

CHAPTER FOUR

PROJECT PROFILES

Communities all over the country are redeveloping brownfields for residential reuse. As the challenges and strategies for making a project a success can vary based on certain site-specific conditions, brownfields practitioners can learn from the experiences of their colleagues who are engaged in brownfields-to-housing initiatives. The following project profiles provide insights on how five different communities coordinated brownfields redevelopment and housing efforts.

- In the rural hillsides of Astoria, Oregon an abandoned mill is being redeveloped into a 16-acre, mixed-use residential neighborhood.
- Muskegon Heights, Michigan is redeveloping the site of a former wastewater treatment plant for residential reuses, which is needed to attract residents to the city and bring new construction to neighborhoods with an aging housing stock.
- Moline, Illinois is aiming to revitalize the Mississippi riverfront by redeveloping acres brownfields into a mixed-use residential and commercial neighborhood called Bass Landing.
- A partnership of organizations is working to build homes for Habitat for Humanity on former brownfields sites in Burnsville, Minnesota.
- St. Paul, Minnesota's brownfields-to-housing projects are aimed at linking jobs and housing to downtown and to the Mississippi River.

The experiences described in each of these communities offer a number of best practices and lessons learned that could guide brownfields-to-housing initiatives in other communities.

The city of Astoria is situated in the upper northwest corner of Oregon just a few miles from the Pacific Ocean. Nestled on steep hillsides overlooking the Columbia River, it is the oldest American settlement west of the Rockies. You might recall some of the spectacular scenery of popular movies such as *The Goonies*, *Kindergarten Cop*, *Free Willy*, and *Short Circuit*, all of which were filmed in Astoria. With a population of 10,000, this quaint rural town is not the kind of place that comes to mind when you think of blight or contamination. Yet, for the better part of the past twelve years, anyone driving into town on US Highway 30 (one of the earliest transcontinental highways running from Atlantic City to Astoria) witnessed just that. Rather than one of Astoria's many bed and breakfasts or its scenic natural beauty, what greeted newcomers and residents alike was an eyesore stretching for 16 acres along the banks of the river—an abandoned plywood mill.

The Clatsop Lumber Mill began operations in 1870 and until 1950 was used to manufacture wood products—everything from lumber for the construction industry to the wooden boxes used in shipping for the region's salmon and tuna canning industries. In 1950, Astoria Plywood Corporation, a local cooperative, began operations at the site. In the late 1980's, dwindling old growth forests, regional environmental issues, and global competition led many such mills to shut down, compromising the economies and spirits of small towns in the Pacific Northwest that rely heavily on resource markets such as timber and fish. The plywood mill in Astoria was no exception. In 1989, after over 100 years of operating as a mill, it was shut down and abandoned—eliminating 217 much-needed family-wage jobs and leaving a legacy of extensive environmental contamination. The city did not have a brownfields program in place at the time, nor was the term “brownfields” even in wide usage. As far as Astoria was concerned, the mill site was just a sore reminder of lost jobs and a dying heritage, not to mention an unsightly blot on the landscape that they simply wished to be rid of.

A Community Rallies and Partnerships Make the Difference

Considering the site's location—right at the city's “front door” and lying along the banks of the beautiful Columbia River—there was strong community support for action. Inspired by that support and successes in the City of Tacoma's waterfront industrial redevelopment efforts, the city began to contemplate its options for cleaning up and redeveloping the mill site.

As previously mentioned, Astoria was not the only municipality dealing with the impact of a defunct timber mill. To help address the issue, the State of Oregon, the Federal Economic Development Administration, and several private sector partners initiated a program called the Oregon Mill Site Conversion Project (OMSCP) especially for rural and/or economically distressed communities that had been dependent upon timber for their economic bread and butter. OMSCP was a public/private partnership created to promote the return of seven vacant mill sites in rural Oregon communities to productive use. The city formed a steering committee of concerned citizens and municipal staff to work with the partnership's lead agency, Rural Development Initiatives, Inc (RDI). RDI led efforts to focus community attention on the extent of the problem posed by contamination and the challenges of redevelopment.

Spurred on by the early assistance of RDI and the OMSCP, the community embarked on a year-long effort to develop a plan to revitalize the mill site and its surroundings. Through a series of community workshops, residents and municipal staff worked together to develop the Gateway Master Plan—an urban infill plan designed to energize Astoria and secure its economic growth. As part of that Plan, residents determined that the best new use of the former mill site would be a residential neighborhood—a new neighborhood that would relate to the river and draw on Astoria's rich history in its layout and architecture. Nobody knew then just how long the process would take or what hurdles they would face. But the commitment of the city and support from its citizens drove the project forward.

Creative Solutions for Incredible Economic Hurdles

Several details impacting the value and redevelopment potential of the mill site emerged as the city embarked on its mission to reclaim the mill site. The site was jointly owned by the Astoria Plywood Cooperative—a group of local residents that owned shares in and were employed by the former plywood mill. The cooperative had acquired a sizeable debt owed to a variety of entities, and therefore the property had an estimated \$5 million in liens¹ and judgments,² which encumbered its sale and redevelopment.

Of this \$5 million, the cooperative owed \$3 million to the Small Business Administration (SBA). SBA, in deciding whether to foreclose, had conducted a preliminary Level 1 and Level 2 environmental assessment on the property and agreed to share results with the city. This was the first proof of contamination that the city acquired, though the full extent of the contamination remained unclear until later. Based on the results of the assessment, the SBA chose not to foreclose on the real estate. They did, however, foreclose on the personal property on the site around 1993. This meant that the cooperative no longer had any rights to the materials or structures on the property.

