

Brownfields Cleanup And Reuse In Illinois Municipalities



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by

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Preface

Attitudes by public officials regarding brownfield remediation have changed in the past several years partly because of educational programs but also because of the outreach efforts by the Illinois Environmental Protection Agency to help them understand the remediation process. Growing cities, especially, can find remediated brownfields useful as business sites. Other cities may find that the remediation process is more troublesome and costly than building on a greenfield.

This report examines how Illinois municipalities managed the brownfield properties that are part of the brownfield remediation process. It sheds light on management practices used, expectations, and difficulties encountered in the process. While the number of cities involved in the survey is not large, the information gathered is relatively unique because it allows insights into what local officials had hoped to accomplish but also the progress that has been made. Since many of the projects are in the very early stages, the job creation and private investment is not nearly complete. Thus, if anything, the figures presented in this report are understatements of the effects of the brownfield redevelopment.

Many people participated in this project and should be recognized especially the mayors who willingly provided detailed information about city policies overall as well as specific sites enrolled in the brownfield redevelopment program. The support of the Illinois Municipal League, especially Joe Schatteman, in mailing the surveys and compiling the information is greatly appreciated. Likewise, municipal officials or administrators in Alton, Calumet City, Monticello, Sterling, and Chicago answered many questions about how parcels were selected and management practices used to move the parcels through the redevelopment process. Jim Heaton, Rock Falls Economic Development Commission, assisted in writing the Sterling case study. We thank Lori Sutton and Karen Poncin, IIRA, for their assistance in data analyses and preparation of the manuscript for publication.

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Executive Summary

Brownfield properties represent both opportunities and challenges for local public officials and community leaders. They often increase health and/or safety hazards and can reduce the value of adjoining properties. At the same time, when redeveloped, they open new properties for development, often in the heart of the city with high traffic, telecommunications access, and the infrastructure needed for economic development.

The past several years has brought public programs to assist in the assessment and redevelopment of brownfield properties and have helped local decision-makers to return them to productive use. Excellent examples exist across the U.S. to show that this process works well even during an economic downturn such as has occurred since 2000.

This report examines experiences of municipal officials in Illinois in cities with brownfield properties that have: a) a no further remediation letter; b) an Illinois Municipal Brownfields Redevelopment grant; c) had a Targeted Brownfields Assessment performed by the Illinois EPA; or d) an USTFields Pilot Grant from the USEPA.

A total of 86 Illinois municipalities met one of these criteria in 2002. These municipalities were surveyed using two questionnaires—one examining general policies and city experiences and the other requesting information on specific parcels that met one of the above requirements. A total of 52 cities (60%) responded to the general survey and information was provided on 121 of the 229 parcels (53%). Phone follow-ups were conducted in several instances to verify information submitted or gather additional data. In addition, case studies of five cities (Alton, Calumet City, Monticello, Sterling, and Chicago) were conducted to understand better how the brownfield process worked and to determine ways in which it can be improved.

Literature Review

The experiences with brownfields must be studied in the context of the existing literature on various brownfield issues and highlights of this literature are briefly presented. Essentially, several directions are of interest. First, greater interest and more aggressive approaches to brownfields by local governments are a relatively recent phenomenon. Early analyses focused on technical issues in addressing specific problems with the properties. Handbooks were prepared to help deal with significant issues involving these properties in an attempt to overcome a fear by local officials of major liability issues that would involve substantial costs.

Second, interest in making brownfields a part of local economic development policies and strategies grew during the 1990s as cities needed additional land for expansion. Public participation in decisions increased as discussions moved beyond guidebooks. This trend is seen more often in larger cities than in rural locations where the demand for industrial or commercial property is less and often the administrative staff is not large enough to undertake these projects. Greenfield locations, without the difficulties related to brownfield sites, are therefore, more attractive in rural locations.

Third, the growth in public programs to provide technical assistance and financial support for brownfield remediation and development, as well as a strong effort to inform local officials about the possibilities, encouraged local officials and practitioners to undertake more

aggressive projects with vacant and brownfield properties. The Illinois EPA has marketed these programs extensively through statewide meetings and on-site technical assistance and the effects of these efforts are well-documented throughout this report.

Fourth, a positive outcome has been that brownfield projects are not limited to replacing business; rather they now involve housing, recreational facilities, and other approaches that recognize the role that their redevelopment can play in improving the overall quality of life in communities. This broader recognition of the role for brownfields in economic development strategies is likely to expand local involvement in the future.

Fifth, accountability for public investment and documentation of the results from brownfield redevelopment projects has led local practitioners to seriously evaluate projects. Documenting the outcomes is difficult in the case of parks or other recreational programs that do not create a large number of jobs or result in private investment. Capturing the increase in quality of life or how a project might have affected investment in other areas of the city has been difficult for local officials.

Results from the General Survey

The general survey requested information on a variety of characteristics of brownfield properties including economic conditions, investment categories, and expected returns.

Economic Conditions in Sample Municipalities. Responding municipalities were grouped into downstate cities (IEPA regions 1, 3-7) and Cook County and collar counties (IEPA region 2). The average downstate city population size was 24,886 compared with 27,723 for respondents in the Chicago area. The latter cities also are wealthier and more often reported growing economies.

Demand for commercial and industrial property is relatively low, but both city groups indicated some demand for inexpensive buildings. Chicago area cities reported more demand for commercial land. These responses, no doubt, partly reflect the current economic downturn.

Brownfield Types and Characteristics. In terms of square feet of brownfield properties, city governments own 26.8 percent compared with 54.3 percent owned by private companies and 19 percent owned by “other entities”. Chicago area cities indicated a much lower percentage of privately owned property (31.1%) than downstate cities (60.3%). Cities in the Chicago area differed from downstate cities with other entities owning a much higher percentage (35.4%) as compared with 13.5 percent owned by other entities downstate. On average, 33.4 percent of the properties have had environmental assessments with Chicago area cities higher (36.2%) than downstate cities (31.6%).

By far, the main actual or planned use (43.2%) for brownfield properties statewide is return them to industrial or commercial use. This use is slightly higher in the Chicago area (48.5%) than in downstate cities (42.1%). The second most often reported planned use is to start a new industrial or commercial activity (28.7%). Mixed residential, industrial, or commercial land use was next (14.2%). Somewhat unexpected is the relatively few cities (4) reporting holding remediated brownfields in reserve for future development.

Outcomes of Brownfield Projects. Considerable evidence exists to document that brownfield projects create jobs. Statewide, responding cities reported an average of 41 full-time permanent jobs retained and 85 full-time jobs created. An additional 61 part-time jobs were retained and 35 part-time jobs created. These jobs are in addition to temporary construction jobs resulting from the remediation projects.

Likewise, brownfield projects stimulated substantial investment by businesses, leverage from financial firms, as well as local, state, or the federal government. The current stage, size, type, and location of the projects make the investments hard to summarize. Consequently, the investment received by cities for brownfield redevelopment projects was categorized into small, intermediate, and large investment size with summaries of the investments provided. The city of Chicago has been excluded from the investment analyses, due to the city's uniqueness—both in size and characteristics.

According to the respondents, average private investment per city in the small investment group was \$50,318, the mid-range group averaged \$2.95 million, and the group of cities reporting the largest private investment averaged \$8.4 million. Only nine cities reported leveraged funds, averaging \$8.1 million. State investment for brownfield redevelopment averaged \$31,368 in the smallest category, \$108,571 in the medium range, and the highest state investment group averaged \$460,471. Cities reporting federal investment averaged \$34,500 in the small group, the middle group received an average of \$275,000, and the group reporting the largest amount of federal investment averaged \$1.0 million. Average local government investment in brownfields was \$15,943 in the smallest category, \$202,145 in the middle category, and \$4.9 million in the highest investment range.

Expected Public Financial Returns. Important to the success of brownfield initiatives is the public return from brownfield redevelopment and investment. Municipal respondents were asked about the expected returns in terms of increased assessed valuation, increase in retail sales from redeveloped properties, or building permits. The success of brownfield projects depends partly on the length of time that the parcel has been inactive.

The expected *average* net increase in assessed valuation, based on 19 respondents, was \$6.0 million, statewide with an average of \$7.9 million in downstate cities and \$3.4 million in the Chicago area.

The *average* expected increase in retail sales tax from redeveloped properties was provided using conservative and optimistic estimates. Statewide, the conservative estimate (based on 14 responses) was \$108,571 with the optimistic estimate of \$245,250 (based on 13 responses). Differences between downstate cities and those in the Chicago area are substantial but are not always consistent. Economic conditions are generally better in the Chicago area cities, which could partly explain higher estimates, but the size of project also is a major difference between the two city groups. The wide variability in responses and the small number of respondents make generalizations difficult.

Since length of time that the property has been idle can be important in the success of the project, respondents were asked to place city brownfield property in one of four categories ranging from less than one year to more than ten years and to indicate, on average, how long property in their city had been inactive before redevelopment was started. Of the reporting cities, 32.6 percent indicated property remained idle an average of one to five years, and 30.4

percent of cities specified an average in the five to ten year category. More than one-quarter (26.1%) of cities had property idle for an average of more than 10 years. Overall, downstate cities are more likely to report property having been idle for an average of five to ten years, but Chicago area cities are strongly represented in the one to five year category. However, the number of respondents is small making generalizations difficult.

Municipal Involvement. Respondents are split regarding the extent to which Brownfield redevelopment efforts are an important component in managing growth and development, although they lean toward the fact that brownfields are important and little difference was found between the two groups.

The responses are somewhat different, however, regarding the extent to which brownfield remediation is a municipal responsibility. Respondents apparently are not as committed to brownfield redevelopment as a municipal responsibility and downstate cities apparently are more convinced of their responsibility for brownfields than the Chicago area cities.

When asked whether brownfield redevelopment is a part of the city's formal economic development strategy, a decided difference by city location was found with Chicago area cities much more likely (66.7%) to be affirmative than downstate cities (50.0%).

More than half (62.5%) of the responding mayors expect that brownfield properties will require additional public funds to attract private investment with downstate cities more likely (66.7%) than Chicago area cities (57.1%) to report this attitude. Respondents, statewide, expect to spend funds on infrastructure upgrades (64.4%), technical support by city employees (57.8%), property tax incentives (53.3%), and low interest loans (46.7%).

Part of effective brownfields management involves promoting the properties to prospective investors and these efforts involve many groups within the city. Respondents reported that city administrators were most involved in these efforts, followed by the mayor or village president, IEPA representatives, city council, private consultants, and property owners.

Respondents were asked about information or assistance that would help them more adequately address issues or concerns associated with brownfields. Statewide, the highest priority (69.4%) was assigned to information about financing opportunities, followed by printed material about options and programs available and seminars or workshops about IEPA and USEPA programs. Presumably the printed materials and seminars would also involve financing issues. The Chicago area respondents seem more interested in financing materials and this may reflect better opportunities for project development in these cities.

Echoing the findings of the literature review, respondents have engaged in more public outreach programming regarding brownfield redevelopment including public forums (51.1%), community advisory task forces (42.2%), and dissemination of printed materials (31.1%). The case studies of successful brownfield programming confirm the importance of these outreach efforts.

Respondents were also asked about factors limiting the success of brownfield projects and highest on the list is shortage of local funds to undertake projects (3.43 on 5.0 scale). Also important are perceived potential liability (2.91) and environmental regulations (2.87). A comparison of the 2000 and 2002 surveys indicate that efforts by IEPA have helped alleviate

fears about potential liability of being involved in brownfield remediation and have encouraged the development of local projects.

Most city officials (80.4%) monitor brownfield sites regularly in a variety of ways including inspections by city personnel (65.9%), meetings with developers (61%), and meetings with city administrators (60%) on brownfield issues. In some instances, cities also have implemented institutional/engineering controls on brownfield sites in compliance with their No Further Remediation (NFR) letter.

Redeveloped brownfield projects have substantially impacted the city. On a five point scale where 5 represents a major effect, responding city officials rated improved aesthetic appearance of the community as 4.07. Respondents also stated that brownfield projects have helped prioritize local economic ventures as well as decreased perceived health risks. The importance of these objectives, rather than job creation, was somewhat unexpected and suggests that performance indicators of the success of brownfield projects should include more than job creation, private investment, and other such measures.

Results from Parcel Specific Survey

To understand the brownfield redevelopment process more completely, we requested information on specific parcels that met the survey criteria. The focus of this survey is to understand the current stage of the specific project, its intended purpose, investments made, and expectations for success in terms of jobs, investment, or other measures.

Former gasoline stations and manufacturing operations make up the largest number of brownfield projects. Gasoline stations have a variety of potential uses such as parks in the City of Chicago or parking lots or commercial ventures in the downtowns of downstate municipalities. Gasoline stations and manufacturing operations are more common in the Chicago area cities with railroad yards and multi-use sites more often reported in downstate cities. Depending on location, brownfield sites can be attractive when they are in high traffic areas and have access to infrastructure facilities.

Property Management. Based on survey responses, the largest number of projects (42.6%) are “in progress” with one-third still in the planning phase and 24.1 percent having been completed. The relatively early stage of many projects means that performance indicators will change in the next several years as the projects move toward completion. There is some evidence that relatively more projects are in the planning stage in Chicago area cities and more projects are “in progress” in downstate cities.

Projects in the Chicago area cities seem to have been idle for relatively longer periods of time with nearly all having been idle for one year or more. By contrast, 25.6 percent of projects in the downstate cities have been idle less than one year.

A majority (53.2%) of the brownfield parcels are privately-owned with an average of 38.7 percent owned by the city. Relatively few of the city-owned parcels had been taken by eminent domain but in many instances cities had worked with owners to remediate the property for redevelopment.

Respondents (48.2%) reported having used legal access during the previous five years to secure a property from trespassers, conduct an environmental assessment, or otherwise protect public health and safety. Likewise, 42.9 percent of respondents had used regulatory authority such as liens, ordinance violations, and zoning on the properties. Approximately half (52.2%) of the parcels are located in a Tax Increment Financing zone and 17.4 percent are located in an Enterprise Zone.

The intended end-use of the brownfield properties mainly involved returning the property to industrial or commercial uses. Second most common is creating a new industrial or commercial use. Clearly, the main intent of these projects is to create jobs. However, location of a parcel can determine the most appropriate use.

Investment in Properties. The size of the projects, stage of completion, and diversity of purpose make summarizing the financial investment in projects difficult. However, estimates have been made based on the parcel surveys, and are grouped according to investment amount: small, intermediate, and large.

Respondents reported an average private investment per parcel of \$7,286 in the small investment range, \$39,786 the intermediate group, and \$1.8 million in the group receiving the largest amount of private investment. Leveraged funds were indicated for only six parcels, averaging \$3.4 million. Average state investment for brownfield parcels was \$17,447 in the smallest category, \$37,205 in the middle category, and \$156,158 in the high investment range. Average federal investment for eight properties reporting was \$325,375. Local government spending averaged \$9,725 in the small group, the middle group received an average of \$53,626 and the group reporting the largest amount of federal investment averaged \$1.6 million.

Non-monetary Benefits to the City. Respondents reported several non-monetary benefits to the city arising from the specific brownfield projects examined in the survey. Eighty four of the respondents to the parcel surveys reported the highest valued benefits (3.7 on 5.0 scale) are improved aesthetics of the neighborhood. Next in importance is the increased marketability of the property (3.3). Also reported, but of lower perceived importance, is that residents are more conscious about environmental issues (2.3) and new more environmentally-friendly businesses have located in the city. The responses are fairly similar between the two city types except that increased marketability is relatively more important in downstate cities. Lower crime and drugs seem more important in the Chicago area.

A substantial number of jobs have been retained (67) or created (75) by the projects examined in this study. Given the relatively early stage of development, this number will probably increase in the future. Respondents also reported that the redevelopment effort had increased the number of jobs compared with five years earlier. Likewise, respondents reported that compared with five years previously, the new jobs pay the same or more. This is especially true in the Chicago area cities.

Respondents were asked about the overall success of the brownfield projects. On a five point scale, Chicago area respondents rated that success 4.0 compared with 3.46 for downstate cities. These responses are probably affected by the fairly early stage of some of the projects whose outcomes have yet to be determined.

Case Studies

The most complete understanding of the brownfield redevelopment process is obtained from talking with city representatives and business investors involved in the ventures. In this project, we selected four cities of different sizes and with diverse projects. Alton (pop. 30,496) in the St. Louis area engaged in two major projects involving a former glass container plant that is being turned into commercial and office space, and a former steel mill that has just recently been renovated to manufacture specialized steel products.

Calumet City (pop. 39,071) in the south suburbs undertook retail redevelopment efforts to clean up a blighted downtown district. Monticello (pop. 5,138) in south central Illinois engaged in a cleanup process of a drug manufacturer and is currently considering alternative uses. Sterling (pop. 15,451) faced a closure of a steel and wire manufacturing company and, building on rail facilities and assets on the site such as major furnaces, is converting the properties to a variety of uses.

A fifth study was conducted on brownfields located in the City of Chicago. The sites include: a former construction and demolition waste recycling facility that has been redeveloped into a green technology center; an abandoned “mixed-use” property converted into mixed-income housing; a former drive-in movie theater/illegal dumpsite that has been developed into an industrial park; and a massive steel mill site which now includes a manufacturing and distribution facility, as well as city park space.

In each example, local officials undertook a different approach and are in different stages of project development. Researchers talked with local public officials, city administrators, and business investors in each community. Several common themes arose in the discussions. First, in all instances, city officials or administrators took the lead in organizing the brownfield redevelopment process. Sometimes they had a definite plan and purpose in mind while in other cases the projects were started to remove an eyesore and then business investors played a major role in guiding the development process. However, in each case, it was important for the city to remove the liability issue by organizing an assessment process and finding funding to undertake it.

Second, the role played by the Office of Brownfield Assistance in IEPA cannot be overstated. Local officials, in most instances, were unaware of the programs available and how to proceed. In some cases, there was substantial apprehension regarding the liabilities involved and the IEPA’s role was important in removing some of these concerns as well as in helping to secure funding.

Third, cities with a clearly stated vision and plan were able to move quickly in the redevelopment process. Sterling is an excellent example of this approach. The city council clearly stated that it did not want to have the vacant properties be a drain on the city. That vision, combined with a clear action plan, moved the redevelopment process along and led to property disposition.

Fourth, business investors, willing to work with city officials, are essential to project completion. In most instances, the city government had incorporated the brownfield projects into their economic development approach, although in some instances, a written development

strategy does not exist. Sometimes city officials aggressively marketed the properties using local incentives. Other cities announced the properties and benefits and then worked with potential business opportunities as they arose. Part of the specific strategy depends on whether the parcels were intended for commercial or industrial use.

Fifth, follow-through on project development is important and is obvious in the cities interviewed. In some instances, the redevelopment process will take many years and will have to continue through several city administrations. Having a well thought-out development plan will increase the chances that this continuity will happen.

Concluding Observations

Brownfields exist in most Illinois municipalities, regardless of size. In some cases, they may be a former gasoline station while in others they can include a large manufacturing plant. In still other instances, underground storage tanks from many years ago may exist and local public officials, as in the case of Calumet City, may not even be aware of them.

Returning these properties to productive use is in the best interests of city residents and programs exist to help community leaders design effective projects. The city can play a key role in defining or removing the potential liability so that potential buyers are comfortable in making a substantial investment. While local officials, especially in small towns, may have some trepidation in engaging in brownfield redevelopment projects, fortunately substantial technical assistance exists in IEPA and DCEO to help with these projects. This report can provide insights into some of the major issues involved.

Brownfields Cleanup and Reuse in Illinois Municipalities

Abandoned properties, especially those contaminated with chemicals, have been a problem facing municipalities for many years and have been the subject of many policies and programmatic attempts aimed at cleanup and redevelopment. While these properties can be costly in terms of cleanup, they also can represent opportunities for redevelopment, especially in cities with potential industrial and business expansion, but with limited available land.

While many, if not most, cities contain some vacant properties, not all sites are considered brownfields and are not eligible for federal and/or state programs. Specifically, in state programs, a brownfield is defined as “a piece of property, commercial or industrial, which is contaminated or is perceived to have contamination. This property may be abandoned, vacant, or underutilized. The property also has the potential for redevelopment.” There is no accurate number or complete list of brownfields in Illinois. However, 2,118 properties have been enrolled in the Site Remediation Program which is the state’s voluntary cleanup program.

Local public officials have a vested interest in addressing the brownfield issue for several reasons. Most obvious is the protection of the health and safety of residents. When brownfield sites contain dangerous chemicals, pesticides, or other toxins, action must be taken to remove them. Other reasons for action include the fact that abandoned properties are eyesores and can lower the value of adjacent properties, especially when they attract vandalism, crime, or other problems. Aesthetics in the community are important and represent a major stimulus for actions to remediate a brownfield property. Redevelopment of a property also increases its assessed valuation when the property is returned to productive use.

A study of brownfield programs in 387 Illinois municipalities in 2001 concluded that economic development was not always the main motivating factor for local involvement in state remediation programs (Walzer, Duncan, and Sutton 2001). In fact, the most often cited reason for cleanup and redevelopment reported by mayors responding to a mail survey was the removal of unsightly buildings, followed by attempts to increase tax revenues for the city. Increasing the financial return on unused or underutilized property was cited next in importance, followed by adding new business in untapped markets. Mayors rated these factors as “important,” as opposed to “very important”.

Regardless of whether economic considerations are the main motivation for involvement by a city in brownfield redevelopment, they are nevertheless important. The encouragement and involvement of businesses in the redevelopment process is important for cities seeking to remediate brownfield properties.

However, to stimulate interest by businesses in a brownfield site, the cost of the property, including possible remediation, must be competitive with greenfield sites. Businesses often

find it easier and less expensive to start with a clean property rather than risk the problems and delays associated with contaminated properties. City leaders and state officials often can influence these decisions by providing attractive alternatives and working with business investors to minimize the liability and/or assist with various phases of the assessment and cleanup process.

This report examines actions by Illinois cities that have participated, in some way, in the brownfield remediation process with the Illinois Environmental Protection Agency (IEPA). Specifically, the cities studied met one of the following criteria: a) received a No Further Remediation letter from the Site Remediation Program; b) obtained an Illinois Municipal Brownfields Redevelopment grant; c) received a Targeted Brownfields Assessment performed by IEPA; or d) obtained an USTFields Pilot Grant from the U.S. Environmental Protection Agency (USEPA). A total of 86 Illinois municipalities met one of these criteria in 2002 and were surveyed as part of this project.

The report addresses several main issues. First, the professional literature on brownfield uses and ways in which to measure outcomes is reviewed to identify the state of the art on measurement and best practices. Second, economic conditions in the municipalities and former uses of the properties are examined to determine the extent to which these uses affect the ability of cities to remediate the properties. These economic conditions can sometimes affect policy decisions regarding brownfields.

Third, the financial investment made in the properties and the expected outcomes were examined where possible. Because many projects are in the early stages of development, investment information was not available in some instances. While job creation and private investment are fairly easy to measure, the contribution of many projects such as parks are more difficult to assess.

Fourth, the literature on the measurement of outcomes was examined and discussions were held with local officials to determine whether these measures might be used in Illinois. This information was gathered in five case studies of cities that had taken alternative approaches to brownfield redevelopment.

Finally, the differences in city involvement in the brownfield program are analyzed when cities are grouped into those where local economic conditions are not prosperous versus those cities with healthy economies or that are perhaps even facing growth constraints. City involvement in the brownfield program, as noted previously, is not always motivated by possible job creation; but certainly poor economic conditions can represent a stimulus for involvement in brownfield remediation.

Methodology

This project involved three stages of data collection. First, a mail survey containing questions about municipal policies and practices toward brownfields was undertaken of the 86 cities that met the criteria listed above (Appendix A). This survey was sent to mayors in fall 2002 and 52 (60.0%) provided usable information¹.

¹This number of cities should make the responses accurate to plus or minus 13.6 percent. Consequently, results can be projected to the rural population with confidence within a 14 percent error.

The average population size of responding cities was 26,087, with populations ranging from 605 to 150,115. When compared with Illinois municipalities overall, the distribution of cities leans toward larger cities with 32.7 percent (17 cities) larger than 30,000 and 19.2 percent (10 cities) smaller than 5,000. This compares with the statewide distribution of cities with 50 percent (66 cities) larger than 30,000 and 75.5 percent smaller than 5,000.

However, the universe for this study is not the entire state; rather, it is limited to municipalities that meet at least one of the criteria set forth. Compared with the potential sample (86 municipalities), the respondents are similar in population size to the universe for this study, 26,087 for the sample versus 26,022 for the universe. When compared to the group of potential respondents, the responding sample experienced population growth of 9.3 percent as compared to 11.1 percent for the universe from 1990 to 2000. Thus, the responding sample cities experienced somewhat slower growth than the group of potential respondents. Additionally, the percent of elderly population for the responding sample was higher (13.7%) than for the potential respondents (12.5%). Per capita income for the responding sample cities was slightly lower (\$22,155) than that of the sample universe (\$22,684).

Because the number of municipalities involved in the brownfield program is relatively small, most of the analyses are presented by region of the state—downstate compared with Cook and the collar counties. The analyses are also organized according to a self-reported assessment of the economic status of the city—prosperous versus stable or declining economic conditions. These comparisons can sometimes help isolate factors affecting the approaches taken by cities. In several instances, specific projects are discussed in more detail to illustrate a point.

The second mail survey asked for information on specific brownfield parcels in municipalities that meet the criteria listed above. Each city received a separate survey for each brownfield property (Appendix B). The parcel-specific survey gathered information unique to that parcel, and is designed to analyze the dynamics involved in the brownfield remediation process, as well as interactions between private investors and city administrators in working with the brownfield programs.

A total of 229 parcels were identified and questionnaires were sent to agencies involved with managing these properties. Statewide, 121 completed questionnaires were returned (53%) which should provide a confidence interval of plus or minus 9 percent. The questionnaires requested detailed information about the investments made, expected returns, jobs created, and related issues. Incomplete responses, submitted mainly because of the early stages of the projects, limited the analyses somewhat. Nevertheless, substantial insights into the intended uses of the projects and the approaches taken are available.

The third phase of the project involved case studies of five cities with brownfield projects underway. Interviews were designed to discover how community leaders had successfully used the brownfield remediation program to remediate and revitalize the properties and to learn more about the obstacles they faced. Cities were selected to illustrate a specific management approach or issue but were also selected by size and region to adjust for other factors that might affect the decisions. The cities examined include Sterling (pop. 15,451), Alton (pop. 30,504), Monticello (pop. 5,138), Calumet City (pop. 39,000), and Chicago (pop. 2,896,016).

As background, the 2000 Illinois survey provides a rich data set of the types of brownfield properties in cities, obstacles faced, and approaches to brownfield remediation that is useful in the current study. Some of this information has been included in the current study to provide a background on decisions and approaches taken. A total of 31 cities responded to both the 2000 and the 2002 surveys.

Literature Review

There has been a large amount of discussion of the need for brownfield redevelopment and this concern has triggered a substantial amount of research on various aspects of brownfield management practices. In this section, we briefly review some of this research as background for the surveys undertaken in municipalities in Illinois.

Early Brownfields Research

Because brownfield redevelopment is a relatively new mechanism used by private developers and local officials/administrators, much of the early research focuses on technical options and explanations presented in a guide type of format. These materials are most useful to environmental engineers and real estate developers. Because governmental brownfield policy was just being created, a majority of the material covers what might be called the remediation “chemistry” of the issue.

Moreover, emphasis remained for a long time on defining and redefining particular characteristics of brownfields in diversified scientific contexts and policy arenas which had implications for the development of legal and regulatory frameworks. Numerous works of this type were published in the mid to late 1990s, offering useful, yet *similar* information.

An early and comprehensive example of this guidebook trend was an article compilation edition geared towards professionals involved in redeveloping contaminated property, published by the American Bar Association in 1997 (Davis and Margolis 1997). The work included extensive references regarding legislation, regulation, judicial decisions and agency publications associated with this type of real estate transaction. Furthermore, it offered practical recommendations for the private brownfields redeveloper.

A similar publication was presented two years later in a work specifically geared towards brownfields rehabilitation in Cook County, Illinois, focusing primarily on a detailed description of the state of Illinois Tiered Approach to Corrective Action Objectives (TACO) (Rafson and Rafson 1999). While case studies of city and state programs were highlighted, the focus remained primarily on the technical remediation options available for the developer, with little attention given to comparative long-term results expected from these initiatives.

Brownfields Redevelopment as a Tool for Economic Development

In 1991, the Northeast-Midwest Institute took the lead in addressing brownfields in terms of economic development by emphasizing the benefits of industrial reuse in urban America (Bartsch, Seitzman, and Cooney 1991). Later in 1996, Charles Bartsch, Elizabeth Collaton and

Edith Pepper introduced *Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Opportunities* (Bartsch, Collaton, and Pepper 1996). The piece is widely regarded as the first to adequately explore the economic and environmental linkages inherent in the brownfields issue. This work moved brownfields beyond the boundaries of the private sector and focused on contamination; not only as an environmental problem, but also as an economic issue worthy of serious policy consideration.

Bartsch, Seitzman, and Cooney dealt with the pervasive existence of brownfields on a nationwide scale. More importantly, they gave credence to the notion that in so many of these situations, private developers and financiers are unable or unwilling to pursue remediation. The overriding premise of the authors was that inactive brownfield sites precipitated lost tax revenue, unemployment and underutilization of infrastructure. They claimed that vigilant attention to development priorities by the community would reverse patterns and potentially return investment to the city.

In the final analysis, Bartsch, Seitzman, and Cooney proposed the primary focus of a public sector approach to redevelopment by using state- and federally-sanctioned financing tools in urban areas. This work set a stylistic precedent that would remain intact for the short-term—the practice of utilizing descriptive case studies to highlight brownfield success stories. This particular notion does not negate the propensity for further research; it simply demonstrated the fact that brownfield outcomes/benefits were not entirely measurable in the short term. In fact, in a majority of cases, many years pass before the effects of redevelopment on communities become evident. The result of this is that a significant amount of the early literature on brownfield redevelopment is anecdotal.

Public Sector Brownfields Redevelopment

In 1997, Edith Pepper of the Northeast-Midwest Institute, examined the brownfields redevelopment issue more deeply by presenting lessons learned from brownfield case studies. Her study demonstrated a direct link between success and public sector involvement (Pepper 1997). She confirmed previous assertions that the public sector must be involved in local brownfield issues to alleviate liability uncertainties and help bridge the financing gap that cannot be addressed by private entities.

The investigation by Pepper takes a further step, however, by recognizing the importance of using a single coordinating entity committed to the redevelopment initiative. She also stressed the importance of a public outreach and involvement plan, crucial for community acceptance of the efforts. Pepper's analysis also showed that projects are more successful if they are a smaller part of a larger plan—making brownfields an essential element in the community's strategic vision of development.

In 1997, the Northeast-Midwest Institute also published the first edition of a reference guide, *Brownfields Development: A Guidebook for Local Governments and Communities*. This reference book reiterated many of the previous assertions made by the Institute concerning the importance of local government coordination of planning, economic development, outreach and public health issues that are part of brownfield initiatives. The 2001 edition expanded this perspective by exploring the unique benefits of well-organized *intragovernmental* coordination in communities (Kirshenber et al. 1997).

Private Sector Brownfields Redevelopment

Robert Simmons addressed the role of private sector involvement in brownfield redevelopment in his report, *Turning Brownfields into Greenfields: Developing and Financing Environmentally Contaminated Urban Real Estate* (Simmons 1998). While he considers the municipal role in redevelopment, he urges against positive government encroachment in the issues over the long haul. The intent of Simmons' work was to strengthen private sector involvement by educating real estate professionals and other public players about steps involved in redeveloping brownfields.

While Simmons agreed that local governments were most likely best qualified to determine the proper use of subsidies in rehabilitation, he stressed the idea that government should be a secondary partner to the private entities. Moreover, he argued that public sector funds should be limited and leveraged using public money rationally.

The public sector should definitely play a role; however, the intent is to create an environment that spurs private interest and investment. Economic measures of success are most important in this approach. Little, if any, emphasis is given to the role of the general public—beyond a statement that development should be encouraged.

A basic overall problem, according to Simmons, is a general lack of knowledge about brownfields by residents. To increase public awareness, Simmons suggests that the role of the local government should include developing and disseminating information about brownfields and the positive opportunities associated with their potential redevelopment.

Peter Meyer and Thomas Lyons also approach brownfield redevelopment from a private sector perspective (Meyer and Lyons 2000). While they agree that the traditional public sector approach to rehabilitating municipally-owned brownfields succeeds in many cases, in other cases, the approach is inherently flawed. This is especially true when sites are extremely large and viewed as highly polluted. In these cases, the authors claim that local officials may be better able to pursue redevelopment initiatives more along the lines of private developers. This can be accomplished by presenting lessons to encourage local planners to more effectively intervene and encourage "market-like" behavior in the public process.

Meyers and Lyons addressed the many stigmas inherent with municipally-owned brownfields and stated that numerous developers interviewed in the study claimed the costs of having to deal with the red tape involved in the public process negated the incentives offered by government. Three major impediments were noted by those surveyed.

First, the process of competitive bidding was a disincentive due to unacceptable delays and the loss of privacy concerning development plans. Second, the potential value of the site is reduced, at least in theory, by the simple fact that it is owned by a public body; oftentimes, public acquisition of a site implies that it is so contaminated that it may never be safe for reuse. Finally, the city often has a propensity toward dictating reuse plans; such plans may be economically and socially attractive to the municipality, but not feasible for a private firm to implement.

Consequently, Meyers and Lyons offer strong counter arguments to the traditional brownfield redevelopment approach in the private sector. First, they assert that direct public subsidies for

urban areas are inefficient and should be reserved only for small and remote sites. The corresponding rationale is that many urban sites already have attractions (location on a waterfront, proximity to a large business district, etc.) that could be better promoted to spur private sector investment and interest. If needed, redevelopment funds could also be maximized by off-site investment in the infrastructure of the surrounding areas to broaden the base of investment.

Second, the practice by cities of assembling small sites into one large parcel is counterproductive, since removal of small sites from the market stifles small business development. Third, secrecy, rapidity and flexibility in zoning and land use must become a priority.

Public Participation: Community Based Organizations & Local Residents

Through the years, the trend towards greater public participation has grown until, by the late 1990s, brownfield issues had clearly moved far beyond the simple guidebook approach. Furthermore, the practice of solidifying initiatives in the public realm, not just in the private sector, was also apparent. In a case study of Community-Based Organizations (CBOs), Kibert, Vetica, and Kibert followed the direction started by the Northwest-Midwest Institute, stressing the importance of the community participation component in brownfields (Kibert, Vetica, and Kibert 1999). The study did not seek to sideline the role of local government in the process, but rather sought to reinforce the notion that CBOs are well suited to act in communities as a liaison between the public and private sectors.

Kibert, Vetica, and Kibert claim that CBOs can serve as a link between government and community members by ensuring that the development process does not marginalize them. Moreover, they are also perfectly suited to serve as a link between government and the business community because they deal with both the private and public sectors on a regular basis. Hence, in the rehabilitation process, CBOs might serve as educators, information brokers and facilitators for brownfields redevelopment.

In studies of brownfield problems in Ohio, Faith Dylewski explored the strength of community participation in the redevelopment process. She noted that such participation is a crucial ingredient in successful brownfield initiatives often overlooked because residents are at odds with the "market-oriented" goals of developers and local governments (Dylewski 2001). She stresses that local governments must recognize the potential conflict, and to ensure long-term success of projects, should work with the community to guarantee that both groups achieve the common goal of revitalization.

