restore green space and urban amenities in undeserved neighborhoods (Smith Hill Valley, Olneyville, Manton, and Hartford), and to stimulate economic reinvestment along the corridor."

and/or light industrial development.⁸⁶ Based on this development proposal, the site has the potential for creating 20 to 100 new jobs.⁸⁷ The portion of the site lying in the flood plain may be restored as a wetland or green space along the river; and an 80 to 100 foot easement will be retained for riverbank improvements and a bicycle/pedestrian path.⁸⁸

Despite merging with the Greenway Project which has some private-sector funding, the Riverside Mills project continues to lack significant public- and/or private-sector financing to support site remediation, and an interested developer. The proposed reuse of the site is problematic in terms of accessing remediation funds, given that the opportunities are all tied to pay-back requirements.⁸⁹ Since 1993, brownfields have been viewed as opportunities for economic redevelopment, and as such the government is willing to assist initially with the expectation that the economic benefits derived from the cleanup will repay the costs of it. Unfortunately, a bicycle path and greenway do not generate income which to pay back loans. Therefore, Riverside Mills is not eligible for the HUD programs, such as BEDI, CDBGs, or other Revolving Loan Funds.

The project is not completely devoid of public funding nor mechanisms that encourage private investment. Federal resources committed through the EPA Brownfields Showcase Community Program include a grant to the Army Corps of Engineers to create a Protocol for Environmentally Sustainable Natural and Economic Resources Redevelopment project, referred to as the Penserr Project. As part of this project, the corps has taken GPS readings and is creating a computer model that will allow the visualization of different redevelopment schemes. Also, The Center for Environmental Studies at Brown University and The Providence Plan, in cooperation with Rhode Island residents, received a grant from the Agency for Toxic Substances

⁸⁶ Lincoln Lace & Braid, the other designated Brownfields Showcase Community, is also included in the master plans for the Greenway Project. (EPA Brownfields Showcase Communities Quick Reference Fact Sheet. EPA March 1998. <http://www.epa.gov/swerosps/bf/showcase.htm>).

⁸⁷ EPA Brownfields Showcase Communities Quick Reference Fact Sheet. EPA March 1998. <http://www.epa.gov/swerosps/bf/showcase.htm>

⁸⁸ The Woonasquatucket River Greenway Project is supported by major sponsors including the Lila Wallace-Readers Digest Fund, Citizens Bank, and the Merck Family Fund.

and Disease Registry (ATSDR) to develop effective materials for educating citizens to deal with brownfields issues. The City of Providence has committed \$3 million to the Greenway Project while the Department of Transportation has committed \$3.1 million for the construction of the bicycle path along the Woonasquatucket River.⁹⁰ In addition, the City will forgive the real estate taxes owed by Barry Lewis and intends to negotiate with the Narragansett Bay Commission and other interested parties who have liens on the property.⁹¹

One source of financing currently being pursued by the City is Supplemental Environmental Projects (SEP) funding, in which the money obtained from the environmental penalty sought by RIDEM against Barry Lewis goes towards a “worthy” project.⁹² The site is eligible for state tax credits on interest income from loans made by banks or individuals to these companies and substantial tax credits on wages paid per new employee as a designated Enterprise Zone.⁹³ Also, employer wage credits are available to companies located in EZs, of up to \$3,000 per year per employee, to offset the salaries and training costs for employees who both work and live in the zone.⁹⁴ These tax incentives, coupled with the City’s commitment, is a progressive step in attracting as well as encouraging the private-sector to invest in the remediation and restoration of Riverside Mills.

Regulatory Framework

⁸⁹ Jane Sherman, Project Director, The Providence Plan. Personal Communication. March 19, 1999.

⁹⁰ Davis, Karen A. “Forum at City Hall Promotes Greening of City Brownfields.” The Providence Journal-Bulletin. May 29, 1998, Friday Metro Edition. Pg. 5C.

⁹¹ Mari-Joan Bull, City of Providence Department of Planning and Development. Personal Communication. February 17, 1999.

⁹² The task of collecting the environmental penalty poses a problem given the whereabouts of Barry Lewis remains unknown. However, when the money is obtained, the SEP at the site may involve investigating or monitoring the environmental media at the property, removing or remediating contamination, or creating conservation land. (EPA “Supplemental Environmental Projects National Database.” July 11, 1997). <http://www.epa.gov/earth100/records/g01038.html>.

⁹³ Rhode Island Economic Development Corporation. “Tax Incentives for Enterprise Zones.” September 16, 1998. <http://www.riedc.com/growth/zones/entzone.html>

⁹⁴ Rhode Island Economic Development Corporation. “Tax Incentives for Enterprise Zones.” September 16, 1998. <http://www.riedc.com/growth/zones/entzone.html>

The federal, state and local regulatory framework guiding the remediation and restoration of Riverside Mills streamlines the project, indicating the potential for a successful remediation and restoration project. Under the EPA Brownfields Showcase Communities program, EPA and RIDEM negotiate “Covenants Not to Sue” (CNTS) with prospective purchasers of brownfields. In this scheme, the EPA will not sue the property owner for contamination if the owner did not cause or contribute to the contamination. Nor will they sue prospective purchasers for contamination that existed before the purchase.⁹⁵ CNTS provides sufficient financial immunity from liability to a financial institution allowing them to look seriously at the brownfields project. Liability relief has convinced the City of Providence to acquire the tax reverted parcel at Riverside Mills.

The City of Providence Department of Planning and Development is employing a new state and city ordinance law that allows the City to acquire the property through a more expedient process.⁹⁶ “Upon a determination that the property is necessary for redevelopment, revitalization or municipal purposes by the redevelopment agency of a municipality.....then the municipality may take such land for the city or town.”⁹⁷ If the taxes are not paid within fourteen days after demand, the Providence Redevelopment Authority may file to take the property.⁹⁸ A stipulation for taking the property, however, is that the redevelopment agency must serve the owner with the notice and contact all parties with interest in the property. This is a difficult task given that Barry Lewis’s address at 305 Washington Avenue in Providence is no longer certified and his whereabouts remain unknown. The Department is currently trying to locate Lewis by notifying every Barry Lewis in the region. If the task is unsuccessful, the attorney will file with the court for a judge to determine whether he has made an adequate attempt to find and serve Lewis with the notice. If the judge rules in the attorney’s favor, a deed is then filed to take the

⁹⁵ EPA Brownfields Showcase Communities Quick Reference Fact Sheet. EPA March 1998.