SBA then auctioned off materials and industrial equipment to recoup some of the \$3 million debt. Unfortunately, as bidders came to collect the auctioned materials, the site was slowly picked apart and materials were strewn around the property haphazardly. According to Paul Benoit, the city's Community Development Director, six months after the auction the site looked like a "war zone". Later, demolition activities uncovered buried capacitors³ and drums with heavy contamination, increasing estimated cleanup costs and further devaluing the property. In short, what initially seemed a relatively benign abandoned site had now become far more unattractive both visually and financially.

It is thanks to Astoria's ability to develop strong working relationships with other public and private entities that the project continued to move forward, even in the face of such seemingly insurmountable obstacles. The financial support from the OMSCP was a very tangible benefit of the program. But another less tangible advantage

of Astoria's involvement in the OMSCP that became increasingly useful was the stronger working relationship they began to develop with the Oregon Department of Environmental Quality (DEQ). DEQ was a partner in the OMSCP. Astoria had not really been on their radar screen, so to speak, prior to the OMSCP. Simultaneously, the concept of "brownfields" was gaining wide attention and DEQ was seeking cities in Oregon that wished to address such sites. As it became clear that Astoria had a brownfield site on its hands and was actively concerned with its fate, and because DEQ was now fully aware of it, DEQ was able to provide guidance to the city as it worked to understand and address cleanup issues.

Because of the interest and involvement of the city, and with the growing interest in brownfields, DEQ in 1995 informed the city that it would undertake the required cleanup on two conditions. One, the city had to agree to reimburse the agency for half of the estimated \$1.4 million cleanup cost, and two, the city had to take legal possession of the site; effectively becoming the owner. Although this was a daunting challenge, especially for a small rural town, the city agreed. But in order to determine appropriate cleanup methods in the meantime, further assessment was required.

Then in 1997, EPA awarded a Brownfields Assessment Demonstration Pilot grant to the Oregon Economic and Community Development Department (OECDD) for the Oregon Mill Site Project. Thanks to the earlier OMSCP and RDI, Astoria was able to obtain some of this funding from OECDD for further site assessments. The assessments helped the city and DEQ determine the next appropriate steps for the site.

Keeping DEQ's challenge in mind, the city worked to clear the liens on the property as a first step. The city contacted⁴ each lien and judgment holder to explain the circumstances. They asked each creditor to consider either forgiving the debt or transferring it to the city. In all cases the creditors—including the Small Business Administration (which was owed the \$3 million), the Internal Revenue Service, a major timber corporation, an insurance company, and a power utility—gave their full cooperation and agreed to do the legal work necessary to name the city as

SIDEBAR: Contamination and Land Use Controls

Contamination on the site was discovered bit by bit over a long period of time; often surprising the city or other entity conducting the assessment or demolition at the time of discovery. It is therefore difficult to portray a sense of timeline relative to the partnerships being developed and funding being obtained by the city, primarily because of the sheer complexity and fluid nature of this project. Therefore, for purposes of this case study, aspects of contamination discovery and remediation will be described independent of the redevelopment process and timeline.

As previously mentioned, the city had early knowledge that some amount of contamination existed on the site because the SBA had already conducted a low level assessment and shared the results with the city upon request. During these early assessments (around 1992), monitoring wells were installed and soil borings and sediment sampling was conducted. Results indicated that groundwater and pond sediments were contaminated with TPH and BTEX compounds.

The millpond's sediment was heavily contaminated and required a weir (a dam in a stream to raise the water level) be built to keep the water level high so that the sediment (where contaminants settled) would not be exposed.¹ The DEQ made the strategic decision not to remediate the pond because it was being cleaned automatically through the pond's natural biology; a process referred to as "natural attenuation".

Incredibly, the pond is now clean. Although wells are still in place for groundwater monitoring, all of the city's water comes from a pristine watershed elsewhere in the county, so there is little concern surrounding the potential for harm to human health through groundwater consumption. Engineering controls still in place on the site include a cap, consisting of three feet of clean fill material, placed over "hot spots"—or areas of high contamination. Deed restrictions prohibit any excavation below the fill without first notifying DEQ. Following is a timeline of the discovery and remediation of contamination on this site:

- During the aforementioned auction held in January 1993, the majority of equipment was removed from the site.
- In June 1993, while buildings were being demolished and equipment salvaged, approximately 100 drums and 51 capacitors were found. DEQ conducted an emergency removal of the capacitors and approximately 25 drums containing acids, sodium hydroxide, oil products, paints, and thinners. Region 10 EPA's Toxic Substance Control Act (TSCA) program also inspected the site and collected six oil-stained soil samples. Pentachlorophenol was detected in three of the samples, and PCBs were detected in two samples.
- In April 1994, more buried capacitors were uncovered during additional demolition activities.
- EPA removed 14 buried capacitors, approximately 10 tons of PCB-contaminated soil, and some asbestos-containing material (ACM) from the site in July 1994.
- In April 1995, leaking capacitors were uncovered in two more areas during demolition activities. EPA removed four capacitors and associated PCB-contaminated debris for off-site disposal.
- DEQ completed a Removal Assessment in September 1995 to characterize the remaining source areas of contamination on-site and evaluate removal options for cleanup, estimated at \$1.4 million. The Removal Assessment identified a number of source areas and recommended further cleanup activities. (Note that it was around this time that DEQ made their challenge to Astoria.)