According to Dylewski, although community participation could take many forms, the traditional focus has been on the public forum. Moreover, while the public forum is not the only way to obtain input, through its usage, it is a vehicle for community members to make a real difference.

Dylewski also suggests the notion of the "working group," defined as a group of community leaders (possessing expertise in a variety of areas) who work closely with local officials on brownfield issues to pursue remediation techniques that reflect the broad community interest. While her results validate similar studies by other researchers regarding community

participation, they advance the participation concept by testing the value of various participation techniques.

Michael Greenberg and Jane M. Lewis are among many researchers who linked brownfield research to specific property uses (Greenberg and Lewis 2000). In a survey of 200 residents in a largely Hispanic census tract, three-quarters of the respondents expressed interest in brownfield redevelopment projects that affected their community. The residents did not always agree with local officials and planners that reuse should aim at industrial or commercial ventures; instead, recreational and cultural projects, as well as housing facilities were of higher importance.

The conclusion of the study is that while the U.S. brownfield initiative is concerned with returning commerce and industry to underutilized city areas, government and business interests must commit to working with residents to build support and acceptance for these types of projects. Furthermore, programs must also fund reuse options which residents are inclined to readily accept as quality-of-life oriented if the projects are to be embraced.

Greenberg continued to pursue the issue of housing on brownfield sites. His basic thesis was that brownfield sites provide a ready supply (and in many places, the only supply) of available land in areas where housing is needed (Greenberg 2002). Furthermore, affordable housing improves the quality of the neighborhood overall; not only by aesthetic improvements, but by inspiring spiritual and physical renewal of the neighborhood, whereby schools, parks or other community-oriented facilities are also pursued.

Greenburg made three main points in considering brownfield sites for housing. First, local officials and residents should be involved, not only because participation is important, but because stewardship is also important. Officially or unofficially, local officials can monitor the site and its surroundings.

Second, both the public and private sectors might be more inclined to support brownfield expenditures if the potential for recovering part of the cost from state governments increased. Finally, Greenberg moves a step further where participation is concerned, citing that public health officials should be formally involved both behind the scenes, as well as publicly. They have a responsibility to become educated on the advantages and disadvantages of the brownfield issue, and disseminate this information to the public. This role is amplified because housing is a use that concerns everyday quality of life and health for residents (families) much more than commercial or industrial ownership might.

Implications for an Evolving Policy Trend

Following a similar quality-of-life trend with a goal to influence policy, the International Economic Development Council and the United States Environmental Protection Agency explored in depth the issue of converting brownfields to greenspace (IEDC/USEPA 2001). The main focus of the report was to provide evidence that while green space may not offer large economic benefits (for this reason, funding sources are often biased against developing brownfields as greenspace), other benefits exist including cleaner air, increased pedestrian traffic, and improved neighborhood aesthetics.

The report examined 25 greenspace projects in the eastern, midwestern and western regions of the United States. These sites were developed for various uses including parks, playgrounds and ball fields, golf courses, minor league baseball stadiums, and bike trails (many of which were profit generating). Once developed, a majority of the sites were under the jurisdiction of the local parks and recreation department.

Furthermore, the report concluded that public funds contributed 67 percent of the financing for these 25 projects, with local and state funds contributing 90 percent. Most local funding was from Tax Increment Financing and bond financing, but, in some instances, dollars were appropriated from local general funds. This validated the municipal initiative for each project. The study also concluded that assessed property values in affected localities increased anywhere from 20 percent to 211 percent where the greenspace projects had been completed.

Greenberg et al. also examined brownfield remediation in medium- and small-size communities, expanding the notion of renewal beyond the scope of the inner city (Greenberg et al. 2001). Population size was an important element in the research. The authors studied nine communities in New Jersey to determine the importance of four key issues: 1) how much information the cities had regarding brownfields in general; 2) what were the plans (if any) for the sites; 3) what was the likelihood that the sites would be redeveloped within the next five years; and 4) what types of policy action could be taken by the surveyed jurisdictions.

The most important finding of the research was a large disparity in results among the communities in the study. Some of the cities had built the issue of brownfield redevelopment into their strategic plans, while others had clearly marginalized the issue (often due to lack of knowledge and expertise). Of the selected communities, those achieving higher levels of accomplishment had a plan in place that was actually a small part of a much larger scheme for development, revalidating the initial assertion made by the Northeast-Midwest Institute years earlier. Other communities lacking the ability to use these same techniques had little chance of profiting from similar scenarios.

A second important result was that brownfields were often viewed by the surveyed communities as simply economic development tools, with no visible social and environmental benefits. However, the survey was conducted through interviews with local city officials and administrators only; thus, the extent of public participation was limited. This could, of course, explain the disregard for the social and environmental factors that more often are an interest of key residents, rather than government.

Though evidence in favor of brownfields was clearly growing along with randomly published success stories, large-scale studies of redevelopment efforts performed on a regional or larger basis were rare. Walzer, Duncan and Sutton conducted a statewide assessment of how initiatives were managed and basically understood by municipal officials (Walzer, Duncan, and Sutton 2001). In their study they surveyed more than 300 Illinois municipalities throughout the state with Chicago purposely separated from other Illinois municipalities because of its size and exclusivity. The report concluded that brownfields exist in cities of virtually every size and in every location in Illinois. While many of the types and former uses are similar, propensity and techniques utilized towards redevelopment differ.

Important results were observed regarding management practices and policies regarding brownfields. First, while many local officials agreed that brownfield initiatives were important

in managing municipal growth and development; this was much more common in large cities. In addition, officials were seemingly neutral on the idea of rehabilitation as a municipal responsibility, perhaps due to lack of expertise on the issue.

Finally, policies concerning abandoned properties varied. Slightly more than 12 percent of the municipalities surveyed reported a formal plan for dealing with vacant and abandoned properties. Consequently, only one-quarter of those same entities stated they had a plan for dealing with similar properties perceived to be environmentally contaminated; and just over half of the cities reported an informal, rather than written, plan.

The results suggested that brownfield rehabilitation has not been completely embraced by communities in downstate Illinois. This notion however, is not a rejection of the brownfield issue; rather it reflects a lack of knowledge about brownfields and appropriate development tools in general.

Rural Brownfields

Molly Singer conducted a case study of rural brownfield issues including the characteristics, challenges and prescriptions unique to them (Singer 2002). She presents rural brownfields as a special case, much more difficult to develop than urban brownfields because, for the most part, these areas lack the development-oriented infrastructure of large areas, especially a diversified economic base and the availability of fiscal incentives to market them.

Moreover, small jurisdictions often do not have the large administrative staffs or technical expertise required for this type of scheme. Local officials more often than not serve in a part-time capacity and juggle many projects at once (some of which require training that they have not had). The result is that projects like brownfields redevelopment are not addressed quickly or given a high priority.

Singer's study focuses on the mentor/protégé relationship between Lockland, Ohio and Orono, Maine. Several conclusions were drawn that represented best practices for brownfield redevelopment schemes in small, rural regions with constrained population size. First, communities of this size can formulate a five year plan, outlining comprehensive community development including brownfield rehabilitation as a component. Second, community participation was imperative, and it is the responsibility of local governments to educate residents, local administration and officials on the topic.

Third, local authority including the use of eminent domain and re-zoning must be applied when necessary. Fourth, local governments must accept responsibility for aggressively pursuing available funding for brownfields redevelopment. Fifth, hand in hand with fostering community participation is fostering a spirit of dedication among local administrative staff charged with managing brownfield issues. This is more important in small jurisdictions than larger ones, because budgeting and manpower are much more significant commodities in rural areas.

Sixth, it is important to encourage public-private partnerships in the brownfield process. This includes, if possible, incorporating local business retention and expansion programs and finally, when possible, forging university partnerships. This relationship can help to foster

more research into, and support for, the issues while simultaneously bolstering the technical expertise far too often lacking in small communities.

Challenges of Financing Brownfield Redevelopment

Towards the end of the 1990s, much more attention was focused on innovative financing techniques or tools available to municipalities. Bartsch advanced the financing issue by placing new focus on the leveraging of resources by local governments, offering more than prescription, by highlighting descriptions of successful options (Bartsch 1999). The work focused mainly on how lender risk might be reduced, along with borrower's costs. In terms of municipal redevelopment, he encouraged the use of tax crediting, abatement and increment financing. Furthermore, he suggested it would benefit municipalities to offer "no-cost" technical training.

Bartsch even goes so far as to suggest a local use or franchise tax for brownfield initiatives. Other suggestions include encouraging earmarked utility charges for brownfields, channeling a part of loan repayments from other programs specifically towards brownfields, funneling money raised from environmental fees to programs, and using small amounts of municipal general fund dollars to "seed" brownfield projects. These mechanisms may appeal to ardent supporters of redevelopment but they may also meet with resistance from taxpayers.

While Bartsch praises the means undertaken by the public sector to facilitate redevelopment, Haque claims that the government's role in encouraging brownfield redevelopment has actually fallen short, most recently with the Internal Revenue Code Section 198 (Haque 2002). Haque's essay, clearly written to influence policy, states that while the legality was adopted to encourage investments, it defies vertical tax equity as it is biased in favor of individuals in high tax brackets. Furthermore, the tax deduction for brownfield remediation is really a tax deferral, because it is re-taxed as income after the property is redeveloped and sold. Hence, since remediation costs are still inherent in the project, it remains less expensive to develop a greenfield property.

Haque's main contention is that investors will always seek the least cost development mechanism, but government (responsible for the public welfare) has the ability to lessen the burden for private sector developers, while increasing social, economic and environmental benefits to communities. Hence, it should be mainly the government's responsibility to put forth incentives to make brownfield investments profitable.

Implications for Future Research

Many authors understand the importance of furthering brownfield research, advancing beyond studies of performance specific to an individual brownfield site, to studies analyzing how efforts affect qualitative issues that closely relate to redevelopment, or may even be precipitated by it. Research shows that the demand for industrial real estate has slowed and future growth is expected to be in the distribution and flexible service industries.

Finally, research has demonstrated the benefits of brownfields (inner-city) versus greenfields (in non-metro areas) redevelopment with respect to transportation planning. Results confirmed that brownfield redevelopment can lead to lower transportation costs and cleaner air with basic quality-of-life improvements for the region as a whole.

Future research regarding brownfield issues could help define baseline measures for other indicators including unemployment, drug use, crime, and even school test scores in blighted versus rehabilitated areas. The better the relationships between environmental cleanup and economic development is understood, the more likely brownfield improvements will positively influence quality of life.

Trends in Performance Measurement

In January 2002, the *Small Business Liability Relief and Brownfields Revitalization Act* authorized \$200 million through FY06 to promote brownfield redevelopment. This legislation, combined with the requirements set out by the Government Performance and Results Act, has major implications for the quality, reporting, evaluation and collection of brownfields program data. In terms of improving performance management, clear measures must be developed and adhered to in order to aid EPA to better understand the role of brownfield redevelopment in protecting the health of Americans, as well as our natural environment and ecosystem.

Meyer addressed the evaluation issue as early as 1998, with regard to both public and private redevelopment, comparing state voluntary cleanup programs (Meyer 1998). He identified several factors used by states in the initial ranking of brownfield site selection priorities: neighborhood characteristics, potential tax base increase, expected job creation, reduced threat to public health and environment, etc. However, these factors were not tied specifically to outcome measurement.

The evaluative criteria for both public and private redevelopment used by Meyer were based on four key concepts pertaining to site redevelopment: time horizon, policy efficacy, policy efficiency and policy effectiveness. In his analysis, Meyer leaned towards area-based regeneration (public), as compared with site-specific redevelopment (private), stating that improved evaluative criteria utilized by public sector planners will have positive effects for both sectors—not only by spurring investment, but also by helping to shape policy that directly affects site market value at the end stage.

The current emphasis on brownfield rehabilitation is increasingly geared towards formal performance measurement in all aspects of site remediation, especially as the competition for federal funds increases. Marante and Reynolds examined the issue and the many challenges surrounding it (Marante and Reynolds 2002). The rationale is that specific data are becoming much more important to ensure continued funding for brownfields, and most programs were established without sufficient attention to a vehicle for measurement. Five important questions are at the forefront of these discussions:

1. what should be measured
2. how will variables be quantified
3. how will diverse community goals be dealt with
4. what data are available
5. how often should the data be updated

Proposed approaches include rating techniques, index measures or indicator approaches. The initial problem remains, however—the measurable data are simply unavailable in most cases. This fact validates the importance of changes in program priorities and policy, and analysis of brownfield rehabilitation results nationwide. Moreover, it is an area where further research and clarification is clearly needed.

Most recently, the International City/County Management Association (ICMA) has begun to assess the success measurement aspect of brownfield redevelopment, through an analysis of several showcase communities nationwide (ICMA 2002). Though the ICMA disclaims that the recommendations are not meant to serve as a “how to,” they are a substantial point of reference regarding measurement indicators used by showcase communities.

The ICMA study found that, aside from the required documentation being submitted to entities such as the Environmental Protection Agency (EPA) or the Economic Development Administration (EDA), no uniform tracking process is in place. While most communities stated they do not use formal performance measurement techniques regarding brownfields, they collect certain types of quantitative data for reporting purposes. This information, however, is not used to assess or make program changes.

ICMA identified four measurement categories for collecting and analyzing data. First, *economic measures*, including job creation and retention; funding availability; housing and real estate issues; and access to, or expansion of overall economic conditions in a given area. Second, *community measures*, including quality of life factors; levels of citizen involvement; and the degree to which projects serve as a catalyst for broader improvement (externalities). Third, *environmental measures*, including overall environmental quality; public health and safety upgrades; the development of sustainable industries; and reduced sprawl. Finally, *governance measures*, contributing to improved local government function and evidence of collaborative stakeholder relationships and/or public-private partnerships.

While the previously mentioned categories have inherent challenges, involved stakeholders should decide which appropriate mix will yield the best performance measures for each brownfield project and how this data should be used to mitigate negative results or improve overall outcomes. Furthermore, the best performance measurement scheme combines both qualitative and quantitative data, stemming from a specific vision, set of goals, and clear objectives for the site.

As noted previously, relatively few studies have compared policies and actions by municipalities regarding brownfield redevelopment. The next section of this report analyzes the results of a 2002 survey of Illinois municipalities that have met one of four criteria for involvement in a brownfield remediation process. The findings are organized to illustrate, when possible, some of the issues identified in the literature review.

The number of vacant and abandoned properties (VAP) and the previous uses of the sites can be seen as implications as to the overall economic well-being of the city, as well as the economic feasibility of remediation and redevelopment. The following results were obtained from the 2000 survey.

- Statewide, 61.3 percent of responding cities in the 2000 survey reported that 5 percent or fewer properties were vacant or not fully utilized, while only 10.8 percent indicated

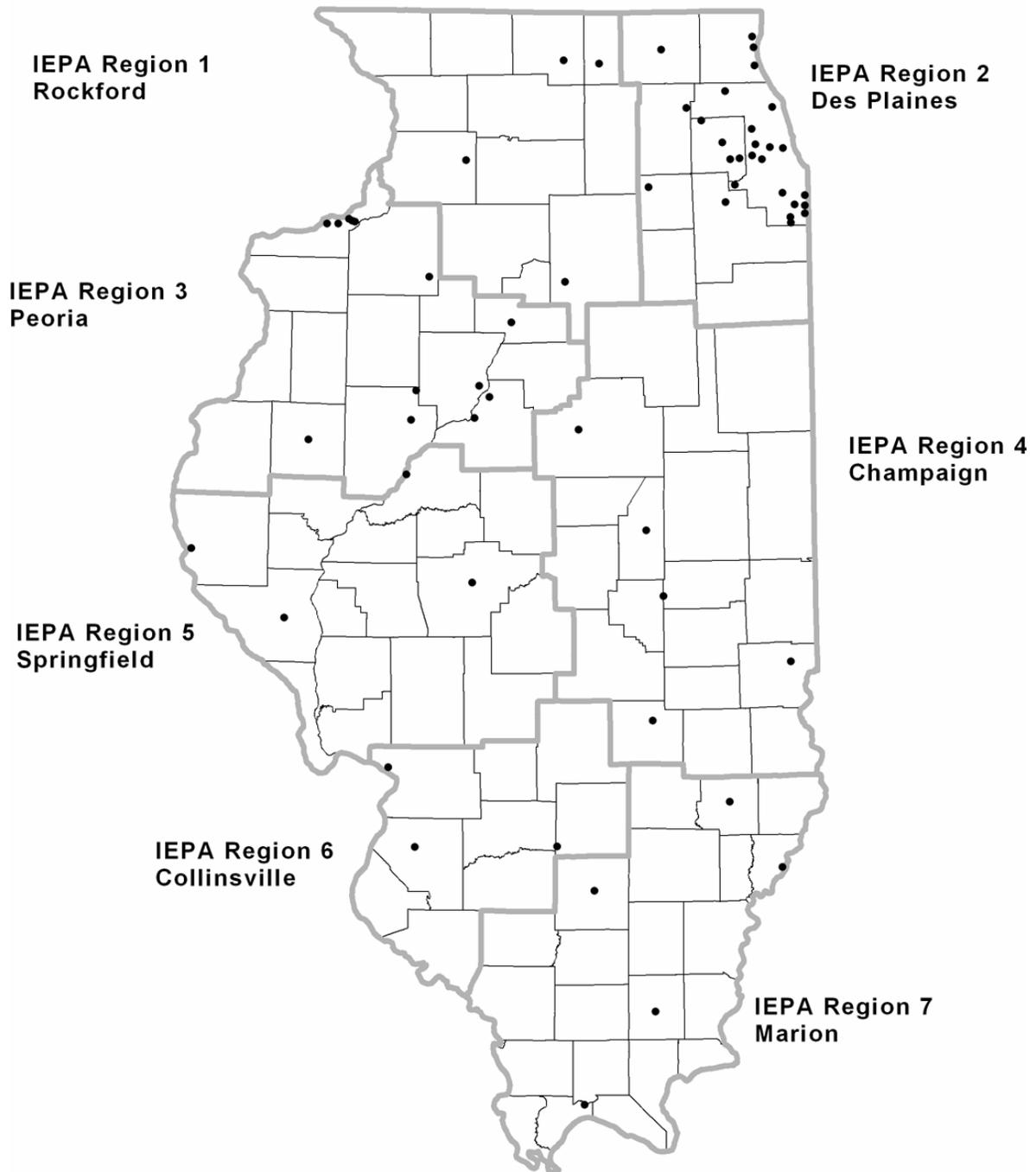
a property vacancy rate of more than 20 percent, signifying that the majority of respondents were experiencing strong or stable economies. As could be expected, a greater percentage of smaller cities and rural areas possess properties with a more than 20 percent vacancy rate than do larger cities and metro areas.

- The most predominant type of VAP statewide was gas stations, with 69.1 percent of respondents reporting the existence of closed gas stations in their municipalities. Former gas stations pose remediation concerns due to the possibility of leaking underground storage tanks.
- Former manufacturing plants were located in 35 percent of the responding municipalities, more often located in larger cities than smaller ones. Because of their size and potential contamination risks, such sites can represent extensive remediation costs.
- To a lesser degree, dry cleaners (12.4%), warehouses for petroleum products or chemicals (12.4%), and stores selling oil, gasoline, or chemicals (9.6%) were indicated as VAP. Additionally, other properties mentioned included mills, foundries, grocery stores, auto dealerships, and junkyards.
- Manufacturing plants, dry cleaners, and foundries were more often found in larger municipalities, while smaller municipalities indicated a greater number of petroleum or chemical warehouses, stores selling oil, gasoline, or chemicals, and mills.

Economic Conditions

Given the relatively small number of cities (86) that have participated in the Brownfield Remediation program, the cities were grouped into downstate Illinois (IEPA regions 1, 3-7) and Cook and the collar counties (IEPA region 2) (Figure 1). According to the 2000 census, the average population of downstate cities responding to the survey was 24,886, compared with 27,723 for the Chicago metro area. In addition, the Chicago area municipalities are wealthier and more prosperous by most economic measures. The Chicago area municipalities had an average per capita income of \$27,329, compared with \$18,361 downstate and \$23,104 statewide. Likewise, the average unemployment in Chicago area cities was 7.2 percent in 2000, compared with 4.9 percent in the downstate cities.

Figure 1. Survey Respondents



Note: A total of 61 municipalities returned one or both surveys and of 52 cities returned the general survey. There were 121 parcel specific surveys returned by 48 municipalities. Both types of surveys were returned by 39 cities.

The literature review identified the fact that during the economic recession the demand for industrial property has declined, especially as the economy shifts to services. Mayors surveyed were asked to describe the demand for commercial property in the municipalities (using a five point Likert Scale). The demand for development property in a community can affect or determine the interest by municipal officials in remediation and redevelopment possibilities for vacant land.

Previous analyses in Illinois demonstrated that rural areas had limited demand for property to develop; thus the incentives for brownfield remediation are lower in rural than in metro areas (Walzer, Duncan, and Sutton 2001). Among mayors in downstate municipalities, 83.3 percent reported limited demand, if any, for commercial properties or at best, some demand for inexpensive buildings (Table 1). This compares with 45 percent of municipalities in Cook and the collar counties reporting this level of demand.

Table 1. Commercial and Industrial Demand for Property

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		Percent	Number
	Percent	Number	Percent	Number		
Commercial demand for property in municipality						
Limited, if any, at present	20.0	6	15.0	3 ^a	18.0	9
Some demand for inexpensive buildings	63.3	19	30.0	6	50.0	25
Significant demand for land on which to build	16.7	5	40.0	8	26.0	13
Waiting list for available properties at market price	--	--	5.0	1	2.0	1
More demand than properties available in city	--	--	10.0	2	4.0	2
Demand for industrial property in municipality						
Limited, if any, at present	30.0	9	36.8	7	32.7	16
Some demand for inexpensive buildings	53.3	16	42.1	8	49.0	24
Significant demand for land on which to build	16.7	5	10.5	2	14.3	7
Waiting list for available properties at market price	--	--	5.3	1	2.0	1
More demand than properties available in city	--	--	5.3	1	2.0	1

^a Significant at 5%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

Likewise, only 16.7 percent of downstate cities reported “significant demand or more” for commercial property compared with 40 percent of the Chicago area cities. This is not entirely unexpected, given the relative concentration of retail sales in shopping centers and large metro centers in downstate Illinois. The downtowns in smaller communities have experienced declines as more residents work and shop in regional centers.

The situation for industrial properties was described somewhat differently with 83.3 percent of the downstate respondents reporting limited demand or at best some demand for inexpensive buildings. However, the comparable response from Chicago area municipalities was 78.9 percent. This may partially reflect the current economic downturn nationally, as well as the fact that Illinois has lost manufacturing in recent years and this decline has affected metro as well as rural areas (Walzer, Gruidl, and Sutton 2002).

The perceived lack of demand for commercial and industrial property could affect the involvement of local public officials in brownfields programs because, statewide, over

two-thirds (68%) reported limited demand or at best some demand for inexpensive commercial properties and 81.7 percent reported limited or at best some demand for inexpensive industrial property. This climate clearly does not create a major interest in property redevelopment for business uses. It is possible, however, that recreational or other uses might offer other opportunities for development.

Number of Brownfields

The numbers and types of brownfields in municipalities can affect the strategies adopted. Responding municipalities reported an average of seven parcels representing 901,677 square feet owned by the city, five parcels including 1.8 million feet owned by the private sector, and four parcels averaging 4.5 million square feet owned by other entities (Table 2). A comparison of parcels by type of city shows that, on average, parcels in downstate municipalities are larger in area, perhaps reflecting the relatively lower density of land use in areas where land prices are lower. These differences held regardless of which group owned the properties.

By and large, ownership of the properties in terms of square footage is divided between private businesses (54.3%) and a municipality (26.8%) with a statewide ratio of two to one. However, within the downstate group, a much higher proportion of the properties (60.3%) are owned by the private sector compared with 36.1 percent in the Chicago suburban area.

Relatively few (33.4%) of the parcels had had environmental assessments performed at the time of the survey. The assessments are slightly more common in suburban cities (36.2%) than those in downstate (31.6%) areas. Likewise, substantial differences were reported between prosperous cities (44.0%) and cities with a stable or declining economy (28.7%) in terms of assessments.² At this point, one can only conjecture, but it seems reasonable that more prosperous cities have more incentives and funding resources to participate in brownfield remediation projects, and the data seem to confirm this notion.

On the other hand, the number of square feet that was reported as having been remediated and returned to productive use by suburban cities (92,890) was substantially less than the 506,014 reported by downstate cities in the past five years. This difference reflects the larger average size of parcels in the latter group. Also, the average number of square feet rehabilitated and returned to productive use (77,900) in suburban cities during the previous year was substantially more than the 55,597 reported by downstate cities.

Actual and Planned Uses

Mayors were asked about the main actual or planned final uses of the rehabilitated properties and were given several possible options. Returning the property to industrial or commercial use was reported by 22 cities, statewide, and an average of 1.3 million square feet is involved (Table 3). The average square footage in downstate cities is substantially larger; but two exceptionally large parcels included in the survey—the Sterling Steel site located in Sterling, Illinois (8.7 million square feet) and the railroad yard site located in Carbon Cliff, Illinois

² Respondents were asked to describe the economic conditions of their municipality; cities reporting either stable or declining conditions have been labeled non-growth as compared with those reporting expanding or prosperous economic conditions. This terminology will be used in subsequent tables.

(7.0 million square feet)—skewed this figure. If the Sterling and Carbon Cliff properties are excluded, the average square feet of property returned to industrial or commercial use is 766,309 square feet per downstate city, and 650,333 square feet per Cook and collar county location.

A statistically significant difference was found between prosperous cities and declining cities, with the latter more inclined to report plans to return brownfield property to industrial or commercial property. The economic setbacks experienced by declining cities may involve shutdowns of industrial plants or commercial facilities, and replacing the employment and utilizing the previous industrial or commercial property is the objective of these communities.

Slightly fewer respondents (15) reported plans to remediate the properties to start new commercial or industrial uses. These uses include various retail establishments such as grocery stores and restaurants, as well as government buildings and a not-for-profit facility. This conversion was more often reported by non-growth cities—and again, the size of the average property reported in the non-growth cities was nearly four times that reported by prosperous respondents. This substantial difference in property size results from three exceptionally large properties located downstate.

Mixed residential, industrial, and commercial uses was the next most often reported planned use according to eight survey respondents, with these respondents equally divided between prosperous and non-growth cities. The main difference, however, is in the size of the property involved—much larger in the non-growth cities. This finding is explained mainly by the inclusion of the Owens-Illinois Glass site located in Alton, Illinois (7.0 million square feet)—an extensive and ongoing redevelopment project currently comprised of a business park designed for office and light industrial use; as well as East Moline (2.2 million square feet)—with planned final uses including condominiums, a manufacturing facility, convenience stores, an interpretive center, a sports complex, and an office building.

Seven respondents, almost evenly split between prosperous and non-growth cities reported property redevelopment for use as public space, such as parking lots. Once again, the average size of the parcels involved was substantially larger in the non-growth cities. Remaining respondents reported converting properties to parks and recreation, transportation and, in a few cases, land is being held for further development.

Table 2. Brownfield Characteristics

Question	EPA Region						All Respondents	
	Downstate Illinois		Cook & Collar		IEPA Region 2		Mean/Number	Number
	Mean/Number	Number	Mean/Number	Number	Mean/Number	Number		
Number of Brownfield properties in municipality?								
Average number of properties owned by municipality								
Average square feet reported	8	17	4	11	7	28		
Minimum square feet reported	1,093,070		605,888		901,677			
Maximum square feet reported	400		8,160		400			
	5,350,000		3,100,000		5,350,000			
Average number of properties privately owned								
Average square feet reported	5	14	6	14	5	28		
Minimum square feet reported	3,049,421		604,664	a	1,827,042			
Maximum square feet reported	10,000		20,000		10,000			
	19,602,000		2,613,600		19,602,000			
Average number of properties owned by another entity								
Average square feet reported	3	1	4	3	4	4		
Minimum square feet reported	9,583,200		2,765,333	a	4,469,800			
Maximum square feet reported	9,583,200		1,100,000		1,100,000			
	9,583,200		4,356,000		9,583,200			
Square footage (overall percentages)								
Owned by the municipality	26.2	17	28.5	11	26.8	28		
Owned privately	60.3	14	36.1	14	54.3	28		
Owned by another entity	13.5	1	35.4	3	19.0	4		
Approximately how many of the above properties have had environmental assessments performed?								
Mean	3	22	3	17	3	39		
Total	67		51		118			
Percent of total Brownfield properties	31.6		36.2		33.4			
Approximately how many square feet of Brownfield's have been rehabilitated and returned to productive use in your city?								
Square feet in past five years (mean)	506,014	26	92,890	20	326,395	46		
Square feet in past year (mean)	55,597	25	77,900	20	65,509	45		

^a Stat. significant at 10%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

Table 3. Final Uses of Rehabilitated Properties

Question	EPA Region						All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7			Cook & Collar IEPA Region 2			Mean	Number
	Mean	Number	Number	Mean	Number	Number		
Main actual or planned final uses of rehabilitated properties (estimated square footage)?								
return industrial/commercial	1,797,115	13	9	650,533	9	1,328,058.70	22	
new industrial/commercial	1,473,322	10	5	937,240	5	1,294,628	15	
mixed residential/industrial/commercial	2,342,250	4	4	48,613	4	1,195,431	8	
public space such as parking lots	205,740	4	3	94,720	3	158,160	7	
parks/recreation	169,070	4	2	331,200	2	223,113	6	
transportation	263,248	5	--	--	--	263,248	5	
residential	98,170	2	3	99,833	3	99,168	5	
held in reserve for future development	897,130	4	--	--	--	897,130	4	
utilities	183,707	3	--	--	--	183,707	3	
open space but not developed parks	166,900	2	1	20,000	1	117,933	3	
historical preservation	479,160	1	--	--	--	479,160	1	
Percentage of total square feet								
return to industrial/commercial	42.1	13	9	48.5	9	43.2	22	
new industrial/commercial	26.5	10	5	38.8	5	28.7	15	
mixed residential/industrial/commercial	16.9	4	4	1.6	4	14.2	8	
public space such as parking lots	1.5	4	3	2.4	3	1.6	7	
parks/recreation	1.2	4	2	5.5	2	2.0	6	
transportation	2.4	5	--	--	--	1.9	5	
residential	0.4	2	3	2.5	3	0.7	5	
held in reserve for future development	6.5	4	--	--	--	5.3	4	
utilities	0.4	3	--	--	--	0.7	3	
open space but not developed parks	0.6	2	1	0.2	1	0.5	3	
historical preservation	0.9	1	--	--	--	0.7	1	

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

Project Outcomes

The economic downturn in recent years and fiscal pressures on state and local governments, created partly by devolution of services from the federal government, have placed increased attention on expected outcomes from public programs, including brownfields. Previous surveys reveal that local officials view brownfield remediation as broader than job creation and investment (Walzer, Duncan, and Sutton 2001). Local officials value removal of unsightly buildings and improving the overall aesthetics of the community and enhancement of property values in the community.

The 2001 report examined the motivating factors for VAP cleanup and the role of brownfield remediation in a municipality's overall comprehensive plan.

- On a five-point Likert Scale where 1 is not important and 5 is very important, cities rated their overall concern with vacant and abandoned commercial and industrial property as 3.2. Although municipalities are concerned with the removal of an eyesore or visual nuisance, the relatively small amount of VAP, coupled with low demand for properties and few complaints provides little incentive for city officials to pursue remediation and redevelopment of VAP. Generally, larger cities and cities reporting higher unemployment indicated more concern with the properties.
- When asked to rank their city's motivational factors for redevelopment on a scale from 1 to 5, with 5 indicating very important, respondents specified the removal of unsightly buildings as most important (4.2), followed by increasing tax revenue for the city (4.1), increasing financial return on unused or underutilized property (3.9), and adding new businesses in untapped markets (3.8).

At the same time, however, for private investors to engage in brownfield remediation efforts, the investment must be potentially profitable and this usually involves job creation. Thus, two measures commonly used to evaluate public programs for economic development are numbers of jobs created and dollars invested initially. While these indicators provide insights into the potential impact on a community, the amount of time needed for the initial investment to actually create permanent employment can be troublesome. While there are construction jobs early in the process, they are temporary and usually without a substantial long-term impact on the community. Likewise, these jobs may involve workers who live outside of the community. The long-term impact on the community is likely to occur after the construction jobs have ended.

Brownfield projects, depending on their purpose, may either retain or create "permanent" jobs or both; likewise, the jobs can be either part-time or full-time. Mayors responding to the mail survey were asked about both construction employment generated and permanent jobs, either full- or part-time. Because most projects are still in the early stages and the number of jobs is not known, mayors were asked to estimate the impact.

Construction Employment

Responding mayors were fairly consistent in the number of actual or potential full-time construction jobs created. Statewide, 14 cities reported an average of 94 actual full-time

construction jobs, with an average of 93 jobs in downstate cities and 95 jobs in the Cook and collar counties (Table 4). Given that downstate municipalities reported much larger projects in terms of square feet, one might have expected the number of construction jobs created to be significantly larger. Such is not the case, however. The number of construction jobs depends on the amount of changes needed in the conversion process to new uses. Another possibility is that the brownfield site redevelopment did not fully use the space available in these projects so the renovated facilities are downsizing.

A substantial difference in full-time construction job creation was found between prosperous and non-growth cities. Municipalities with growing economies created an average of 101 full-time construction jobs compared with an average of only 78 in the cities with either a stable or declining economy. Size of the redevelopment project is probably the main explanation of this differential.

When asked about the number of potential full-time construction positions created, the statewide response was an average of 32 jobs, again with minimal differences between the averages. Some difference was found when the cities were grouped into prosperous and stable or declining—40 and 27 respectively. The construction of O'Brien Field baseball stadium, a \$25 million brownfield redevelopment project located in downtown Peoria, allowed for the retention of 10 full-time permanent and 20 part-time permanent jobs. Additionally, the redevelopment created 80 part-time permanent positions as well as 250 temporary construction jobs.

While the statewide sample reported an average number of 39 actual part-time construction jobs, downstate municipalities reported 24 jobs compared with 55 in Cook and the collar counties. The same pattern of responses was found between prosperous cities (55) and non-growing cities (24), but the number of responses is relatively small, making generalizations difficult.

A gross estimate of the economic impact on a community of these construction jobs is available by applying the average annual construction wage to these numbers. In 2001, construction workers in Illinois earned an average of \$30,575 in downstate Illinois versus \$47,844 Cook and collar counties.

Permanent Jobs

A different pattern was found when mayors reported the number of “permanent” jobs retained or created by redevelopment efforts. Ten downstate municipalities reported an average of 132 full-time jobs created compared with an average of 42 jobs in Cook and the collar counties. When asked about jobs retained, downstate municipalities reported 56 jobs compared with 34 in Cook and the collar counties but the number of cities responding was too small to generalize. Many respondents are in the early stages of brownfield redevelopment and are unable to report even reliable estimates of the jobs retained or created. However, the averages reported in both jobs created and retained at this point are higher in downstate municipalities than in northeastern Illinois.

When respondents are grouped into those with prosperous economies and those with stable or declining economies, the non-growing cities reported substantially more jobs retained and/or created. Ten non-growing cities reported an average of 134 positions created and 66 retained

compared with an average of 40 full-time positions created and 29 retained in the cities with relatively prosperous economies.

The number of part-time jobs created averaged 35 jobs statewide based on 12 respondents, but the cities varied substantially with an average of 53 jobs in the Cook and collar counties and 10 jobs in the five downstate cities responding. In part-time jobs retained and created, the prosperous cities outpaced those with declines. It appears that projects in the non-growth cities employ more full-time people, which could reflect differences in the labor market. Higher unemployment in declining cities may mean that full-time employees work for relatively lower wages, or that more workers are available than in prosperous areas.