<http://www.epa.gov/swerosps/bf/showcase.htm>

⁹⁶R.I.G.L. § 44-9-8.1

⁹⁷R.I.G.L. §44-9-8.1

⁹⁸R.I.G.L. §44-9-8.1

property, thus giving the City of Providence possession of Riverside Mills. In this property taking, Lewis will remain liable for the site's contamination.⁹⁹

Riverside Mills and the Greenway Project is consistent with the Comprehensive Plan of the City of Providence, dovetailing with Mayor Cianci's efforts to transform Providence into the "renaissance city" by revitalizing neighborhoods, remediating the environment, and attracting new businesses.¹⁰⁰ The City's Environmental Task Force, in an effort to improve the neighborhood, has completed clean-ups on the vacant lots adjacent to the Riverside Mills. The Parks Department, in association with the Greenway Project, is planning renovations for two parks along the river, while state owned property is currently targeted for community gardens and environmental education initiatives."¹⁰¹ The Greenway project is compatible with DEM's long term strategic objectives to Project and Outdoor Recreation, Urban Justice and Equity, and Revitalization and Restoration of National Resources. The 1997 Strategic Planning document for Land Protection highlights the priority of establishing Greenways and Linkages in Metropolitan areas bringing people to environmental resources.¹⁰²

Institutional & Community Involvement

Institutional and community involvement is, perhaps, the greatest asset for the Riverside Mills project. The Providence Plan, in particular Project Director Jane Sherman, is emerging as a strong project leader in the redevelopment of Riverside Mills in conjunction with the Greenway Project. The organization is taking a lead role in terms of its continual community outreaches, including: making people aware of the river, developing programming around the

⁹⁹ Mari-Joan Bull, City of Providence Department of Planning and Development. Personal Communication. April 28, 1999.

¹⁰⁰ Mingis, Ken. "State of the City 1998 Cianci." The Providence Journal-Bulletin. March 12, 1998, Thursday Metro Edition, Pg. 1D.

¹⁰¹ Reegan, Timothy; Sherman, Jane. "Brownfields Showcase Communities Application." December 1997.

¹⁰² Reegan, Timothy; Sherman, Jane. "Brownfields Showcase Communities Application." December 1997.

river and the greenway itself, and looking towards long term endowment and stewardship for the River parks.¹⁰³

Strong private leadership is critical for this project, and given the scope and length of cleanup, a strong government entity is also necessary in terms of the economics and financing of the remediation activities. The Mayor has repeatedly stated his commitment to the restoration of Riverside Mills, as the site including the remaining building is not only a health hazard, but also has a blighting influence on the residential properties across the street and the commercial area further down Manton Avenue and into Olneyville Square.¹⁰⁴ The City also recognizes the “opportunity for something positive to happen in the community that could start to support revitalization and investment in the area.”¹⁰⁵ “The commitment of the Mayor and the City Council, and the pledge from the Trust for Public Land, assures that some, if not all, of the redevelopment moneys for the recreational portion of Riverside Mills will be available.”¹⁰⁶ The City’s support is a progressive step towards the redevelopment of Riverside Mills. However, the vital role of identifying and leveraging funds to clean-up the site remains unfulfilled.

Additional resources are currently being pursued by Elise Jakabhazy, an EPA federal employee designated to the City of Providence as the Providence Brownfields Communities coordinator. Jakabhazy is essentially a project manager, assisting with the coordination of technical and financial support from the participating federal agencies, acting as a spokesperson for federal agencies, and increasing corporate and public understanding of brownfields. The multiple public/private partnerships between the state, city, and private parties also contribute to a coordinated, comprehensive effort. A Memorandum of Understanding exists between the

¹⁰³ The Providence Plan has implemented outreach efforts that include “presentations to environmental and neighborhood organizations throughout the city, programming along the river corridor, educational outreach to schools and community centers, and Greenway planning sessions throughout the river corridor. Canoe and kayak programs, river tours, the annual Woonasquatucket River Greenway Festival, and other activities have generated community interest in reclaiming the river and its adjacent spaces for recreational uses.” (Reegan, Timothy; Sherman, Jane. “Brownfields Showcase Communities Application.” December 1997).

¹⁰⁴ Mari-Joan Bull, City of Providence Department of Planning and Development. Personal Communication. February 17, 1999.

¹⁰⁵ Mari-Joan Bull, City of Providence Department of Planning and Development. Personal Communication. February 17, 1999.

RIDEM, the City of Providence, and The Providence Plan for the Woonasquatucket River Greenway Project. The Providence Plan has also formed a partnership with EPA Region I under the Urban Environmental Initiative to address urban environmental health and justice issues. The agency has also received technical advice and Environmental Justice and Environmental Education Grants for their community outreach and education programs along the river. In addition, the Providence Plan is working with the RIDEM OWM, Planning and Development, Water Resources and Technical and Customer Assistance in the planning and implementation of the Greenway Project and in addressing the significant environmental assessment at Riverside Mills.¹⁰⁷

The public/private partnerships mentioned above and effective community participation in the planning process is an essential ingredient to the redevelopment of Riverside Mills. Planning sessions for the Greenway Project have been held at schools, churches, community centers, and housing projects and publicized with press releases and bi-lingual flyers distributed in the neighborhoods. At the sessions, strategies for the reuse of Riverside Mills were integral to the discussions, and current proposals reflect the community's interest and stated needs. The most common request communicated by residents was for the building and nearby land to be reused for green industries or commercial uses, and the remainder of the site used as an open space/wetland area.¹⁰⁸ There exists a remarkable consensus and emphasis on the need for a bicycle path along the river to provide an attractive, safe, and direct way to access schools, churches, stores, local community centers, and jobs.¹⁰⁹

While the Riverside Mills brownfields project exhibits many strengths, several weaknesses may hinder further site remediation. The strengths of the Riverside Mills project include: property location; liability relief for prospective purchasers; "dovetails" with The

¹⁰⁶ Reegan, Timothy; Sherman, Jane. "Brownfields Showcase Communities Application." December 1997.

¹⁰⁷ Reegan, Timothy; Sherman, Jane. "Brownfields Showcase Communities Application." December 1997.

¹⁰⁸ Jane Sherman, Project Director, The Providence Plan. Personal Communication. March 19, 1999.

¹⁰⁹ In Olneyville, 43% of the households in Olneyville do not have access to automobiles. (Jane Sherman, Project Director, The Providence Plan. Personal Communication. March 19, 1999).