(Sidebar continued on page 28)

(Sidebar continued from page 27)

- The removals were completed in October 1996. Approximately 6,700 cubic yards of contaminated soil were treated using low temperature thermal desorption; 3,800 gallons of floating product were extracted from the groundwater and properly disposed of; 45,000 tons of contaminated debris were transported off-site for proper disposal; and 21 PCB-containing capacitors uncovered during the excavation were disposed of.
- After completing the removals, DEQ conducted a risk assessment to evaluate whether residual contamination at the site posed a significant risk to human health or the environment. The risk analysis also helped determine if any restrictions on future development of the site were necessary.
- In December 1997, DEQ issued a Record of Decision (ROD) describing the final remedy for the site. The selected remedy included a soil cap, sediment stabilization, surface water control, institutional controls, and monitoring.
- The city of Astoria, through site developer Venerable Properties, then proceeded with the remedial design of the selected remedy with the U.S. Forest Service (USFS) grant, which covered activities such as capping, demolition and debris removal, geoengineering, property and topographical surveys, land use planning and permitting, and legal work. DEQ reviewed and approved the redevelopment plans, ensuring they complied with the final remedy.

¹It was not difficult to determine how most of the petroleum contamination came to be there. Logs were floated up the river into the pond, and then dragged out with large chains. The chains had to be lubricated almost constantly with oil, which of course was going directly into the pond for years.

lien-holder. With this support, the city was ultimately able to secure clear title to the site as required by DEQ.

The next step in the redevelopment process involved securing the funding for half of the \$1.4 million cleanup costs. When the city approached commercial banks and lenders for the \$750,000 loan it needed to meet DEQ's challenge, the assistance was only offered on the condition that the city agree to guarantee the loan with its general fund. The city considered this untenable, and instead approached ShoreBank Enterprise Pacific, a nonprofit conservation development organization active regionally in assisting rural communities to pursue economic as well as environmental goals. ShoreBank Enterprise Pacific immediately recognized the potential of the remediation and redevelopment, and quickly authorized a loan of \$750,000 to the city, secured only by the contaminated real estate. Enterprise also provided considerable assistance to the city in structuring its overall approach to redevelopment of the site after remediation.

DEQ and the city proceeded with cleanup activities, and upon completion of cleanup and a final risk assessment by DEQ, the city signed a Prospective Purchaser Agreement (PPA) with the agency. The agreement, in essence, states that in return for setting up institutional and engineering controls for the site, DEQ will not hold the city or any future owners liable for past contamination on the site. This agreement provided assurance and eased liability concerns for prospective buyers of the site; allowing the city to successfully market and sell the clean site to a private developer. With the PPA in place, the city took possession of the site through a "friendly condemnation".⁵ The plywood cooperative had never declared bankruptcy, and it was no longer a functioning corporation or entity. The remnants of the cooperative's Board, understanding the direction of the city, agreed not to contest the condemnation. With the PPA in place and having secured title through condemnation, the city, following a regional marketing campaign and design competition, sold the mill site to Venerable Properties.

Revenue from the sale allowed the city to repay its \$750,000 loan to ShoreBank Enterprises Pacific.

Further demonstrating the city's outstanding forethought in financing the redevelopment of the site, they obtained funding from the USDA - Forest Service to help pre-development costs such as survey work and geotechnical assessments, and to meet DEQ's final requirements as part of the prospective purchaser agreement. The city wisely held these funds until sale of the site was complete. This allowed them to work in partnership with the developer to focus pre-development investment on high priority activities and to ensure that those activities fit well into the overall plan for redevelopment, thereby saving the developer both time and money.

Mill Pond Today

By the spring of 2003, what had been an eyesore will be transformed into a mixed-use, 16-acre residential neighborhood. The rejuvenated site will include 82 individual house lots, and additional lots for apartment housing and commercial uses. From the site, one can see past the old millpond to the Columbia River a few hundred feet away, and the mountains of Washington state in the distance—an appropriate representation of the beauty of Astoria. At the center of the redevelopment will be cottages built on pilings that overhang the pond, and others that extend into the pond on piers. More homes will overlook a common green space and streets within the village. There is still work to be done at the site, however. Phase I of the construction (partially financed by ShoreBank Pacific, a bank affiliated with Shorebank Enterprise Pacific), has been completed, with six units built and sold. Phase II involves infrastructure construction to be completed in the fall of 2002. The city used its successful cleanup and sale of the property as leverage to obtain a state highway fund grant for construction of sidewalks and street improvements to enhance access to the site.

In designing Mill Pond Village, Art DeMuro of Venerable Properties paid attention to elements that would help create an atmosphere of

true community, and would fit closely with the Gateway Master Plan. The result is a mixed-use development of Neo-traditional design that includes narrow streets, front porches and smaller lots with scenic views and easy access to Astoria's new waterfront trolley. Four commercial lots of more than 30,000 square feet each could be used for multifamily housing, commercial use or a mixture of the two. More is planned for the site, including walking and bike paths, parks and public areas. "Green guidelines" have been enforced to ensure that builders chosen by lot buyers use environmentally compatible practices in construction. House lots are from about 1,700 to more than 3,900 square feet, and will range in price from about \$30,000 to \$60,000. The beauty of the site redevelopment has truly become a source of civic pride and renewed hope in the community.