Private Investment

A second measure of brownfield redevelopment successes is the investment made by private businesses and/or public agencies. In most instances, private investment is of more interest because it places properties on the tax rolls. In some cases, such as parks or recreational activities, however, a governmental unit is involved and the investment can make a substantial contribution to quality of life that ultimately can lead to additional business investment.

To gain insight into specific investment patterns, responding municipal officials were asked to estimate the amounts invested in brownfield redevelopment projects in their cities during the previous five years (1997-2002) using five categories: private, leverage by financial firms, state, federal, and local public agencies (Table 4). The following analyses regarding investment do not include data from the city of Chicago. Because of its distinctiveness—both in size and characteristics—a separate analysis of Chicago will be presented later in this report.

Due to the wide range of investment reported by municipalities, averages within each category have been calculated for three groups of cities ranked by investment size—lower third, middle third, and largest third. Exceptionally large investments are excluded from the analysis, and are discussed separately. Because of the diversity of projects reported, the number of municipalities in some categories is relatively small, making generalizations difficult.

Statewide, a total of 21 cities reported investment by private businesses for brownfield redevelopment projects during the previous five years. When private investment is grouped by size, the 11 cities in the smallest investment group averaged \$50,318; the six cities in the mid-range group reported an average of \$2.95 million; and the group with the largest private investment category (four cities) averaged \$8.4 million.³

Of the nine cities reporting leveraged funds (\$8.1 million average), two cities averaged \$107,500; the middle five averaged \$7.1 million; and the two cities in the largest leverage category averaged \$18.8 million.

³ Private investment for two cities was excluded due to the large dollar amounts reported (Skokie: \$20.0 million; Sterling: \$42.0 million).

Table 4. Employment and Investment

Question	EPA Region					
	Downstate Illinois		Cook & Collar		All Respondents	
	IEPA Region 1 & 3 - 7	Number	IEPA Region 2	Number	Mean	Number
Actual or potential construction related jobs created during rehabilitation efforts?						
Average actual full-time	93	6	95	8	94	14
Average potential full-time	32	4	31	4	32	8
Average actual part-time	24	5	55	5	39	10
Average potential part-time	15	1	28	3	25	4
Number of jobs created by redevelopment efforts?						
Average full-time retained	56	2	34	4	41	6
Average full-time created	132	10	42	11	85	21
Average part-time retained	82	3	29	2	61	5
Average part-time created	10	5	53	7	35	12

Question	Investment Size by Category					
	Smallest Third		Medium Third		Largest Third	
	Amount	Number	Amount	Number	Amount	Number
Investment in Brownfield redevelopment projects in the past five years (estimated)						
Private equity investment						
Mean	50,318	11	2,950,000	6	8,375,000	4
Median	22,500		2,850,000		8,250,000	
State grants						
Mean	31,368	13	108,571	14	460,471	8
Median	30,000		117,000		270,000	
Federal grants						
Mean	34,500	4	275,000	5	1,025,000	2
Median	35,000		300,000		1,025,000	
Local government investment						
Mean	15,943	12	202,145	13	4,877,238	11
Median	11,409		200,000		4,000,000	

Only nine respondents provided leverage information for this question. Telephone follow-up indicated confidentiality issues. In some cases, private investors were reluctant to disclose financial information.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

State investment for brownfield redevelopment was reported by 37 sample cities. The 13 cities reporting the smallest state investment averaged \$31,368; 14 cities were included within the medium range, with an average funding amount of \$108,571; the eight cities included in the high state investment group averaged \$460,471.⁴

Relatively few cities (12) reported federal dollar investments. Four cities with the smallest amounts of federal investment averaged \$34,500, while the five cities in the middle group averaged \$275,000, and the two cities with the highest federal investment averaged \$1.0 million.⁵

Local government investment was reported by 37 cities. Twelve cities are in the smallest local government investment group, with an average of \$15,943; 13 cities in the middle group averaged \$202,145 in local funding, while the 11 cities in the largest category, averaged \$4.9 million.⁶ The most often reported use of local investment dollars was site assessment; however, cities also reported using local dollars for various other remediation and redevelopment activities such as property acquisition, demolition, and infrastructure upgrades.

Availability of funding assistance to cities involved in the remediation and redevelopment of brownfield property is often a determining factor as to the feasibility of such projects in cities. Many cities commented in the 2002 survey regarding the importance of outside funding sources:

- “This program has been a positive program. It has assisted the city to be able to share the costs of assessing contaminated property and assisting with technical advice on how to effectively and efficiently resolve the problem.”
- “Enabled the city to clean up a property and get it ready to put on the market without using 100% of city funds.”
- “(The brownfield sites) are not feared quite as much because of the knowledge that there are federal and state sources of funds for assessment and cleanup.”

Expected Public Returns

While private investors expect a return on equity, local governments have a vested interest in encouraging brownfield revitalization because businesses generate sales taxes, and property taxes or fees from services. In some instances, Tax Increment Finance (TIF) districts are used to make a property more marketable. In the case of TIFs, the increase in assessed valuation may not have been reported because the extra taxes collected are restricted to retiring the debt for improvements.

Mayors were asked several questions about outcomes resulting from the brownfield projects. This study includes three indicators of outcome: change in net assessed valuation; increase in sales taxes; and number of building permits issued related to these projects.

⁴ In addition, two cities reported large state investments—\$12.6 million (Alton) and \$12.7 million (Moline)—and were excluded from the averages.

⁵ An outlier (Peoria) with \$30 million in federal investment was excluded from the averages.

⁶ An outlier (Moline) with \$12.7 million in local government investment was excluded from the averages.

Table 5. Expected Public Returns

Question	EPA Region						All Respondents	
	Downstate Illinois			Cook & Collar			Mean	Number
	IEPA Region 1 & 3 - 7	Mean	Number	IEPA Region 2	Mean	Number		
What is the total expected net increase in assessed valuation of the Brownfield properties?	\$7,872,727		11	\$3,445,000		8	\$6,008,421	19
What is the estimated increase in retail sales tax from redeveloped properties:								
Conservative estimate	\$88,125		8	\$135,833		6	\$108,571	14
Optimistic estimate	288,167		6	208,464		7	245,250	13
How many building permits have been issued for Brownfield properties in your municipality?								
Number of residential	1		1	35		5	30	6
Number of industrial	3		6	2		2	3	8
Number of commercial/retail	2		10	2		9	2	19
Number of other	1		1	1		5	1	6
On average, how long have properties been inactive before redevelopment was started?								
Less than one year	16.0		4	4.8		1 ^a	10.9	5
One to five years	16.0		4	52.4		11	32.6	15
Five to ten years	44.0		11	14.3		3	30.4	14
More than ten years	24.0		6	28.6		6	26.1	12

^a Significant at 5%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

In terms of expected net increase in assessed valuation resulting from redevelopment of the brownfield sites, 19 municipalities, statewide, reported an average increase of \$6.0 million (Table 5) with a substantial difference by city group. Downstate cities (\$7.9 million) were larger than those in Cook and the collar counties (\$3.4 million). Correspondingly, non-growth cities—many of which are downstate—reported an average of \$8.7 million compared with an average of \$3.0 million for prosperous cities. These differences reinforce the fact reported earlier that brownfield properties in downstate municipalities are larger.

Some brownfield properties will be redeveloped for commercial uses and will generate municipal retail sales taxes. Mayors were asked for both conservative and optimistic estimates of the annual retail sales taxes generated from the properties. Statewide, 14 respondents reported an expected \$108,571 and \$245,250 in sales taxes. The range of estimates was substantially higher among downstate mayors compared with those in Cook and the collar counties. These differences most likely result from the wider diversity of projects in the downstate cities.

Information on the number of building permits shows not only the type of intended uses for the properties, but also the overall progress in redevelopment since issuance of a building permit usually indicates that a project has been selected and has plans for development. Statewide, building permits issued for residential land uses are most common, but this finding largely reflects cities in Cook and the collar counties.

Respondents differ markedly both in average numbers of permits issued, as well as by specific purpose. Municipalities in Cook and the collar counties, for example, reported relatively more building permits issued for residential properties compared with downstate cities where industrial and commercial uses are more common. However, commercial and retail uses were also relatively important among cities in Cook and the collar counties, although the number of cities for which data are available is relatively small.

Another factor in brownfield redevelopment is the length of time that properties had been idle before redevelopment was started. The 2000 survey and the current project showed that many local leaders perceive limited demand for either industrial or commercial property. These properties, therefore, can remain idle for relatively long periods of time.

Length of time the property has been vacant or abandoned can be an indication of the level of demand for commercial or industrial property in a municipality. The following analyses were obtained from the 2000 survey data:

- Of the respondents surveyed in 2000, 46.4 percent statewide reported that, on average, the properties had been abandoned from one to five years, and 28.6 percent reported the properties had been idle an average of five to ten years.
- While properties in the 2000 survey were most often vacant for an average of one to five years among all sizes of municipalities, small cities with populations of less than 1000 (23.9%) were more likely to report properties idle for an average of ten or more years.
- The length of time a property has stood idle is a crucial factor when considering remediation and redevelopment because the longer a property has been vacant,

the greater the amount of effort and resources needed to restore the site to functional condition.

In the 2002 survey, mayors were asked about the average number of years that the properties had been inactive before redevelopment efforts started. Statewide, one to five years was most often reported, followed by five to ten years. However, one-quarter of the respondents reported that the average site had been idle for more than ten years. Respondents also differed widely by location with Cook and collar county cities much more likely (52.4%) to report one-to five-year inactivity while downstate cities (44%) most often reported five to ten years.

Along the same lines, nearly two-thirds (65.4%) of non-growth cities reported brownfield properties idle for five years *or longer*, compared with 55 percent of the properties in growth cities idle for five years *or less*. These findings confirm that a significant determinant of activity in brownfield redevelopment is the local economic climate.

Involvement by Major Agencies

Brownfield redevelopment involves many groups including business investors, local government agencies, and state government agencies such as the Illinois Environmental Protection Agency and the Department of Commerce and Economic Opportunity. In addition, local financial institutions and other agencies play a facilitating role. This section examines contributions by each group in the brownfield projects.

Municipal Government

Local governments are important players in brownfield redevelopment projects and mayors in responding cities affirmed their interest in making brownfields a part of the local economic development and revitalization process. Specifically, when mayors were asked about the role of brownfields in managing municipal growth and development, an average score of 3.48 on a five point scale was reported by the 52 cities responding (Table 6). Little difference was reported by city location (downstate versus Cook and collar counties), but non-growth cities reported brownfields as a more important economic revitalization strategy. Unfortunately, these cities may have less demand for industrial and commercial properties as noted previously.

The interest shown by municipalities in incorporating brownfields into an overall local growth and development strategy does not necessarily mean that mayors see brownfield redevelopment as primarily a municipal responsibility. Mayors responding to the survey reported an average of 2.94 on the question of municipal responsibility for brownfield remediation. This response indicates some disagreement about the cities' responsibility. Thus, while responding mayors see brownfields as important in managing local growth and development, they see the city participating in a broad process involving businesses, state agencies, and possibly the federal government in the case of Superfund sites. Prosperous cities were slightly more inclined to see a more definite role for municipal government, but the differences between city groups are not substantial.

Cities with effective planning strategies are more likely to make effective use of brownfield properties. Mayors were asked whether the municipality has a comprehensive plan involving

future land uses and, statewide, 84.6 percent responded affirmatively. On average, these plans had been created within the past decade with 1994 as an average date, although at least one plan dates back to 1965. Having a comprehensive land use plan, of course, does not maximize the use and value of brownfield properties. Rather, a serious evaluation of business possibilities and options is needed to determine how the property(ies) might be put to optimal use. Mayors were asked (on a five-point scale) about the importance of “balanced growth” concepts as advocated by planners to control local growth and development. The statewide average response (51 municipalities) was 3.37 on a five-point scale where 5 is very important; this response was midway between the importance of brownfields in local development policies and whether brownfield remediation is a municipal responsibility.

Table 6. Municipal Involvement

Question	EPA Region						All Respondents	
	Downstate Illinois		Cook & Collar		IEPA Region 2		Mean/Pct.	Number
	Mean/Pct.	Number	Mean/Pct.	Number	Mean/Pct.	Number		
To what extent are Brownfield redevelopment efforts an important component in managing municipal growth and development? (Coding: 1=not important; 5=very important) Mean listed	3.50	30	3.45	22	3.48	52		
To what extent do you agree that Brownfield remediation is a municipal responsibility? (Coding: 1=strongly disagree; 5=strongly agree) Mean listed	3.00	30	2.86	22	2.94	52		
Does your municipality have a comprehensive plan involving future land use?								
Percent responding yes	86.7	26	81.8	18	84.6	44		
If yes, what is the date of the plan?								
Mean	1996	26	1992	17	1994	43		
Minimum	1970		1965		1965			
Maximum	2003		2002		2003			
How important are "Balanced Growth" concepts advocated by some planners to control growth and development in the city development policy? (Coding: 1=not important; 5=very important) Mean listed	3.38	29	3.36	22	3.37	51		
Is Brownfield redevelopment a part of the city's formal economic development strategy?								
Percent responding yes	50.0	15	66.7	14	56.9	29		
If yes, does a written policy exist? Percent responding yes	11.1	2	33.3	5	21.2	7		
Does the city have an active plan to help retain and/or expand current businesses?								
Percent responding yes	78.6	22	76.2	16	77.6	38		
Does the city currently have a written plan to attract business to the community?								
Percent responding yes	50.0	15	57.1	12	52.9	27		

^a Significant at 10%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

The responses by mayors demonstrate an interest in incorporating brownfields into the local development strategy, but with some hesitation about assuming local responsibility. The reasons for this, according to the 2000 survey, are that cities do not have sufficient funds to support large remediation programs, there may not be sufficient demand for industrial or commercial property to justify major expenditures, and there still may be a fear of potential liability from engaging in remediation efforts (Walzer, Duncan, and Sutton 2001).

Statewide, 56.9 percent of responding mayors reported that brownfield redevelopment is part of the city's formal economic development strategy but this approach was more often reported by cities in Cook and the collar counties (66.7%) than downstate cities (50.0%). Likewise, non-growth cities more often reported brownfields in the development strategy (57.1%) than prosperous cities (35.7%).

Most cities (78.8%) have *not* progressed to the point of establishing a written policy about using brownfields as a development tool. Cities in Cook and the collar counties were more likely to possess a written plan (33.3%), than downstate cities (11.1%); possibly reflecting size differences, with smaller downstate cities less likely to have written strategies. Not as much difference is found between non-growth cities and those with prospering economies, and this may also relate to differences in the size distribution of cities within each group.

Mayors were also asked whether they have an active plan to retain or expand current businesses in the city. A vast majority (77.6%) responded affirmatively with downstate cities in the lead (78.6%) on this issue, compared with municipalities in Cook and the collar counties (76.2%). Virtually no difference was reported between prosperous and non-growth cities, however.

Respondents also were asked whether they have a written plan to attract businesses and only about half (52.9%) reported affirmatively. Relatively small differences were reported by location, with cities in Cook and the collar counties slightly more likely to have a plan (57.1%) than downstate cities (50.0%). Somewhat similar patterns were reported between non-growth and prosperous cities with the former being in the lead. Care must be taken when interpreting these results, however, because cities may actively recruit businesses without a written action plan. Nevertheless, those with a written plan may more aggressively recruit businesses in general and to brownfield projects.

Municipal Investments

Cities with brownfield initiatives may need additional funding as shown by 62.5 percent of respondents reporting that additional public funds will be required to attract private investment (Table 7). A significant difference is reported between prosperous cities (50.0%) and non-growth municipalities (73.1%). More than one fourth of prosperous cities (27.3%) indicated that no additional city investment is needed in these properties. Interpreting these responses is difficult, but one might conjecture that in prosperous cities, private businesses are more ready and willing to invest, thus, reducing the financial commitment required by municipal governments.

Additional Actions to Attract Businesses

Financial investments are not the only expected actions by municipalities to redevelop brownfield properties as reported by 91.8 percent of respondents. Additional actions by cities are higher in downstate cities (92.9%) than in Cook and the collar counties (90.5%). Similarly, 26 non-growth cities (96.3%) reported additional actions needed by cities compared with 86.4 percent reported by prosperous cities.

When provided with a list of possible actions to attract businesses, the most often reported (64.4%) was infrastructure upgrades. This approach was reported by 68.4 percent of respondents in Cook and collar counties compared with 61.5 percent of downstate municipalities. Non-growth cities were most likely (73.1%) to report infrastructure upgrades, while only 52.6 percent of prosperous cities did so. These findings are hard to rationalize because of the overlap between prosperous cities and those in Cook and the collar counties. Infrastructure upgrades were more often implemented by cities with larger square footage of brownfield property. Cities with 300,000 or more square feet of brownfield property were more likely to perform infrastructure upgrades (76.5%) than cities with less than 300,000 square feet of brownfield property (47.1%). Larger properties are often divided into smaller parcels, requiring more improvements or changes than smaller parcels that are often returned to similar uses.

Table 7. Attracting Investment and Businesses

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		Percent	Number
	Percent	Number	Percent	Number		
Will the Brownfield properties require additional public funds to attract private investment? Percent responding yes	66.7	18	57.1	12	62.5	30
Will additional city actions be used to attract businesses? Percent responding yes	92.9	26	90.5	19	91.8	45
If yes, which actions will be taken:						
Infrastructure upgrades	61.5	16	68.4	13	64.4	29
Technical support by city employees	65.4	17	47.4	9	57.8	26
Property tax incentives	50.0	13	57.9	11	53.3	24
Low interest loans/revolving loan funds	69.2	18	15.8	3 a	46.7	21
Land price write-downs	42.3	11	47.4	9	44.4	20
Zoning concessions	15.4	4	26.3	5	20.0	9
Job training initiatives	23.1	6	5.3	1	15.6	7
Free city services	11.5	3	5.3	1	8.9	4
Loan guarantees	7.7	2	5.3	1	6.7	3

^a Significant at 1%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

The second most frequently reported means used to attract business statewide was technical support by city employees (57.8%); with downstate municipalities (65.4%) more inclined to use such action than those in Cook and the collar counties (47.4%). Also, technical support is more often reported in non-growth cities (61.5%) than in prosperous cities (52.6%). Type of redevelopment use may offer one explanation for the needed technical assistance. Also, owners of property may not know enough about economic development strategies and may need the city's assistance for this and to figure out programs available to assist owners.

Fiscal incentives were also reported as needed to attract businesses. Statewide, 53.3 percent reported that property tax incentives will be needed and 44.4 percent reported that land price writedowns will be used, if necessary (Table 7). In both instances, respondents in Cook and the collar counties more often reported these incentives compared with downstate cities. Non-growth cities more often reported them than prosperous cities. Two possible explanations for the use of property tax incentives may be that high tax cities are trying to compete for new businesses or that cities with brownfields in Enterprise Zones already include property tax abatements as part of the Zone incentives. Likewise, land price writedowns are common development strategies, especially in areas with relatively high land prices; and these incentives may be used for brownfields as part of the regular economic development incentive package.

Low cost loans were also reported by nearly half (46.7%) of the respondents but especially downstate cities and non-growth cities. Possibly, the use of low-cost loans will be determined by type of brownfield redevelopment projects. For instance, commercial redevelopment that does not involve large capital expenditures may less often use this option than large manufacturing projects. Most of the incentives listed are commonly provided by medium and large municipalities, and probably do not relate solely to brownfield properties. Which, if any, incentives are actually used will most likely depend on the specific project.

Managing brownfield projects can be almost a citywide endeavor, and mayors were asked which of several groups had been involved in promoting the projects. Respondents were asked to rate the involvement of these groups using a five-point scale where 5 is very involved (Table 8). Statewide, the three groups most involved were city administrators (4.22), mayors (4.16), and representatives of the Illinois Environmental Protection Agency (4.14). These three groups are key players but without support from property owners, local officials could not return the properties to productive use.

Information regarding the involvement of various groups in brownfield redevelopment was provided in the 2001 report:

- According to the 2000 survey, statewide, the key decision-makers in regards to environmental issues with VAP were mayors or village presidents (47.7%) and city councils (43.0%).
- City residents were directly involved in decisions regarding land use and future development in four out of five reporting municipalities. The majority of respondents (65.1%) indicated that residents were involved with decision-making through a planning/zoning commission, while 42.9 percent reported the involvement of residents through informal contacts with council members. In 24.2 percent of the responding cities, the mayor/council held public hearings on specific environmental issues, and 14.9 percent reported maintaining a citywide advisory committee that meets periodically. Only 3.9 percent indicated the existence of a very active citywide environmental committee.

Table 8. Promoting Brownfield Projects

Question	EPA Region					
	Downstate Illinois		Cook & Collar		All Respondents	
	Mean	Number	Mean	Number	Mean	Number
How much were the following groups involved in promoting Brownfield projects?						
City administrators	4.56	27	3.82	22 b	4.22	49
Mayor or village president	4.41	29	3.82	22 b	4.16	51
IEPA representatives	4.59	29	3.55	22 a	4.14	51
City council	4.28	29	3.59	22 b	3.98	51
Private consultants	4.21	28	3.67	21	3.98	49
Property owners	3.22	27	2.86	21	3.06	48
Business investors	2.91	22	2.74	19	2.83	41
Economic/community development corporations	3.08	25	1.89	19 b	2.57	44
Other state agency representatives	3.10	10	1.73	11 c	2.38	21
Federal agency representatives	2.54	26	1.95	20	2.28	46
DCCA representatives	2.38	26	2.05	21	2.23	47
Financial institutions	2.20	25	2.10	20	2.16	45
General public	2.43	21	1.82	17	2.16	38
Regional planning commissions	2.44	25	1.50	20 b	2.02	45
Local environmental groups	1.84	25	1.32	19	1.61	44
Public health agencies	1.80	25	1.32	19	1.59	44
Non-governmental organizations/community groups	1.88	17	1.21	14 c	1.58	31
Local colleges/universities	1.68	25	1.22	18	1.49	43

Code: 1=not at all; 5=very involved.

^a Significant at 1%.

^b Significant at 5%.

^c Significant at 10%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

- When measured on a five-point Likert scale, assistance provided by IEPA (3.7) and the Department of Commerce and Economic Opportunity (DCEO) (3.7) was reported as most useful by surveyed cities. IEPA provides valuable technical and financial resources for environmental assessment and remediation, while DCEO offers information and funding for economic development. Additionally, cities indicated private consulting firms (3.5) and in-house expertise (3.4) as vital sources of technical assistance.

The remediation and redevelopment of brownfield properties is often initiated by city administrators to reduce eyesores or dilapidated buildings rather than to create jobs or private investment directly. Mayors typically rely on IEPA representatives to assist Phase I and Phase II assessments as well as remediation activities. The role of these agencies is reinforced in the case studies later in this report.

The groups reported as involved in promoting brownfield projects include city councils (3.98) and private consultants (3.98) and they are rated as more involved in downstate cities than in Cook and the collar counties. Chicago area cities, as a whole, ranked all groups lower than did downstate cities. City administrators/mayors rated relatively high (3.82) and private consultants rated most involved (3.67) among suburban cities. One possible explanation is that the Chicago area cities are larger and more professionally managed with specialists to manage brownfield projects. Likewise, they may have easier access to private consultants for projects although these cities rated IEPA staff as highly involved as well.

Somewhat surprising is the reported lack of involvement by the Illinois Department of Commerce and Economic Opportunity (formerly known as the Department of Commerce and Community Affairs (DCCA)) in brownfield redevelopment projects—but the state of the projects could be an important explanation. Early in a project, attention is on cleanup and remediation of the property. Attracting a business happens at a later stage, and this phase is where the Department of Commerce and Economic Opportunity may be most involved.

Property owners are listed as being involved, but not as much as the agencies previously mentioned. Most likely, the remediation process will have been completed when a buyer is willing to commit to the property for redevelopment. However, if the current owners are redeveloping the property, then their cooperation is essential. The reported limited involvement by property owners may reflect a fear of costs associated with cleanup or perceived liability which inhibits them from aggressively pursuing cleanup without a substantiated demand for the remediated property. In some instances, especially with a plant closing, absentee landowners—unwilling to actively engage in redevelopment unless pressured by the city or other organizations—may be an issue.

Financial institutions were mentioned as having relatively little involvement in the brownfield projects. One would not expect these agencies to take the lead in a brownfield project, although it is crucial that they are involved in financing specific projects. Likewise, local economic development organizations were not reported as very involved in the remediation process, and this phenomenon is confirmed in the case studies. The lead seems to be taken by city administrators working directly with state agency representatives and property owners or prospective businesses (if they have been identified).

According to comments received in the 2002 survey, the assistance and cooperation by various groups involved proved to be a positive aspect of the redevelopment process:

- “The redevelopment vision of the city council for a major brownfield project has been transformed into a community vision as the result of the success of the brownfield project. The city’s policy toward other brownfield properties has become more aggressive.”
- “Some recognition that redevelopment of underutilized contaminated sites will regain government involvement. Our success has proven this to be true and the community recognizes this.”
- “Developed good relationships with the regional brownfield rep and our project manager in Springfield. This is a good program with state government assisting local communities.”
- “The cooperation of the USEPA, IEPA, DCEO, (city’s) Enterprise Zone Association, and locals make it happen.”
- “We have received a lot of help from IEPA and USEPA. The community is very supportive.”

Additional Assistance Needed

Mayors were also asked about additional assistance or information enabling local officials to address brownfield redevelopment issues more effectively. A need for additional information about brownfields and financing options was most frequently reported by responding cities (Table 9). Statewide, respondents (69.4%) reported that information about financing alternatives is most needed. While true within all city groups, this need was reported most often by cities in Cook and the collar counties (78.9%) and by prosperous cities (72.7%). These two groups are more likely to have business opportunities than either downstate cities or those with a stable or declining economy.

Also helpful, according to mayors, is printed material about options and available programs; presumably this refers specifically to brownfield remediation and redevelopment programs rather than financing availability. Especially important is information about ways to obtain a No Further Remediation letter or other document removing future liability from the property before private businesses will agree to invest.

Seminars and workshops about IEPA and USEPA programs will help as well, according to mayors. Fewer respondents reported that comparisons of successful programs and on-site technical assistance would help them address local issues. While comparisons of successful programs were desired more by prosperous cities, on-site technical assistance from the IEPA, Division of Remediation Management, seems more useful to the non-growth city group.

Overall, it appears that most municipalities participating in the brownfield programs are comfortable with the information available; and, if anything, help in arranging financing for incoming businesses would help most. After the brownfield property has been remediated and

is free of contamination, the focus shifts to identifying potential businesses and finding ways to finance them.

Table 9. Issues and Concerns

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		Percent	Number
	Percent	Number	Percent	Number		
What assistance/information would enable local officials to more adequately address issues and concerns associated with Brownfield redevelopment?						
Information specifically about financing alternatives.	63.3	19	78.9	15	69.4	34
More printed material about options and programs available.	33.3	10	38.9	7	35.4	17
Seminars and workshops about IEPA and USEPA programs.	36.7	11	33.3	6	35.4	17
Comparisons of successful programs in Illinois.	26.7	8	33.3	6	29.2	14
On-site technical assistance by IEPA Division of Remediation Management.	27.6	8	27.8	5	27.7	13
Don't need additional assistance or information at this time.	24.1	7	5.6	1	17.0	8
Other assistance to help local officials address issues and concerns associated with Brownfield redevelopment.	20.7	6	--	--	12.8	6
During the past two years, has your municipality utilized community outreach techniques to garner support for current and future redevelopment initiatives?						
Percent responding yes	62.1	18	50.0	10	57.1	28
If yes, please indicate:						
Public forums	55.6	15	44.4	8	51.1	23
Creation of a community advisory committee or task force	44.4	12	38.9	7	42.2	19
Dissemination of promotional materials (pamphlets, information packets, etc)	25.9	7	38.9	7	31.1	14
Public service announcements	19.2	5	22.2	4	20.5	9
Environmental education programs/curriculums	23.1	6	11.1	2	18.2	8
Workshops/seminars for potential property owners	11.5	3	11.1	2	11.4	5

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

Ways to Garner Support for Brownfield Properties

Mayors were asked about outreach efforts to generate support for current and future redevelopment initiatives. Nearly half (57.1%) of respondents reported community outreach techniques, with such efforts most frequently used by downstate and non-growth cities.

Several specific outreach efforts were identified. Public forums to discuss the redevelopment projects were mentioned by over half of the respondents (51.1%) with downstate cities (55.6%) and prosperous cities (90.9%) more likely to report these activities.

Another commonly used (42.2%) outreach approach is to create a community advisory committee or task force related to the redevelopment project. Once again, this approach occurred more often in downstate and non-growth cities. Fewer respondents (31.1%) reported publishing and distributing pamphlets or printed materials about the project; and this approach was more likely in non-growth cities. Overall, the non-growth cities more often engaged in outreach activities—probably because of less demand for industrial and commercial property to develop.

Limitations to Redevelopment

Mayors were asked about factors limiting the successes of brownfield projects using a five-point scale where 5 represents a major limitation. Leading the list of limitations was shortage of local funds (3.43) as reported by 49 cities responding to the survey. This finding supports the results of the 2000 survey (Walzer, Duncan, and Sutton 2001). The shortage of funds more often occurred in downstate cities (3.71) and in non-growth cities (3.69) than in either of the other groups (Table 10).

Table 10. Brownfield Successes

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		Mean	Number
	Mean	Number	Mean	Number		
How much have the following factors limited the successes of Brownfield projects?						
Shortage of local funds	3.71	28	3.05	21	3.43	49
Perceived potential liability	2.96	26	2.85	20	2.91	46
Environmental regulations	3.08	26	2.60	20	2.87	46
Resistance from property owners	2.93	27	2.65	20	2.81	47
Need for additional assessment of property	2.57	28	2.25	20	2.44	48
Paperwork involved in applying for funds	2.62	26	2.10	20	2.39	46
Limited or no demand for property	2.35	26	2.10	20	2.24	46
Lack of city staff and/or technical expertise	2.15	26	2.25	20	2.20	46
Lack of support from financial institutions	2.27	26	1.84	19	2.09	45
Lack of understanding of grant requirements	2.19	26	1.90	20	2.07	46
Inadequate infrastructure for development	1.88	26	2.00	20	1.93	46
Lack of community interest	2.15	27	1.60	20	1.91	47
Neighborhood conditions (crime, poverty, etc)	1.62	26	1.53	19	1.58	45
Poor intragovernmental coordination	1.46	26	1.47	19	1.47	45
Poor coordination with utilities	1.27	26	1.58	19	1.40	45

Code: 1=no limitation; 5=major limitation.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

Next in importance is a perceived potential liability from getting involved in the property. Although liability protection has been provided with the passing of the Small Business Liability Relief and Brownfields Revitalization Act on January 11, 2002, the liability issue continues in brownfield remediation efforts. Although affected by the type of project involved, environmental regulations followed closely (2.87) as a limitation, especially in downstate municipalities (3.08).

Resistance from property owners was also mentioned as a limitation to the success of brownfield redevelopment projects. The resistance is slightly higher in downstate municipalities and non-growth cities. The specific reasons for these responses are not completely clear from the survey results. The paperwork involved in grant applications and lack of city staff and/or technical expertise were mentioned, but were not as important as factors mentioned previously. Lack of community interest in brownfield redevelopment is not a substantial limitation in any group but the responses suggest that this issue might be slightly more important in downstate cities than the Chicago area cities.

Management Practices and Impact

Mayors were asked whether brownfield redevelopment sites are currently monitored by the city (Table 11). Statewide, approximately three-fourths (80.4%) of the mayors responded affirmatively, although the monitoring process was much more likely (90.0%) in downstate cities than in Cook and the collar counties (66.7%). This difference is statistically significant. Similarly, cities with stable or declining economic conditions were more likely (85.7%) to report monitoring processes than prosperous cities (73.9%).

Table 11. Management Practices

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2			
	Percent	Number	Percent	Number	Percent	Number
Are conditions at Brownfield redevelopment sites currently being monitored by city? Percent responding yes	90.0	27	66.7	14 b	80.4	41
If yes, please indicate means currently utilized:						
Inspections by city personnel	66.7	18	64.3	9	65.9	27
Meetings with developers	61.5	16	60.0	9	61.0	25
Meetings with city representatives	53.8	14	71.4	10	60.0	24
Processing of complaints	40.7	11	28.6	4	36.6	15
Does the city currently implement institutional/engineering controls for Brownfield sites?						
Yes, all sites	37.9	11	14.3	3 a	28.0	14
Some sites	20.7	6	38.1	8	28.0	14
No	37.9	11	23.8	5	32.0	16
Don't know	3.4	1	23.8	5	12.0	6
If yes, please indicate means currently utilized:						
Land use restrictions	71.4	15	64.3	9	68.6	20
Groundwater restrictions	52.4	11	64.3	9	57.1	24
Capping (engineered barriers)	47.6	10	42.9	6	45.7	16

^a Significant at 5%.

^b Significant at 10%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

The monitoring process was managed in several ways—mainly (65.9%) by city employees inspecting the properties; and these inspections were reported by each city group, regardless of location or economic condition. Regular meetings with developers (60.0%) and city representatives (61.0%) were reported by three-fifths of respondents. Processing complaints is another option, but only one-third of the respondents (36.6%) reported this approach as the main way to monitor the properties. More likely, managing complaints would occur if the process had, in some way, gotten out of hand.

Mayors also were asked whether the city currently implements institutional or engineering controls for brownfield properties either involving all or some sites. Statewide, 28 percent reported controls for all sites and 28 percent reported controls on some sites. Controls commonly used by cities include land use and groundwater restrictions, as well as engineering barriers such as capping. Downstate municipalities and non-growth cities more often reported controls on *all* sites, while respondents in Cook and the collar counties favored controls on *some* sites; in each case, the number was less than half of the respondents.

A more detailed inspection of the data shows that restrictions on land use (68.6%), groundwater restrictions (57.1%), and engineering barriers such as capping (45.7%) were used by many of the respondents. The various city groups differed in responses, most likely because of the types of projects involved. The requirements for clean property vary by use such as residential, recreation, or industrial. Once again, the extent to which this monitoring process is underway depends on the status of the redevelopment project.

The next logical question involves how a brownfield redevelopment project affected the city. Most brownfield sites, such as former gasoline stations or dry cleaners, are a relatively insignificant part of the entire city, but nevertheless, they represent eyesores or potential problems for a neighborhood; and, in some instances, the sites represent significant properties for further development in strategic areas of the city such as the downtown.

Mayors reported that the largest effect on the city (4.07 on a 5.0 scale) was the improved aesthetic appearance (Table 12). This is consistent with the findings of the 2000 survey and represents a significant motivation for becoming involved in redevelopment projects. Dilapidated buildings can lower property values in surrounding neighborhoods and can contribute to disinvestments by other property owners. Responses by city location and economic conditions were consistent in rating the impact of brownfields in terms of improving the aesthetic appearance of the city.