Woonasquatucket River Greenway Project and the City of Providence's urban revitalization efforts; strong project leadership and management, public/private partnerships, and effective community participation and support. The major impediment to the remediation of Riverside Mills is the severity of contamination. Full remediation will require a costly and extensive clean-up, a condition that subsequently discourages investors and lenders from financing the project. Although Riverside Mills has access to a number of public and private economic and social resources, an essential component to the Greenway Project, neither a source of funding nor a prospective developer willing to remediate and restore the site has materialized. These strengths and weaknesses of the Riverside Mills project are analyzed in greater detail in chapter four, the final chapter. The following chapter also presents a series of recommendations to The Providence Plan and the City of Providence regarding the appropriate procedure for remediating and restoring Riverside Mills.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The primary impediment to reuse of the Riverside Mills project is the scope and cost of cleanup, resulting in the lack of adequate funding from both the public and private-sector for remediation activities. Although it lacks the two most critical ingredients for a successful project, Riverside Mills fulfills the remainder of the list, and is therefore a good candidate for brownfields remediation and restoration.

The strengths of the Riverside Mills project are strong leadership and management by The Providence Plan and public/private partnerships through the Woonasquatucket River Greenway Project. The prospect for successful brownfields redevelopment is also enhanced by the property's riverside location and the asset of the Woonasquatucket River, which had been neglected and abused but has a great potential for contributing to the revitalization of the area. Furthermore, the community adjacent to Riverside Mills supports site remediation and is a precursor to a successful project.

The severity of contamination at Riverside Mills gives rise to the question of how to abate the environmental problems so as to protect the community and economic development interests. Public interest-groups have a valid concern that in the State's rush to encourage private developers to redevelop brownfields, it will allow threatening levels of contaminants to remain in the soil and groundwater. The underground storage tanks at Riverside Mills pose environmental risks if not removed or drained before the site is capped and redeveloped. Should the USTs erode and subsequently leak oil, the City of Providence and The Providence Plan, as property owners, are liable for any ensuing lawsuits concerning property damage, groundwater contamination, and damage to natural resources. The penalties for violating the provisions include a fine of \$50.00 a day per day each day the tank remains in the ground after notification

and an additional fine or penalty that may be assessed under other state law or regulations.¹¹⁰

Therefore, tank remediation, and in particular the acquisition of a clear waiver of liability, must be addressed before the City of Providence forecloses on Riverside Mills.

Therefore, it is in the partners best interest to secure funds for the clean-up and redevelopment of Riverside Mills prior to foreclosing on the property. By doing so, the City will guarantee that the newly remediated lot will not attract illegal activity and jeopardize the safety of those using the Woonasquatucket River Greenway. Who then should finance the costs of remediating Riverside Mills, given that there is no financially responsible party: the public- or private-sector? The question centers around the issue of equity, and if not addressed before the redevelopment project proceeds, negative public attitudes and perceptions can potentially stymie reuse efforts. The use of public funds for the construction and maintenance available from Intermodal Surface Transportation Efficiency Act (ISTEA) of the bicycle path is the most logical choice, given that it is a community-shared space. However, private financing of commercial development and recitation site remediation would be ideal. The next question is how the public attracts private money.

One approach to attracting outside capital is Tax Increment Financing (TIF).¹¹¹ This mechanism is based on an essential premise of most brownfields initiatives- using the anticipated growth in property taxes generated by a development project to finance the activities needed immediately to create the new value.¹¹² TIF programs are also easily used with other types of funding, such as grants or loans. However, the key to TIF is the local commitment of incremental tax resources for the payment of redevelopment costs. To use this financing

¹¹⁰ R.I.G.L §46-12.1-4

¹¹¹ The TIF program has been credited by the New York Times with responsibility for a “downtown Renaissance” in Kansas City.

¹¹² Bartsch, Charles. “Paying For Our Industrial Past.” Economic Development Commentary. Vol. 19, No. 4. Winter 1996.

approach for Riverside Mills, the TIF must be coordinated with the City of Providence and possibly economic development.¹¹³

Another financing tool meriting further investigation is the fund designated for the removal and clean-up of leaking USTs. Riverside Mills does not qualify for the Rhode Island Underground Storage Tank Financial Responsibility Fund, since there is no financially responsible party.¹¹⁴ However, money for the removal of USTs may be available from a \$1.3 million state bond issued in 1989, although only \$700,000 remains in the fund currently according to the Rhode Island Department of Administration.¹¹⁵ In order to take advantage of this bond money and further the remediation process, one should contact: a.) Rhode Island Representative Eileen Naughton, who has claimed interest and expertise in the removal process; and b.) Steven McAlister, the Rhode Island Department of Administration Central Services.¹¹⁶

The City of Providence has a unique opportunity to enhance urban revitalization efforts and capitalize on the benefits that accrue from redeveloping Riverside Mills. Activities at Riverside Mills thus far, including the completion of an environmental site assessment and the establishment of various public/private partnerships that provide access to valuable social and financial resources, exhibit the Brownfields Showcase Communities programs potential as a catalyst for change. The project is illustrative of the myriad benefits to be realized by communities adjacent to the brownfields. Riverside Mills demonstrates the federal benefits of being a designated showcase community, while simultaneously exposing the shortcomings of the program.

The brownfields initiative attempts to maximize the incentives to brownfields redevelopment; however, real progress in this area requires creation of economic and other incentives to make redevelopment more attractive. To date, the EPA and its state counterparts

¹¹³ Kelly Owens, Senior Engineer, RIDEM Office of Waste Management. Personal Communication. April 28, 1999.

¹¹⁴ R.I.G.L. §46-12.9-9.6

¹¹⁵ Michaela Kane, RIDEM UST program. Personal Communication. March 22, 1999.

¹¹⁶ Michaela Kane, RIDEM UST program. Personal Communication. March 22, 1999.

have focused primarily on three incentives for brownfields redevelopment-- relaxing cleanup standards, releasing potential purchaser and developers from liability, and funding site assessments. Although these proposals and programs are commendable attempts to encourage brownfields redevelopment, they do not always accomplish their intended purposes.