Conclusion

The Astoria Mill Pond Village is a perfect example of the crucial importance of establishing strong, ongoing public/private partnerships to address brownfields. With the untiring efforts of Astoria's Community Development Director, Paul Benoit, acting as their brownfields "champion," commitment from the city staff and residents, and assistance from the Oregon DEQ as well as other public and private agencies, Astoria was able to creatively solve the financial problems encumbering the property and secure a diverse array of public and private funding for assessment, cleanup and redevelopment of the site. What once set a negative tone at the city's front door now accurately portrays the city's energy and commitment to economic recovery and success. Furthermore, by engaging the community early on, the city was successful in securing a redevelopment plan that reflected the community's needs and vision. Highlighting their success, Astoria was awarded a national Phoenix Award in 2001 for its innovative approach to brownfields redevelopment—a well-deserved distinction for a small town that tackled an urban-sized problem.

Endnotes:

¹ A lien is defined as the right to keep possession of property belonging to another person until a debt owed by that person is discharged.

² A judgment is defined as a court act creating or affirming an obligation, such as a debt, or a writ in witness of such an act.

³ A capacitor is an electric circuit element used to store charge temporarily, consisting in general of two metallic plates separated and insulated from each other by a dielectric (nonconductive element). Also called condenser.

⁴ In most cases, the city contacted lien holders by phone to discuss the situation.

⁵ Legally, if a site is condemned, liens become obsolete and/or are less likely to be enforced.

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Muskegon Heights, Michigan

The city of Muskegon Heights, Michigan, is a small community—a mere 3.8 square miles—with a population of approximately 12,049 people. It is an urban neighbor to the city of Muskegon and has an extraordinary history. Located approximately four miles southeast of Muskegon along the western border of the state near Lake Michigan, Muskegon Heights is one of many communities established and once sustained by heavy industry, but now blighted by brownfields sites as scars of its industrial past. With a current unemployment rate of around 10%, the city, now a federal Enterprise Community, has been investing resources into implementation of a comprehensive brownfields redevelopment plan to address historical contamination and attract new jobs.

The city recognizes that part of the equation for revitalizing Muskegon Heights is bringing people back into the city to live. Migration of residents occurred simultaneous to a loss of jobs in the area. Unfortunately, the housing stock in Muskegon Heights is largely a remnant of its industrial history. Many of the houses are old, in disrepair, and small, at an average size of around 800 square feet. Consequently, more adequate housing is seen as a strong need in the community. One of the key projects slated for new housing in the city is the redevelopment of a former wastewater treatment plant. The plant has been a standard fixture over the course of the city's industrial history, and now figures prominently in its future as well.

A Planned Community

Industry has played an integral role in shaping the history of Muskegon Heights. Up until the late 1800's, Muskegon and the surrounding areas were known for lumber. After the great Chicago fire of 1871, many lumber moguls became instant millionaires because of the demand for lumber to rebuild the devastated city. Around 1890, despite the demand, not enough lumber remained for everyone to benefit. Jobs were lost, and the economy of the area was in sharp decline.

A group of entrepreneurial lumbermen and one lawyer, seeking to breathe new life into what had become an economically depressed area, started the Muskegon Improvement Company (MIC), a private corporation to attract people and new industry to the area—Together they purchased six hundred acres just beyond the city limits of Muskegon, where Muskegon Heights now stands. Their plan was to attract industry to the area by offering low tax, free building sites, and an assured labor force.

MIC attracted residents—and therefore the assured labor force—to the area in quite an unusual way. The MIC built finished houses on several plots of land to encourage sales in Muskegon Heights. In May 1890, a lottery was held. For \$139, a person could purchase a plot of land at random, not knowing its exact location until the day of the drawing. On the day of the drawing, the purchasers were each given the location of their lot and discovered whether it had a house. Companies and families alike jumped at these respective opportunities and MIC's plan became a success. Growth was rapid. By 1893, there were more than thirteen hundred people in the settlement, and the town was incorporated as a city in 1903.

Muskegon Heights became a quintessential old mill town, where residential areas were built near factories so that workers could literally walk to their jobs. Over the years, individual members of MIC continued to invest in the growing city, donating funds for the construction of hospitals, libraries, schools, parks and monuments; all of which kept it attractive to businesses and residents alike.

History of the Wastewater Treatment Plant

The intensity of industrial activities in the area plagued the Muskegon Heights environment from the beginning. Effluent from the various factories was polluting nearby Mona Lake. The city had learned

from what had happened to Muskegon Lake due to untreated industrial discharges and wanted to prevent the same thing happening to Mona Lake. Therefore, the town held a vote and passed a bond in 1917 to build a wastewater treatment plant.

The treatment plant accommodated the heavy industry in the new city; over the years this included operations such as electroplating and significant foundry operations, as well as the manufacture of chemicals, refrigerators, furniture, piston rings, and machinery such as gasoline pumps. Industry ebbed drastically in the 1930's during the depression, but then boomed again during and after World War II. According to Kate Lynnes of Williams & Beck, a private environmental consulting firm located in Grand Rapids, it was during the late 1970's and early 1980's that Muskegon Heights just sort of "rolled up." Many industries relocated to southern states or overseas to escape the demands of union labor and old factories that had become too expensive to heat and maintain. The huge corporate mergers exacerbated the problem, as companies downsized, closed down unprofitable or obsolete factories, and centralized their operations in other locations. While the water treatment plant had maintained operations during all of these ups and downs—the city investing significant dollars in upgrading it over the years—some regional pressure soon led to its closing.