Table 12. Impact on City

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		Mean	Number
	Mean	Number	Mean	Number		
How did the Brownfield redevelopment efforts impact your municipality?						
Improved aesthetic appearance of community	4.04	25	4.11	19	4.07	44
Helped prioritize local economic development projects	3.20	25	3.42	19	3.30	44
Decreased perceived health risk	3.21	24	3.37	19	3.28	43
Revitalized local tax base	3.00	22	3.11	18	3.05	40
Improved local infrastructure	2.42	24	2.89	18	2.62	42
Stimulated downtown	2.33	24	2.89	18	2.57	42
Decreased citizen complaints	2.52	25	2.53	19	2.52	44
Made residents more aware of pollution issues	2.46	24	2.06	18	2.29	42
Promoted more environmentally friendly industries	2.08	24	2.35	17	2.20	41
Decreased pollution	2.13	24	2.47	17	2.27	41
Strengthened industrial attraction of city	2.63	24	1.72	18 ^a	2.24	42
Increased access to public facilities	2.00	24	2.17	18	2.07	42
Lowered crime, vandalism, and other social problems	2.00	24	2.06	18	2.02	42
Changed municipal approach to industrial recruiting	1.92	24	1.61	18	1.79	42
Created affordable housing	1.63	24	1.61	18	1.62	42

Code: 1=no effect; 5=major effect.

^a Significant at 5%.

Source: Brownfield Outcomes General Survey, 2002-2003, n=52.

The second most important impact reported (3.30) was that the brownfield program helped prioritize local economic development projects. Presumably, because brownfields may involve access to state support or assistance, can pose health and safety hazards, and can be prominent eyesores in the city, they receive priority status when considering property development options. On the other hand, these properties may involve additional costs, or even face restrictions regarding potential uses. The reprioritization process was reported as more important by non-growth cities, but the differences among cities by location in Illinois were less pronounced.

Reducing perceived health risks was reported as a moderate effect (3.28) of the brownfield program by the 43 mayors responding to this question. This issue was slightly more important in the Chicago area municipalities and in non-growth cities. Once again, the types and sizes of properties involved affect the level of importance in regards to reducing health issues.

Revitalizing the tax base is moderately important (3.05) in the ultimate impact of brownfields. Little difference is reported by city location or economic status. This response is somewhat unexpected, especially if the assessed valuation of the property had been reduced because it was vacant or underutilized. At the same time, while returning the property to a productive use clearly increases the assessed valuation, in those instances where property is not large, the overall impact on the tax base may not be substantial; and other factors such as improving the aesthetics may take precedence. Likewise, local officials may not know the final use of the property until much later in the remediation process.

Several impacts of brownfield remediation that initially might have been thought to have a major effect on the city but were not reported include lowering crime, vandalism and other social problems, decreasing pollution, or even reducing complaints from residents. For whatever reason, these potential impacts did not rate high in the survey responses.

According to the comments from respondents, the overall attitude regarding the brownfield remediation process was positive:

- “The continuing redevelopment of brownfields has enabled a rebirth of this area of our city which has had a positive impact throughout our community.
- “Although still in progress, the overall impact can already be termed extremely positive as all units are sold and many anticipated commercial uses are expected (restaurants, etc).”
- “The only potential for development in the village is redevelopment of existing properties, both commercial and residential. Due to the scarcity of land, this (brownfield) site was attractive for redevelopment without public assistance.”
- “Better utilization of obsolete properties has added life and vitality to the business district.”
- “It has assisted in transforming what was once dilapidated manufacturing uses/area into a major educational district. We now have a new junior high and a freshman building where there was once decaying manufacturing uses.”
- “Environmental studies on this property have peaked the interest of adjacent property owners, and has attracted developers to take more interest in proposing future projects.”
- “The city has benefited by the elimination of blight adjacent to a redevelopment currently in progress. Future uses in conjunction with current redevelopment are increased. Developers are now expressing an interest in this parcel.”

- “The city’s successful program has proven to developers and property owners that brownfield assessment and remediation can be accomplished at a reasonable cost.”

Parcel Specific Survey Responses

While the previous section described the overall responses to the brownfield issue by municipal governments, this section provides a detailed examination of brownfield parcels in an attempt to understand how cities are responding, the progress made, and the outcomes of the redevelopment efforts. The parcel-specific questionnaires were sent to persons responsible for managing the property within the local government—those who should be most familiar with the process.

Because projects are at various stages of completion, some responses are incomplete—reducing the number of observations in specific analyses. Nevertheless, the 121 questionnaires returned—of the 229 surveys mailed (187 downstate, 42 Cook and collar counties)—provide the most complete information available on the Illinois sites at this time. The results are presented by location. The average brownfield parcel in this study was 303,773 square feet, with an average project startup year of 2000.

Previous Uses of the Property

The properties in the sample had a variety of former uses with significant implications for cleanup requirements and costs, even limitations on the viable uses of the properties because of the associated remediation costs. Statewide, 25 percent of the properties were formerly gasoline stations, and this use was definitely more common in cities in Cook and the collar counties than downstate (Table 13). Since the 1970s, there has been a substantial shift from small full-service stations to larger convenience stores. The result is that many corner service stations closed and repair services now handled by auto dealerships or specialty shops. The closed service stations often are perceived as brownfield sites, some with limited potential for economic development because of their small size.

Former manufacturing sites are among the larger numbers (18.8%) of brownfield sites in the sample. Once again, manufacturing sites represent a larger proportion (21.4%) of the sites in the Cook County area than downstate (16.1%), reflecting the fact that large metro areas have lost relatively more manufacturing employment in recent years than smaller non-metro areas (Walzer, Duncan, and Sutton 2001).

Other former uses heavily represented in the sample include salvage/junk yard/landfill, railroad yard and/or repair shop, multi-use sites, and public works facilities. Property managers were asked about the stage of completion of the projects in this sample and reported that 33.3 percent are in the planning phase, 42.6 percent are in the redevelopment process, and 24.1 percent have been completed. A comparison of cities in the Chicago area (36.4%) with downstate cities (30.2%) shows relatively more Chicago brownfield sites in the planning phase. On the other hand, the Chicago area also shows substantially more completed projects (32.7%) than in downstate cities (15.1%).

Table 13. Parcel Characteristics

Question	EPA Region						All Respondents	
	Downstate Illinois		Cook & Collar					
	IEPA Region 1 & 3 - 7	Number	IEPA Region 2	Number	Percent	Number	Percent	
Previous use of property?								
Gas station	14.3	8	35.7	20	25.0	28		
Manufacturing operation	16.1	9	21.4	12	18.8	21		
Salvage/junk yard/landfill	5.4	3	14.3	8	9.8	11		
Automotive repair shop or dealership	8.9	5	3.6	2	6.3	7		
Railroad yard and/or repair shop	12.5	7	--	--	6.3	7		
Multi-use site	8.9	5	1.8	1	5.4	6		
Mill	5.4	3	1.8	1	3.6	4		
Chemical/petroleum product warehouse/store	3.6	2	3.6	2	3.6	4		
Public works facilities	1.8	1	5.4	3	3.6	4		
Dry cleaner	3.6	2	1.8	1	2.7	3		
Foundry	3.6	2	1.8	1	2.7	3		
Establishment selling oil/gas/chemicals	1.8	1	1.8	1	1.8	2		
Painting business	1.8	1	--	--	0.9	1		
Refinery	1.8	1	--	--	0.9	1		
Other (contractor's shop, former residence, gravel pit, trap/skeet range, and vacant lots)	10.7	6	7.1	4	8.9	10		
At what stage is the redevelopment effort?								
Planning phase	30.2	16	36.4	20	33.3	36		
In progress	54.7	29	30.9	17	42.6	46		
Completed	15.1	8	32.7	18	24.1	26		
For how long was the property inactive before the redevelopment project started?								
Less than one year	25.6	11	2.0	1	13.0	12		
One to five years	27.9	12	28.6	14	28.3	26		
Six to ten years	25.6	11	28.6	14	27.2	25		
More than ten years	20.9	9	40.8	20	31.5	29		

^a Significant at 1%.

^b Significant at 5%.

Source: IIRA Brownfield Outcomes - Parcel Specific Survey, Spring 2003 n=121.

The length of time during which the properties had been inactive before the redevelopment process started differs substantially by location. According to the data obtained from the *parcel-specific* surveys, statewide, nearly one-third (31.5%) of the indicated parcels had been inactive for more than 10 years, but in the case of the Chicago area cities, the figure was 40.8 percent. Downstate respondents reported less than one-quarter (20.9%) of their properties idle for that length of time.

At the other extreme, very few properties (2.0%) in the Chicago area were described as inactive for less than one year, compared with 25.6 percent downstate. This difference may partly reflect variations in the type of property. For instance, in this sample, downstate cities reported a higher proportion of gas stations, while the suburbs reported more manufacturing operations that probably are larger and harder to redevelop. The city groups are relatively similar in the proportions in the one to ten year intervals.

Ownership of the property also can affect the amount of redevelopment time since city ownership removes delays in working with a private owner(s). The responses were remarkably similar between the two city groups with 38.7 percent of the properties, statewide, being city-owned (Table 14).

Somewhat distinctive, however, is how the city obtained ownership, especially using legal actions such as eminent domain. Statewide, 17.5 percent of the parcel managers reported that eminent domain had been used to take the property and 65.1 percent reported that this approach had not been used. Downstate respondents were much more definite (80.8%) that eminent domain had not been employed compared with 54.1 percent in the Chicago area. The main difference is the relatively large number of respondents (27.0%) in the latter group that were unsure whether legal processes had been used. The greater uncertainty may reflect respondents' unfamiliarity with the properties involved—perhaps because of staff turnover.

Nearly half (48.2%) of the statewide respondents reported that the municipal government had sought legal access to the property to secure it from trespassers, performed an environmental assessment, or otherwise had taken steps to protect the public health and safety of the community. Chicago area cities were more likely (54.4%) to report these actions than downstate respondents (41.5%).

Comparable results were obtained when respondents reported using regulatory authority such as liens, ordinance violations, and zoning controls on the properties. Statewide, 42.9 percent of the property managers reported using this authority, with Chicago area cities more likely to report its use (50.0%) compared with 35.2 percent for downstate cities. Once again, however, lack of knowledge about what had happened within the Chicago area respondents (20.7%) may have influenced the figures reported.

When property managers were asked whether the city had worked with private owners to remediate the property for redevelopment, statewide, nearly two-thirds (64.2%) reported affirmatively. The responses are comparable by location. This question, however, did not gather information on actions taken.

Table 14. Municipal Involvement with Parcel

Question	EPA Region						All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2				Percent	Number
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Who currently owns the property?								
Municipality	38.2	21	39.3	22	38.7	43		
Private owner	54.5	30	51.8	29	53.2	59		
Other	7.3	4	8.9	5	8.1	9		
If city owned, was eminent domain or municipal authority used to take the property?								
Yes	15.4	4	18.9	7 ^b	17.5	11		
No	80.8	21	54.1	20	65.1	41		
Don't know	3.8	1	27.0	10	17.5	11		
In the past five years, has your municipality sought legal access to this property to secure it from trespassers, perform an environmental assessment, or otherwise protect public health and safety?								
Yes	41.5	22	54.4	31	48.2	53		
No	52.8	28	35.1	20	43.6	48		
Don't know	5.7	3	10.5	6	8.2	9		
Has your municipality used regulatory authority such as liens, ordinance violations, zoning on this property?								
Yes	35.2	19	50.0	29 ^a	42.9	48		
No	61.1	33	29.3	17	44.6	50		
Don't know	3.7	2	20.7	12	12.5	14		
If privately owned, has the city worked with owner to remediate this property for redevelopment?								
Yes	64.5	20	63.9	23	64.2	43		
No	25.8	8	25.0	9	25.4	17		
Don't know	9.7	3	11.1	4	10.4	7		

^a Significant at 1%.

^b Significant at 5%.

Source: ILRA Brownfield Outcomes - Parcel Specific Survey, Spring 2003 n=121.

Outcomes of Remediation Efforts

The desired outcomes of the brownfield redevelopment process are typically two-fold: first, to remove an eyesore and to protect the health and safety of residents; and second, to create additional employment. However, the number of jobs created varies with size of the property, intended uses, and the stage of redevelopment of the property.

Expected End-Use. Cities were asked to indicate the planned end-use of the parcels. Because many properties may be divided, with more than one planned end-use per parcel, respondents estimated the percentage end-use in each category. The planned end-use of brownfield property typically was return to industrial or commercial activity (26.0%), new industrial or commercial activity (17.1%), parks/recreational, public space, and open space (12.1%), and mixed uses (11.6%) (Table 15). Chicago area respondents were slightly more likely to report returning a greater percentage of property to industrial or commercial activity (29.3%) than downstate cities (22.7%). Downstate cities more often (23.3%) reported new industrial or commercial activities than those in Cook and the collar counties (11.0%). While the data are not sufficiently detailed to document precise uses, one possibility is that Chicago area cities spend more time rehabilitating existing properties while the downstate respondents make major renovations or possibly demolish existing structures in favor of new ventures.

Table 15. End-use of Property

Question	EPA Region					
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2		All Respondents	
	Percent	Number	Percent	Number	Percent	Number
Please indicate the planned end-use of this property?						
Returned industrial/commercial	22.7	13	29.3	16	26.0	29
New industrial/commercial	23.3	15	11.0	7	17.1	22
Parks/recreation, public space, and open space	11.7	11	12.5	10	12.1	21
Mixed residential/industrial/commercial	11.3	8	11.9	7	11.6	15
Held in reserve for future development	6.7	5	10.1	6	8.4	11
Residential	9.6	5	6.3	6	7.9	9
Transportation	4.5	7	--	--	2.2	7
Utilities	--	--	1.9	1	1.0	1
Historical preservation	0.5	2	--	--	0.2	2
Other	9.6	5	17.0	9	13.3	14
Is the Brownfield property located in a:						
TIF zone	41.7	15	63.6	21	52.2	36
Enterprise zone	19.4	7	15.2	5	17.4	12
Both	38.9	14	21.2	7	30.4	21

Source: IIRA Brownfield Outcomes - Parcel Specific Survey, Spring 2003 n=121.

A small percentage of property (8.4%) was being held in reserve for future development, with slightly more property in the Chicago area (10.1%) reserved for future planning than in the downstate region (6.7%). This finding is consistent with the perceived lower demand for industrial and commercial properties in smaller downstate cities.

Job Retention or Creation. The number of jobs created or retained clearly depends on the amount of investment in the property by various parties. In assessing these comparisons, one must understand how the jobs created compare in salary with previous jobs in the case of manufacturing or commercial property. Likewise, productivity advances may mean that with

modern technology, fewer employees can produce a greater output. In these instances, the number of jobs created, or even retained, may be less than previously existed, even though the aggregate output is the same or higher.

Also important are the types of incentives available to investors in brownfield properties. Two commonly used incentive programs in Illinois are Tax Increment Financing (TIF) and Enterprise Zones (EZ). The TIF program designates a dilapidated area in a city and the city borrows funds to make substantial renovations. The tax revenues generated from any increase in assessed valuation resulting from the improvements are then set aside to retire the debt.

Cities using a TIF program frequently offer a variety of tax concessions and other incentives to investors for a designated period to locate in the district. While the benefits obtained from TIF programs have been debated, the conventional view among economic development practitioners is that they make sites more attractive for private investment. Proponents contend that the TIF program stimulates development that otherwise would not take place (ITIA).

However, critics of tax increment financing argue that the program can also have negative impacts on a community—they point out that jobs created within the TIF district are often a result of movement from a location outside of the district to a location within the district. Additionally, TIF opponents maintain that a TIF district can create an environment that is unfavorable for small businesses and lower-income residents due to increases in assessed property values and frequent use of legal authority such as eminent domain and zoning changes (DNAP 2003).

The Enterprise Zone (EZ) is another incentive program, but with different requirements, procedures, and approaches. A common practice is to abate property taxes for a designated period of time, as well as waive sales taxes on construction materials. A variety of other incentives can be established to make the blighted area more competitive for investment.

Thus, presumably if the brownfield property is located in either a TIF or an EZ area, investors will be more likely to invest—especially for industrial or even commercial uses. Property managers were asked whether the parcels in this study are in either or both of these areas. More than half of the parcels (52.2%) are in a TIF district and 17.4 percent are in an EZ. Somewhat surprising is that 30.4 percent of the properties were described as in both areas; because if property taxes are waived in an EZ program, the potential additional revenues raised from the increased assessed valuation are not available to retire the debt for the improvements. This response may indicate confusion among respondents regarding which program is involved or how the programs specifically work. It also may involve some overlap with parts of the property in both areas. TIF zones are more common among the Chicago area respondents (63.6%) than downstate municipalities (41.7%). The reported use of EZs was similar between groups of cities. More downstate respondents (38.9%) reported properties in both programs than in the Chicago area (21.2%).

Table 16. Investment

Question	EPA Region					
	Downstate Illinois		Cook & Collar		All Respondents	
	IEPA Region 1 & 3 - 7	Number	IEPA Region 2	Number	Mean	Number
What was, or is, the expected net increase in the assessed valuation of the affected property?						
Net increase	2,100,000	9	1,993,333	6	2,057,333	15
Don't know (percent)	58.6	34	73.0	46	66.1	80
If known, what is the estimated increase in retail sales tax, if any, for the redeveloped property?						
Conservative estimate	23,500	2	765,000	3	468,400	5
Optimistic estimate	24,000	1	1,478,333	3	1,114,750	4
Don't know (percent)			54.0	34	56.2	68

Question	Investment Size by Category					
	Smallest Third		Medium Third		Largest Third	
	Amount	Number	Amount	Number	Amount	Number
Investment in Brownfield redevelopment projects in the past five years (estimated)						
Private equity investment						
Mean	7,286	7	39,786	7	1,791,375	8
Median	5,000		25,000		1,800,000	
State grants						
Mean	17,447	19	37,205	18	156,158	18
Median	16,000		32,500		99,031	
Federal grants						
Mean	325,375	8	--	--	--	--
Median	243,750		--	--	--	--
Local government investment						
Mean	9,725	17	53,626	19	1,633,059	17
Median	10,000		59,614		500,000	

Only six respondents provided leverage information for this question. Telephone follow-up indicated confidentiality issues. In some cases, private investors were reluctant to disclose financial information.

Source: IIRA Brownfield Outcomes - Parcel Specific Survey, Spring 2003 n=121.

Investment in Property. Respondents were asked about the amount of investment, actual or estimated, by various sources in each specific redevelopment project included in this report (Table 16). As previously mentioned regarding investment information for the municipal survey, averages from the *parcel-specific* surveys for the various forms of investment have been placed into three categories according to the amount of investment—lower third, middle third, and largest third. Exceptionally large investments are noted and excluded from the analysis. Chicago parcels have been excluded because of the city’s uniqueness. Depending on status of the projects, some investments had not yet been made, so the data are incomplete.

Statewide, 22 parcel surveys including investment by private businesses were reported. When private investment per parcel is grouped into thirds—small, medium, and large investments—the smallest group including seven parcels averaged \$7,286 in private investment; the medium group including seven parcels averaged \$39,786; and the largest with eight parcels averaged \$1.8 million.

Parcels with the smallest private investment were large areas of land and former small businesses (gas stations and an auto repair business). The medium group included former gas stations, large manufacturing businesses, and one large land area. Parcels in the large private investment group were evenly divided between former small businesses and large businesses—both manufacturing and commercial.

Information on leverage from financial institutions was available for only six parcels and averaged \$3.4 million. In this instance, the two groups of cities were much more similar. However, the small number of responses makes these figures difficult to interpret. Four of the parcels reporting leverage were former gas station sites; other former uses included a site with various commercial businesses and a mill.

More detailed information is available on state investment with data provided on 56 parcels. The majority of state investment reported was in the form of IEPA brownfield grants used for environmental assessments and remediation. In addition, several cities reported state grants from DCEO and the Illinois Department of Transportation.

The 19 cities reporting the smallest amount averaged \$17,447 in state investment for parcels including ten former small businesses (gas stations, auto repair shops, chemical retail, and a Marine Corps training center), four large manufacturing businesses, and five large land areas (railroad yards, construction businesses, and a trapsheet range).

Eighteen cities were in the medium state investment range, with an average funding of \$37,205, and involved nine former small businesses (gas stations and an incinerator); six large businesses (manufacturing businesses, a foundry, and a locomotive repair facility); and three large land areas (railroad yards and a train station).

Parcels with the largest state investment (18) averaged \$156,158 including ten large businesses (a chemical store, a mill, a refinery, foundries, and various manufacturing sites); four small businesses (gas stations, paint store, and an industrial right-of-way); and four large land areas (junk yards, railroad yard, and a gas station).⁷

⁷ A water treatment plant in Moline had an unusually large state investment, \$12.0 million, for the remediation of a brownfield site adjacent to the facility to allow expansion of the water treatment plant. The investment was not included in the averages.

The average federal investment reported for eight properties was \$325,375; two additional parcels were not included in the average due to size: one received \$1.7 million (Springfield) for assessment and remediation from the federal Superfund program, and another parcel received \$30 million (Peoria) for site demolition in the form of a HOPE IV grant. Federal investment was also received by cities from Economic Development Administration and USEPA grants.

Information on local government spending was provided for 54 parcels and averaged \$693,715 statewide. However, the magnitude of local government expenditures differed substantially between the two city groups, with Cook and collar county (excluding the city of Chicago) respondents averaging \$389,938 compared with \$845,603 for respondents in the downstate region. Due to the significantly larger properties located downstate (521,647 average square feet) versus Cook and collar counties (163,408 average square feet), greater local government investment for remediation and redevelopment was likely.

When divided into three groups based on local investment, 17 parcels received an average of \$9,725 including nine small businesses (gas stations, auto repair shops, warehouse/retail site, and a dry cleaner); five large land areas (junk yard sites, trapskeet range, and a train station); and three large businesses (foundry, locomotive repair station, and a chemical warehouse).

The 19 mid-range parcels averaged \$53,626 in local investment including ten small businesses (gas stations, a painting business, a chemical warehouse, a Marine Corps training facility, a painting business, and a dry cleaner); five large land areas (auto salvage yard, railroad yards/repair shops, and bus depot); and four large businesses (manufacturing operations, a mill, and an auto repair shop).

Seventeen parcels received an average of \$1.6 million in local investment, and included 12 large businesses (manufacturing operations, foundries, a mill, and a site composed of various commercial properties); and five small businesses (an incinerator, gas station, auto repair shop, and an industrial right-of-way).⁸

Since many projects are not complete, we asked respondents to estimate the remaining costs for the projects. The average for 19 downstate projects was \$4.0 million compared with \$820,625 for Chicago area respondents. A high percentage of respondents (45.5%) said that they did not know the remaining investment needed for completion.

Likewise, when asked about the expected net increase in assessed valuation resulting from the property redevelopment, two-thirds (66.1%) reported that they did not know. For those who provided a response, the average increase was \$2.06 million with \$2.1 million in downstate municipalities and \$1.99 million for Chicago area cities.

Non-monetary Benefits. In addition to increases in assessed valuation and sales taxes, property managers also expected other benefits from the rehabilitated brownfield projects. When asked to rate these non-monetary benefits on a five-point scale where 5 is a major effect (Table 17), respondents reported that neighborhood aesthetics had improved (3.7) making the neighborhood more marketable to residents or businesses (3.3). Many respondents reported that it was too early in the current rehabilitation project to assess the potential benefits (2.8), thus, making it impossible for them to identify other impacts.

⁸ Due to the unusually large amount of local investment (\$8.5 million), the water treatment facility parcel located in Moline is not included in the average.

Table 17. Benefits and Current Status

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2			
	Mean/Pct.	Number	Mean/Pct.	Number	Mean/Pct.	Number
What nonmoney benefits have occurred due to the Brownfield rehabilitation effort? Code: 1=no effect; 5=major effect. (mean)						
Aesthetics of neighborhood have improved	3.5	38	3.8	46	3.7	84
The area is much more marketable to residents or businesses	3.6	35	2.9	40 b	3.3	75
Current rehab project stage still too early to assess potential impacts	2.9	23	2.8	28	2.8	51
Not much expected to happen because of this project	2.5	20	2.6	28	2.6	48
Residents are more conscious about environmental issues	2.3	33	2.3	40	2.3	73
New, more environmentally friendly industry or business have located	2.4	33	2.1	42	2.3	75
Property values in neighborhood have increased more than elsewhere in the city	2.2	33	2.3	40	2.2	73
Crime, drugs, etc in the area have decreased	1.8	32	2.4	40 b	2.1	72
Vacancy rates in area have decreased	2.2	32	2.0	39	2.1	71
Increased green space/recreational opportunities	2.2	33	1.6	38 b	1.9	71
What is the current status of the rehabilitated property? (percent)						
Purchased within the past six months	1.5	3	7.4	3 a	4.8	6
Purchased within the past year	23.8	7	25.7	9	24.8	16
Sales pending	13.0	6	17.9	7	15.7	13
Listed with a realtor	7.0	2	2.9	1	4.7	3
Vacant, not listed with a realtor	54.7	17	46.1	17	50.0	34

^a Significant at 5%.
^b Significant at 10%.

Current Status of the Brownfields Properties. Brownfield property managers were asked to report the current status using pre-defined levels ranging from vacant and not listed, to purchased in the past year (Table 17). Statewide, one-half of the sample properties are vacant but not listed with a realtor. Downstate respondents were slightly more likely (54.7%) to report this status than Chicago area cities (46.1%). The second most often reported status (24.8%) was that the rehabilitated property had been purchased within the past year, followed by a pending sale (15.7%).

Number of Jobs Retained or Created. Information was provided on the number of full or part-time jobs retained or created in the sample brownfield projects. Mainly because of the status of some projects, the number of responses was somewhat limited. Respondents reported an average of 67 full-time jobs retained within the ten parcels included in the survey (Table 18). A slightly higher average number of jobs retained (77) was reported by Chicago area respondents compared with downstate cities (52).

Statewide, respondents reported creating an average of 75 full-time jobs in the 21 brownfield parcels included in this analysis, but downstate municipalities reported considerably more jobs created (86) than those in Cook and the collar counties (68).

The completed brownfield projects also retained part-time jobs according to respondents with an average of 15 in the two projects reported. Eight projects statewide reported an average of 19 part-time jobs created in the brownfield projects. These figures are somewhat difficult to interpret because many projects are unfinished, and additional jobs may be forthcoming in the future.

Table 18. Employment

Question	EPA Region				All Respondents	
	Downstate Illinois IEPA Region 1 & 3 - 7		Cook & Collar IEPA Region 2			
	Mean/Pct.	Number	Mean/Pct.	Number	Mean/Pct.	Number
Because of redevelopment effort, how many jobs were: <i>(mean)</i>						
Full-time retained	52	4	77	6	67	10
Full-time created	86	8	68	13	75	21
Part-time retained	20	1	10	1	15	2
Part-time created	23	4	16	4	19	8
Temporary created	46	12	34	6	42	18
Compared with five years earlier, was the number of jobs created by the redevelopment effort: <i>(percent)</i>						
Fewer than existed previously	35.3	6	13.0	3 b	22.5	9
More than existed previously	64.7	11	87.0	20	77.5	31
Compared to wages paid previously, was the estimated wage paid for jobs created following remediations: <i>(percent)</i>						
Less than	14.3	2	--	-- a	5.7	2
Approximately equal	50.0	7	23.8	5	34.3	12
Greater than	35.7	5	76.2	16	60.0	21
How successful have the Brownfield redevelopment efforts been in your city? <i>(mean)</i> <i>(Coding: 1=not successful; 5=very successful)</i>						
	3.46	26	4.00	19	3.69	45

^a Significant at 5%.

^b Significant at 10%.

Source: IIRA Brownfield Outcomes - Parcel Specific Survey, Spring 2003 n=121. Brownfield Outcomes General Survey, 2002-2003, n=52.

The questionnaire also asked how the jobs generated by the brownfield redevelopment effort compare with the employment level five years earlier. More than three-quarters of the respondents (77.5%) reported that the current number of jobs exceeds previous levels. This response was higher among Chicago area respondents (87%) than downstate cities (64.7%), but the responses for both groups were substantial.

Advances in technology and automation can bring higher worker productivity in the brownfield developments resulting in a drop in employment; however, no respondent reported this experience. The fact that 22.5 percent of the respondents reported fewer jobs now than previously may simply reflect incomplete projects or alternative land uses such as open space or parks. This question requested information only about the brownfield parcel, rather than for the entire city. Thus, the brownfield property may have been converted to a recreational area, park, or other alternative use leading to an improved quality of life in the city and stimulated industrial or business development in other parts of the city not included in the survey. Overall employment may have increased in the city but not in the specific brownfield parcel currently being examined. Pinpointing the effects of the brownfield property redevelopment to the potential for the city to increase investment or job creation is difficult, if not impossible.

Wage levels are also important in attracting industry as well as in providing a higher standard of living for residents, so respondents were asked about the estimated wages paid for jobs created by the brownfield redevelopment projects compared with those previously in the area. More than half of the respondents (60%) reported that current wages are higher than previous wages, with Chicago area respondents (76.2%) reporting higher wages more often than

downstate cities (35.7%). One-half (50.0%) of the downstate respondents reported that the wages are approximately equal to those paid previously and one-third (34.3%) of the respondents statewide agreed.

Success with Brownfield Projects

The above analyses show that while many brownfield redevelopment projects are not complete, they have helped to improve the aesthetics in the community and have created or retained jobs. They have engaged many groups in the city and often are incorporated into the city economic development plans. In some instances, they have reprioritized local development priorities.

Respondents were asked to rate their experiences with the brownfield redevelopment program on a five-point scale where 5 is very successful. Statewide, 45 of the 52 municipalities responding to the general survey reported an average rating of 3.69, suggesting that the brownfield redevelopment process had experienced moderate success. Respondents in Cook and the collar counties as well as prosperous cities typically rated the program higher (4.00) than did downstate cities (3.46) and non-growth cities (3.48).

One interpretation of these figures is that the prosperous cities have more opportunities for development and job creation, making the projects more likely to succeed. Likewise, the projects in the Chicago area cities more often generated jobs with salaries higher than previously earned in the area. The economic environment in these cities clearly is more positive than in many downstate communities.

Summary

Brownfield redevelopment offers substantial benefits for some municipalities, especially those with a prosperous economy and a relative shortage of property on which to expand industrial development. Unfortunately, for many municipalities, the current national economic downturn has created a scenario that makes this development or revitalization more difficult than it has been in the recent past.

Nevertheless, the analyses in this report identified several main findings. First, even with the sluggish national economy and, in some instances, limited demand for commercial and industrial property, approximately half of the responding mayors considers the brownfield redevelopment efforts a moderate success. The fact that many projects are far from complete may mean that the success factor will increase as the projects move ahead.

Second, obtaining private investment and job retention/creation are important goals of the brownfield redevelopment process. Private investment in brownfield redevelopment depends on conditions and circumstances associated with the property as well as the community in which it is located; the market demand for a specific land use; the degree of contamination; and the type of redevelopment project. A recent study involving three brownfield sites in Baltimore, Maryland (Howland 2003), examines these factors and their impact on the use of private investment versus public subsidy. A brownfield project with favorable conditions—strong market demand for the type of redevelopment, minimal contamination, and a new use

in which regulatory cleanup standards are low—is more likely to be funded by private dollars. Alternatively, a project in which the type of development is in low demand, contamination is extensive, and remediation requirements are significant may require public sector involvement in order for remediation and redevelopment to occur.

There is definite evidence that the brownfield program has led to job creation and retention although, in some instances, it appears that employment after the project is lower than before. This may be because the project is not completed or that an alternative use is planned. Neither of these factors limits the success of the brownfield endeavor.

Third, while job creation and private investment are important, mayors are also trying to remove dilapidated buildings and eyesores in the community. This aim can be independent of job creation and sometimes may mean creation of a park or open space that improves the aesthetics of the neighborhood. Reducing crime, vandalism, and other social problems can save the city funds as well as make surrounding properties more desirable for investment. Long-term, these changes may be more important to improving the city than immediate job creation. The value of these benefits, however, is harder to assess.

Fourth, the research demonstrates that brownfield redevelopment is increasingly being incorporated into local economic development programming efforts. In some instances, it is changing the priorities of this process. As the national economy improves, one might expect to see additional interest in brownfield redevelopment, especially in Chicago area cities and those experiencing prosperity. One might also expect to see more involvement by agencies such as the Department of Commerce and Economic Opportunity as brownfield remediation projects move closer to redevelopment.

Fifth, one aim of this project was to obtain information on ways in which local public officials evaluate the success of the brownfield projects. This was the main reason for conducting the project at two levels—general city and specific parcel. The survey information and the case studies confirmed the difficulty of finding measures beyond the traditional jobs and investment measures.

However, equally clear is the interest and commitment of local officials in finding the best use of the projects even when they do not involve additional business activity. Quality of life improvements have a high value to local officials and residents so much attention is being paid to parks, open space, and other improvements. The “value” of these investments is difficult to quantify but nevertheless are major motivations for brownfield development efforts.

Sixth, state agencies, especially the Illinois Environmental Protection Agency, through the Office of Brownfields Assistance, are partners in the development process. The case studies on several occasions emphasized the value of the guidance and assistance provided during the brownfield process.

Brownfields are important in the local development process in many cities surveyed and one might expect this importance to increase in the future as the national economy improves and the projects move ahead in the redevelopment phase. The ultimate outcomes will be additional jobs and investment but also improvements in the quality of life in these communities.

Case Studies

While the survey results provide a useful overview of the processes used by cities in managing brownfield redevelopment projects, a more detailed analysis of the practices followed by cities is useful in understanding obstacles faced and ways in which cities have overcome them. Information at this level can help other local public officials and community leaders who may face similar situations.

To better understand how local public officials manage brownfield redevelopment projects and factors that contribute to their successes, an effort was made to study municipalities of various sizes and locations but also those containing various types of brownfields with a variety of end-uses. The four cities selected based on information provided in the mail survey are Alton, Calumet City, Monticello, and Sterling. Chicago, because of its size and innovative approach, was examined separately.

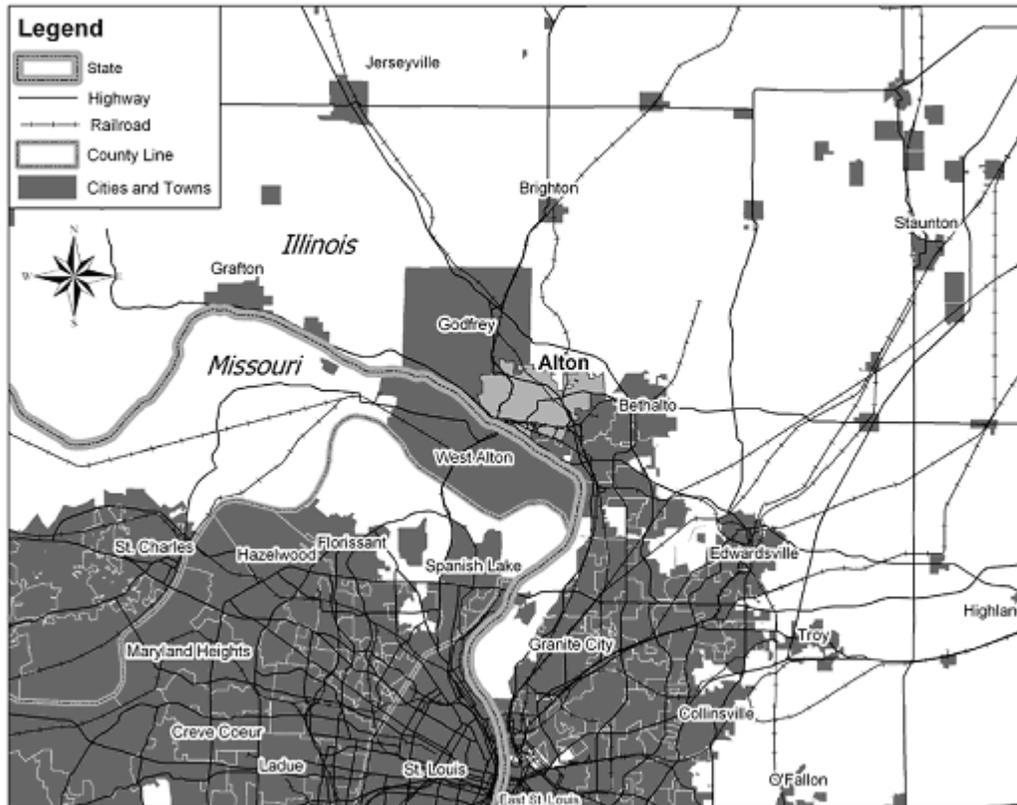
Information was gathered in on-site interviews with city administrators and investors in brownfield projects. Special attention is paid to the types of brownfields managed, strategies used within cities during the remediation process, special difficulties encountered, and the successes or failures incurred during the redevelopment processes. Since many projects are still in the early stages, the expected outcomes either may not be known or have not yet been achieved.