In addition, no legislation exists on the state level that specifically targets Brownfields Showcase Communities. As a result, those involved in regulatory processes of the Riverside Mills project are forced to conform to existing laws and programs. The use of State legislation has been moderately successful in terms of acquiring the site, albeit unsuccessful in accessing funds with suitable payback mechanisms for remediation activities at Riverside Mills. “The attraction of the project for selection as a showcase community project was the proposed mixed use and restoration of recreational and green space to an undeserved area in Providence. Yet, the funding has not provided for exactly this kind of creative planning.”¹¹⁷ In addition, federal partners are not aware of their capacity to contribute and consequently, potential financial and human resources have not been identified and programs not capitalized upon.

These shortcomings are primarily attributed to the program’s infancy, and as such, Riverside Mills, along with the 15 other showcase communities, is “inventing the wheel.” The lessons learned thus far can ultimately be used to improve the effectiveness of the EPA Brownfields Showcase Communities program and other existing brownfields programs. The targeted redevelopment of both the Riverside Mills and the Lincoln Lace & Braid sites in the Woonasquatucket River Greenway Project have the potential to serve as excellent models for approaching a brownfields redevelopment project. “While the obstacles to revitalize old properties are formidable, they are not insurmountable.”¹¹⁸

The viability of applying the “key ingredients” the clean-up and redevelopment of vacant lots merits investigation. Vacant lots are essentially residential brownfields. The character of

¹¹⁷ Jane Sherman, Project Director The Providence Plan. Personal Communication. March 19, 1999.

¹¹⁸ Bartsch, Charles; Collaton, Elizabeth. “Industrial Site Reuse, Contamination, and Urban Redevelopment: Coping With the Challenges of Brownfields.” Washington, DC: Northeast-Midwest Institute, December 1994.

the abandoned and degraded land in the City of Providence necessitates increased attention to strategies for reclaiming residential brownfields. The blighted appearance of a vacant lot, often in the center of a residential block, and disruptive nature of the activities that take place on them, affects the quality of life for nearby residents. In this way, a broadened definition of brownfields, which includes residential lots, could significantly augment the ability of Providence to reabsorb acres of vacant land, foster environmental and economic health, and improve the quality of life in urban neighborhoods.

APPENDIX A

CRITICISMS OF THE SUPERFUND PROGRAM

Criticisms of Superfund	Consequences
Liability Provisions	
1.) The strict, joint, and several liability provision underlying Superfund produces litigation and hinders remedial efforts at hazardous waste sites	<p>a.) Potentially Responsible Parties (PRPs)¹¹⁹ delay remediation or reduce cleanup costs through expensive costly litigations.¹²⁰</p> <p>b.) Major PRPs can escape liability via bankruptcy, shifting responsibility to small, solvent PRPs.¹²¹</p> <p>c.) This liability scheme is burdensome for local governments who become owners by default of abandoned sites and bear the costs to cleanup contaminated municipal landfills.¹²² Local governments have no new resources for these tasks, and the laws provide no mechanism for setting priorities among them.</p>
2.) Generators of hazardous waste are wrongfully held responsible for site cleanup	Companies that dispose of their hazardous waste, via a recycling business or to a recycling facility, cannot control what happens to their waste. These companies are, nevertheless, named parties and must pay their share of the cost for site cleanup. i.e.; Daytona Antifreeze site. ¹²³

¹¹⁹ PRPs include current and past owners and operators at the site; persons who arranged for hazardous materials disposal at the site; and persons who have brought to the site hazardous materials that subsequently were released to the environment.

¹²⁰ Hird, John A. "Superfund: The Political Economy of Environmental Risk." Baltimore, MD: The Johns Hopkins University Press, 1995.

¹²¹ Vig, Norman J.; Craft, Michael E. "Environmental Policy in the 1990s." Washington, DC: Congressional Quarterly Inc, 1997.

¹²² Vig, Norman J.; Craft, Michael E. "Environmental Policy in the 1990s." Washington, DC: Congressional Quarterly Inc, 1997.

¹²³ The Daytona Antifreeze site in Marietta collected used antifreeze from car dealers and auto repair shops in and around Atlanta for a nominal fee. The recycling facilities closed leaving behind ~270 drums and 21 large tanks containing used antifreeze, waste oil, acids and other hazardous substances. Many of the companies that did business with Daytona are PRPs under Superfund and were thus required to pay their share for the cost of cleaning up the site.

APPENDIX A CRITICISMS OF THE SUPERFUND PROGRAM CNTD.

<p>3.) Vague statutory language</p>	<p>a.) Uncertainty about potential environmental liability has made lenders and developers reluctant to fund the redevelopment of brownfields because they are concerned about the cost for cleanup costs.</p> <p>b.) Irregular judicial interpretation of the liability provisions have subsequently led to conflicting rulings.¹²⁴ i.e.; <i>United States v. Fleet Factors Corp.</i>¹²⁵</p>
<p>4.) The polluter does not assume complete financial responsibility under the “Polluter Pays” principle</p>	<p>a.) Banking and insurance industries share the liabilities for Superfund sites with their clients.</p> <p>b.) In order to remain competitive in the market, companies pass on the cost of corporate liability to consumers and shareholders. Because corporate shares change hands rapidly, retroactive liability places the burden on those who did not own shares at the time the pollution occurred.¹²⁶ “These costs may eventually filter down to Joe Public who might have a pension plan or own stock in an insurance company that must reimburse the chemical company for cleanup costs.”¹²⁷</p> <p>c.) Consumers bear the financial burden via pollution taxes and taxes on petroleum and chemical feeds and environmental income tax on corporations.</p> <p>d.) “Lawyers exploit loopholes in the Superfund Act to ‘force municipalities and tax payers to pay a disproportionate share of cleaning up toxic pollution generated by the industry,’” Representative Chris Smith, R-N.J.</p>
<p>Stringent Cleanup Standards¹³⁰</p>	
<p>1.) “How Clean is Clean?”</p>	<p>Lack of process certainty with respect to the cleanup process and the amount of time required to complete the project.</p>

¹²⁴ Bartsch, Charles; Collaton, Elizabeth; Pepper, Edith. “Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities.” Washington, DC: Northeast-Midwest Institute, 1996.

¹²⁵ Bartsch, Charles; Collaton, Elizabeth. “Industrial Site Reuse, Contamination, and Urban Redevelopment: Coping With the Challenges of Brownfields.” Washington, DC: Northeast-Midwest Institute, 1996.

¹²⁶ Gunter, Booth. “Cleanup Costs Spread Through U.S. Economy.” The Tampa Tribune. July 24, 1993, Monday FINAL EDITION. NATION/WORLD, Pg. 2.