Around 1974, the county sought to construct a land application wastewater treatment system to treat municipal and industrial wastes for the entire area, which was comprised of several small communities like Muskegon Heights. As the waste stream had become increasingly difficult for each community to treat independently, they shut down their own wastewater plants and used the new county plant instead. Politics also played a role in this issue. The land application treatment system proposed by the County was the first large-scale plant of this type in the country. The heavy volume of wastewater also helped the county to justify the expense of constructing the facility. However, with the new county wastewater treatment plant in operation, the Muskegon Heights treatment plant sat idle.

Given the ongoing industry migration and associated loss of jobs, the city was losing its tax base rapidly while poverty levels increased. In 1975, Systech, a waste treatment company, approached the city about leasing the old wastewater treatment plant to treat electroplating wastes from other locations—namely other parts of Michigan and Ohio. The city eagerly agreed to this job and tax-generating endeavor. Since then, Systech has been acquired by a series of other companies,¹ all of which have had compliance problems with the Michigan Department of Environmental Quality (DEQ). One of the operating lessees—Laidlaw Environmental Services—decontaminated the tanks and

SIDEBAR: Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is a complex piece of legislation and difficult to summarize. (For more comprehensive information, see EPA's Web site at <http://www.epa.gov/swerosps/rcrabf/index.html>.) Essentially, RCRA is an enforcement program that addresses responsible parties rather than automatically transferring liability to the owner of a facility. Facilities subject to RCRA corrective action are responsible for conducting investigations and cleanups as necessary to protect human health and the environment. Facilities subject to a permit, order, or sometimes even a voluntary agreement typically present their recommendations for investigation and cleanup activities to the lead regulator for review and approval.

The lead regulator is typically either the state environmental regulatory agency or the regional EPA office. Only states authorized by EPA can be lead regulators for RCRA Corrective Action. As of September 2001, EPA had authorized 38 States and Territories for facility-wide corrective action under RCRA §3004(u). EPA's authorization of a State Corrective Action Program is based on a determination that the state is capable of implementing corrective action equivalently to EPA, and in a manner consistent with applicable Federal statutes, regulations, and guidance. Authorized states have primary responsibility for corrective action at hazardous waste treatment, storage, and disposal facilities.

removed some contaminated soils, and also agreed to pursue voluntary corrective action under the Resource Conservation and Recovery Act² Corrective Action Program (RCRA CAP). However, operation of the site was transferred again to Safety-Kleen, Inc., which met with the city once and offered to do some corrective action. Unfortunately, an agreement on liability issues could not be reached, nor was the site a high priority for DEQ because the active units had been closed. Current bankruptcy proceedings of Safety-Kleen, Inc. effectively stopped further efforts to assess or clean up the site, leaving the city to deal with the problem as best they could.

A Vision for the Site

The city considered several potential reuses for the water treatment plant site before taking further steps toward remediation. The city concluded that families who had left Muskegon Heights' urban center for the suburbs needed to be attracted back into town. To make this vision a reality, the city's urban center needed newer, more attractive housing. The wastewater treatment plant site has an advantageous location for housing as it is a half mile from downtown and adjacent to a large natural area.

A local development partnership, Mona Terrace LLC, approached the city with an interest in designing a New Urbanist neighborhood on the old water treatment plant site. The design would include characteristics such as narrow streets, sidewalks, open front porches, shared driveways, and garages in the rear of each home. The idea appealed to the city, and a process was set in motion to make it happen.

But Muskegon Heights still had to face the complex environmental and legal issues surrounding the site. Kathryn Lynnes of Williams & Beck was brought in as a consultant and recommended they go through the U.S. EPA's new RCRA Brownfields Pilot program,³ because the liability issues related to the cleanup and redevelopment of RCRA brownfields sites are more complicated than typical brownfields sites and EPA's assistance would be necessary to address these issues. RCRA is also the only act that specifically covers the investigation and

removal of hazardous and non-hazardous solid waste resulting from both municipal and industrial usage. The city began holding regular (usually monthly) meetings between the now numerous stakeholders involved with the project: the city, Region 5 of the U.S. Environmental Protection Agency (EPA), DEQ, consultants, and Mona Terrace LLC. Community representatives at these early meetings included local pastors, long-time residents, and city council members.⁴ Bringing everyone together helped the city to begin addressing the challenges of site redevelopment.

Discussions and sharing of ideas really energized the stakeholders and subsequent efforts led to a major boost to the project. In 2001, the city and Mona Terrace LLC were pleased to learn that the Safety-Kleen facility had been selected as an EPA RCRA Brownfields Prevention Pilot—one of five Pilots awarded nationwide that year. The proposed goals of the Pilot are to apply Michigan's non-RCRA risk and land use clean-up criteria⁵ to the site, develop a corrective action strategy, negotiate a consent agreement for corrective action implementation, and obtain a comfort letter from EPA to help resolve purchaser liability concerns. It was an inspiration to the city and other stakeholders to keep up their efforts.