Alton

Alton, Illinois, a city once flourishing with riverfront industries, has experienced significant changes to its economic environment in the past several decades. Within the span of a decade, two of the city's major industries, Owens-Illinois, Inc. and Laclede Steel closed their Alton plants. Alton was now faced not only with the challenges of how to deal with a declining population and high unemployment, but also with the implementation of redevelopment plans for two brownfields sites of substantial magnitude, both in physical size and costs. In this case study, the challenges and successes incurred by the city of Alton in the remediation and redevelopment processes are examined.

Alton Demographics. Alton (Madison County pop. 261,409) is located on the north side of the Mississippi River in Southwestern Illinois, 25 miles north of St. Louis (Figure 2). Known as part of the "River Bend" region, Alton was once a thriving industrial community, benefiting from its transportation advantages. In 1912, Alton's riverfront manufacturing district comprised 102 industries, with growth and expansion continuing through the 1920s. However, as industries faced aging and deteriorating plant infrastructure, plants ceased operation. No longer defined by industrial growth, Alton began to experience, simultaneously, decreasing population and increasing unemployment. In the 1960s, the population of the city of Alton was approximately 45,000 residents; by 2003, population had dropped by 1/3 to 30,496 (Table 19). The city's average annual unemployment rate from 1980-2001 is 8.5 percent, while the U.S. average annual unemployment rate for the same time period is 6.0 percent (RBGA 2002).

Figure 2. Alton



Owens-Illinois, Inc. History

Owens-Illinois, Inc. (originally Illinois Glass Co.), producer of glass containers, had been a part of Alton's industrial history since 1873. At the height of production, the Owens-Illinois Alton plant employed 4000 people and Owens-Illinois Glass was the largest hollowwear manufacturer in the world. However, due to increased competition from plastic and metal container manufacturing, product demand began to slow. By the mid-1970s, employee layoffs were steadily occurring and, in October 1983, Owens-Illinois closed the 110-year-old bottle manufacturing plant. Consequently, 312 employees were terminated, resulting in a monthly payroll decline of \$500,000. The 1988 merger of Owens-Illinois and Brockway, Inc. made the combined company the nation's largest glass container manufacturer, with 40 percent of the industry's sales. The remaining Alton employees anticipated that this merger would provide more business and job security. Instead, four years later, Owens-Illinois, Inc. announced the closing of both the remaining mold shop and the foundry, representing a loss of 338 union and non-union jobs with a payroll of approximately \$1,080,000 per month.

Table 19. Profile of Alton

Census of Population and Housing	Year		Change	Percent Change
	1990 Census	2000 Census		
Population	32,905	30,496	-2,409	-7.3
Age Structure				
0 - 4 Years Old	2,667	2,197	-470	-17.6
5 - 9 Years Old	2,494	2,182	-312	-12.5
10 - 17 Years Old	3,427	3,474	47	1.4
18 - 24 Years Old	3,149	2,788	-361	-11.5
25 - 44 Years Old	9,773	8,870	-903	-9.2
45 - 64 Years Old	5,693	6,098	405	7.1
65 and Over	5,702	4,887	-815	-14.3
Civilian Labor Force (Population 16 Years and Over)				
Employed	13,004	13,044	40	0.3
Unemployed	1,583	1,039	-544	-34.4
Rate	10.9	7.4	-3.5	-32.0
Industry Employment				
Agriculture, Forestry, Fishing, Hunting, and Mining	216	55	-161	-74.5
Manufacturing	2,672	1,964	-708	-26.5
Wholesale and Retail Trade	3,106	1,907	-1,199	-38.6
Finance, Insurance, Real Estate (F/I/RE)	808	721	-87	-10.8
Services	4,247	6,465	2,218	52.2
Public Administration	581	391	-190	-32.7
Other*	1,374	1,541	167	12.2
*Other consists of construction, transportation and warehousing, utilities, and information.				
Household Income				
Median Household Income	\$22,948	\$31,213	8,265	36.0
Inflation Adjusted (1989=100.0)	22,948	23,232	284	1.2
Percent of Households Making				
Less than \$15,000	34.3	25.8	-8.6	-25.0
\$15,000 to \$34,999	36.1	28.6	-7.5	-20.8
\$35,000 to \$49,999	18.3	19.1	0.8	4.6
\$50,000 to \$74,999	8.3	16.8	8.5	103.1
\$75,000 to \$99,999	2.1	5.4	3.3	156.7
\$100,000 or more	1.0	4.4	3.5	362.6
Per Capita Income	\$10,904	\$16,817	5,913	54.2
Inflation Adjusted (1989=100.0)	10,904	12,517	1,613	14.8
Poverty Status				
Total Persons in Poverty	6,370	5,533	-837	-13.1
Percent of Total	19.9	18.7	-1.2	-5.8

U.S. Bureau of the Census.

Owens-Illinois Remediation and Redevelopment. The city of Alton was now confronted with the challenge of the remediation and redevelopment of the former Owens-Illinois Glass (OIG) complex—a 153-acre brownfield site—most of which had been sitting idle for 14 years. Unfortunately, due to poor economic conditions, the city itself was in no condition to finance such a project. However, it was apparent that some action needed to be taken to remediate the eyesore at the city’s front doorstep, as well as to encourage job retention and creation. Located at the foot of the Lewis and Clark Bridge at the intersection of Illinois Route 143 (Berm Highway) and Broadway, the OIG site possessed multiple transportation modes—the nearby Mississippi River, railroad lines, interstate, and airports—and the site was clearly advantageous for commercial exchange. The city, under the guidance of the city’s director of business and economic development, had experienced positive results with the \$6.8 million redevelopment of the Alton riverfront project, focusing on tourism and recreation. Once the city identified the direction it was to take with the brownfield project, the director of business and economic development was instrumental in the creation of a 23-year TIF district, enabling the city to partially fund the project through the additional tax revenues that eventually would be generated by improvements on the OIG brownfield site. Clark Properties Inc., a St. Louis-based redeveloper, expressed interest in purchasing the OIG brownfield site for development of a business park. Clark Properties had prior experience with brownfield remediation and redevelopment, including the successful Union Seventy Center, a 161-acre industrial business park on the site of a former General Motors Corporation plant located in North St. Louis.

The first step in the remediation process of the OIG brownfield site was to conduct an initial environmental assessment of the property. However, neither party in the relationship was willing to pay for this assessment. Owens-Illinois, Inc. was unwilling to finance an assessment for property which they were abandoning and Clark Properties Inc. did not want to invest in an assessment for property they had not yet acquired. Therefore, the city was ultimately obliged to use \$150,000 in TIF funds to pay for the environmental study so that the redevelopment could proceed.

After over three years of ongoing negotiations between Owens-Illinois, Inc., Clark Properties, the city of Alton, and the Environmental Protection Agency, an agreement to purchase the property was finally reached, with Clark Properties accepting responsibility for the environmental cleanup. The process of negotiation was complex, involving a 500-page environmental agreement with deliberations amongst the involved parties regarding terminology, definitions, and accountability. Ultimately, liability insurance policies were acquired by the city of Alton, Owens-Illinois, Inc., and Clark Properties; an action that was instrumental in moving the property acquisition forward.

Once the OIG sale was finalized, Clark Properties, in partnership with Clayco Construction of St. Louis, and the city of Alton were prepared to proceed with Phase One of the remediation and redevelopment plan. The goal of Phase One was the development of what was to be known as the Alton Center Business Park, suitable for bulk warehousing, light manufacturing, and distribution. Clark Properties was prepared to immediately step in and begin the environmental cleanup and demolition processes at the brownfield site. However, the site was found to contain asbestos, as well as heavy metal contaminants including lead and arsenic, organic solvents, and fuel storage tanks containing gasoline and oil. Additionally, before the developers could reap any state tax benefits, on-site landfills would need to be cleared. Environmental Operations, Inc. of St. Louis, an environmental compliance consultant, received a \$2.6 million contract for environmental contamination evaluation and cleanup of the entire

site. Environmental Operations worked closely with both the Illinois EPA and federal EPA to ensure that all regulatory requirements were met. Mike Clark, principal of Clark Properties, called Environmental Operations a “key player” in the redevelopment project.

Phase One of the project included the demolition of approximately 15 structures, representing one million square feet of space, as well as the renovation of two warehouses totaling 450,400 square feet of usable space. In addition to \$6 million in TIF funding slated for Phase One of the project, the Alton Center Business Park received \$11.6 million in tax-exempt moral obligation bonds from the Southwestern Illinois Development Authority (SWIDA). Because the bonds were backed by the state of Illinois, SWIDA could offer them at a much more favorable interest rate to the developers. SWIDA loaned an additional \$500,000, obtained through Illinois FIRST, to Alton Center Business Park, L.L.C. Although the amount of private investment dollars for this stage of the project was not released to the public, it is estimated that Phase One would cost an estimated \$22 million.

Alton Center Business Park has entered Phase Two of the renovation project, which entails the construction of additional properties along the frontage of Broadway, as demand arises. Overall costs of the remediation and redevelopment of the Owens-Illinois brownfield site is estimated between \$45 million and \$50 million. The city of Alton allocated \$2.0 million in TIF funds for infrastructure, with an additional \$750,000 earmarked for the \$11 million project to extend Indiana Avenue through Alton’s Industrial Corridor, between Illinois Route 143 and Broadway. For the Indiana Avenue construction, the city also received \$4.3 million from the Illinois Commerce Commission, an additional \$4.3 million from the federal Transportation Efficiency Act for the 21st Century (T-21) program, and commitments from Madison County for funding. The redevelopment plan for the Alton Center Business Park project included a stipulation that Clark Properties would donate two parcels of property for the extension of Indiana Avenue to the city so that they could transfer title to AmerenUE, once a “No Further Remediation” letter had been issued. Additionally, 14 acres of land had to be acquired from 15 separate owners for the project. Because the construction of the Indiana Avenue extension would impact 2.5 acres of wetlands located on the property, the city has had to implement a wetland mitigation plan to create 9 acres off-site. The goal of the city is to coordinate the Indiana Avenue extension project with a plan that would utilize Illinois Commerce Commission funding to upgrade the railroad crossing and realign the railroad track.

Marketing the Property. The continued success of the Alton Center Business Park development is dependent upon the ability of Clark Properties and the city of Alton to attract new businesses to the property. Clark Properties has collaborated with Ted Prehn, owner of T.L. Prehn Properties of Bethalto to promote the business park. Together, they have incorporated standard marketing practices such as cold calling, print advertising, and direct mailings into their marketing strategy. Additionally, they are seeking out companies outside of the region that might benefit from a Midwest location. Originally, the focus was on promoting the property primarily for light industrial and warehousing businesses; but due to the overabundance of warehouses in the St. Louis region and the desire to attract types of businesses that would offer a greater number of jobs, a marketing shift occurred—with the city and the developers promoting the business park as a “mixed-use” development instead. A major selling point for the city of Alton is the availability of incentive programs such as the Tax Increment Financing District, an Enterprise Zone and an abundance of trained labor.

Businesses located within the Enterprise Zone could receive investment and job tax credits, utility and sales tax exemptions, and potential property tax abatement.

American Water Works, Alton Center Business Park's first and only tenant, employs approximately 450 people at their national customer response center, located in one of the renovated warehouses. The company offers their employees an hourly wage of \$9.00 and above and an attractive benefit package. Since the Alton Center Business Park facilities are "built-to-suit," American Water Works was able to have a 42,551 square foot state-of-the-art call center. The company was also given a "right of refusal," granting them a level of sanctioning power regarding other potential adjoining tenants. Through the auspices of the city of Alton, American Water Works received a Linked Development Grant in the amount of \$462,000 for job creation, to be applied toward capital purchases. Alton city officials and Clark Properties have estimated that Alton Center Business Park could potentially bring 1000 jobs to the city.

Laclede Steel History

Laclede Steel, manufacturer of carbon and alloy steel products, had been a vital part of the Alton economy for almost 90 years, employing as many as 3000 people at one time. As a world financial crisis developed in the late 1990s and competition increased from low-price imports, the U.S. steel industry experienced a sharp drop in demand for domestic steel shipments. Low steel prices, a large debt load, and high pension costs ultimately forced Laclede Steel into Chapter 11 bankruptcy reorganization in November 1998. Laclede emerged from bankruptcy in January 2001, but filed for bankruptcy dissolution in July 2001, causing all operations to cease. The closing of Alton's Laclede Steel Company in July 2001 left the city with a 400-acre brownfield site along Broadway. Additionally, 550 people were out of work, placing additional burden on an area already plagued with a well above-average unemployment rate.

Laclede Steel Remediation and Redevelopment. Almost immediately after the closing of Alton's Laclede Steel plant, two former Laclede Steel employees began implementing a plan to bring a portion of the steel mill back into operation. Along with several other private investors, the prospective owners formed the "C" corporation, Alton Steel, Inc. After obtaining approval from the U.S. Bankruptcy Court, Alton Steel purchased the Laclede Steel Property for \$1 million. In turn, the proceeds were placed in a trust fund earmarked for environmental cleanup of the site. As part of the settlement agreement, Alton Steel, Inc. will be responsible for bringing the site back into compliance with the Resource Conservation and Recovery Act. Laclede Steel had not been in EPA compliance since 1998, and the U.S. Environmental Protection Agency held a \$125 million claim against the site. Alton Steel was given approval for an environmental remediation plan that would enable the new owners to perform the remediation over a longer time span; and the company anticipates the cleanup costs will fall well below the amount of the EPA claim.

Through negotiations with United Steel Workers Local 3643, Alton Steel entered into a five-year contract with the union that includes an hourly wage averaging \$13.20 per hour. The contract also includes quarterly profit-sharing, paid insurance, and incentives that could increase an employee's salary 20 percent. In turn, the union was willing to make some changes to the work rules and job classifications.

In June 2003, Alton Steel hired approximately 25 employees—mostly former Laclede employees—to initiate cleanup and renovation of the factory. Alton Steel officially began production on September 11, 2003, employing 129 people. By October, the mill was producing 800 tons of steel bars per day, with steel output equaling product orders. Alton Steel expects to hire 70 more employees in 2004, with plans to hire approximately 350 employees within two years.

Alton Steel, Inc. plans to concentrate efforts on a specialized area in the steel market, namely, semi-finished steel, including special quality bar used for various steel products such as auto parts. Using one state-of-the-art electric furnace, the company projects a production level of 600,000 tons annually. Alton Steel's decision to focus on a more specialized market was based on the apparent insufficient production of special quality bar steel in the United States, and the continued profitability of the special quality bar unit at the Laclede Steel plant up until production ceased. The CEO of Alton Steel, Inc. has many years of experience in the steel industry, in both management and consulting roles that could prove beneficial to the company. As co-founder of Bluff City Steel in Memphis, Tenn., the CEO of Alton Steel implemented a cost-accounting method at the mill, as he believes in keeping product inventory marginal and obtaining steel scrap as needed from various suppliers in the open market.

To finance the Laclede redevelopment project, Alton Steel relied on private investment funds, much of which came from company officers. At the onset of the process, Alton Steel sought legal counsel to assist in negotiations with the Environmental Protection Agency, Laclede Steel, the union, and lenders. Once the environmental cleanup plan was in place, the company had the ability to make financing arrangements. Financial consultants were hired to secure long-term financing and negotiations with a major metropolitan bank ensued. Although the city of Alton has not provided any funding to Alton Steel for the redevelopment of the Laclede brownfield site, the city was instrumental in obtaining a \$15,000 Community Development grant from Madison County for the purpose of relocating the Armed Forces Museum into one of the structures on the Laclede property. The Armed Forces Museum has plans to lease the building from Alton Steel, and will use the grant money for renovations to the building. The state of Illinois has expressed interest in the Laclede brownfield project, offering a financing package that would include a loan guarantee program through the U.S. Department of Agriculture's Rural Development office. Additionally, the state treasurer's office has funding assistance available through the STEP Program, allowing banks to offer job-creating businesses a lower interest rate for financing.

Lessons Learned. The continuing success of the Owens-Illinois Glass brownfield site remediation and renovation project has been a result of several underlying factors. Although it was evident that the city of Alton lacked the funds to underwrite the project, city officials were diligent in their efforts toward procuring capital for the renovation and redevelopment process. This is evident in their utilization of a TIF district, the Enterprise Zone, and various government grants to support various elements of the development. From the onset, city officials recognized the economic impact that a project of this magnitude represented to the city of Alton and surrounding communities. The mayor, the director of business and economic development, as well as other various city officials were steadfast in their commitment to the project. Another key element to the notable level of achievement with the Owens-Illinois brownfield project was the collaborative approach of city officials, the private sector, and government entities.

Additionally, the OIG brownfield project was not seen as a single entity, but rather part of an overall city plan for economic renewal. The Hunterstown revitalization plan, involving federally designated “Weed & Seed” neighborhoods, and the Marina Riverfront master plan, aimed at the development of the riverfront for commercial, recreation, and tourism purposes, are also part of Alton’s community renewal efforts.

Due to its close proximity to the business park property, the Laclede Steel brownfield project ties in well with the Alton Center Business Park. The extensive Indiana Avenue road construction project would be beneficial for both properties, opening up a considerable region for sustained commercial development. The TIF district, originally created for the Alton Center Business Park project, has developed into an impressive revenue generator for the city, bringing in over \$3 million in tax and interest revenues during the first half of its 23-year life span. These TIF funds have enabled the city of Alton to finance a range of city development and improvement projects involving highways, buildings, and water and sewer infrastructure.

Although still in initial phases of redevelopment, the Laclede Steel brownfield project shows potential. This project has been defined by the private investors and the local steelworkers union working together with the common goal of creating a viable company for the benefit of the community. In addition, experienced legal representation and counsel, as well as support from the state government may prove to be vital assets to the brownfield project.

Conclusions

As the recipient of two brownfields awards for the Alton Center Business Park project—the Phoenix Award presented by the EPA for environmental remediation efforts and the Illinois Tomorrow Award for “outstanding balanced growth initiatives”—the city has demonstrated the ability to overcome common obstacles to brownfield redevelopment. Although the city itself did not have sufficient funds to finance the Owens-Illinois Glass project, alternative methods of funding were utilized such as the TIF district, Enterprise Zone, as well as government grants. The issue of environmental liability was perhaps one of the most daunting concerns faced by the parties involved in the redevelopment plan; however, after careful negotiations and acquisition of liability insurance, the project could move forward. Although property ownership is often a frequent reason for nonparticipation in brownfield redevelopment, the city of Alton was fortunate in that a purchasing agreement was achieved between Owens-Illinois and Clark Properties, so that property ownership was never a concern for the city itself. The remediation and redevelopment of the Laclede Steel site represents major progress in the city of Alton’s renewal plans. Not only does the redevelopment of the 400-acre site eliminate the city’s largest eyesore, it also will provide extraordinary potential for economic growth. The city of Alton has achieved great progress in the areas of economic and social revitalization of their community, and brownfield redevelopment will most likely continue to be a crucial element in the overall plan for community renewal.

Calumet City

Calumet City, as is true of many older suburbs, has very little land left to be developed; yet local officials are interested in generating additional employment for residents. Thus, brownfield remediation represents an opportunity to convert community eyesores into

productive sources of employment in key locations within the city. This approach has been successful and, while still ongoing, has made a substantial difference in Calumet City.

The experiences with brownfields in Calumet City offer insights into several difficulties that can be faced in working with abandoned properties, especially those with potential contamination. Properties in older cities often have had many uses, some of which may not be completely documented in city records and this often results in the occurrence of unforeseen obstacles during the redevelopment process. Although faced with such obstacles, Calumet City officials have successfully managed the brownfield properties during the past several years.

Calumet City Demographics. Calumet City is a south suburban community of approximately 39,000 residents, comprising an 11 square-mile area, and bordering Hammond, Indiana, and the Illinois municipalities of Dolton, Harvey, and Lansing (Figure 3). The city is more than 100 years old and is essentially landlocked. It is largely a residential community with services and wholesale and retail trade as the major employment bases (Table 20). Especially important is the River Oaks shopping mall that provides substantial sales tax receipts for the city.

The area was known for oil refineries in the past, but cutbacks in this industry created unemployment and economic disruption in the area. Since little, if any, land is available for industrial development, city officials have focused mainly on retail development of the brownfield properties, in part because the properties were especially suitable for retail business in both size and location. Local economic development in the recent past has been in the retail sector with the construction of a shopping mall and other facilities; and local leaders envision the development in the retail sector to be an influential part of the city's economy.

Figure 3. Calumet City

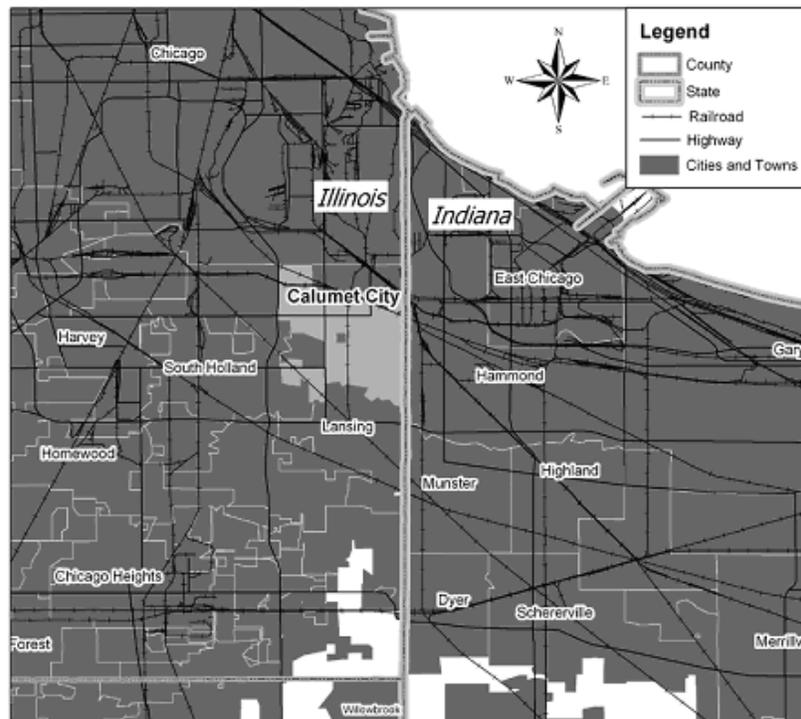


Table 20. Demographic Profile of Calumet City

Census of Population and Housing	Year		Change	Percent Change
	1990 Census	2000 Census		
Population	37,840	39,071	1,231	3.3
Age Structure				
0 - 4 Years Old	2,532	3,027	495	19.5
5 - 9 Years Old	2,577	3,447	870	33.8
10 - 17 Years Old	3,681	4,753	1,072	29.1
18 - 24 Years Old	3,334	3,365	31	0.9
25 - 44 Years Old	12,396	11,983	-413	-3.3
45 - 64 Years Old	7,444	7,521	77	1.0
65 and Over	5,876	4,975	-901	-15.3
Civilian Labor Force (Population 16 Years and Over)				
Employed	17,664	16,981	-683	-3.9
Unemployed	1,481	1,482	1	0.1
Rate	7.7	8.0	0.3	3.8
Industry Employment				
Agriculture, Forestry, Fishing, Hunting, and Mining	98	32	-66	-67.3
Manufacturing	3,379	2,261	-1,118	-33.1
Wholesale and Retail Trade	4,127	2,338	-1,789	-43.3
Finance, Insurance, Real Estate (F/I/RE)	1,708	1,691	-17	-1.0
Services	4,833	6,390	1,557	32.2
Public Administration	799	954	155	19.4
Other*	2,720	3,315	595	21.9
*Other consists of construction, transportation and warehousing, utilities, and information.				
Household Income				
Median Household Income	\$30,138	\$38,902	8,764	29.1
Inflation Adjusted (1989=100.0)	30,138	28,955	-1,183	-3.9
Percent of Households Making				
Less than \$15,000	23.6	15.7	-7.9	-33.6
\$15,000 to \$34,999	35.4	28.7	-6.7	-18.8
\$35,000 to \$49,999	21.6	19.1	-2.4	-11.3
\$50,000 to \$74,999	15.3	20.3	5.0	32.4
\$75,000 to \$99,999	3.0	10.3	7.4	249.6
\$100,000 or more	1.1	5.8	4.7	433.6
Per Capita Income				
Inflation Adjusted (1989=100.0)	\$13,569	\$18,123	4,554	33.6
	13,569	13,489	-80	-0.6
Poverty Status				
Total Persons in Poverty	3,694	4,721	1,027	27.8
Percent of Total	9.8	12.2	2.3	23.8

U.S. Bureau of the Census.

Historical Perspective. The brownfield properties include approximately 15 acres that previously had been used in a variety of ways ranging from a machine shop and service stations, to several adult entertainment enterprises. In the 1930s and 1940s, the area had gained a reputation for conventioners and was known as a “sin strip.” It was not only an eyesore and an embarrassment to residents, but it also limited the potential of the city for redevelopment along other more acceptable lines. By the 1950s, the area had lost its luster and the properties deteriorated even further.

In the early 1990s, city administrators decided to take actions that involved purchasing the properties and making them more suitable for redevelopment. The neighborhood condition was such that a private business investor would not have been able to redevelop a property and run a successful operation. This forced city officials to find a way to address the properties as a whole, with a goal towards redevelopment.

The most expeditious and direct approach was for the city government to purchase the property parcels and prepare them for resale to private developers, and then, in some way, recover the public investment. The city used a Tax Increment Financing district to leverage \$13 million in General Obligation bonds in order to purchase properties along Stateline Road and State Street. In total, approximately 18 blocks of parcels were purchased.

Calumet City has 10 brownfield properties owned by the municipality, and the city government is in the process of negotiating sales of these properties to private businesses. In total, the properties include approximately 12 acres within the city limits. All ten of the known brownfield parcels have had environmental assessments performed, and one-half of the parcels have been rehabilitated and returned to productive use in the past year. The planned use of all of the properties is commercial or light industrial. Because the properties had been idle between five and ten years, one of the main considerations involved in moving ahead on the property redevelopment was the renewed interest by the mayor and city council in removing eyesores and changing the image of the city to maximize the potential for future economic development.

The properties were purchased at fair market value and are in one of four Tax Increment Financing districts in the city. In a TIF arrangement, property taxes resulting from increases in property values are used to retire the debt incurred to make improvements. This meant, of course, that the properties must be sold to private investors as quickly as possible to return them to the tax rolls and increase tax receipts. The buildings had to be razed and the properties prepared to make them attractive for developers. In other words, the properties had to be “buildable” before businesses would invest.

Because most properties were 25 by 125 foot parcels, they were best suited for continued retail use, although they could be combined and resold for other endeavors. The locations, however, are not as suited to manufacturing or other purposes and the city sees retail or service businesses as the best option for local economic development. An advantage of these properties is that they are strategically located in the community with access to telecommunications and other infrastructure facilities. They also are in high traffic areas of the downtown, making them attractive for retail development.

Since the 1990s, Calumet City has had a coordinator of community and economic development and a comprehensive land use plan to guide overall economic development within the city. However, it does not have a formal or written local economic development action plan. Instead, the city council is directly involved in many local decisions regarding the types of businesses attracted, zoning, and land use decisions. While this approach is not uncommon, especially in smaller communities, it places heavy responsibility on the economic development director or coordinator.

The approach used in Calumet City also relies heavily on external consultants for technical expertise. While this approach offers advantages in flexibility of services available, it also requires a relatively well-informed governing body to ensure that the quality and type of services obtained are those needed to make effective decisions.

Brownfield Experience and Approaches. Calumet City has received extensive assistance from state and federal government agencies in working with brownfield redevelopment projects. In 1988, the city received a grant from the USEPA for a Phase One assessment project; this initiative found substantial contamination on several parcels. Of special concern are underground tanks left by previous users such as gas stations and home heating storage tanks. Overall, the city estimates that 30-35 tanks were removed from the properties; 12 tanks were removed from one block alone.

Since the city government had purchased the properties without a full assessment of the contamination involved, it incurred substantial unexpected expenses associated with the project. Hindsight suggests that some of these expenses perhaps could have been avoided with a more detailed examination of the property, or with more reliance on professional expertise in evaluating the property prior to purchasing. Apparently, local records were not adequate to identify previous owners in sufficient detail to enable city administrators to anticipate underground tanks and other possible brownfield issues. In this case, reliance on a consulting firm did not yield sufficient information to identify these problems. Presumably, had the city or the property appraiser known about these potential hazards, the fair market values would have been less—allowing the city to budget for cleanup.

The city received a second grant from IEPA to help remediate the three parcels that currently are being developed. Thus, while the city government invested nearly \$13 million from bonds in the current properties or in their redevelopment, business investors will pay \$1 for the properties when they compile a development plan accepted by the city council.

City purchase can be an effective and expeditious way to prepare and redevelop brownfield properties, but this approach frequently raises issues because property owners are often city residents who purchased the properties without realizing the presence of storage tanks or other contamination left by previous uses. When the city government purchases the properties at fair market value after the contaminated uses have been identified, the property values are lower, penalizing current owners. This can be a difficult political liability that can be avoided when the property is sold to a private buyer.

The result in Calumet City is that the unexpected expenses encountered by the city government meant that the city had to raise additional funds. The properties have been remediated and the city has commitments from two fast food retail establishments to build on the properties. These

stores are anchors for this development and will contribute significant sales tax dollars to the community. In one case, the investor has a similar business in Lansing, an adjacent city, and is expanding his operations. The other investor already has a similar business in Calumet City and wanted another location on the east side.

In both instances, when the business investors began preparing the properties to build, they encountered additional underground tanks adding to costs to the city since it sold the properties as “buildable.” Once again, had these brownfield issues been known prior to the transactions, financing adjustments might have been possible. However, the market value of the property (sale price) presumably would have been discounted to reflect the tank removal cost.

The remaining properties in this area will be redeveloped into office space, restaurants, or retail strip mall-type of development—potentially including 18-20 outlets. From the city government’s perspective, these stores will contribute sales taxes and generate employment in the downtown area. These uses are compatible with the comprehensive land use plan for the city.

A third property parcel is under negotiations with a local meat cutting establishment seeking to expand its current operations. Had property in the city not been available, the business probably would have relocated to Will County; thus the redevelopment project retained nearly 50 jobs and created 23 more.

The properties that have been sold or remediated and are available for use constitute approximately two-thirds of the total brownfield acreage in Calumet City. Negotiations are underway with three other investors and letters of interest have been submitted. If these investment prospects materialize, an additional 47 jobs are expected to be created. At that point, virtually all of the brownfield properties will be in the redevelopment phase, or at least committed to the development process.

Process Followed. The process followed in Calumet City for contacting potential developers is relatively informal. Since the city does not have an aggressive economic development action plan underway, the Community and Economic Development (CED) coordinator works closely with the city council in the development process.

First, the CED coordinator places advertisements in as many media outlets as feasible to spread the word that properties are available. In addition, a local engineering, consulting, and testing firm that is working with the city on several projects has helped market some of the properties to clients. Word has spread relatively quickly that the city is selling the land for \$1 to developers who submit plans that meet the approval of the city council. As part of the application process, after first contacting the CED coordinator, a developer must submit a blueprint of the property, including space for parking and other components needed to successfully manage the proposed business. Additionally, the developer must provide an artist’s sketch of the proposed structure, ideas for how it will be used in a business situation, the estimated cost of the structure, and the number of potential jobs to be created. The plans submitted are reviewed first by the CED coordinator and, if acceptable, they are then sent to a development committee of the city council and then to the entire council for a decision on whether to direct the city attorney to draft an agreement with the developer.

Thus far, the decisions have been made on a case-by-case basis, and the city does not have formal criteria in place with which to decide about prospective businesses. The council takes into consideration the estimated sales tax to be generated, the increase in property taxes, and the number of jobs. The sales tax increase benefits the city treasury directly, and, as in many suburban cities, are a major revenue source. The investment made in the property increases the assessed valuation, which, in turn brings in additional property tax revenues. Because the properties are in a TIF district, the tax increment is used to retire the debt incurred to remediate the property.

The number of jobs created and incomes generated directly benefit the city through increased spending and the multiplicative effects. Thus far, the council has worked with fast-food companies because they submitted proposals and the city wanted to start the development process. Later developments may bring higher paying jobs depending on what tenants move into the strip mall.

Because the entire city is within an Enterprise Zone, investors qualify for state benefits including no sales tax on construction materials. In addition, the city may waive local permit fees and can sign off on Cook County property tax abatements. City officials can also guide investors regarding securing financing from local lending institutions.

Financing Profile. The Calumet City brownfield projects provide an example in which the city government took charge and made a major investment of local funds (mainly borrowed) to start the process. Essentially, the city has invested \$13 million raised in bonds plus approximately \$340 thousand of a \$1 million line of credit to purchase the properties and prepare them for development. In addition, the city received a grant of \$200,000 from the USEPA to undertake the Phase One assessment process. This grant was followed by a grant of \$88,300 from the IEPA to help remediate the property.

Combined, the two retail establishments have invested approximately \$1.8 million in buildings and infrastructure improvements. The planned strip mall is expected to result in an investment of approximately \$3.5 million before it is completed. This does not include expected additional investments made by future tenants.

The meat-cutting operation is expected to invest as much as \$1.5 million in the building and infrastructure, plus as much as \$150,000 prepared the building for operation. The three businesses involved in negotiations for other properties estimate that they will spend from \$2.5 to \$3 million in construction costs.

Thus, the total expected private investment in the properties at this time is estimated to be as high as \$9.5 million, signifying that the city investment has triggered substantial investments by the private sector. The expectation by the city is that increases in assessed valuation and sales taxes will reimburse the \$13 million investment in purchasing and remediating the properties. In addition, the perception of the city as a viable place for economic development and ridding the city of undesirable property uses adds to the overall quality of life for residents and will bring long-term benefits to the area in many other ways.

Lessons Learned. Other communities can learn several lessons from the experiences in Calumet City, since it took a very direct and forthright approach in brownfield property redevelopment.

First, in hindsight, the city would have benefited from more due diligence research in purchasing the properties initially. Had more information been obtained regarding past uses of the property, the city might have anticipated some of the storage tanks and the associated problems. This could have reduced the amounts paid for the properties.

Second, the initial work undertaken by a private contractor did not disclose all of the tanks that had to be removed. More sophisticated testing procedures used in assessing the properties could have identified additional tanks and possibly lowered the cost of remediation. At the very least, some of the difficulties and delays encountered in preparing the properties for development might have been avoided. The city is currently working with a firm that uses more sophisticated testing procedures; and it is likely that all of the tanks on the targeted properties have been identified.

Third, even in a land-locked city, it is possible to undertake a successful remediation process if the mayor and city council are committed to such a course. The experience in Calumet City shows that aggressive actions by the city can bring about positive results in a reasonable amount of time. The amount of time it will take to recover the more than \$13 million invested by the city is not known. However, much of the stimulus for action was not based on economics; rather, it was to improve the aesthetics of the city and to change its reputation. Such improvements can make development in the future easier.