¹²⁷ Gunter, Booth. “Cleanup Costs Spread Through U.S. Economy.” The Tampa Tribune. July 24, 1993, Monday FINAL EDITION. NATION/WORLD, Pg. 2.

¹²⁸ Vig, Norman J.; Craft, Michael E. “Environmental Policy in the 1990s.” Washington, DC: Congressional Quarterly Inc, 1997.

¹²⁹ Lick, Derek. “Facing Criticism, EPA Revamping Superfund Program.” States News Service. October 11, 1991, Friday.

¹³⁰ Sites on the NPL, regardless of their level of contamination and their future reuse are required to comply with what are termed “dirt-eating rules,” or requirements that specify such stringent cleanup levels that one could safely eat the dirt. (Hird, John A. “Superfund: The Political Economy of Environmental Risk.” Baltimore, MD: The Johns Hopkins University Press, 1995).

2.) Marginal cleanup costs of the project frequently exceed the marginal cleanup benefits	Prospective developers move to develop “greenfields, economically viable projects, moving jobs away from city.
Stigma Associated with the National Priority List	Redevelopment of low risk, economically viable sites the stigma of being on the NPL and potential contamin
<ul style="list-style-type: none"> <li data-bbox="228 380 862 453">• The “administrative pipeline” slows site remediation¹³¹ 	The General Accounting Office reported that “it can take ten years from the time a site is listed on the NPL until cleaned up. ¹³² Moreover, the GAO found that the time to study and remediate a Superfund site has, on average, increased over the past decade. ¹³³ Subsequently, after more than 17 years, about one-third of the nation’s Superfund sites have been cleaned up. ¹³⁴
<ul style="list-style-type: none"> <li data-bbox="228 653 743 684">• Cost of the Superfund Program 	The program is “excessively costly owing to the extensive time involved in determining responsibility for cleanups, with the spending on elaborate remediation plans, and long delays in implementation.” ¹³⁵

¹³¹According to Representative Robert Borski, D-Pa., the “administrative pipeline” is the primary reason the program is “slow.” (Lick, Derek “Facing Criticism, EPA Revamping Superfund Program.” States News Service. October 11, 1991, Friday).

¹³²“Testimony February 04, 1998. J. Winston Porter President Waste Policy Center House Commerce Finance and Hazardous Materials Status of Superfund Program.” Federal Document Clearing House Congressional Testimony. February 4, 1998, Wednesday. CAPITOL HILL HEARING TESTIMONY.

¹³³“Testimony February 04, 1998. J. Winston Porter President Waste Policy Center House Commerce Finance and Hazardous Materials Status of Superfund Program.” Federal Document Clearing House Congressional Testimony. February 4, 1998, Wednesday. CAPITOL HILL HEARING TESTIMONY.

¹³⁴“Testimony February 04, 1998. J. Winston Porter President Waste Policy Center House Commerce Finance and Hazardous Materials Status of Superfund Program.” Federal Document Clearing House Congressional Testimony. February 4, 1998, Wednesday. CAPITOL HILL HEARING TESTIMONY.

¹³⁵(Vig, Norman J.; Craft, Michael E. “Environmental Policy in the 1990s.” Washington, DC: Congressional Quarterly Inc, 1997). EPA only recovers a fraction of possible costs from PRPs and subsidizes polluters by charging them lower interest rates than found in the commercial market. (Superfund Remains High Risk Program, GAO Reports.” Pesticide & Toxic Chemical News. March 1, 1995. No. 18, Vol. 23; ISSN: 0146-0501).

APPENDIX B

TENANTS OF THE RIVERSIDE MILLS COMPLEX AS OF DECEMBER 18, 1989

BUILDING NUMBER	NAMES OF TENANTS
Building 1	Paul's Plating T.D. Epoxy V.G. Polishing
Building 1A	Alias Stage Federal Polishing Co. Custom Jewelry
Building 1B	Royal Automotive Engineering
Building 2A	Loural Originals
Building 2B	Phoenix II M & F Costume Jewelry Colors Unlimited
Building 2C	Regency Distributors American Reproductions
Building 3A	Glory Finding & Buckle
Building 3B	Mariton Enterprises Sewtown E.T. Cranston Providence Display Co. Abraxus Machine
Building 8	B's Polishing Aquamatic System Abate & Ursillo Polishing Mill Wright Service Columbus Mold
Office Building	Nationwide Casting Co. MAC Soldering Erickson Designs Mark Cummins Music Studio

Source: RIDEM OWM, Rhode Island (1997).

APPENDIX C Documentation of Deed Records 8/25/86-Present

Property: 50 Aleppo Street
Providence, RI

Plat: 63 Lot: 326

Current Owners: Barry Lewis *See Tax Deed Below

Acquired From: Robert Gaudette Sr. & Donald Marshall dated 8/25/86 and recorded in Book 1429 at page 178 on 8/26//86.

Stamps: \$3427.60/\$2,000,000

1. \$1,400,000 Mortgage, Security Agreement and Assignment to Eastland Savings Bank dated 8/25/89 and recorded in Book 1429 at page 186 on 8/26/86 @ 2:46 p.m.
2. \$400,000 Mortgage to Robert Gaudette Sr. & Donald Marshall (no address listed) as Tenants in Common dated 8/25/86 and recorded in Book 1429 at page 216 on 8/26/86 @ 2:47 p.m.
3. \$2,215.50 Execution by Anthony E. Muscatelli & Associates Inc. No. 47187 dated 8/24/88 and recorded on 8/31/88 @ 2:53 p.m. Sixth Division District Court No. 88-00104. Attorney Gerald Mosco. 1 State Street Suite 100 Providence, RI.
4. Confirmatory Agreement regarding Mortgage, Security Agreement and assignment of Leases and Rents and Confirmatory Subordination of Second Mortgage to Eastland Savings Bank dated 2/16/89 and recorded in Book 1982 at page 125 on 2/28/89 @ 11:16 (RE: Mortgage is recorded in Book 1429 at page 186 and Subordination of Mortgage in Book 1429 at page 216 to Confirmatory Agreement in Book 1982 at page 125.
5. Notice of Violation by the City of Providence Department of Inspection and Standards dated 9/22/89 and recorded in Book 2117 at page 1 on 10/6/89 (Working without a Permit etc.)
6. Notice of Violation by the City of Providence Department of Inspection and Standards dated 9/18/89 and recorded in Book 2117 at page 2 on 10/6/89 (Building possesses a hazardous condition)
7. \$13,901.99 U.S. Tax Lien by U.S. I.R.S. dated 9/11/90 and recorded in Book 2298 at page 32 on 9/17/90 Serial No. 50004452 (See Copy)
8. Notice of Intention to do work or furnish materials by Coventry Building Wrecking Co. Inc. by John Baccarie. Attorney Fred J. Volpe 130 Tower Hill Road North Kingston, RI recorded in Book 2339 at page 114 on 12/19/90 @ 2:45 p.m. (\$60,000)

Source: City of Providence Department of Planning and Development, Rhode Island (1998).