Next Steps and Outlook

Much remains to be done. The stakeholders continue to meet monthly by conference call or in person to discuss other opportunities, and are still pursuing funding options for cleanup through EPA. The developer, Mona Terrace LLC, has remained a committed and patient partner in the redevelopment process, and projections indicate that the market is still good for this type of redevelopment—and will remain so at least through 2004. According to Melvin Burns, the city manager of Muskegon Heights, the complex legal issues surrounding the site are really beginning to “take shape”. While the city is seeking grants, it could also pay off any loans through the sale of the property to Mona Terrace, plus capture revenues through tax-increment financing.⁶

The pilot program mentioned above, coupled with low interest rates, a strong demand

for medium-income housing in the market, and the success of a similar housing project on the adjacent acreage, make the Mona Terrace project a viable business venture that could provide much-needed housing for the community. There is a strong commitment among all of the stakeholders to the success of the project and continued revitalization of the city. In a way, Muskegon Heights has come full circle. The same spirit of enterprise, collaboration, and dedication to community that founded the city a century ago is today a major element of its revitalization.

Conclusion

Muskegon Heights is a community with a fascinating history. The very industrial operations that helped to establish it have also contributed to one of its most current challenges—cleaning and redeveloping the wastewater treatment plant. The city and various stakeholders in this redevelopment have crafted a plan which is perhaps counterintuitive to what one might expect for reuse of the site; housing as opposed to industry. Through continued public education, dogged determination in pursuing public funding where appropriate, and patience, the city is likely to achieve its goal of turning this defunct treatment plant into a beautiful residential area and attracting residents and vitality back into the city.

Endnotes:

¹ Tricil began operations at the site around 1983, and conducted significant amounts of assessment and cleanup during its operation of the site. They later shared documentation of these activities with the city. Tricil was bought out by Laidlaw Environmental Services in 1990, which shut the plant down around 1991 and agreed to pursue RCRA Corrective Action.

² RCRA, or 42 U.S.C. s/s 6901 et seq. (1976), gave EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set a framework for management of non-hazardous wastes. The 1986 amendments to RCRA en-

abled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

³ RCRA has historically focused only on active and future facilities and not abandoned or historical sites. The RCRA Brownfields Prevention Initiative was established by EPA to encourage the reuse of potential RCRA Brownfields so that the land better serves the needs of the community either through more productive commercial or residential development or as greenspace.

⁴ When the city has gained a broader understanding of the various issues surrounding the redevelopment, they plan to further involve the community through public education.

⁵ More information on Michigan's environmental regulations is at <http://www.michigan.gov/deq>.

⁶ The tax increment financing (TIF) process uses the anticipated growth in property taxes generated by a development project to raise public sector capital. For more information, see ICMA's Brownfields Redevelopment: A Guidebook for Local Governments and Communities.

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Moline, Illinois is a community of approximately 43,750 people located in western Illinois. The city is bounded by two rivers—the Rock River on the southern tip and the Mississippi River on the northern tip. Along the Mississippi River lies an area that was used as commercial property from about 1920 to 1960. Businesses ranging from stone crushing to aluminum manufacturing, parts storage, and even a scrapyards have been located there at one time or another, but the site has been undeveloped since the time the site structures were demolished in the early 1990s as part of Moline’s long term planning for the area.

To revitalize this and the surrounding acreage along the Mississippi riverfront, Moline decided to pursue a mixed-use residential and commercial redevelopment now referred to as Bass Street Landing. In order to make this plan a reality, the city needed to overcome some significant challenges.

Site Acquisition

The first challenge involved the initial relocation of the businesses adjacent to the core (brownfields) property. The businesses were holdovers from a time when water transportation was important to industry, so the land was essentially underdeveloped and not at its best use. In order to relocate these businesses, Moline approached the U.S. Department of Housing and Urban Development (HUD) and secured a Section 108 Loan Guarantee of \$3 million for acquisition, relocation, and site clearance in the project area. A portion of future Community Development Block Grant (CDBG) entitlements was pledged as security on the loan. City staff met with each owner, had appraisals and Phase I environmental assessments completed, and negotiated sale and relocation of the businesses. The city also provided staff assistance by referring buildings and sites for relocation, in effect taking on the role of a realtor. Negotiations took about a year and a half. In the end, all of the business owners found a replacement site. Through the relocations, the city retained viable businesses in town while still paving the way for new, more compatible retail and residential uses to support the Bass Street Landing project area.

A second challenge the city faced was redirecting two bridge ramps to make way for the redevelopment. Because the ramps provide access to a United States Army arsenal located on an island in the Mississippi River, the city literally had to secure an act of Congress to get permission for this portion of the project. To make this happen, Industrial Operations Command (IOC) at the Arsenal prepared a report of excess that in very general terms stated the Army would not be hindered by the project. In this case, the city demolished the old ramp and built a new one at its own expense. The Army had no costs related to the project except for staff time to prepare the report, which the city also paid for. A number of federal agencies got involved in this real estate process, including the Department of the Army (Washington, DC), US Corp of Engineers (Washington, DC and Louisville), HUD, IOC at the Arsenal, and Army Material Command (AMC) in Alexandria, Virginia. On the legislative side, the city worked with the offices of Congressman Lane Evans in Moline and Washington, DC and Illinois Senator Dick Durbin in Washington, DC. Because Evans’ office retained a military liaison on staff, it took the lead on the project.

A final remaining challenge is an electrical substation owned by the local utility company, which is adjacent to the redevelopment site. Although it is an uncomplimentary structure for the Bass Street Landing project, the substation is remaining on the site because it is too expensive to relocate and is needed in the area. Plans are still in the works to visually soften its presence so that it does not detract from the beauty of the redevelopment.