Fourth, planned redevelopment in the case of Calumet City may create approximately 135 jobs, based on estimates thus far. In addition, 47 jobs were saved because a business did not leave the city. This does not include jobs created by additional companies that will locate in the strip mall; currently, no information is available on these prospects.

The brownfields remediation process in Calumet City accomplished several objectives—expanding the retail sector in the downtown, while removing eyesores and reducing vandalism and crime. Without concerted action by the city government to redevelop all of the properties at once, the neighborhood would not have been attractive enough to draw investment. The brownfield program also helped reprioritize the local economic development process as well.

The city council and administrators continue to work with business investors, private consultants, and others to mirror the activities and to redevelop remaining properties. City officials clearly view brownfield redevelopment as an essential part of the municipal growth and development process. The aggressive actions taken by the city government show that public officials see brownfield redevelopment as a legitimate municipal responsibility. In addition, they work closely with private investors to return the properties to the tax rolls as quickly as possible.

The process in Calumet City also has benefited from close contacts with both the USEPA and the IEPA, Office of Brownfields Assistance. Technical assistance and the funds provided were instrumental in allowing the city to make substantial progress on the remediation issue. Local officials were quick to point out how they benefited from the guidance received. They also reported a need for additional information on brownfield management issues including workshops and seminars.

Monticello

The brownfields redevelopment process currently underway in the city of Monticello demonstrate the common challenges faced by communities in the early stages of trying to mitigate the negative effects of properties that have been vacant and/or abandoned for more than a decade. Redevelopment schemes for this area have been complicated not only by challenges associated with private ownership and remediation financing, but also by the historical significance attached to some of the sites and a subsequent reluctance toward their demolition.

This case study describes the process by which city administration partnered with private civic organizations to garner support for redevelopment and subsequently brought the project into an active phase. Due to a change in development plans of a prospective business for the site, any end uses for the properties after remediation are not specifically planned at present. However, the process of readying the properties for reinvestment has been spurred into motion through a local collaborative effort and a public education campaign.

Even though the project is in its infancy as far as derived benefits are concerned, several redevelopment schemes are under discussion, ranging from adaptive rehabilitation to newly developed retail operations—all geared towards retaining the thriving commercial character of historic downtown Monticello.

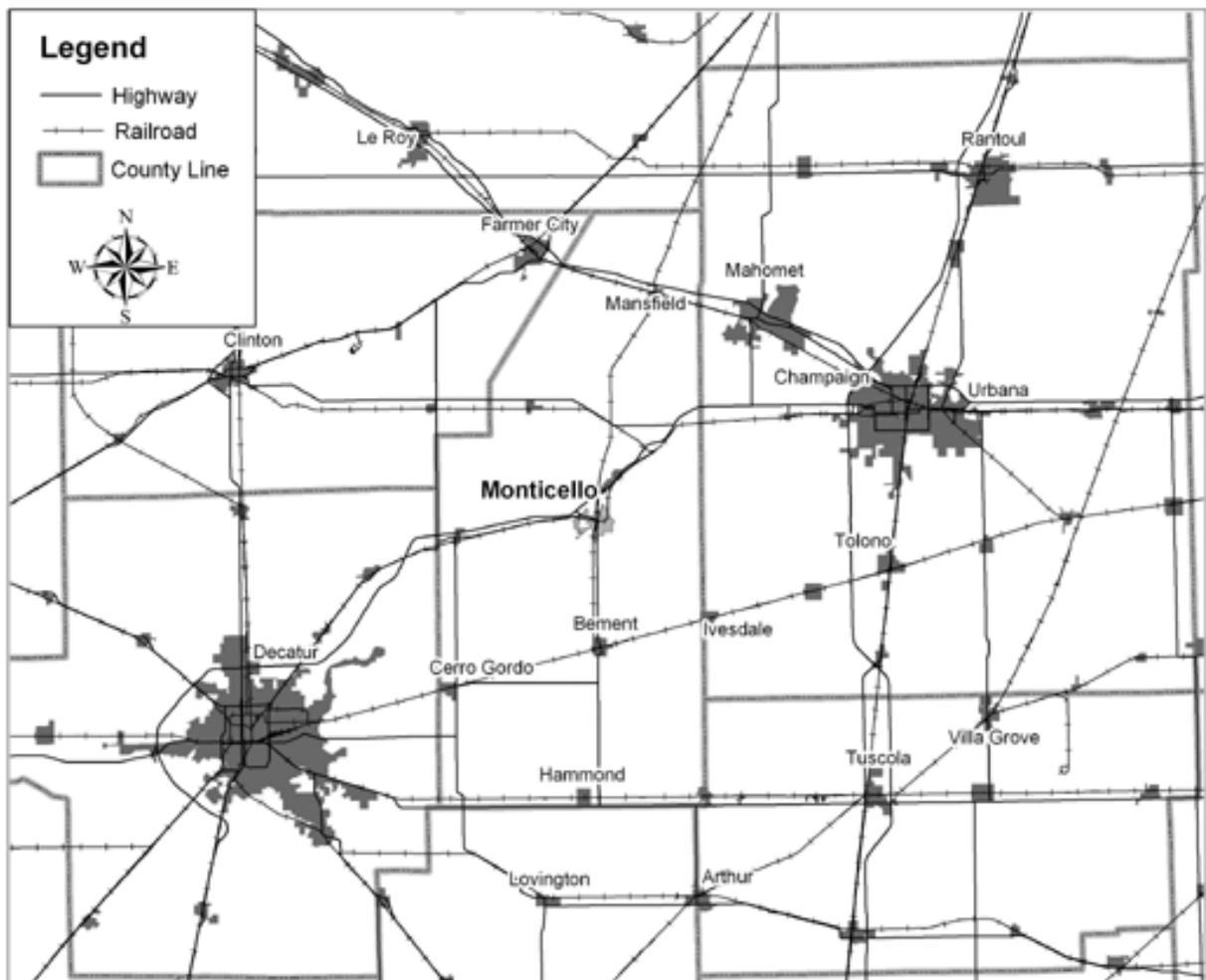
Monticello Demographics. Monticello (pop. 5,138) is the county seat and largest city in Piatt County (pop. 16,365). Situated in central Illinois, halfway between Champaign (30 miles to the southwest) and Decatur (35 miles to the northeast), it has enjoyed prosperity over the years. Due to its accessibility to Illinois Route 105 and Interstate 72 and the proximity of Interstates 57, 55 and 74 (Figure 4), Monticello has been, and continues to be, a bedroom community for larger cities in the region.

Though Monticello has experienced common economic setbacks during the last two decades, unlike many small Illinois communities, it did not experience dramatic population losses during the 1980s; and between 1990 and 2000, the city actually experienced a population increase of 12.9 percent (Table 21). Much of this increase can be attributed to an influx of commuters from Champaign and Decatur, drawn to high quality of life (including extremely low crime rates) and comparatively low residential property tax rates (city tax rates have decreased for the past seven years). According to the Bureau of Economic Analysis, the number of Monticello residents citing Champaign as their county of work has nearly doubled each subsequent decade since the 1970s, and the 2000 Census documented 58.7 percent of the workforce is employed outside Piatt County. Consequently, the population in the 45-64 year age range increased nearly one quarter (23.0%) in the previous decade and 44.2 percent of the Piatt county population had household incomes greater than \$50,000. This percentage increase is higher than in other non-metro, as well as metro, Illinois counties overall.

The base of the Monticello economy is not in manufacturing (9.1%), but rather in the retail/service sector (89.2%). Thus, the city has been relatively insulated from the negative consequences felt by other small/rural communities hit hard by the decline in manufacturing, agricultural and extractive industry sectors. Two plant closings in the area initially caused an increase in the unemployment rate; but the added workforce availability served as an attraction

to new businesses, including three new manufacturing companies—Wall Systems, Inc. (wall manufacturer), Ruff Quality Components (roof truss manufacturer), and Ring Industries (manufacturer of drainage tile padding). Currently, Monticello’s investment has been oriented towards the retention and recruitment of retail/service businesses, including capturing tourism dollars by attracting visitors to unique historical locations such as the Robert Allerton Park and Monticello Railway Museum.

Figure 4. Monticello



Brownfield Site History. Beginning in the late 19th century, the area west of Monticello’s courthouse square, historically known as Pepsin Hill, was the commercial center of the city. Longstanding local businesses, like the Harrison Brother’s Carriage Works, D.K. McClure and Sons Garage and Machine Shop, the Monticello Lumber Company, the Monticello Grain Company and the Pepsin Syrup Company, provided services and livelihoods for a growing number of residents in Monticello and the surrounding region.

Table 21. Demographic Profile of Monticello

Census of Population and Housing	Year		Change	Percent Change
	1990 Census	2000 Census		
Population	4,549	5,138	589	12.9
Age Structure				
0 - 4 Years Old	267	309	42	15.7
5 - 9 Years Old	318	330	12	3.8
10 - 17 Years Old	485	564	79	16.3
18 - 24 Years Old	316	311	-5	-1.6
25 - 44 Years Old	1,382	1,355	-27	-2.0
45 - 64 Years Old	972	1,248	276	28.4
65 and Over	809	1,021	212	26.2
Civilian Labor Force (Population 16 Years and Over)				
Employed	2,249	2,603	354	15.7
Unemployed	113	83	-30	-26.5
Rate	4.8	3.1	-1.7	-35.4
Industry Employment				
Agriculture, Forestry, Fishing, Hunting, and Mining	82	82	0	0.0
Manufacturing	402	320	-82	-20.4
Wholesale and Retail Trade	403	354	-49	-12.2
Finance, Insurance, Real Estate (F/I/RE)	162	177	15	9.3
Services	832	1,178	346	41.6
Public Administration	87	152	65	74.7
Other*	281	340	59	21.0
*Other consists of construction, transportation and warehousing, utilities, and information.				
Household Income				
Median Household Income	\$33,491	\$45,754	\$12,263	36.6
Inflation Adjusted (1989=100.0)	33,491	34,055	564	1.7
Percent of Households Making				
Less than \$15,000	15.8	12.2	-3.6	-22.8
\$15,000 to \$34,999	37.9	24.4	-13.5	-35.5
\$35,000 to \$49,999	27.2	18.2	-9.1	-33.3
\$50,000 to \$74,999	12.8	23.0	10.2	79.6
\$75,000 to \$99,999	3.9	11.1	7.2	186.1
\$100,000 or more	2.4	11.1	8.7	367.7
Per Capita Income				
Per Capita Income	\$15,537	\$23,257	7,720	49.7
Inflation Adjusted (1989=100.0)	15,537	17,310	1,773	11.4
Poverty Status				
Total Persons in Poverty	131	187	56	42.7
Percent of Total	3.0	3.8	0.8	27.2

U.S. Bureau of the Census.

In contemporary terms, the area clustered a group of related industries. Horse drawn wagons transported Pepsin Syrup products, while the Carriage Works also supplied wagons to the U.S. Postal Service. The lumber company supplied wood for wagons and supply containers. A livery stable and blacksmith served the businesses as well. These businesses gained economies of scale and were able to build a strong economic base in Monticello and neighboring communities.

The major employer was Dr. Caldwell's Pepsin Syrup Company. It occupied an acre of land bordered by the railroad tracks to the east and elevated tracks to the west. The site consisted of two, three and four story brick buildings housing the company's operations. In the 1930s, local production made Monticello one of the largest pharmaceutical centers in the world, at one time boasting the highest number of millionaires per capita in the United States.

The Pepsin Syrup Company has a long history and its operation and production during the 20th century were major contributions to Monticello's economic prosperity. Incorporated in 1893, during an era when global and national patent trends were peaking, the number of remedies and patent medicines being manufactured in Monticello was unprecedented given the small size of the city.

With revenues reaching \$1 million in the first six years, the operation soon outgrew Dr. Caldwell's office practice and small drugstore on the courthouse square, and relocated to the larger site popularly referred to as Pepsin Hill. The initial company building was a private residence (Stickel/Holmes residence). Over the years, three additions were made not only to allow for larger scale production, but also to provide services, benefits and leisure to company employees. Consequently, the Pepsin Syrup Company provided "employee perks" long before they became a regular component in compensation packages. The facility hosted an employee gymnasium, cafeteria, men's/women's lounges and clubrooms, and numerous other amenities.

The success of the Pepsin Syrup Company spurred development of other entrepreneurial endeavors on properties adjacent to the operation, which led Pepsin Hill to eventually becoming Monticello's primary commercial location. Pepsin Hill industries offered not only a competitive wage, but made millionaires out of an unusually large number of residents, laying the groundwork for the affluent economic character Monticello currently retains.

In 1925, the Pepsin Syrup Company was sold to Household Products, Inc., a division of Sterling Products Company, Wheeling, WV. Along with Pepsin Syrup, Sterling products included Fletcher's Castoria, Fizrin and Campho-Phenique. Nearly a century after its founding, the business was sold to the Mentholatum Company in 1984. Operations were permanently suspended the following year due to the perceived costs and liabilities associated with structural upgrades to the building. Dr. Caldwell's brand was sold to Denison Pharmaceutical of Rhode Island and the property has remained idle since 1986.

Development Profile & Process. The closing of the Pepsin Hill operation in 1986 triggered a substantial deterioration in the status of the property. The property was quickly resold to the former Case Management Company in Champaign (now Developmental Services). In 1987, the property was sold yet again to its current owner for slightly more than \$100,000. Consequently, while plans to redevelop the property fell through time and time again, deterioration eventually set in. The end result, 17 years later, was that the city's greatest economic resource

became a vacant eyesore. The site is currently used as a storage site for discarded restaurant equipment, while exterior and interior deterioration continues.

Due to the history associated with the establishment, many Monticello residents attached great sentimental value to the property. This, combined with a lack of cooperation due to private ownership, posed serious problems for any clean up and/or mitigation efforts. Through the 1990s, public awareness of the health and safety issue surrounding the property increased. Not only had it become a nesting ground for stray animals and vermin, stagnant water contributed to a summer mosquito problem, and incidents of vandalism were on the rise, including an arson attempt.

Unfortunately, having turned down an option to purchase the building for \$1 during the middle 1980s, the city was essentially powerless, without the assistance of an outside mechanism to intervene in the short term. While the property remains in private hands at present, the city has become a party in a protracted lawsuit to obtain the Pepsin property for conversion. Due to the lack of cooperation by the owner, no clear outcome is currently on the horizon.

Site Specifics. The City of Monticello applied for and received an IEPA Municipal Brownfields Redevelopment Grant in April 2002 (one of the first pharmaceutical sites included in the program) and was awarded \$118,000 to assess the environmental condition of the former Pepsin building and surrounding properties. The assessment was made to identify any recognized environmental conditions on the properties that could encumber future site development, evaluate the scope, potential mitigation options and estimated costs associated with the identified conditions.

The study area includes approximately 3 city blocks bounded by the Monticello Railroad Museum train tracks on the north, Main Street on the south, the Norfolk and Southern Railroad to the east and Park Street to the west, a strategic position in relationship to downtown Monticello. The city retained a consulting firm to prepare the grant application documents, as well as to develop and implement the site assessment and investigation plans. As a condition of the grant, city personnel and staff provided site assessment and investigation activities.

The Monticello redevelopment process remains in the early stages. Currently, Phase I and II assessments have been completed. Five sites are included in the assessment area with all property titles currently held by private owners. These sites include 189,440 square feet of land with former uses including an automotive repair shop, a mill and establishments selling oil, gas or chemicals. The results of the IEPA site assessment confirmed the existence of soil contamination associated with residual motor fuel and waste oil products, the existence of an unregistered 20,000 gallon underground storage tank containing approximately 1400 gallons of residual fuel oil, along with additional suspected asbestos and lead containing materials.

The Pepsin Hill Brownfields project was enrolled in the Site Remediation Program in early June 2003, with a site investigation report and remediation objectives report forwarded to IEPA about the same time. Out of the five sites, four required cleanup of contaminated soil. In July 2003, a remedial action plan was submitted along with a request for additional IEPA Municipal Brownfields Remediation Redevelopment Grant funds to assist with outside clean-up. The remedial action completion report is slated to be submitted in July 2004, with the end goal of

obtaining a No Further Remediation (NFR) letter for individual property owners associated with the redevelopment project.

Decision-making Processes. The catalyst that spurred the project into action was a desire to keep retail business in the downtown area. In essence, a regional grocery store chain was interested in locating in the area in 2001, and to keep sprawl from starting on the outskirts of the city, the Pepsin building and adjacent properties were identified as meeting their space needs (this regional chain later bought out the local grocers). Thus, the process of dealing with the deteriorating building had begun.

In March of 2001, the City of Monticello had hired an Economic Development Director to be the point person on Brownfields, pursue the redevelopment grant process and basically “oversee” the city’s involvement in the project. Meetings with key stakeholders (property owners as well as community representatives) were held, with diverse thoughts on redevelopment represented. Discussions centered on the rehabilitation of the building versus its demolition and extension of new streets to the Pepsin Hill area. Community stakeholders met with representatives from the Illinois Historic Preservation Agency to identify potential opposition if the project materialized and potential state funding for demolition. Since the building was placed on the Illinois Register of Endangered Historic Sites in 1999, demolition issues had to be given due consideration.

At the urging of IIRA’s Rural Economic Technical Assistance Center and the Department of Commerce and Economic Opportunity (formerly the Department of Commerce and Community Affairs), the IEPA was contacted (via the Champaign County Regional Planning Commission). Later the group met with representatives of the IEPA to gather information on assistance programs, and was encouraged to apply for an IEPA Brownfields Redevelopment Grant.

Key Players. Key stakeholders that played a role in the process were local city administrators, the Monticello Chamber of Commerce, Monticello Historic Preservation, and Monticello Mainstreet, with a minimal role for elected city officials. Furthermore, the project required cooperation and coordination among several property owners. Joint, as well as one-on-one meetings, were held with property owners to garner support for the project. Monticello city administrators cite the ease in working with representatives from the IEPA as being one of the most positive aspects of the redevelopment process from a local perspective.

Public Education. During the past two years, the city of Monticello used several community outreach techniques to gain support for current and future redevelopment efforts. As often is the case, there was a general lack of understanding among town residents as to the concept behind and outcomes associated with brownfields redevelopment. The education began with meetings of community civic organization leaders, which spurred the public awareness process into action. These stakeholders were instrumental in providing support, diverse opinions, redevelopment ideas and help with consensus building towards future initiatives. The city took the initiative to create their own “IEPA Brownfields Redevelopment Grant” sign, describing the project and acknowledging the contributions made by the city, engineering partners, and IEPA. The community reacted positively to the news that actions were being taken to mitigate the negative consequences associated with this once formidable, but now rapidly deteriorating structure.

The Monticello Economic Development Office also helps with public education regarding the local brownfield redevelopment process. A log of interior photos is being kept for future presentations. In the past, private tours of the building were arranged. Status reports are continually made to the city council. Monticello's eNews site has also been used as a public awareness tool. An ongoing series draws attention the redevelopment process currently underway, explains the concept of "Brownfields" and the intended outcomes, with a unique sensitivity to the historical significance of the property.

Potential Site End Use: Redevelopment or Rehabilitation? On a positive note, Monticello has an active business retention and expansion program, and offers one-stop development support. Furthermore, partnerships built over the past two years are helping to position the city of Monticello as being pro-business, both for the attraction of businesses and to benefit existing companies. This is extremely important when considering potential redevelopment of the Pepsin Hill area once NFR letters are attained for current property owners.

Multiple schemes have been discussed for bringing the Pepsin Hill area back into productive use, a majority of which is based on the assumption that any new operations will be commercial/retail. City administrators are determined to clean up the outside of the site area. Interior clean up will be determined by the redevelopment plans and financed by future investors unless state or federal clean up money becomes available.

Once the Site Remediation Program is well underway, the city will re-contact developers who expressed interest in the site when it was added to the endangered list, along with others with successful experiences involving redevelopment of historical buildings. This process will help determine if the building is worth rehabilitating.

Past recommendations for site re-use include: retail, public meeting space, community recreation center, residential units (condos) or daycare center. However, the Pepsin sites were not assessed for evidence of lead based paint. Reuse of the space in a residential or public manner would require assessment and remediation if lead is present. The presence of asbestos might present a similar scenario.

Redeveloping the area as it was in the past, as a cluster, remains a viable option. Redevelopment of the Pepsin building/site has a high potential for spurring a domino effect in redevelopment in the surrounding area, capturing local economies of scale in the same manner as in the past, as well as externalities associated with broader and more diversified economic activity.

The city has experienced some challenges in the funding process; specifically, in meeting the grant match due to the substantial size of the grant, as well as in securing funds for future redevelopment. Support from local financial institutions has, to this point, been non-existent, and the potential for this type of funding does not seem likely. Ownership issues are also important because there is a high probability that property owners may attempt to pad property sale prices, making them unattractive to otherwise willing developers. The Economic Development Office is working with owners and the city remains optimistic that such issues will be resolved. Utilization of Tax Increment Financing is also a future consideration in terms of potential options for acquiring cleanup and redevelopment funds.

Lessons Learned. Several lessons can be learned from the experiences in Monticello. First, as with any economic development endeavor in a small town, the importance of having one key individual serving as a primary contact, cheerleader and liaison between state agencies and property owners is essential. In Monticello, hiring an Economic Development Director with coordination time and technical assistance experience provided a catalyst for the project.

Second, in the absence of local government support (a situation common to other brownfield sites), the importance of garnering leverage from local economic development oriented organizations to build recognition and consensus within the broader community is imperative. This includes the cooperation of individuals on remediation financing, structural rehabilitation, and creation of a business recruitment strategy.

Third, recognition by the municipal government as to the importance of exploring pragmatic development options was instrumental in the successes in Monticello. The city could have acquired the property in the mid-1980s for only \$1, found a developer when the building was still in adequate condition, and the property could have continued to contribute to Monticello's tax base. However, brownfield redevelopment has become a component in the city's broad economic development strategy and this should help its overall success.

Additionally, the city of Monticello has developed a clearer understanding regarding the amount of time and effort required in the remediation and redevelopment process. Initially, plans were underway for the construction of a grocery store on the brownfield site. However, after two years into the process, the grocery store chain decided to purchase an existing former grocery store property instead of waiting for the brownfield site project to reach completion. The city itself was anxious to gain a new retail establishment and to benefit from the additional sales tax revenues that would be generated by the new business. Although the grocery store is no longer a potential prospect for the redevelopment site, the city still intends to clean up the site and market the property for other retail uses. Since the city of Monticello is experiencing a scarcity of available property within the city limits, redevelopment of the brownfield site is key to preventing urban sprawl.

Conclusions. Though the Monticello project remains in the early stages, the acquisition of a Brownfields Redevelopment Grant clearly improves the chances for this vital area's future development. Without such funding assistance, both the city and property owners would have been unable to begin tackling the primary impediment to redevelopment—the presence of potentially harmful environmental contaminants that pose threats to public health and safety.

After the site remediation program is completed, the goal is to keep moving forward with IEPA and the other stakeholder groups to address concerns existing inside the structure and its potential demolition. It is assumed that many of the remaining tanks and piping contain precious metals that could be liquidated, with the revenue utilized to further finance the effort. The city also intends to continue its crusade to gain legal control of the property, which would certainly result in escalating the pace of cleanup and redevelopment. The ultimate goal is to have this downtown eyesore redeveloped into something that positively serves the residents of Monticello—be it retail, recreation, housing or entertainment. None of this would have been possible without the assistance of the IEPA Municipal Brownfields Redevelopment Grant which enabled the city to facilitate an expert site assessment, a crucial first step towards revitalizing this historic district.

Sterling

Sterling, IL (Whiteside County pop. 60,653) experienced a major setback in May 2001 when Northwestern Steel and Wire Company, its largest employer for many years, closed its facility after several years of declining employment. Not only were major brownfield cleanup costs involved, but the owner was involved in Chapter 11 bankruptcy proceedings which meant that few, if any, funds would be available for remediation. However, through an innovative and dedicated approach, Sterling is engaged in a successful remediation process and has already sold several properties to prospective investors.

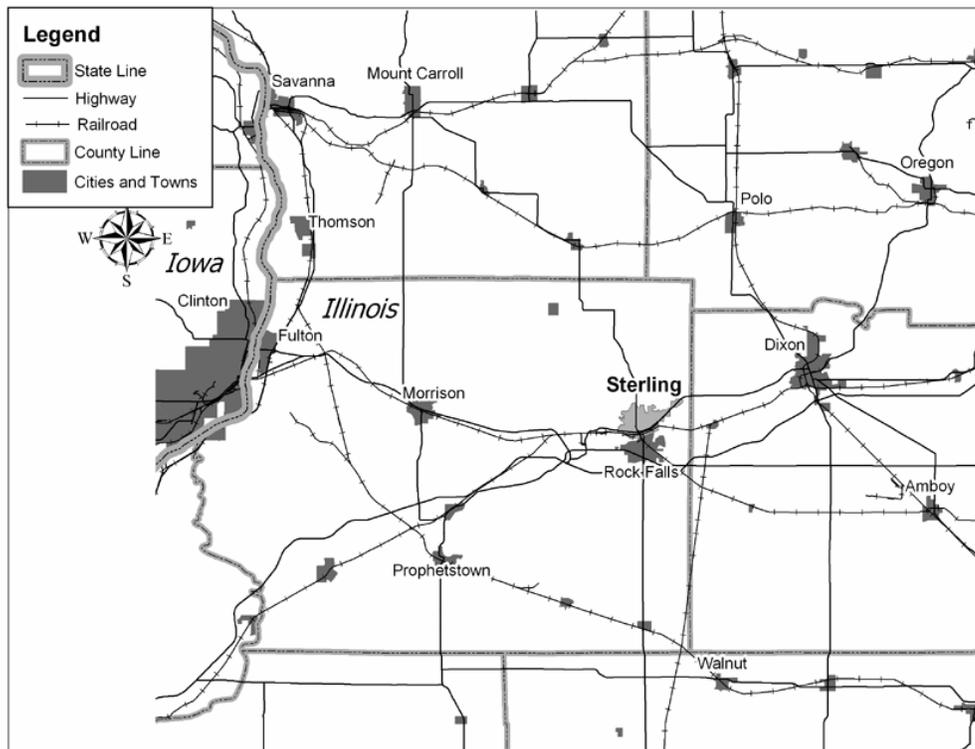
This case study describes the process that was used in the remediation and redevelopment process and illustrates what can be accomplished when local officials, state agency personnel, and business investors work together on what might have seemed initially like an impossible, or at least improbable, project. Even more impressive is that the redevelopment process was undertaken during a national economic downturn during which manufacturing employment, nationally, was declining.

Sterling Demographics. Located in a rural region in northern Illinois, Sterling (pop. 15,451) is adjacent to Rock Falls (pop. 9,580). While the Northwestern Steel and Wire plant was primarily located in Sterling, the impact of its closing was also felt in Rock Falls; thus, some of the following discussions include information on both cities. The cities are separated by the Rock River and are adjacent to Interstate 88, linking the Chicago area with the Quad Cities and I-80 (Figure 5). Sterling is 100 miles from Chicago and 55 miles from the Quad Cities (pop. 350,000). The area has a strong agricultural base and Sterling-Rock Falls serve as a regional shopping center for surrounding small towns.

Sterling lost population between 1980 and 1990, reflecting similar population declines in many rural areas due to the downsizing of industry (Table 22). During the 1990s, Sterling-Rock Falls experienced a loss of both youth and elderly populations, a trend not uncommon in many rural Illinois counties. More recently, Whiteside County and most of Northwest Illinois has experienced an increase in business closures, bankruptcies, and downsizing—with an apparent shift away from heavy industry. However, manufacturing employment in the Sterling area still ranks as double the national average (GSDC 2003).

The Northwestern Steel and Wire Company (NWS&W) comprised more than 750 acres of property in the city of Sterling. Founded in 1879, the company was the first mini steel mill in the United States, producing steel and wire products from scrap steel; and, at its operational peak, NWS&W employed approximately 5,000 people. The steel mill experienced financial difficulties beginning in the late 1970s which continued through the early 1990s. However, due to negotiations with the union, which led to greater worker accountability and productivity, as well as a stepped-up effort to reduce operating costs and increase sales, NWS&W experienced somewhat of an economic turnaround—earning net profits and reducing its debt load through the mid-1990s. During this time period, NWS&W had an optimistic outlook for the future, making significant capital purchases and hiring 40 new production workers. The company was the leading supplier of structural I-beams as well as pulled wire and nails. NWS&W was also the largest single-point consumer of scrap steel in the Midwest, purchasing over 2 million tons annually for processing in its three 400-ton electric furnaces—the largest electric furnaces in the world.

Figure 5. Sterling



In the late 1990s, however, a world financial crisis ensued; and the resultant illegal steel dumping by foreign steel makers brought about a surge of bankruptcies in the U.S. steel industry. Due to its inability to compete with cheap foreign imports, NWS&W closed the nail and wire division in 1999. On December 19, 2000, with \$296 million in unsecured debt, NWS&W filed for Chapter 11 bankruptcy reorganization in an attempt to avoid complete shutdown of operations. The state of Illinois provided assistance to the company through a \$7.5 million economic package that included large business development loans, job training assistance, and Illinois FIRST funding.

After reorganization attempts failed, Northwestern Steel and Wire Company announced the closure of the steel mill on May 18, 2001 and its intent to convert to Chapter 7 bankruptcy liquidation. At the time of closing, NWS&W was still the area's largest employer—maintaining an annual payroll of approximately \$66.6 million and a workforce of 1,400 union employees, paid from \$20 to \$25 per hour. Subcontractors, mostly local, employed 600 workers, many of whom lived in Sterling or other communities in Whiteside County. If an economic development multiplier of 1.25 is applied, the total lost in income is \$5.5 million.

When the company filed for a conversion from Chapter 11 bankruptcy reorganization to Chapter 7 bankruptcy liquidation, not only were employees terminated, but over 9,000 retirees from the plant lost their pension incomes. NWS&W retirees also lost health insurance and other benefits and many had to rely on Medicaid and other forms of public assistance for health care expenses. Thus, many sectors of the regional economy were adversely affected.

The closure dramatically increased unemployment in the area from 4.8 percent prior to the May 2001 closure to 9.6 percent after—well above the statewide average of 5.4 percent (U.S. Department of Labor 2003). A large number of NWS&W employees had a 25 to 30 year history with the company. Thus, not only did the city have to deal with worker displacement, but also worker retraining became a significant issue. Likewise, the average income of Sterling was reduced to 80 percent of the statewide average, qualifying many families for public aid. As a natural consequence of the economic setback caused by the closure, certain segments of the population could no longer maintain the lifestyles to which they were accustomed, causing even further deterioration of the economic structure of the community and placing substantial pressure on local charitable organizations. Not only was the closure a major blow economically to the entire area, it left Sterling with a major brownfield property and associated cleanup expense—with little, if any, access to financial help from the owner.

Brownfield Property Characteristics and Use. The sheer size and diversity of use of the brownfield properties in Sterling posed a formidable challenge to local officials. The steel and wire mill contained several plants and related activities, each of which could give rise to a need for remediation; and relatively little was known about what had been done on the properties until the recent past. Thus, Phase One assessments were essential for local officials to determine a reasonable approach to the project.

The 750 acres of property involved several steel manufacturing operations including slag deposits and contaminated areas. However, it also contained locational resources such as the bordering Rock River, a major recreational asset. While the Rock River is non-navigable, the site also had 18 miles of major rail access with six miles of mainline owned by Union Pacific, and an additional 12 miles of NWS&W-owned line on-site, including eight operational switches (six active and two inactive). In addition, there is easy access to I-88, a major transportation route in northern Illinois.

Elected officials and the city manager in Sterling decided early in the process that in order to prevent the property from becoming unsalvageable, they had to take action immediately. However, the actions had to make sense in light of the property and the economic situation. First, the city had to take stock of the potential brownfield issues faced with this property and determine the steps needed to ultimately generate a No Further Remediation letter or other assurances that would be required by prospective buyers.

Second, the city had to develop a working relationship with the bankruptcy court in order to gain access to the property and then ultimately market it to new owners who might be willing to invest in redevelopment. The city did not intend to purchase the properties and take them off the tax rolls. Rather, the aim was to, possibly through an intermediary, market various parcels directly to private buyers.

City officials also were concerned that potential investors would select only the most suitable properties for their purposes, leaving the city or another agency with major parcels that would be extremely difficult to redevelop. Thus, the properties had to be included in an economic development plan for the area and had to be marketed quickly to prospective buyers.

Table 22. Demographic Profile of Sterling

Census of Population and Housing	Year		Change	Percent Change
	1990 Census	2000 Census		
Population	15,132	15,451	319	2.1
Age Structure				
0 - 4 Years Old	1,058	1,116	58	5.5
5 - 9 Years Old	1,094	1,114	20	1.8
10 - 17 Years Old	1,766	1,650	-116	-6.6
18 - 24 Years Old	1,321	1,461	140	10.6
25 - 44 Years Old	4,581	4,436	-145	-3.2
45 - 64 Years Old	2,821	3,057	236	8.4
65 and Over	2,491	2,617	126	5.1
Civilian Labor Force (Population 16 Years and Over)				
Employed	6,896	7,105	209	3.0
Unemployed	481	504	23	4.8
Rate	6.5	6.6	0.1	1.6
Industry Employment				
Agriculture, Forestry, Fishing, Hunting, and Mining	71	43	-28	-39.4
Manufacturing	2,396	2,193	-203	-8.5
Wholesale and Retail Trade	1,455	993	-462	-31.8
Finance, Insurance, Real Estate (F/I/RE)	254	296	42	16.5
Services	2,021	2,693	672	33.3
Public Administration	186	241	55	29.6
Other*	513	646	133	25.9
*Other consists of construction, transportation and warehousing, utilities, and information.				
Household Income				
Median Household Income	\$25,636	\$37,664	12,028	46.9
Inflation Adjusted (1989=100.0)	25,636	28,033	2,397	9.4
Percent of Households Making				
Less than \$15,000	27.9	14.5	-13.4	-48.2
\$15,000 to \$34,999	38.9	32.5	-6.4	-16.5
\$35,000 to \$49,999	19.4	19.1	-0.3	-1.4
\$50,000 to \$74,999	10.0	21.2	11.1	111.2
\$75,000 to \$99,999	2.0	8.5	6.5	322.8
\$100,000 or more	1.8	4.3	2.5	141.7
Per Capita Income				
	\$12,880	\$19,432	6,552	50.9
Inflation Adjusted (1989=100.0)	12,880	14,463	1,583	12.3
Poverty Status				
Total Persons in Poverty	1,785	1,625	-160	-9.0
Percent of Total	12.1	10.8	-1.3	-10.7

U.S. Bureau of the Census.

Redevelopment Strategy(ies). City officials, with help from legal counsel, petitioned to join the bankruptcy proceedings as an interested party, since it had a major stake in what happened to the properties. In this capacity, they could have input into court decisions regarding the most suitable use of the property and timing of the sale. The city also worked with the bankruptcy court to maintain the property and otherwise assist in the management processes.

The city of Sterling created the Rock River Development Area that included the more than 700 acres formerly occupied by NWS&W. The local management group also developed working relationships with several local economic development agencies such as the Greater Sterling Development Corporation (GSDC) and other private groups including a major local philanthropic organization in Sterling. Working relationships and support from these groups turned out to be major assets in accomplishments to date on the brownfield properties. During this time, city representatives met with various neighborhood groups and organizations to keep them abreast of planned developments—building local support for the initiatives, as well as removing fears about what might happen to the property that could decrease property values.