APPENDIX C Documentation of Deed Records 8/25/86-Present

9. Notice of Intention to do work or furnish materials by Tri-State Investigation Agency Inc. Attorney Fred J. Volpe 130 Tower Hill Road North Kingston, RI recorded in Book 2339 at page 122 on 2/19/96 @ 2:46 p.m. (\$6,825.75)
10. Notice of LIS Pendens by Tri-State Investigation Agency Inc. dated 3/21/91 and recorded in Book 2383 at page 49 on 4/11/91 @ 11:20 a.m. Attorney Fred J. Volpe 130 Tower Hill Road North Kingston, RI 02852 P.O. Box 444. (\$6,825.75)
11. Notice of LIS Pendens by Coventry Building Wrecking Co. Inc. dated 3/20/91 and recorded in Book 2383 at page 57 on 4/11/91 @ 11:21 a.m. Attorney Fred J. Volpe 130 Tower Hill Road North Kingston, RI 02852 P.O. Box 444 (\$60,000)
12. \$2,465.70 Execution No. 48324 by Rentals Unlimited, Inc. Recorded on 5/15/91 Attorney Mare D. Wallick 51 Jefferson Boulevard Warwick, RI 02888. Sixth Division District Court
13. \$360.00 City Lien Notice by the City of Providence dated 6/26/91 and recorded in Book 2419 at page 266 on 7/2/91.
14. \$22.00 City Lien Notice by the City of Providence dated 8/8/91 and recorded in Book 2441 at page 81 on 8/22/91.
15. \$30.00 City Lien Notice by the City of Providence dated 9/6/91 and recorded in Book 2452 at page 261 on 9/19/91.
16. \$1,528.28 Tax Lien Notice by U.S. IRS dated 11/21/91 and recorded in Book 2480 at page 207 on 11/25/91. (See Copy)
17. Notice of Violation by the State of Rhode Island Division of Air and Hazardous Materials recorded in Book 2501 at page 241 on 1/9/92. (Address 291 Promenade Street Providence, RI)
18. \$40.00 City Lien Notice by the City of Providence dated 1/16/92 and recorded in Book 2508 at page 131 on 1/23/92.
19. \$38.00 City of Lien Notice by the City of Providence dated 4/10/92 and recorded in Book 2546 at page 76 on 4/15/92.
20. \$9,799.00 City Lien Notice by the City of Providence dated 5/15/92 and recorded in Book 2561 at page 149 on 5/20/92.
21. \$24,599.78 Tax Deed by the City of Providence to the City of Providence dated 6/29/92 and recorded in Book 2587 at page 74 on 7/14/92 @ 9:00 a.m. (See Copy)
22. \$8,086.17 Notice of Lien by the Narragansett Bay Commission dated 12/3/92 and recorded in Book 2674 at page 19 on 12/15/92. Account No. 508071 & 508072.
23. \$23.00 City Lien Notice by the City of Providence dated 5/25/93 and recorded in Book 2757 at page 325 on 6/2/93.

Source: City of Providence Department of Planning and Development, Rhode Island (1998).

APPENDIX C Documentation of Deed Records 8/25/86-Present

24. \$181.00 City Lien Notice by the City of Providence dated 5/13/94 and recorded in Book 2953 at page 70 on 5/17/94.
25. \$5,401.76 Notice of Lien by the Narragansett Bay Commission dated 8/15/94 and recorded in Book 3003 at page 161 on 8/19/94. Account No. 508071.
26. \$13,901.99 U.S. Tax Lien by U.S. IRS dated 8/6/95 and recorded in Book 3181 at page 242 on 8/10/95. (Corrects in Book 2298 at page 32) See Copy.
27. \$13,901.99 U.S. Tax Lien by U.S. IRS dated 8/6/95 and recorded in Book 3182 at page 63 on 8/11/95. (Corrects in Book 2298 at page 32) See Copy.
28. \$12.00 City Lien Notice by the City of Providence dated 10/30/95 and recorded in Book 3223 at page 350 on 11/1/95.
29. \$1,743,593.66 Execution by Eastern Screw Company Inc. dated 2/15/96 and recorded in Book 3278 at page 14 on 2/15/96. Superior Court No. PC 92-3609 (See Copy)
30. \$12.00 City Lien Notice by the City of Providence dated 2/20/96 and recorded in Book 3281 at page 183 on 2/22/96.
31. \$12.00 City Lien Notice by the City of Providence dated 5/6/96 and recorded in Book 3326 at page 101 on 5/9/96.
32. \$100.00 City Lien Notice by the City of Providence dated 10/16/96 and recorded in Book 3423 at page 57 on 10/16/96.
33. \$100.00 City Lien Notice by the City of Providence dated 12/5/96 and recorded in Book 3455 at page 265 on 12/10/96.

Source: City of Providence Department of Planning and Development, Rhode Island (1998).

APPENDIX D

Application of the “Key Ingredients” to Riverside Mills

Criteria	Yes	No	Maybe
<i>Location</i>			
Situated in a “desirable” location	<ul style="list-style-type: none"> • Mixed-use zoning • Adjacent to the Woonasquatucket River 		
Situated in a Target Community	<ul style="list-style-type: none"> • Federal Enterprise Community • RI Enterprise Zone • \$3 million grant from Empowerment Zone Application 		
Access to existing infrastructure	<ul style="list-style-type: none"> • Interstate highway with a high traffic count • Public utilities: public water, city sewer, electricity, and telephone 		
Significance of property/building	<ul style="list-style-type: none"> • In August 1998, the Woonasquatucket River was designated an American Heritage River 		

APPENDIX D Cntd.