Partners

Major players in the project to date have been the city of Moline and Renew Moline, a public-private partnership aimed at creating jobs and expanding the city's tax base. The developers include Kaizen Company of America, Ryan Companies, and LaSalle Group, Ltd. The city was the lead agency in terms of acquisition, but facilitating the project has been a 50/50 effort between the city and Renew Moline.

Cleanup

Low levels of contaminants discovered during environmental assessments included benzene, toluene, ethylbenzene, and xylene (BTEX), polynuclear aromatic hydrocarbons (PNAs) volatile organic compounds (VOCs) semi-volatile organic compounds (SVOCs), arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. Although this is a daunting list of contaminants, they were found in very small amounts. Therefore the Illinois Environmental Protection Agency (IEPA), after reviewing plans for the redevelopment, issued a letter of no further action. They determined that the Bass Street Landing development itself will effectively cap the contamination. However, greenspace areas will require that approximately two feet of soil be removed from the site, and the city is planning to use that soil to raise a road in the project area.

Today

Marketing of the residential units has been disappointing. Developers have determined that Moline is a market that is not conducive to concepts but rather will need to see the redevelopment itself before potential buyers will commit. This makes building a 48 unit high rise difficult at best. The developers have therefore rethought the design and are considering building residential units in phases—fourteen units at a time. This will be accomplished by building three or four buildings over a period of three to five years instead of a single high rise tower. The developers held a series of focus groups with potential buyers when the project was first planned, most of whom were retirees or nearing retirement.

Although the groups were initially receptive to the project, the recent poor national economy and significant downturn in the stock market (where most of the potential buyers have their wealth) have cooled buyer interest in the project. Without at least fifty percent pre-sales, conventional financing was not available, and the developers were not able to assume the risks themselves. In other words, having investment ahead of time rather than depending on the immediate success of the project for funds would have been a more prudent strategy.

As of November 2002, the city and developers were continuing discussions on how to phase the project in response to the current market conditions. The developers have suggested that the commercial components commence first, along with the completion of the infrastructure relocations. These would greatly improve the setting for the residential "neighborhood" and increase the confidence level of the residential buyers. It is hoped these initial phases can begin in early 2003, with the first residential phase coming on line in early 2004.

References:

- Craig Anderson, email to author, 20 September 2002.
- Nancy Mulcahey, email to author, 10 September and 23 October 2002.
- Scott Harrington, telephone conversation with author, 14 August 2002.
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Burnsville, Minnesota is a suburb of Minneapolis-St. Paul with a population of 60,220, located approximately twenty miles south of the Twin Cities. As more commuters have moved to the suburban areas surrounding the Twin Cities, Burnsville has been challenged with finding enough affordable housing to meet community needs.

A parcel of land in the city was contaminated by having been used as a farm dump for many years. In particular, it contained a lot of mixed debris, and even tested high for lead in some spots. The land was tax forfeited and the state gave it to the county. The state and county sold the land to the Dakota County Community Development Agency, who would later offer it for sale to the Twin Cities Habitat for Humanity (TCHH).

History and Partnership

Meanwhile, a local man working in the Attorney General's office, Lee Paddock, was serving on the board of the Minnesota Environmental Initiative (MEI), a local environmental organization with a program targeting brownfields redevelopment. He was also involved as a volunteer with the TCHH site selection process. Paddock knew that TCHH avoided sites with potential environmental liability issues because it had no capacity to deal with such challenges, and that MEI had a long history of working on brownfields redevelopment. Paddock introduced the organizations to one another around 1998. A partnership was soon established between MEI and TCHH. Together the organizations approached the Metropolitan Council—a regional planning agency serving the Twin Cities seven-county metropolitan area and providing essential services to the region—to apply for a brownfields pilot. In 1999, the Metropolitan Council applied for and was awarded an EPA Brownfields Assessment Pilot to work with MEI and TCHH. With the pilot in place, the three organizations informed those who typically brought sites to TCHH's attention that potentially contaminated properties could now be assessed for suitability for housing. In 2000, assessments were conducted on many sites. In the fall of 2001, the Burnsville property became the eighth site to be assessed by the pilot partners. Each agreed that the site could be used for redevelopment if TCHH was given the proper guidance through MEI.

After contamination was confirmed on the site, MEI and TCHH raised money and in-kind services for the cleanup. Other agencies were brought in to assist with the various aspects of the project. Each of the agencies involved in the resulting partnership provided one key contact for the project. Those agencies included the U.S. Environmental Protection Agency (EPA); the Metropolitan Council; Dakota County Community Development Agency; Dakota County Environmental Management; the City of Burnsville; Braun Intertec, an environmental consultant; and Veit, a dig and haul company. Metropolitan Council provided guidance, and MEI and TCHH acted as the primary drivers of the project and the partnership. Dakota County Community Development Agency was the owner of the property prior to TCHH's acquisition of it, Dakota County Environmental Management and the city of Burnsville assisted with garnering local support for the project, Braun Intertec offered some of its consulting services as an in-kind donation to MEI and TCHH, and Veit donated equipment and time to help alleviate cleanup costs.

Although this project and partnership were innovative, there were some complications to overcome. The TCHH leadership was convinced that this was a good move, but the grassroots representation of TCHH volunteers had to be persuaded that the site would be safe for residential reuse. MEI as an organization has always been very sensitive to environmental justice issues involved with brownfields redevelopment, and took the public health aspect very seriously. The entire project was riding on the results of the environmental assessments; they would determine whether the site was appropriate for residential redevelopment. Luckily, the contamination that was found was relatively easy to remove.