Local officials also contacted the IEPA, Office of Brownfields Assistance to identify programs that might be utilized in the assessment phases, as well as assistance towards redevelopment. A need for the city to leverage local funds was clear, given the fiscal environment, and success on this issue has been remarkable. Because these contacts were made in the very early phases, momentum was created that moved the project along more quickly. The fact that the properties were being dealt with and, in some instances, being sold, impressed upon residents and potential investors alike that the city was serious and that the properties had value.

Initially, the brownfield property was organized into 16 sites to make the properties easier to market to private investors, and to better manage the process. Each of these sites had special assets or location factors that might be of interest to investors; and the group managing the brownfields property set out to find potentially interested buyers for the properties using a variety of approaches. Essential to the successful marketing of the properties was the process of identifying all of the former companies with connections to NWS&W. Because the city had six priority sites that they wished to redevelop early in the program, these sites received additional attention in marketing and other initiatives.

The city manager and local management group contacted IEPA and other organizations to seek funds for a Phase One assessment process in the Illinois Site Remediation Program, and to obtain assistance in determining the extent of remediation needed on each of the properties that they were interested in marketing initially. They credit a law firm with much of the insights and contacts to carry out these initiatives. The city obtained grants from the IEPA amounting to \$340,000 and Environmental Site Assessments valued at \$180,000. Additionally, through its Brownfields Economic Redevelopment program, the USEPA awarded another \$1.2 million in grant funds to the city of Sterling; composed of two grants totaling \$400,000 allocated for assessments on contaminated areas within the site, as well as \$800,000 in the form of a revolving loan fund to finance on-site cleanup efforts.

In addition, the city of Sterling is committing TIF revenues, city general revenues, and staff time or in-kind services as local match for these assessments. The intent is to receive a No

Further Remediation letter so that potential buyers of the property can be assured of no further liability for cleanup, which in turn, increases the marketability of the properties.

The local management team also developed several sources of financing for business investors including revolving loan funds. Portions of the properties are located in a Tax Increment Financing District and others are in an Enterprise Zone. Developments in a TIF district generate additional property taxes to retire debt incurred to make public improvements in the area; and the city of Sterling has committed \$900,000 in TIF funding to the redevelopment of project sites. An Enterprise Zone designation offers tax incentives on construction material costs and certain other business start-up expenses.

The Greater Sterling Development Corporation (GSDC) was committed to providing both low-cost loans and possible grant funding to assist in business starts. Sterling Today Incorporated (STI), a non-profit organization, has grant funds available to retail or service businesses locating in the project area. With this set of incentives, the city government is in an excellent position to assist investors in starting businesses. In short, the potential liability issue is being addressed, tax incentives are available, and low-cost loans could be made available for potential businesses.

More than industrial development is planned for the brownfield properties, however. Public use and green space developments are under consideration, and private trusts and charitable foundations are committing over \$1 million during a five year period to assist with demolition of buildings, site clearance, and renovation endeavors. This is an important element of the brownfield initiative due to the difficulties often encountered in the process of procuring funds for demolition projects.

Marketing the Sites. An important element of Sterling's success has been in identifying potential buyers for the six priority properties. The GSDC is assisting the local management group in marketing the properties, as well as helping to arrange financing. The properties are marketed without fear of potential liability because the city has committed to the cleanup effort, leaving potential buyers free to concentrate on the viability of the property as a business site.

Sterling Rail Company, LLC (Rock River Grain Loading Facility). Sterling was fortunate because a grain handling company in a neighboring community was considering expansion and was attracted to the property because of the rail connections. This company collects grain from area farmers and ships it to markets in the southern and southwestern United States. The company contacted the previous owner about purchasing one of the priority properties. Those negotiations had stalled, and when the city of Sterling became involved in the bankruptcy hearings, it was able to convince the bankruptcy court that selling what amounted to approximately 110 acres would benefit the overall effort. Of major importance to the interested company was the guaranty that no liability issue would surface. The ability of the city to participate in the bankruptcy procedures meant that they had access to many of the records of the previous owner and could then build on contacts such as the grain handling operation. Likewise, having the trust of the bankruptcy judge lent credence to recommendations by the city to sell properties in accordance with the overall city economic development plan.

The company expansion has resulted in the employment of six people and represents approximately \$3.1 million in investment by the firm. In addition, this operation opened new markets to area farmers, and the business is expected to increase in the future. The city of Sterling spent approximately \$60 thousand from grants and other funding sources to remediate the property.

Sterling Steel Company, LLC (Sterling Steel Manufacturing Facility). A second priority property (240 acres) has been marketed to a company that recycles steel, much of which is left from the NWS&W operations. The parent company of Sterling Steel, Leggett & Platt Incorporated, was a large purchaser of NWS&W products and needed a new source of materials. Leggett & Platt purchased one of the mills and invested approximately \$36 million in the property. Production in the furnace and caster division of Sterling Steel commenced in January 2003 and the rod mill was brought into operation in February 2003. The company recycles scrap steel into steel rod and steel billets for use in other Leggett & Platt operations throughout the United States. At the previous operation, the scrap materials were transported by truck; at the Sterling Steel location, they can be brought in by rail at a substantially lower cost.

Sterling Steel benefited from the ability to utilize a significant amount of material left from the demolition of former NWS&W buildings, thus, providing the company with a less expensive source for scrap steel, while simultaneously aiding in the local cleanup process. During the construction phase, the company employed as many as 300 people.

As of October 2003, the company employed 215 workers, with plans to add an additional 15 workers to the payroll. Rather than relocating management staff, the company hired former NWS&W management personnel. Emphasis was placed on hiring an experienced, high-quality workforce and Sterling Steel enrolled employees in extensive training provided through the Illinois Training Program and the Northwest Illinois Workforce Partnership. The company implements preventative maintenance practices, as well as measures to improve plant safety and efficiency. Because the company has experienced impressive production levels—often exceeding weekly production goals—employees have received quality production incentives, boosting their weekly wages. The ultimate mission of Sterling Steel is to supply high quality rod at the lowest cost, while maintaining the safest steel mill in the United States.

The relocation of Sterling Steel also contributed to the local project by bringing in three other companies including one that supplies welding supplies (Stein), a scrap dealer (AZCON) and a liquid gas supplier. These supporting businesses employ approximately 62 people, subcontract another 35 employees, and lease nearly 74 acres from Sterling Steel.

Rock River Lumber & Grain . A third priority site, a former truck maintenance facility and fire training area, was purchased by Rock River Lumber and Grain. The property is intended to be a wholesale contractor/supplier/lumber operation with a lumber rail downloading facility, and, therefore, rail access is key to the viability of this business. When operational, the lumber business could employ as many as 30 people.

Plans also exist for a commercial downloading facility on this property, which the company will use to offer a transportation and/or off-load service for other businesses' products. Heavy equipment would be one possibility, but it is too early to determine specific directions for this project.

In some respects, the property may provide the basis for industrial cluster development. In other words, companies that need access to rail can locate in the vicinity and contract for services from the Rock River Lumber & Grain, thereby creating a significant multiplier effect. Access to both rail and I-88 could make the site attractive as a distribution location (transshipment point).

Casey Equipment/Sterling Industrial Park, LLC. The 540,000 square foot property, formerly a 14-inch steel mill, is being redeveloped as an industrial park. Sterling Industrial Park LLC, a subsidiary of Casey Equipment Company, is subdividing the mill building, formerly used by the NWS&W, into usable spaces. These modules will then either be leased to multiple businesses, or leased or sold to one main business. This project will support industrial development in the future and provides an opportunity for Sterling to use a variety of incentives to attract businesses to this location.

Planned Stormwater Runoff Retention Area. This represents one of the more creative uses of the brownfield site. Federal environmental regulation requires that when buildings and parking lots are constructed, the amount of land removed from wetlands must be replaced. Sterling plans to include approximately 65 acres of the brownfield site as a wetlands bank. The property would be redeveloped to meet federal wetlands requirements; and developers in more urban locations can purchase this land to replace wetlands that they remove elsewhere. At the same time, the wetlands can provide recreational and environmental benefits for area residents.

Progress and Outcomes. The Sterling brownfield redevelopment project has seen a number of early successes. The diligence of local officials, as well as the ability to quickly create public-private partnerships enabled the advance planning and quick action that has made Sterling such a model brownfield redevelopment community. As a result, the properties that make up the project area remained inactive for less than one year following the bankruptcy.

Since the beginning of remediation and redevelopment efforts, 75-80 percent of the property has been purchased for redevelopment. While a multitude of planned reuses exist, the greatest portion of redevelopment activity is occurring in the 320 acres of property being returned to or becoming new industrial/commercial development. Additional rehabilitation effort focuses are: ten acres for utility uses, 20 acres for transportation uses, five acres of undeveloped open space, 11 acres for historical preservation and 54 acres being held in reserve for future development.

The task of replacing the nearly 1400 jobs lost with NWS&W closure is difficult. However, great strides towards recovery have been made through redevelopment efforts that led to the creation of 502 full-time and 18 part-time jobs, as well as the retention of 40 part-time jobs. In addition, the construction phase of redevelopment thus far has created an additional 250 full-time and 65 part-time jobs for local workers.

One of the most note-worthy successes has been the ability to significantly leverage brownfield redevelopment dollars to capture private interest and dollars. The overall project has seen 1.3 million federal brownfield dollars, \$500,000 from the state, and \$2 million in local investment to realize an additional \$42 million in private dollars invested into equity and more than \$17.5 million leveraged by financial firms. The resulting net increase in assessed valuation of the brownfield properties is expected to top \$16.5 million.

Since the redevelopment efforts began, in excess of 20 million square feet of brownfields have been rehabilitated and returned to productive use. New building permits have been issued for one commercial and eight industrial buildings. The increase in sales tax has been estimated to fall between \$50,000 and \$100,000 for the redeveloped properties.

Challenges. One of the more enduring challenges brought about by the redevelopment project has been the management of sites that fall under the Resource Conservation and Recovery Act (RCRA) on the brownfield property. The NWS&W site contains a RCRA landfill, which will have to be continually monitored due to the existence of hazardous material. Eighteen wells exist on the site and will require regular monitoring at a cost of \$10,000 per year. Additionally, slag deposits encompass a significant area on the property and while some of the property has potential for use, portions of pre-RCRA property may never be used. A potential developer is considering securing a portion of the RCRA property for rail storage, as rail is currently at a premium.

What can be learned? The successes with the major brownfield project in Sterling can be attributed to several factors—some of which are unique to Sterling, but others of which may be replicated in other cities.

- **Commitment of City Officials.** A major consideration in the successes in Sterling is the clear commitment by city officials, especially the city manager, to this initiative. Because of his previous experience with a Superfund project in Iowa, the city manager was aware of the types of programs available at the state and federal level. The city council made it clear that a strategy was needed to make the best of the brownfield property and that they wanted to avoid turning it into a long-term liability to the environment in the city.
- **Innovative, Integrated, and Aggressive Approach.** City officials did not see the brownfield property as a separate project; rather, they created a development district and integrated it into a long-term economic development plan for the city. By identifying and prioritizing specific parcels, the city was able to market them to various groups. Officials and organizations in Sterling were also aggressive in seeking out potential users of the property including previous customers of the closed steel plant. This targeted approach was much more effective than placing general ads in trade magazines.

The approach incorporated resources from agencies whose missions included local development such as the Greater Sterling Development Corporation. By developing an inclusive approach rather than duplicating other efforts, the city directed more of its resources to the brownfield redevelopment initiative. For instance, incentives offered by a Tax Increment Financing District or an Enterprise Zone are available to attract businesses to the brownfield sites. While these sites are not the only development initiatives marketed by the city, they are part of the entire package. Also important is that city officials included alternative land use such as greenways, a possible riverfront park, and a wetlands bank.

- **Public Involvement.** A key element in the redevelopment process in Sterling was an effort to keep residents aware of the process and expected outcomes. With such a large property and the potential for contamination, residents were concerned with how the

new developments would impact the quality of life and property values. Regular meetings with neighborhoods and an on-going public involvement in the decision-making processes was important in building support for development efforts and in building good will for the overall effort. These meetings, plus the positive press coverage, also encouraged investors and other groups to buy into the development process.

City officials also recognized the need for legal and technical expertise in the redevelopment efforts and hired a legal firm with a member who was familiar with the area. Through this collaboration, the city was able to move quickly on several fronts such as raising needed revenues, working with the bankruptcy court, and finding the more appropriate uses of the properties. The bankruptcy proceedings as well as the city's ability to find beneficial projects, helped move the process along more quickly.

- **Leverage.** From the outset, city expenditures were leveraged with both public and private funds. Contacts with the IEPA, Office of Brownfields Assistance, raised significant funds for the assessment process that was necessary in attracting private investment. City officials also contacted the USEPA for funds to assist with the costs of environmental assessments as well as finance the cleanup effort on the properties.

Also key to the successes in Sterling are the resources of private foundations. These long-time family foundations are vitally interested in the success of the project because of its significant contribution to the quality of life in Sterling. Consequently, the foundations were willing to commit funding to projects, such as demolition, that otherwise might have been difficult to finance. Being able to access this type of support—financial and technical—is important to the overall success of the initiative.

- **Persistence.** Local officials in Sterling have clearly stated that they are committed to this process for the long haul; and they see redevelopment of the brownfield sites as an important element in a long-term local economic development strategy. Persistence and follow-through builds confidence in everyone involved that the process is worth pursuing and will ultimately bring positive results. While the process is still young in Sterling, there is every indication that it will continue. To date, 75 to 80 percent of the property has been sold or committed to an alternative use.

Chicago

Brownfields often are liabilities but have the potential to be significant assets after successful remediation. The city of Chicago alone has approximately 2000 brownfield sites comprising an estimated 13 percent of total city land (Great Lakes Commission 2001); and has instituted an effective management system to ensure the ease and success of the remediation and redevelopment of these sites. This approach has worked well and much can be gained by examining the way that various economic development agencies are interlinked and the extent to which brownfield redevelopment is incorporated into the overall economic development system in the city. This systematic approach is a major reason for Chicago's redevelopment successes.

Background. This case study is based on responses from the mail survey of Illinois municipalities as well as two interviews with city administrators in the Department of Planning and Development and the Department of Environment. The study has four sections. First, the types of brownfields and characteristics are listed along with the overall process of brownfield identification and selection. Second, the types of incentives provided by the City and the procedures involved in working with private developers are briefly described. Third, the progress and outcomes from a variety of brownfield projects within the city are presented. The final section includes lessons from the experiences in Chicago that could benefit local leaders in other communities.

Brownfields and Projects. Chicago has an estimated 50 brownfield sites in various stages of development at any given time (City of Chicago 2003). For the 2002 survey, parcel-specific information was obtained for 23 active sites. However, due to the complexity involved in the management of the large number of brownfields located in the city, limited data was available. The former uses of the 23 reported properties varied and included a waste treatment facility, a drive-in movie theater, a landfill, a bus turnaround, gas stations, and manufacturing facilities. A majority of the parcels were vacant for at least six years before the redevelopment process was started and, in most cases, the city used forms of regulatory authority such as liens, ordinance violations, or zoning to gain control of the site. A return to industrial or commercial use was the most frequently reported end-use; however, residential, parks, open space, and parking were also commonly indicated as planned end-uses. Although the original vision of the Chicago Brownfields Initiative placed emphasis on industrial and economic redevelopment, job creation and tax revenues, the benefits derived from redeveloping brownfields for uses such as new housing, additional parking areas, open space and parks, was ultimately realized, as is evident by many of the redevelopment projects in Chicago.

The Chicago Brownfields Initiative. The Chicago Brownfields Initiative, started in 1993, emphasizes the importance of city involvement in such projects. Through negotiations with developers via a Request for Proposal (RFP) process, the city facilitates brownfield redevelopment. In creating the Chicago Brownfields Initiative, Mayor Richard M. Daley assembled an interdepartmental team of professionals with backgrounds in law, planning, environmental management and finance to oversee brownfields redevelopment projects. Included are the Office of the Mayor, Office of Budget and Management (OBM), Department of Environment (DOE), Department of Planning and Development (DPD), and Department of Law (DOL).

Chicago established a Brownfields Sites Pilot Program in 1993 for the remediation and redevelopment of five selected brownfield properties. The city earmarked \$2 million in General Obligation Bonds for the project, but was able to prepare the sites using only one-half of the budgeted amount. The pilot program was also successful in creating 239 jobs and retaining 950 jobs (City of Chicago 2003). In addition, the program created over \$5.2 million in private investment (Baker n.d.), and \$337,000 in annual tax revenues (City of Chicago 2003).

In 1994, as part of the Chicago's Brownfields Initiative, the city assembled more than 100 representatives including business leaders, manufacturers, environmentalists, bankers, regulators, civic organization leaders, city officials, and various community groups to start a Brownfields Forum. Promoting stakeholder dialogue by means of the forum was a key element in the planning and development of the city's brownfields reuse strategy (ICMA 2001). Mayor Daley asked the forum participants to examine the impediments to brownfields

redevelopment, as well as the dynamics of economic development strategies used on brownfields sites within the city. In a two-day meeting, the forum participants analyzed the barriers to brownfields redevelopment and developed a general plan of action to deal with the various complexities of the brownfields process. Several groups were formed at the Brownfields Forum, with each group focusing on specific issues and preparing strategies to be included in the overall approach. In 1995, the Brownfields Forum Final Report and Action Plan resulted from the Forum's collaborative efforts (ICMA 2001).

The report cites more than 60 impediments to brownfields redevelopment and participants in the forum had offered 63 proposals for addressing the cited impediments. The group again formed teams to implement the proposed strategies. Although the forum succeeded in addressing three-quarters of the recommendations, some issues still were not dealt with, including "predevelopment financing, expanding mechanisms for public involvement and community development participation, site control and land assembly, and pollution prevention" (ICMA 2001).

The city implemented several policies because of proposals introduced in the Brownfields Forum Final Report. These include "enacting a property tax incentive, encouraging local banks to develop and use a model lending package, and implementing land acquisition tools appropriate to brownfields sites" (ICMA 2001). The Chicago Brownfields Initiative continues to make progress in the area of brownfield redevelopment, leading to the city's designation as a Brownfields Showcase Community. Chicago pioneered a forum-based planning program, and based on these successes, other cities have utilized the forum approach.

Chicago has changed the dynamics of its brownfield redevelopment program, both in increased interest and program expansion, as well as legal and regulatory changes. Perhaps most notable is the evolution of the stakeholder's perception of brownfields—from the perception that brownfields represent environmental challenges, to a view that brownfields represent a real estate investment set apart by various unique procedural issues. This change in perception has stimulated private investment in brownfields projects (ICMA 2001).

Early in the process, the city applied to the U.S. Department of Housing and Urban Development for a Section 108 loan used to finance the purchase and remediation process (U.S. Department of Housing and Urban Development n.d.). The HUD 108 loan program, a provision of the Community Development Block Grant (CDBG) program, offers 20-year term guaranteed loans used for the sole purpose of brownfield remediation and redevelopment which allow local governments to borrow against future CDBGs. The increases in tax receipts as part of a Tax Increment Finance district covering the remediated properties are used to repay the debt. These funds cover the costs of assessment, property purchase, contractual obligations, and other activities associated with brownfield remediation.

In addition, a 1993 lawsuit settlement involving the U.S. government and Sherwin-Williams Company allowed Chicago to create Supplemental Environmental Project (SEP) funds for brownfields revitalization (Brown 1998). As part of a settlement for environmental offenses, the paint manufacturer has been required to pay \$950,000 to be used in the remediation process in the West Pullman Industrial Corridor. Although settlements from environmental lawsuits often involve SEPs, the Sherwin-Williams case was the first to use the SEP funds for a brownfields project. The EPA and the Department of Justice have supported this use of SEP funds, as it is a

means to ensure that proceeds acquired from environmental settlements are used to benefit the area in which the offenses occurred (Brown 1998).

Site Selection Process. Initially, major brownfield sites are identified by city departments as part of an on-going planning and economic development process that includes input from city council members and other groups. This process prioritizes projects for remediation and redevelopment based on ease of acquisition and perceived potential of the site, as well as the complexity involved in remediating the site. Given the diversity of sites, the selection process is complex and requires substantial time and effort.

Brownfield sites located in areas with development already underway and/or in areas that benefit from established infrastructure and transportation usually offer a higher potential for development and are likely to receive first consideration. However, if the sites have high contamination, are extremely large, or have multiple owners, they may be more difficult to market without special assistance from the city.

Site selection is typically initiated by the Chicago Department of Planning and Development (DPD) sometimes in response to concerns from residents through an alderman or from other agencies. The Department of the Environment (DOE) conducts a preliminary site assessment to identify environmental issues specific to the property, such as previous industrial uses, existence of underground storage tanks, and current environmental condition.

Assessment Process. The DOE then presents findings, proposed recommendations and estimated remediation costs to the Brownfields Initiative team to ultimately determine the feasibility of site redevelopment. If a site is found acceptable for redevelopment, a Phase One Environmental Site Assessment (ESA) is performed, usually by a professional environmental consulting firm. The Phase One ESA involves a more in-depth study of the environmental history (including a 50-year title search) and current property conditions.

A Phase Two ESA is then conducted, in which the DOE contracts for sampling and testing procedures to verify the existence of environmental contamination in order to develop a more accurate remediation strategy and cost estimation. Additional assessments may be performed to determine the extent of environmental contamination. Complete information from the assessment is crucial in evaluating the costs and difficulties involved in subsequent remediation.

The assessment process identifies the types of contamination to be cleaned up including underground storage tanks, hazardous waste materials, and illegally dumped debris. The DOE and an environmental consultant use the IEPA's Tiered Approach to Corrective Action Objectives (TACO) to create a cleanup plan designed to accommodate expected future uses of the redeveloped property. Following the site assessment process, the city most often obtains acquisition authority for the property, with a remediation budget determined next.

In order to more efficiently perform assessments on a large number of brownfields, the city conducts initial environmental assessments on several sites simultaneously. This approach allows a more comprehensive picture of the level of contamination on several sites at the same time, differentiating sites that need remediation from those more suited to progressing directly from assessment to a development stage (City of Chicago 2003).

An important element that makes this approach succeed is the integration of brownfields into the overall city economic development plan. Chicago created 22 industrial corridors for economic development and defined desired land uses or business activity. Within this overall framework, properties can be marketed more easily and projects can be completed more quickly. At the same time, as in the case of the Center for Green Technology, Chicago used brownfield sites in innovative ways to address other needs within the city.

Property Acquisition. Brownfield properties are acquired by the city of Chicago in several ways. If the city cannot obtain a property through a negotiated purchase with the property owner, the city may be compelled to use alternative acquisition methods. These include eminent domain (condemnation) in which the property is purchased from the owner at a price that recognizes the environmental condition of the property. A second approach involves a lien foreclosure whereby the city obtains a court order to assess and/or clean up an abandoned property and a lien is placed against the property for associated costs. Third, a tax reactivation in which properties with delinquent taxes (2 years or more) can be acquired by the city; or acquisition obtained via a legal settlement agreement is sometimes used (City of Chicago, Department of the Environment 2000c). The Department of Law (DOL) assists in the execution of lien foreclosures, real estate transactions, and cost recovery lawsuits (City of Chicago, Department of the Environment 2000a).

Remediation Process. After the property is acquired, either by the city or a private owner, the site is typically entered into the IEPA Site Remediation Program—the state’s voluntary cleanup program that provides technical and evaluation services for the remediation process. The ultimate aim is for the property owner to receive a No Further Remediation (NFR) letter. The NFR letter protects the city and subsequent owners of the property from environmental liability stemming from the site’s previous uses, making the site much more marketable to developers and end users.

Localized hazardous waste is the first contamination removed from the site; and if extensive contamination exists, the DOE works with property owners to determine the best way to handle other contaminants. These practices can include the use of on-site barriers. Using TACO-based cleanup standards is a practical way to achieve remediation goals quickly and economically.

Chicago also has considered other innovative, yet economical remediation techniques including in-place oxidation, bioremediation, and phytoremediation (City of Chicago 2003). These methods involve the use of agents, live organisms, or plants to decompose, degrade, or otherwise transform the state of the contaminant, rendering the contaminant less harmful or eliminating it completely (Groeneveld 2002).

Unexpected costs associated with environmental remediation deter the marketability of brownfields sites. Potential developers are often apprehensive of a brownfield site because of the risk of unknown contamination. Environmental insurance is a relatively new concept in brownfields redevelopment that can alleviate concerns of stakeholders—property sellers, buyers, tenants, as well as capital lenders—regarding unforeseen remediation costs. It provides a cost cap if actual cleanup costs exceed estimations and offers protection from liability for historic or future claims.

Financial Tools. While expensive, brownfield remediation can have large payoffs in both monetary and nonmonetary terms such as neighborhood revitalization and improved quality of life. One estimate is that redevelopment of one acre of brownfield property prevents the conversion of 4 ½ acres of open space (McCandless 2002). The amount of regulatory requirements, the potential liabilities, and the substantial paperwork involved can hinder brownfield redevelopment; however, the redevelopment of brownfield sites often represent a more economically advantageous option over the development of greenfield property because of pre-existing structures, infrastructure, transportation lines, suppliers, customers, and workforce (City of Chicago, Department of the Environment 2000b). In addition, the available funding and financing tools gives brownfield redevelopment a significant advantage over greenfield redevelopment.

The cost of brownfield remediation in Chicago has been estimated to vary between \$1,500/acre to \$240,000/acre (City of Chicago, Department of the Environment 2000b). Fortunately, however, not only have the legal and regulatory dynamics of brownfields redevelopment become much more favorable for the private sector and communities involved, but better funding options and incentives have increased the feasibility of the process.

Public policies have been implemented to encourage brownfield redevelopment including the voluntary Illinois Site Remediation Program which utilizes “risk-based cleanup standards;” the proportionate share liability measure whereupon stakeholders are only held liable for environmental contamination which they caused; job creation from brownfield remediation and redevelopment efforts; and “regional growth plans” to encourage brownfield redevelopment to prevent urban sprawl (City of Chicago, Department of the Environment 2000b).

Financial and technical incentives in the form of grants, bonds, loans, fees, cost-sharing assistance, and tax programs have been developed for brownfield redevelopment projects. Various grants are available for use in brownfield projects including: the IEPA Municipal Brownfield Redevelopment Grant Program for cleanup and redevelopment; USEPA Brownfields Assessment Demonstration Pilot Grants used for investigation activities and the creation of site remediation plans; Community Development Block Grants (CDBG) from the US Department of Housing and Urban Development (HUD) which provide funding for community development and revitalization efforts; Section 108 Loan Guarantees and Economic Development Initiative (EDI) Grants to be used for economic development projects; the Public Works Program offering funding for infrastructure to distressed communities; and Technical Assistance Grants offered through the Economic Development Administration for assistance with economic development issues and Phase One site assessments. Other forms of assistance are redevelopment assessments conducted by the IEPA; the federal Brownfields Tax Incentive in which remediation costs can be considered a deduction in the year they were incurred; and the Illinois Environmental Remediation Tax Credit that provides a tax credit of up to 25% of the un-reimbursed eligible cleanup costs. Communities can also implement Tax Increment Financing Districts, or issue general obligation or revenue bonds in order to fund brownfield projects. (IEPA 2003).

Chicago uses several public incentives for brownfield redevelopment including Tax Increment Financing (TIF) districts, Empowerment Zones, and Enterprise Zones administered by the Department of Planning and Development (DPD). TIF districts have been important in funding brownfield redevelopment especially in declining areas. The implementation of a 23 year TIF

district allows communities to utilize the increases in state and local taxes brought about by redevelopment projects to fund revitalization efforts within the district. TIF proceeds have been used for various stages of brownfield redevelopment including site preparation, property acquisition, rehabilitation, and infrastructure improvements.

As of May 2003, Chicago had 129 approved TIF districts supporting a wide variety of brownfield projects including mixed-income residential housing, various industrial and business parks, a flight-training center, and a 10-screen movie theater complex (City of Chicago, Department of Planning and Development 2003). The incremental property tax dollars, generated from redevelopment within the TIF districts, have succeeded in removing blight, upgrading neighborhoods, and stimulating business and job attraction and retention.

Since funds generated from the TIF districts are not available at the onset of the remediation and redevelopment project, the city uses Section 108 loan funds to acquire property and undertake remediation. The loans are retired using increases in property tax revenues in the TIF districts, revenue from property sales, and funds obtained from legal settlements (ICMA 2001).

Recently, the City of Chicago implemented TIFWorks, a program available to businesses located within TIF districts that provides up to 75 percent of employee training costs. In addition, eligible small businesses and not-for-profit organizations can apply for TIF funds to cover 100 percent of training costs. The TIFWorks program involves funding for employee training related to workforce development, including customized skills training, English-as-a-Second-Language education, and training necessitated by equipment and technology upgrades or product line expansion. TIFWorks funding is designated for “businesses that demonstrate that training will make them more competitive and directly benefit Chicago residents” (City of Chicago, TIFWorks n.d.).

In addition, HUD has awarded Brownfields Economic Development Initiative (BEDI) grants to Chicago that are used with the Section 108 loans. The purpose of the BEDI grant program is to create economic opportunities for low or moderate income residents; with program guidelines stipulating that 70 percent of the funds must be used for activities that will impact a majority of individuals in the low to moderate income brackets (U.S. Department of Housing and Urban Development n.d.).

Although BEDI grant funds can be used for cleanup and redevelopment processes, HUD emphasizes that funds from both the Section 108 Loan Guarantee and the BEDI grant programs are to be used on projects and activities that produce near-term and significant economic benefits, such as job creation and tax base increases (U.S. Department of Housing and Urban Development n.d.).

Another useful funding initiative, the *Empowerment Zone* (EZ) program administered by HUD, has been used in three federally-designated distressed and poverty-stricken areas of Chicago to stimulate private investment and job creation. The Empowerment Zones cover a combined area of 14 miles in which 200,000 people reside. Various properties are located within the Zones including industrial and commercial businesses, residential neighborhoods, transportation corridors, parks, and open space. Empowerment Zones have priority status for federal grants and waivers from federal regulations. Social Service Block Grants (SSBG) are awarded to Empowerment Zones to implement a strategic plan for the zone, including: “economic

empowerment; affordable housing; public safety; cultural diversity; health and human services; and youth futures” (City of Chicago, Department of Environment 1998a). In addition, businesses within an Empowerment Zone receive tax-exempt EZ bond financing, cost deductions for qualified property purchases, and credits of up to \$3,000 for wages and training expenses paid to an employed zone resident.

Chicago also uses the state-administered *Enterprise Zone* program by the Department of Commerce and Economic Opportunity (DCEO) to stimulate economic growth and community revitalization. Chicago has six Enterprise Zones, encompassing various land uses. The Enterprise Zone designation provides tax abatements, credits, and exemptions to businesses locating in distressed areas in the City of Chicago. When a parcel is located in both a TIF and EZ, property tax rebates for the EZ are not provided (City of Chicago, Department of Planning and Development 1998b).

In 1999, the Chicago was designated a Brownfields Showcase Community, due to its reputation as a national model for successful collaborative efforts in brownfields redevelopment. The Showcase Community distinction entitled the city to \$691,000 in funding and incentives, including USEPA site assessment funds. Additionally, as part of an EPA pilot program, the city received \$500,000 from the USEPA Brownfields Cleanup Revolving Loan Fund (BCRLF) grant (City of Chicago 2003, CBI) to be used to assess the process of remediation and redevelopment, with job creation and tax revenue increases as program goals (USEPA, Brownfields Cleanup Revolving Loan, 2003).

Chicago has implemented city-issued bond and loan programs including General Obligation Bonds used to finance brownfield cleanup and reuse and Industrial Revenue Bonds (IRB) that provide eligible businesses with long-term, low-interest financing for new construction, renovation, and fixed assets (City of Chicago, Industrial Revenue Bond Program). Also available is an environmental loan program in which the city provides incentives to banks that lend money to small businesses for environmental projects. For every dollar a bank loans to small businesses, the city deposits three dollars into the lending bank, and for loans made to small businesses owned by minorities or women, the city deposits five dollars for every one dollar loaned (City of Chicago n.d. b).

The Business Infrastructure Assistance Program (BIA) provides cost-share assistance for projects involving small-scale infrastructure improvements in industrial areas of Chicago. Under the program, the city will provide funds for 50 percent of the costs for improvements, if the other half is paid by the applicant. The program also stipulates that improvements must be completed by private contractors, and that the assistance must be used in distressed areas of the city, and/or to benefit low- to moderate-income persons (City of Chicago, Business Infrastructure Assistance Program n.d.).

Tax incentives are offered at the county, state and federal level to promote brownfield remediation and redevelopment, which, in turn, results in new tax revenues, improved environmental conditions, and job creation. The Cook County Class 6(b) tax incentive involves reducing an industrial brownfield property’s assessment rate. Instead of the property being assessed the standard level of 36 percent of fair market value, the property is assessed at 16 percent for ten years; at 23 percent in year 11; and at 30 percent in year 12. The 6(b) tax incentive can result in tax savings for property owners of up to 55 percent annually (City of Chicago, Cook County Property Tax Incentive for Brownfields n.d.).

The Illinois Income Tax Act (1997), Section 201 tax credit reduces the taxable liability for properties entered into the Illinois Site Remediation Program. A tax credit is given towards 25 percent of unreimbursed eligible remediation costs, with a deductible amount of \$100,000 (no deductible for properties located within an Enterprise Zone), and maximum eligible costs of \$700,000. The maximum annual tax credit per property is \$40,000, with a total allowable tax credit of \$150,000 per site (City of Chicago, State of Illinois Income Tax Incentive for Brownfields n.d.).

The Taxpayers Relief Act (1997) offers a federal tax incentive for cleanup costs involving brownfield property. By allowing a taxpayer to deduct remediation expenses against income in the year in which they were incurred rather than over the life of the property, the incentive can result in a tax savings of 30 percent during the first year of federal taxes (City of Chicago, Federal Tax Incentive for Brownfields n.d.).

Negotiations Process. Chicago discounts the price of land as an incentive to developers. In areas where significant development has not occurred for decades due to distressed conditions, the city may offer property to a developer at a substantial discount through a negotiated process. These negotiations are unique to the parcel and make describing the policies and practices difficult. Property owners, as part of their development plan, set forth the purposes of the project and work through financial arrangements required to complete the project. The city examines the purchase price, costs of remediation and infrastructure, and then negotiates with potential buyers.

Specific information regarding the redevelopment project and the negotiated terms between the project developer and the city is provided in written form via a redevelopment agreement. The agreement includes details such as sale information and purchase price, project budget and funding sources, remediation and improvement requirements, and insurance and employment obligations. By recommendation of the Community Development Commission, the Finance Committee introduces the ordinance to the City Council for authorization to execute the redevelopment agreement (Neighborhood Capital Budget Group 2002).

Professional Support. After a developer purchases a property, city departments continue to help to ensure a smooth redevelopment process. The Department of Planning and Development, for instance, aids in recruiting businesses to the area. Through the “Business Express” program, the City assists with issues facing businesses, with priority status given to brownfield remediation or development. This free-of-charge program, designed by the Department of Planning as a business recruitment and retention tool, maintains liaisons with every city department to help resolve problems and facilitate communication. The staff of 15 assists with permitting and regulation issues including public infrastructure, labor relations, zoning and codes as well as other issues facing businesses. The fact that the city provides a one-stop service to help owners work through the various steps involved in starting a business can substantially increase the chances of success as well as encourage some risk-taking with brownfield properties (Kiernan 2003).

Forging partnerships has been vital in brownfield redevelopment in Chicago. The brownfields team has developed strong relationships with organizations such as the Metropolitan Planning Council and the Northeastern Illinois Planning Commission (NIPC) as well as governmental agencies at every level. These associations have been key to successful outcomes. In addition, the City has strong relationships with various local organizations; developers;

financing and educational institutions; employment training organizations; and neighborhood associations, creating desired facilitation of the brownfield redevelopment process (ICMA 2001).