Application of the “Key Ingredients” to Riverside Mills

<i>Costs & Finances</i>	Yes	No	Maybe
Scope & length of cleanup		<ul style="list-style-type: none"> • An underground vault with an undetermined volume of No. 6 fuel oil and 4 USTs collectively containing ~120,000 gallons of No. 6 fuel oil • Widespread presence of VOCs in the groundwater with concentrations ranging from 6 to 7,700 ppb • Soil samples collected in April 1997 exceed the R-DEC for one or more contaminants. • Soil contaminated with oil and total petroleum hydrocarbons, exceeding RIDEM’s R-DEC, I/C DEC, and BG Leachability Criteria • The chemicals and hazardous substances identified in RIDEM OWM investigation include: copper, brass, sodium, electro black, sulfuric acid, hydrochloric acid (one 20 gallon drum), sodium hydroxide, trichloroethylene (two 55 gallon drums), assorted lacquers, thinners, and paints, amines, phosphoric acid, isopropyl alcohol, lube oil, dielectric fluid, waste oil (40-55 drums), soil fumigant (20 drums) • Site is strewn with rubble, commercial trash and household 	

		waste	
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APPENDIX D Cntd.
Application of the “Key Ingredients” to Riverside Mills

<i>Costs & Finances</i>	Yes	No	Maybe
Scope & length of cleanup		Estimated cost to remediate the site is \$1.4 million	
Project “piggy-backs” public-works initiative	<ul style="list-style-type: none"> The Woonasquatucket River Greenway Project 		
Availability of public-sector funding	<ul style="list-style-type: none"> Brownfields grant to RIDEM OWM conduct a site assessment Federal grant to the Army Corps of Engineers for the Penserr Project to create a computer model that allows for the visualization of redevelopment schemes ATSDR grant to Brown University and The Providence Plan for public education about brownfields issues The City of Providence has committed ~ \$7 million to the Greenway Project 	None currently available for site remediation	<ul style="list-style-type: none"> City is pursuing an SEP in which money goes towards site remediation TIF \$700,000 remaining from a 1989 \$1.3 million State bond
Availability of private-sector funding	<ul style="list-style-type: none"> The Greenway Project is supported by major sponsors including the Lila Wallace-Readers Digest Fund, Citizens Bank, and the Merck Family Fund 		<ul style="list-style-type: none"> EZ tax incentives: <ul style="list-style-type: none"> ➤ Tax credits on wages paid per new employee, or a \$50,000 tax deduction for resident business owners ➤ State tax credit on interest income from loans made by banks or individuals to these companies ➤ Fixed-asset loans from \$25,000 to \$150,000 and working capital loans to \$30,000 ➤ Loans of up to \$10,000 from RIEDC and the Home Loan Investment Bank

APPENDIX D Cntd.

Application of the “Key Ingredients” to Riverside Mills

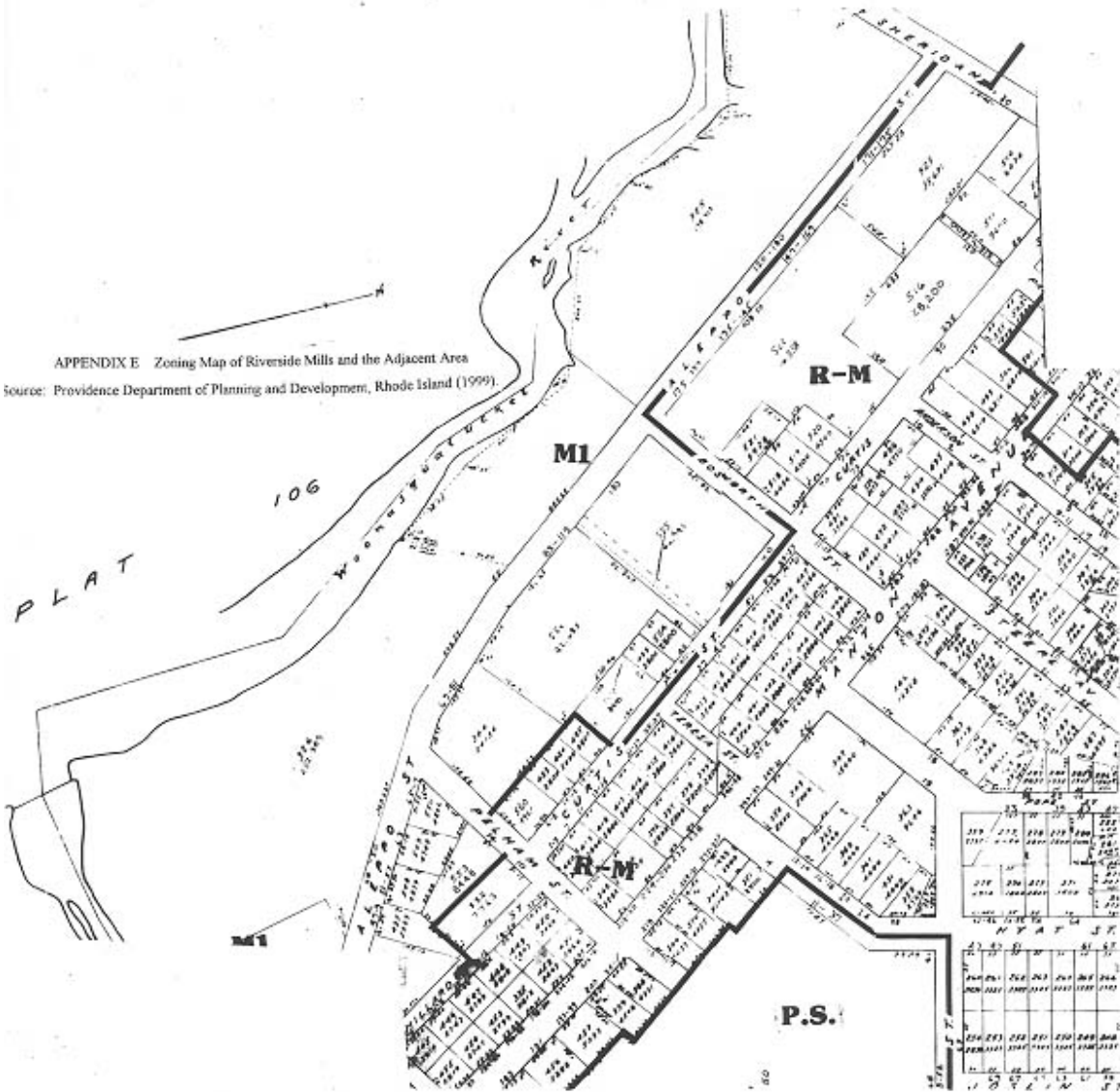
<i>Regulatory Framework</i>	Yes	No	Maybe
Liability relief	<ul style="list-style-type: none"> • The agreements with prospective purchasers of the property are “Covenants Not to sue” 		
Federal, state, and/or local initiatives that:			
Accelerate the process of acquiring & remediating the property	<ul style="list-style-type: none"> • R.I.G.L. §44-9-8.1 		
“Dovetail” with comprehensive master plans	<ul style="list-style-type: none"> • RM and the Greenway Project Dovetail with Mayor Cianci’s transformation of Providence into the “renaissance city” • The Greenway Project is compatible with RIDEM’s long term strategic objectives 		

APPENDIX D Contd.

Application of the “Key Ingredients” to Riverside Mills

Criteria	Yes	No	Maybe
<i>Institutional & Community Involvement</i>			
Strong project leadership			<ul style="list-style-type: none"> The Providence Plan is emerging as a strong leader through community outreaches
Strong local government entity			<ul style="list-style-type: none"> The Mayor and the City of Providence are supportive, but have not been strong in regards to identifying and leveraging funds for site remediation.
Public/private partnerships	<ul style="list-style-type: none"> EPA City of Providence Community Coordinator (project manager) MOU between the RIDEM, the City of Providence, and The Providence Plan for the Woonasquatucket River Greenway Project The Providence Plan formed a partnership with EPA Region 1 under the Urban Environmental Initiative 		
Effective community participation	<ul style="list-style-type: none"> Highly publicized planning sessions with press releases, bi-lingual flyers; held in the local community at schools, churches, and community centers Strategies for reuse of RM reflects the requests by residents in the adjacent community 		

APPENDIX E Zoning Map of Riverside Mills and the Adjacent Area
Source: Providence Department of Planning and Development, Rhode Island (1999).

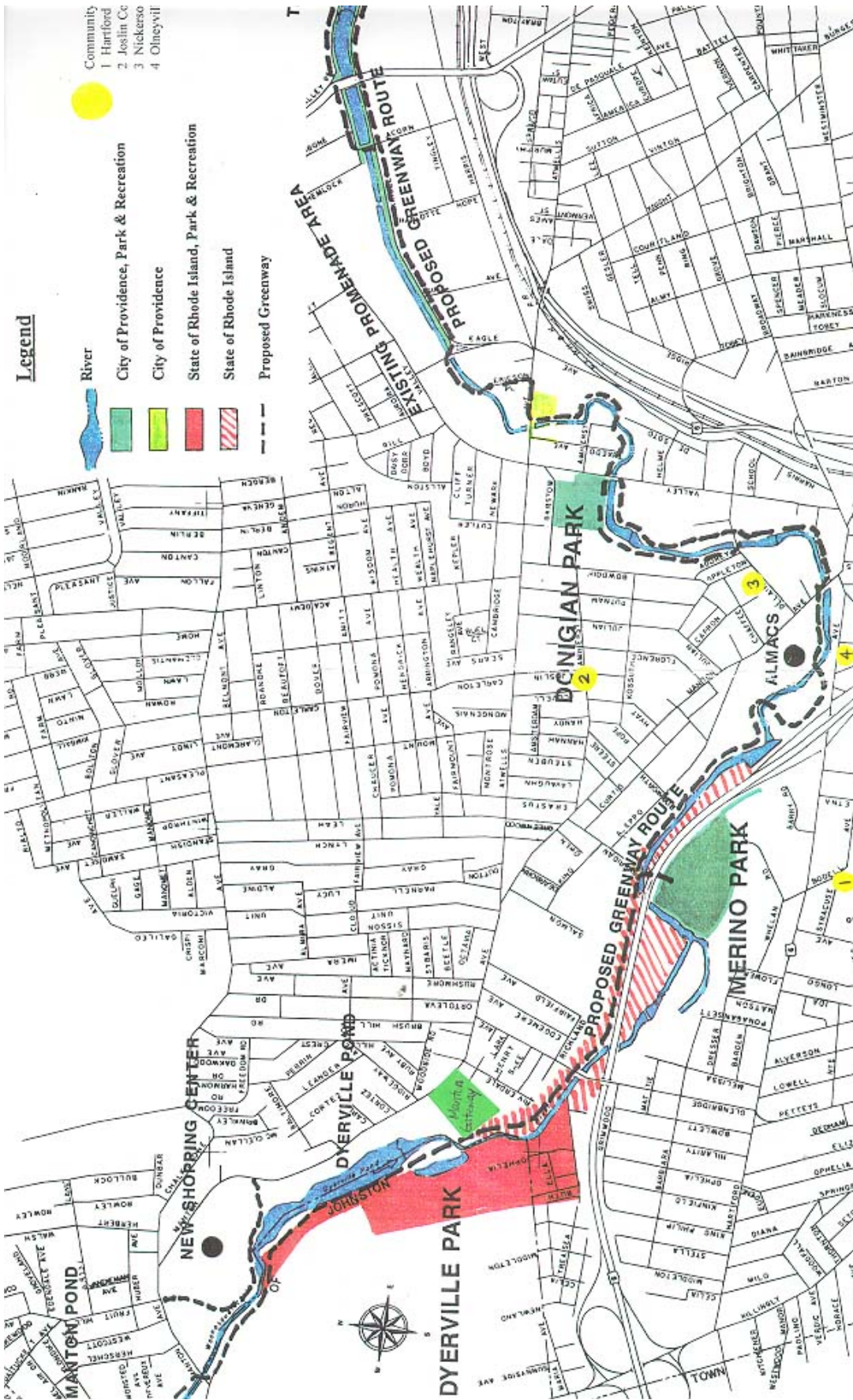


APPENDIX F

CHEMICALS AND HAZARDOUS SUBSTANCES USED AT THE RIVERSIDE MILLS COMPLEX PRIOR TO THE 1989 FIRE

Substance	Where Reportedly Used
Copper CN	Paul's Plating
Brass CN	""
Sodium CN	""
Electro Black CN	""
Sulfuric Acid	""
Hydrochloric Acid	""
Sodium Hydroxide	""
Trichloroethylene	V.G. Polishing
Assorted lacquers, thinners, and paints	T & D Epoxy
Trichloroethylene	Federal Polish
Amines	Kem-Kel
Phosphoric Acid	""
Isopropyl Alcohol	""
Lube Oil	Columbus Mold
Dielectric Fluid	""

Source: RIDEM OWM, Rhode Island (1997)



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