Chicago Brownfield Projects. To gain more specific insights into the types of brownfield projects in which Chicago has engaged, five sites have been selected for inclusion in this report: The California Avenue Business Park located in the Western Ogden Industrial Corridor, The Center for Green Technologies, Gateway Park LLC located in the Greater Southwest Industrial Corridor, the North Town Village located next to the Cabrini-Green project, and the U.S. Steel site are briefly examined to illustrate both the variety of projects and the types of arrangements made to implement them. These projects include an educational/research institution, two industrial land-use properties, a mixed commercial-residential use, and a multi-dimensional business, recreation, and quality of life area. These projects are also located in different parts of the City.

California Avenue Business Park. The California Avenue Business Park is a prime example of how the city's interdepartmental team of project managers has taken an aggressive strategy to brownfields remediation and redevelopment. Located within the Western Ogden Corridor at 927 South California Avenue, the California Avenue Business Park includes 37 acres of land acquired by the city over a period of three years. Because the property has 65 separate mixed-use parcels, the diversity of ownership was a considerable obstacle to acquisition (Kiernan 2003).

After the parcels were acquired, the city removed 964 tons of contaminated soil and 11 underground storage tanks from the site, spending \$16 million of HUD Section 108 loan funds for remediation to be repaid with TIF dollars. The city subsequently used a land writedown as an incentive to attract a developer, selling the land for \$1 per square foot. In return, the city received \$40-\$50 million in private investment from the developer (Kiernan 2003).

Although the area surrounding the business park is considered economically disadvantaged and plagued by crime, the potential for success of the project exists because of various locational assets. The area has one of the highest unemployment rates in the city, providing a large available labor force; however, this pool includes workers with relatively low skill levels, necessitating a job training facility nearby or within the business park.

The site is favorable for industrial development because of the excellent highway and rail access. Approximately 30 major employers are located in the business park area, providing replacement/expansion and spin-off demand opportunities. The new industrial park development will provide incentives for neighboring businesses to replace decaying and obsolete facilities with up-to-date facilities. In addition, existing businesses may utilize the industrial park to expand current operations and add complementary spin-off uses or office/flex space. The development of new industrial sites such as the California Avenue Business Park may help to expand transportation facilities due to the increase in intermodal and airport demand (Arthur Anderson 1998).

The development process of the California Avenue Business Park is expected to create 300-400 temporary construction jobs (City of Chicago, Office of the Mayor 2000), and an estimated 300-600 jobs will be retained or created from businesses locating in the industrial park (City of Chicago 2003). The city expects to realize annual tax revenue of \$2.3 million generated from the

development of the industrial park (City of Chicago 2003). The designated developer is working to recruit local as well as new manufacturers, suppliers, and distributors to the new industrial park location.

The actions taken by the city to remediate and prepare the property for development are crucial to the success of projects such as the California Avenue Business Park. Because development has not occurred in the area in many years, offering the property in a redeveloped state to firms and developers is advantageous to all parties involved, facilitating ease of acquisition for the buyers of the property, and encouraging economic development for the city.

Center for Green Technology. The Chicago Center for Green Technology (CCGT) represents an innovative approach to brownfields redevelopment and is a model for other brownfield projects, both in environmental remediation and site redevelopment. The CCGT is located at 445 North Sacramento Boulevard on a 17-acre former brownfield site that was an industrial/commercial property for more than 100 years.

In 1990, the Sacramento Crushing Company acquired the property for use in recycling construction and demolition materials. The Chicago Department of Environment discovered operating permit violations involving illegal dumping and accumulation of waste. The company was required by the IEPA Bureau of Land to cease operations in 1996. The Sacramento Crushing Company then abandoned the site and filed for bankruptcy. Chicago acquired the property through a foreclosure on an environmental lien in 1999 with an agreement to remediate and redevelop the property (City of Chicago, Department of Environment 2000d).

Debris was piled 70 feet high in some areas, with one pile having sunk 15 feet into the ground. The original cost estimation for site remediation was \$20 million; however, due to economic measures involving on-site processing, recycling, and reuse of the construction and demolition debris, the city cut costs in half, spending just over \$9 million on property cleanup (Chicago Center for Green Technology (CCGT n.d.). Ultimately, in a period of just 18 months, the city removed 250,000 cubic yards of construction and demolition debris from the site, disposed of an underground storage tank, removed hazardous and other miscellaneous waste from the building, and crushed 589,000 tons of concrete (CCGT n.d.).

From the results of a risk assessment performed on the property, it was revealed that only a portion (approximately 24,000 square feet) of the parcel—comprising the demonstration garden and the plant storage area—required soil remediation. In total, 850 cubic yards of contaminated soil was removed and replaced with an equal amount of clean top soil (Zelechowski 2003).

Funding for the cleanup process included an estimated \$6.8 million from HUD Section 108 fund; \$100,000 from legal settlements; \$17,500 from the EPA's Showcase Community grant; \$360,000 from sales of recycled material; and \$2.1 million from other city funding sources (Zelechowski 2003). The property is part of the Kinzie Industrial Corridor TIF District, and tax increments produced will be used to retire the HUD Section 108 loan. Additional revenues from the TIF will help fund other redevelopment on the project. The site is also located within a Federal Empowerment Zone and State Enterprise Zone that provide additional tax and economic development incentives.

In 1999, redevelopment of the grounds and the existing building was started. The Chicago Department of Energy began to redevelop the front four acres of the property, including the main building, into a state-of-the-art model center for “green” technology. The Chicago Environmental Fund worked with an American Institute of Architects Committee on the Environment to design the center. The project uses the most innovative environmental features following a set of standards promoted by the U.S. Green Building Council known as the LEED (Leadership in Energy and Environmental Design) Green Building Rating System.

The Chicago Center for Green Technology is one of three buildings in the United States to reach the highest level of green technology standards, implementing various environmentally-sound practices such as the use of solar power, green roof systems, rainwater collection tanks and a groundsource heat pump.

One-third of the building materials used in the Center are recycled, including ceiling tiles composed of recycled newspapers; flooring constructed from recycled rubber and cork; carpet panels composed of recycled materials; and bathroom tiles created from recycled aviation glass. The CCGT made a concerted effort to obtain as many building materials as possible from within a 300-mile radius of Chicago to help stimulate the local economy as well as to avoid the use of long distance transportation which adds pollution to the environment.

Funds for the \$6 million building renovations were raised through a \$100 million settlement from the City’s utility company. The \$150,000 in remediation costs for the removal and replacement of contaminated soil and the installation of a geo fabric liner on the grounds surrounding the building was also included in the building renovation budget (Zelechowski 2003).

The CCGT currently houses three environmentally-focused enterprises including Spire Solar Chicago, producer of solar panels; Greencorps Chicago, a training facility for the City’s community landscaping and job skills program; and WRD Environmental, an environmentally-focused landscape consulting firm.

Future plans include redevelopment of the 13-acre rear parcel for industrial/commercial use. The city is currently negotiating with a company that rehabilitates rail cars, and has enrolled the 13-acre parcel in the state’s Site Remediation Program, with the ultimate goal of obtaining a NFR letter. Remediation will include reducing the level of contamination on portions of the property to below the state’s industrial/commercial and construction soil remediation objectives (SRO) for arsenic, lead, and various polynuclear aromatic hydrocarbons (PAHs) compounds. Costs for subsurface cleanup on the site have been estimated at \$170,000, and the funds will be obtained through revenues generated through the TIF district.

The CCGT represents an innovative project from two perspectives. First, the removal of a major eyesore from the neighborhood opens new possibilities for development. The fact that the City was able to accomplish the work at less than half the cost by more effectively recycling and other approaches is totally consistent with the Green philosophy of the project. Second, the CCGT is a source of information and a resource that can be used by many developers in the city. Thus, the project benefits far more than the immediate neighborhood and many other areas can learn from the research and experimentation at CCGT.

Gateway Park, LLC. The Greater Southwest Industrial Corridor, including 737 acres on Chicago's southwest side, contains large production facilities used by Nabisco, Tootsie Roll, and Sweet Heart Cup. Located within the industrial corridor is a 62-acre property, formerly the location of a drive-in movie theater. Following the closing of the drive-in, the site became littered with thousands of tons of asphalt, concrete, shingles and auto parts (City of Chicago, DPD News 2001). The property was known as the largest illegal dumpsite identified in Operation Silver Shovel, in which public officials were prosecuted for accepting bribes for illegal dumping rights in the 1980s (City of Chicago, DPD News 2001).

Apprehension from potential buyers brought on by the magnitude of environmental contamination, caused the property to remain idle for several years. The Greater Southwest Development Corporation and the city's Department of Planning and Development ultimately succeeded in attracting a manufacturer seeking to locate a factory and corporate headquarters within the City. A partnership between the owner of StyleMaster, Inc., other investors, and local and federal agencies was formed to establish the industrial park, Gateway Park, LLC (City of Chicago, CBI 2003).

With funding from a HUD Section 108 Loan and a legal settlement stemming from the illegal dumping activities, the city's Department of Environment began to clean up the brownfield site in April 2000, removing approximately 600,000 cubic yards of debris including 43,000 cubic yards of auto shredder residue that was identified and treated on-site as hazardous waste. A portion of the debris, including concrete, was recycled or reused. Total remediation costs for the property were estimated at \$26 million (City of Chicago, CBI 2003).

After cleanup and a NFR letter was received, the city transferred ownership of 30 acres of the property to StyleMaster Inc., a producer of molded plastic home storage products; the remaining 32 acres is still owned by the city. The city Chicago offered funding incentives to StyleMaster for the \$50 million project in the form of \$14 million in TIF and \$13 million in low-interest loans. In turn, the company constructed a 660,000 square foot manufacturing, warehouse and distribution center and has created 300 jobs thus far. In addition, StyleMaster has plans to add an additional 740,000 square foot building, creating additional jobs in the corridor. The company has received assistance with job training and recruitment from the Mayor's Office of Workforce Development (City of Chicago, DPD News 2001).

The success of the redevelopment project was the result of public-private partnerships and cooperation involving various city departments, aldermen, investors, and governmental agencies. In addition, the willingness of the City to take on the responsibility for remediation and infrastructure improvements, as well as the availability of incentives, was instrumental in encouraging redevelopment of the brownfield site.

North Town Village. In 1999, the City of Chicago developed a "Plan for Transformation," a 10-year, \$1.56 billion revitalization program in which the City plans to demolish all 53 of the public housing high-rises in Chicago, replacing them with privately-managed mixed-income developments (Affordable Housing Finance 2001). By 2010, the Chicago Housing Authority plans to have redeveloped 25,000 public housing units—making it the "largest overhaul of public housing in the nation's history" (Chicago Housing Authority 2003). The program also includes extensive infrastructure improvements, job training, and community economic development.

A seven-acre brownfield parcel located 100 yards from the Cabrini-Green housing complex was an abandoned mixed-use location that included a former service station, a machine shop, and a manufacturing facility. The property was acquired by the City of Chicago and slated for environmental remediation in 1999 to construct new housing to replace a portion of the residential units that would be destroyed with the razing of the Cabrini-Green high-rises.

The city initially removed 50,000 cubic yards of debris from the site and subsequently enrolled the property into the Site Remediation Program in order to clean up the remaining environmental contamination. In the summer of 2001, the city received a No Further Remediation letter for portions of the property, allowing the development process to proceed.

Construction of the mixed-income development known as North Town Village was completed in 2001 at a total cost of more than \$71 million. Public investment in the project included \$8.6 million in Tax Increment Financing, \$8 million from the Home Loan Program, and \$6 million in Chicago Housing Authority/Illinois Housing Development Authority funds. Private investment of \$49.2 million was in the form of Low Income Credits (City of Chicago, Department of Environment n.d.).

North Town Village includes 261 residential units located within a seven-story mid-rise, two six-flats, and two eight-flat apartment buildings. In order to encourage integration, the units are divided into three categories, depending on income level: 50 percent private for-sale units (131 units); 20 percent affordable housing targeted to families at or below 120 percent of the City's median income level (39 rental units, 12 for-sale units); and 30 percent replacement public housing (79 units) (IHDA 2001).

The North Town Village project is not only a model of mixed-income residential integration for Chicago, but also for the nation (Daniels 2001). In the past, communities have experimented with scattered site housing—in which low-income people are relocated into working-class neighborhoods, and with low density, privately-owned housing under the IRS Low Income Housing Tax Credit program; however, the areas of relocation often lacked the social infrastructure necessary for successful integration.

Key to the success of the North Town Village project is the existence of adequate social infrastructure. As the City eliminates the publicly-managed low-income housing projects of 30 years ago and replaces them with new, privately-managed, income-integrated housing, investments in areas of social infrastructure such as schools, libraries and jobs will be a necessary component to Chicago's plan for urban renewal.

Lessons Learned from the Case Studies

While each brownfield project varies in former use, intended outcome, methods of finance, and a variety of other factors, these projects contain several common elements and ideas that should be considered by other municipalities in considering brownfield projects. Several factors that keep recurring in the studies are discussed briefly below.

U.S. Steel Site. The 573-acre U.S. Steel (USS) South Works steel mill site represents the largest vacant property located within Chicago City limits. Once a thriving steel manufacturing facility spanning three miles of shoreline along Lake Michigan, the mill employed as many as

20,000 people (National Endowment for the Humanities n.d.). Throughout the 1970s and 1980s, labor issues and declining demand for domestic steel led to the gradual downsizing of USS; and by 1979, employment had declined to 10,000. By the time USS completely ceased operations in 1992, the company had only 700 employees on the payroll (National Endowment for the Humanities n.d.).

Between 1992 and 1997, U.S. Steel voluntarily cleaned up the property to meet IEPA residential standards for remediation, qualifying the property for the issuance of a No Further Remediation letter. In 1999, Solo Cup Corporation disclosed plans to purchase a 119-acre parcel of the former U.S. Steel site to construct a new one million square foot manufacturing and distribution complex. In 2001, a redevelopment agreement with U.S. Steel was executed under the authorization of the Chicago City Council in which Solo Cup Corporation agreed to purchase the South Works property for \$8.9 million (Chicago Committee on Finance 2001). The new South Works facility will replace three Solo Cup plants located elsewhere in the city, and will allow for significant expansion of operations, retaining 450 jobs and creating an additional 550 jobs at the lakefront location. In addition, the redevelopment project will create hundreds of temporary construction jobs (City of Chicago, DPD News 2002).

Chicago has committed \$21 million, mainly in the form of TIF assistance, for the Solo Cup redevelopment project. In addition, the city has created a second TIF district adjacent to the site for neighborhood revitalization. Through the Illinois FIRST program, the state of Illinois allocated \$15 million for the site access, preparation, and utility relocation. The state also agreed to provide funds for job skills training to educate employees on current manufacturing technology. The extensive infrastructure improvements involving streets, storm sewers, traffic signals, lighting, and landscaping has been estimated to cost over \$18 million (City of Chicago, DPD News 2002).

U.S. Steel has donated 17 acres of the property to the city and the Chicago Park District to be developed as part of a new 100-acre lakefront park; an additional 27 lots were donated by USS for a community park to be located in the adjacent South Chicago neighborhood. The Army Corps of Engineers gave the city a parcel of land to be used in the lakefront park development in exchange for a parcel that the Corps needed for a lakefront stabilization project.

The city worked with the community to create a redevelopment plan with specific goals that would revitalize the neighborhood, including a new school, park development and job creation. The construction of the new Solo Cup facility on the U.S. Steel brownfield site has been an economic stimulus to the surrounding South Side Chicago community. Collaboration between the City's Department of Planning and Development, Department of Transportation, the State, as well as the stakeholders involved in the project was, and will continue to be, key to the success of the redevelopment efforts of the U.S. Steel site.

Local Champion. While Chicago has access to some of the best expertise on issues relating to brownfields and an organizational structure to systematically manage brownfield redevelopment projects, it is clear that Mayor Daley is committed to these endeavors and is an important factor in their success. The same is true in the downstate cities. In each case, someone championed the project and was responsible for following through. Not always is the person a city official but in most instances, the city government was involved in a large way during the implementation process by providing incentives or other attractions to make the development viable.

Clear Plan of Attack. The projects that seem to have moved most quickly and successfully have had a definite agenda and an organized approach. The Corridors in Chicago, for instance, point the direction for possible and appropriate land uses in a section of the city. In Sterling, the city administration and council organized a definite approach to contact former buyers of steel made by Northwestern and proceeded to market the assets contained on the brownfield site. The outcome is that the properties have been marketed successfully with desired employment created.

Public-Private Partnerships. Also important to success with brownfields is the ability of the city to partner with private agencies. Each of the remediated projects has involved extensive investment by private agencies and the city government must aggressively work with these investors if the property is to be marketed successfully. Some, but not all, cases have involved substantial fiscal incentives, such as land write-downs. In most instances, a financial incentive such as a TIF or Enterprise Zone was used to make investment in the property more attractive.

However, equally important seems to be that the city government is willing to work with the owners or buyers to identify potential liability and to work with IEPA to remediate the property so that a NFR letter could be issued. Without this letter, private investors may see the potential redevelopment costs of the properties as too high to warrant purchase. The role of the city government varies with the projects. For instance, Calumet City purchased the property to remove an eyesore and change the nature of an important neighborhood. In the case of Sterling, the city was not interested in owning the property but was able to work with a bankruptcy judge to find suitable buyers and work through the process.

Brownfields as Part of Overall Development Process. Cities with brownfields as an important component in an overall development process, such as Alton, Chicago, and Sterling, seem to have had successes more quickly. Brownfields are seen as a property with special needs, rather than something that must be marketed in a totally separate way. Incorporating the brownfield properties into the city development process brings economies of scale and focuses more resources to the remediation process than might occur if a separate brownfield unit were established.

This can be an important issue in small municipalities because they often have no organized development plan. Instead, they respond to inquiries about industrial sites but do not aggressively market the city to prospective businesses. In these cities, the demand for industrial or commercial property may not be sufficient to warrant a full-scale brownfield redevelopment program.

Access to Specialized Expertise. The cities that have done well with brownfields have had access to the legal and environmental expertise needed to complete the redevelopment in a timely way. This expertise includes knowledge and familiarity with federal and state programs that can be used to fund an environmental assessment or other aspects of the redevelopment project.

Accessing this specialized talent can be especially difficult in smaller communities that typically do not have this expertise in-house. While consultants are available, they may be costly for small projects and cities in rural or remote areas may experience more difficulty in obtaining these services.

Inadequate access or use of highly qualified technical expertise can bring significant delays to the redevelopment process and ultimately result in higher costs. For instance, purchasing properties without full knowledge of underground storage tanks or other obstacles can lead to higher prices paid than is justified by the condition of the property and that do not reflect the costs of the subsequent remediation.

Fortunately, the IEPA, Office of Brownfields Assistance, is available to work with local officials and businesses as they work through the remediation process. This technical expertise can be invaluable, especially to smaller municipalities without a full-time staff.

Local politics can also be a problem if the city council or other group is unwilling to enter serious negotiations for a property parcel because of local ownership. Too much may be paid for properties or they may be sold at arbitrarily low prices. Examples of these situations are readily available.

Persistence. Also important is the willingness of local officials and administrators to stay with a project until it has been completed. This will often involve several years and may even extend into the next administration. Creating an environment and a setting in which the brownfield remediation process is a recognized part of the city administration and policies is very important to long-term success.

The need for persistence speaks to the importance of creating a brownfield redevelopment policy that is passed by the city government with sufficient information on goals and strategies to cause subsequent administrations to continue the process. Linking brownfield remediation to the economic development plan that includes incentives and other policies can help promote the project.

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Appendix A

List of Cities Responding To Surveys

List of Cities Responding to Survey

City Name	Returned Survey		Number of Parcels
	General	Parcel	
Alton	yes	yes	1
Arthur	yes	yes	1
Bartlett	yes	yes	1
Belleville	yes	yes	1
Belvidere	yes	yes	1
Broadview	yes	yes	1
Calumet City	yes	yes	4
Canton	yes	no	--
Carbon Cliff	yes	yes	1
Centralia	yes	no	--
Chicago	no	yes	23
Chicago Heights	yes	no	--
Cicero	no	yes	2
Clarendon Hills	yes	yes	1
Downers Grove	yes	yes	2
East Moline	yes	no	--
East Peoria	yes	yes	1
Effingham	yes	yes	4
Elgin	yes	no	--
Farmington	yes	yes	1
Franklin Park	yes	no	--
Glen Ellyn	yes	no	--
Harrisburg	yes	yes	3
Havana	no	yes	1
Karnak	no	yes	1
Kewanee	yes	yes	1
La Grange	yes	no	--
Lacon	yes	yes	1
Lake Forest	yes	yes	2
Lansing	yes	yes	1
Lemont	yes	yes	4
Lockport	yes	yes	1
Lynwood	yes	yes	2
Macomb	yes	no	--
Marshall	yes	no	--
Moline	yes	yes	5
Monticello	yes	yes	4
Mount Carmel	yes	yes	1
Mount Vernon	no	yes	1
Normal	yes	yes	1
North Chicago	yes	no	--
Olney	yes	yes	1
Palatine	yes	no	--
Pekin	yes	yes	1
Peoria	yes	yes	4
Pittsfield	yes	yes	1
Plano	no	yes	1
Posen	yes	yes	2
Quincy	yes	yes	2
Rock Island	yes	yes	8
Rockford	yes	yes	5
Silvis	yes	yes	1
Skokie	yes	yes	1
South Chicago Heights	yes	yes	7
Springfield	no	yes	1
Sterling	yes	no	--
Summit	no	yes	2
Thornton	yes	yes	2
Tonica	yes	yes	2
Waukegan	no	yes	5
Woodstock	yes	yes	1

Appendix B

Brownfield Outcomes - General Survey

Brownfield Outcomes – General Survey

Contact Name _____ Telephone _____

E-Mail Address _____ Municipality _____

Population _____

1. Describe the economic conditions in your municipality: (check one)
 - relatively prosperous and better than surrounding area
 - prosperous but signs of economic slowdown are evident
 - stable with no significant changes expected in the next year or so
 - substantial employment decline in the last two years
 - high unemployment, well above average of the 1990s

2. How do you perceive the economic future of your city within the next three years? (check one)
 - optimistic, local businesses are growing and seem to be prospering
 - positive with some businesses expanding but others stagnant or declining
 - stable with no significant business expansions or contractions
 - several large employers are in decline and may have to reduce employment
 - more than one large employer closed and the replacement prospects are dim

3. Describe the status of industrial and commercial properties in your municipality: (check one)
 - less than 1 percent of all properties are vacant or not fully utilized
 - between 1 and 5 percent are not fully utilized
 - between 6 and 10 percent are vacant or not fully utilized
 - between 11 and 20 percent are vacant or not fully utilized
 - more than twenty percent are vacant or not fully utilized

4. Describe the demand for property in your municipality:
Commercial (check one)
 - limited, if any, at present
 - some demand for inexpensive buildings
 - significant demand for land on which to build
 - waiting list for available properties at market price
 - more demand than properties available in city and prices are increasing

Industrial (check one)

- limited, if any, at present
- some demand for inexpensive buildings
- significant demand for land on which to build
- waiting list for available properties at market price
- more demand than properties available in city and prices are increasing

5. Does your municipality have a comprehensive plan involving future land use?
 yes no *If yes, what is the date of the plan?*
_____ (year)

6. Approximately how many Brownfield properties currently exist in your municipality?
_____ # of properties owned by the municipality
_____ # of properties owned by the state
_____ # of properties privately owned
_____ # of properties owned by another entity
(specify) _____

What is the approximate square footage they represent?

_____ # square feet of land owned by the municipality
_____ # square feet of land owned by the state
_____ # square feet of land privately owned
_____ # square feet of land owned by another entity (specify) _____

7. Approximately how many of the above properties have had environmental assessments performed?
_____ # of properties

8. Approximately how many square feet of Brownfields have been rehabilitated and returned to productive use in your city?
_____ square feet in the past five years _____ square feet in the past year

9. What are the main actual or planned final uses of the rehabilitated properties (estimated square footage)?
_____ # square feet returned to industrial/commercial (only)
_____ # square feet new industrial/commercial (only)
_____ # square feet residential (only)
_____ # square feet mixed residential/industrial/commercial
_____ # square feet utilities
_____ # square feet transportation
_____ # square feet parks/recreation
_____ # square feet public space such as parking lots

_____ # square feet open space but not developed parks
 _____ # square feet historical preservation
 _____ # square feet held in reserve for future development
 _____ # square feet other (specify) _____

10. On average, how long have properties been inactive before redevelopment was started?
- less than one year
 - one to five years
 - five to ten years
 - more than ten years

11. Approximately how many jobs did the redevelopment efforts create?
- | | | |
|----------------|--|----------------|
| Full-time | | Part-time |
| _____ retained | | _____ retained |
| _____ created | | _____ created |

12. Estimate the actual or potential number of construction related jobs created during rehabilitation efforts?
- | | | | | |
|-----------|-----------------|-----------|-----------------|-----------|
| Actual | | full-time | | part-time |
| Potential | _____ full-time | | _____ part-time | |

13. How involved have local private financial institutions been in Brownfield rehabilitation projects in your city?
- | | | | | | |
|-----------------|---|---|---|---|--------------------|
| <i>inactive</i> | | | | | <i>very active</i> |
| 1 | 2 | 3 | 4 | 5 | |

14. If known, how much (estimated) money was invested in all of the Brownfield redevelopment projects in your community in the past five years?

\$ _____ private dollars invested in equity

\$ _____ leverage by financial firms (loans, if known)

\$ _____ state dollars invested (grants)

\$ _____ federal dollars invested (grants)

\$ _____ local government dollars invested

15. What is the total expected net increase in assessed valuation of the Brownfield properties:
- \$ _____ net increase

16. If known, what is the estimated increase in retail sales tax for redeveloped properties:

\$ _____ conservative estimate \$ _____ optimistic estimate

17. How many building permits have been issued for Brownfield properties in your municipality?

_____ # residential
 _____ # industrial
 _____ # commercial/retail
 _____ # other (please specify) _____

18. Will the Brownfield properties require additional public funds (beyond assessment/cleanup) to attract private investment? yes no don't know

19. Will additional city actions be used to attract businesses? yes no

If yes, which actions will be taken: (check all that apply)

- infrastructure upgrades
- low interest loans/revolving loan funds
- loan guarantees
- job training initiatives
- land price write-downs
- property tax incentives
- free city services
- technical support by city employees
- zoning concessions
- other (specify) _____

20. How did the Brownfield redevelopment efforts impact your municipality?

	<i>no</i>				<i>major</i>
	<i>effect</i>				<i>effect</i>
decreased pollution	<input type="checkbox"/>				
decreased perceived health risk	<input type="checkbox"/>				
helped prioritize local economic development projects	<input type="checkbox"/>				
promoted more environmentally friendly industries	<input type="checkbox"/>				
changed municipal approach to industrial recruiting	<input type="checkbox"/>				
created affordable housing	<input type="checkbox"/>				
increased access to public facilities	<input type="checkbox"/>				
improved local infrastructure	<input type="checkbox"/>				
improved aesthetic appearance of community	<input type="checkbox"/>				
strengthened industrial attraction of city	<input type="checkbox"/>				
made residents more aware of pollution issues	<input type="checkbox"/>				
revitalized local tax base	<input type="checkbox"/>				
stimulated downtown	<input type="checkbox"/>				
lowered crime, vandalism, and other social problems	<input type="checkbox"/>				

decreased citizen complaints
 other (specify) _____

21. How successful have the Brownfield redevelopment efforts been in your city?

not successful 2 3 4 *very successful*
 1 5

22. How much have the following factors limited the successes of Brownfield projects?

	<i>no</i>				<i>major</i>
	<i>limitation</i>				<i>limitation</i>
shortage of local funds	<input type="checkbox"/>				
lack of community interest	<input type="checkbox"/>				
resistance from property owners	<input type="checkbox"/>				
need for additional assessment of property	<input type="checkbox"/>				
environmental regulations	<input type="checkbox"/>				
lack of city staff and/or technical expertise	<input type="checkbox"/>				
poor <i>intragovernmental</i> coordination	<input type="checkbox"/>				
poor coordination with utilities	<input type="checkbox"/>				
paperwork involved in applying for funds	<input type="checkbox"/>				
lack of understanding of grant requirements	<input type="checkbox"/>				
inadequate infrastructure for development	<input type="checkbox"/>				
perceived potential liability	<input type="checkbox"/>				
limited or no demand for property	<input type="checkbox"/>				
neighborhood conditions (crime, poverty, etc.)	<input type="checkbox"/>				
lack of support from financial institutions	<input type="checkbox"/>				
other (specify) _____	<input type="checkbox"/>				

23. Are conditions at Brownfield redevelopment sites currently being monitored by city?

yes no don't know

If yes, please indicate means currently utilized: (check all that apply)

meetings with developers
 meetings with city representatives
 inspections by city personnel
 processing of complaints
 other (please specify) _____

24. Does the city currently implement institutional/engineering controls for Brownfield sites?

yes, all sites some sites no don't know

federal agency representatives	<input type="checkbox"/>				
private consultants	<input type="checkbox"/>				
financial institutions	<input type="checkbox"/>				
local colleges/universities	<input type="checkbox"/>				
local environmental groups	<input type="checkbox"/>				
regional planning commissions	<input type="checkbox"/>				
economic/community development corporations	<input type="checkbox"/>				
public health agencies	<input type="checkbox"/>				
non-governmental organizations/community groups	<input type="checkbox"/>				
(specify) _____					
general public	<input type="checkbox"/>				
others (specify) _____	<input type="checkbox"/>				

32. What have been the most successful aspects of Brownfield redevelopment projects from a local perspective?

33. During the past two years, has your municipality utilized community outreach techniques to garner support for current and future redevelopment initiatives?

- yes no don't know

If yes, please indicate: (check all that apply)

- public forums
- environmental education programs/curriculums
- creation of a community advisory committee or task force
- dissemination of promotional materials (pamphlets, information packets, etc.)
- public service announcements
- workshops/seminars for potential property owners
- (other) specify _____

34. How have the attitudes toward Brownfields and policy evolved during the past two years in your community?

35. What assistance/information would enable local officials to more adequately address issues and concerns associated with Brownfield redevelopment?

- don't need additional assistance or information at this time
- more printed material about options and programs available
- seminars and workshops about IEPA and USEPA programs
- information specifically about financing alternatives
- comparisons of successful programs in Illinois
- on-site technical assistance by IEPA Division of Remediation Management
- other (specify) _____

Please (✓) if you wish a copy of the results.

Please return completed survey to:
Illinois Institute for Rural Affairs
518 Stipes Hall
Western Illinois University
1 University Circle
Macomb, IL 61455

Appendix C

Brownfield Outcomes - Parcel Specific Survey

Brownfield Outcomes – Parcel Specific Survey

Contact Name _____ Telephone Number _____

E-Mail Address _____ Municipality _____

Site Name _____ Site Address _____

1. Please indicate the square footage of the Brownfield property: _____ # of square feet
_____ project start date (mo./yr)

2. What was the former use of the property? (check one)

- | | |
|--|---|
| <input type="checkbox"/> gas station | <input type="checkbox"/> chemical/petroleum product warehouse/store |
| <input type="checkbox"/> dry cleaner | <input type="checkbox"/> foundry |
| <input type="checkbox"/> manufacturing operation | <input type="checkbox"/> establishment selling oil/gas/chemicals |
| <input type="checkbox"/> mill | <input type="checkbox"/> automotive repair shop or dealership |
| <input type="checkbox"/> painting business | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> refinery | |

3. At what stage is the redevelopment effort?

- planning phase in progress completed

4. For how long was the property inactive before the redevelopment project started? (check one)

- less than one year six to ten years
 one to five years more than ten years

5. Who currently owns the property?

- municipality private owner other (specify) _____

a. If city owned, was eminent domain or municipal authority used to take the property?

- yes no don't know

b. If privately owned, has the city worked with owner(s) to remediate this property for redevelopment?

- yes no don't know

6. In the past five years, has your municipality sought legal access to this property to secure it from trespassers, perform an environmental assessment, or otherwise protect public health and safety?

- yes no don't know

7. Has your municipality used regulatory authority such as liens, ordinance violations, zoning, etc. on this property?

- yes no don't know

8. Please indicate the planned end-use of this property (estimate percentage in each)
- | | |
|---|--|
| _____ returned industrial/commercial (only) | _____ public space such as parking lots |
| _____ new industrial/commercial(only) | _____ open space but not developed as parks |
| _____ residential (only) | _____ historical preservation |
| _____ mixed residential/industrial/commercial | _____ transportation |
| _____ utilities | _____ held in reserve for future development |
| _____ parks/recreation | _____ other (specify) _____ |

9. Because of the redevelopment effort, how many jobs were?
- | | | |
|---------------------|---------------------|------------------------|
| Full-time permanent | Part-time permanent | Temporary construction |
| _____ retained | _____ retained | _____ created |
| _____ created | _____ created | |

10. Compared with five years earlier, was the number of jobs created by the redevelopment effort:
- fewer than existed previously
 - fewer because technological advances have resulted in more efficient operations
 - more than existed previously

11. Compared to wages paid previously, was the estimated wage paid for jobs created following remediation:
- less than
 - greater than
 - approximately equal

12. *To the best of your knowledge*, how much investment (estimated) has *already* been made in the redevelopment project including demolition?
- \$ _____ private dollars in equity
 - \$ _____ leverage by financial institutions (loans, if known)
 - \$ _____ state investment (grants)
 - \$ _____ federal investment (grants)
 - \$ _____ local government investment

13. If known, what is the estimated *remaining cost* involved in rehabilitating the property and bringing it to completion?
- \$ _____ estimated remaining cost don't know

14. Is the Brownfield property located in a: TIF zone Enterprise zone both

15. What was, or is, the expected net increase in the assessed valuation of the affected property:
- \$ _____ net increase don't know

16. If known, what is the estimated increase in retail sales tax, if any, for the redeveloped property?
- \$ _____ conservative estimate \$ _____ optimistic estimate
- don't know

17. What is the current status of the rehabilitated property? (enter percentages as appropriate; 100 percent equals the entire property)

<i>Status</i>	<i>Portion</i>
purchased within the past six months	_____ percent
purchased within the past year	_____ percent
sale pending	_____ percent
listed with a realtor	_____ percent
vacant, not listed with a realtor	_____ percent

18. What nonmoney benefits have occurred due to the Brownfield rehabilitation effort?

	<i>no effect</i>			<i>major effect</i>	
aesthetics of neighborhood have improved	<input type="checkbox"/>				
property values in neighborhood have increased					
more than elsewhere in the city	<input type="checkbox"/>				
crime, drugs, etc. in the area have decreased	<input type="checkbox"/>				
the area is much more marketable to residents					
or businesses	<input type="checkbox"/>				
vacancy rates in area have decreased	<input type="checkbox"/>				
new, more environmentally friendly industry					
or business have located	<input type="checkbox"/>				
residents are more conscious about environmental					
issues	<input type="checkbox"/>				
increased green space/recreational opportunities	<input type="checkbox"/>				
current rehab project stage still too early to assess					
potential impacts	<input type="checkbox"/>				
not much expected to happen because of this project	<input type="checkbox"/>				

19. What has been the overall impact of this Brownfield remediation project on the city?

Please (✓) if you wish a copy of the results.

Please return completed survey to:
 Illinois Institute for Rural Affairs
 518 Stipes Hall
 Western Illinois University
 1 University Circle
 Macomb, IL 61455