Funding

Because this project was driven primarily by two non-profit organizations, financing the cleanup was no small challenge. In addition to the EPA Brownfields Assessment Pilot, which provided the organizations with funds for the site assessment, cleanup costs were covered with \$15,000 from the county, \$15,000 from the city, \$66,000 worth of donated services from Waste Management, \$15,000 worth of donated labor from Veit, and donated consulting services equaling 28 percent of the total workload from Braun Intertec.

Cleanup

Many brownfields cleanup and redevelopment projects can literally take years to complete, but remarkably, the majority of the work for this project happened between November 2001 and March 2002. Because of TCHH's funding cycle, this type of expeditious action was necessary to make the project a success. All told, 2100 tons of material and soil have been removed from the site for cleanup. Infrastructure to bring city water to the site is in place, and no institutional or engineering controls will be necessary.

Today

The finished development is a 2.7-acre parcel of land with five TCHH duplex homes and one single family home. The five duplex homes house ten families—one family on either side of each duplex structure. The total development will house eleven families, who will start moving in as early as 2003.

Because of the success of this project, a larger partnership was developed between US EPA and Habitat for Humanity International. Currently, other similar projects are being replicated across Minnesota and in other communities including Charlotte, Boston, Denver, and San Francisco.

References:

Michael Welch, telephone conversation with author, 27 June 2002.

Michael Welch, email to author, 4 December 2002.

McAuliffe, Bill. "Housing effort: A brownfield of dreams". Star Tribune. 9 June 2002.

Oseid, Tammy J. "Habitat reclaims dump for housing site". St. Paul Pioneer Press. 22 February 2002.

Upper Landing is a redevelopment project in St. Paul, Minnesota located on 26 acres along the Mississippi River industrial corridor. Two former businesses on this property, Kaplan Scrap Metal and Harvest States Grain, left soil contaminated with lead, wood-treating products, and petroleum/oily products. Kaplan Scrap Metal, the most current operator at the site, had a long history of pollution in St. Paul. After the company relocated their operations in 1988, the city acquired the idle property and demolished the structures on the site. But the site sat vacant for nearly a decade afterwards.

Three years ago, development adjacent to the site prompted the city to consider it for a mixed-use redevelopment that would link jobs and housing to downtown and the river. Soon thereafter, the city adopted the Upper Landing Urban Design Master Plan, and in April of 2001, they signed a contract for redevelopment with Centex Multi-Family Communities.

Cleanup

To make the property safe for redevelopment, the Minnesota Pollution Control Agency, which implements the state's voluntary cleanup program, considered a cleanup plan that includes treating and removing some soils, and adding eight feet of clean soil to cover the treated area and raise the property above the floodplain. Although there were some environmental concerns surrounding the raised floodplain, the long-term benefits of the redevelopment greatly outweigh the concerns. For example, the high density of this development, and the fact that it will utilize existing infrastructure, is more economically and environmentally feasible than the alternative—suburban sprawl. Higher density residential developments draw higher tax revenues than single-family homes on large lots, and the infrastructure is already in place. Were it not for a redevelopment such as Upper Landing, the city speculated that residents would simply continue moving to suburban areas, creating a need for additional infrastructure and a heightened need for automobile use.

The Development

Upper Landing is designed to be a large mixed-use redevelopment along the riverfront that will serve to reconnect the riverfront to downtown St. Paul. Of the 650 planned units, 20 percent are slated to be affordable housing for residents at or below 50 percent of the median income. In addition, there will be commercial space as part of the redevelopment (which means more jobs), a park system that is connected by a trail along the Mississippi River, and construction of a harbor for pleasure boats.

Stakeholders

To accomplish this goal, the city had to engage various stakeholder groups and provide timely information to the public through a series of newspaper articles, press conferences, and public meetings. Partners in this project have included the city of St. Paul as the project lead; Tetratex, an environmental consulting firm; Centex, the developer; the Minnesota Department of Trade and Economic Development; the Minnesota Pollution Control Agency; and Metropolitan Council, a regional planning agency serving the Twin Cities seven-county metropolitan area and providing essential services to the region. The city remains the legal owner of the property and is leasing it to Centex. Once the development proves itself in terms of jobs created and tax revenue increased, the city will sell the property to Centex. The various agencies involved provided a number of services ranging from financing the project or providing legal counsel to conducting community education or providing input on cleanup options.

Funding

The cleanup of the site was made possible through grants from state and regional coffers. According to Wayne Nelson at the Metropolitan Council, state funding of \$3,891,241 was committed by the Minnesota Department of Trade and Economic Development through its Contamination Cleanup Grant Program, and regional funding of \$702,709 was committed by the Metropolitan Council through its Tax Base Revitalization Account (TBRA). The TBRA funding was established by the state legislature through its Livable Communities Act in 1995, and primarily serves to restore the commercial and industrial tax base by putting contaminated properties back to productive use. Upper Landing qualified for TBRA funding because its high-density housing will generate high property tax revenues while retail and management components will create several new jobs.

Conclusion

The riverfront was for many years simply a location for heavy industry that the city had turned its back on. Today, St. Paul has once again embraced its riverfront and through this redevelopment, will begin to reconnect it to the downtown area while simultaneously providing housing and jobs to the community. By taking advantage of sound public policy and funding options and public-private partnerships, the city has been able to effectively finance this project and reclaim the lost residential heritage of the riverfront.

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<<http://www.upperlanding.com/Living.htm>>. □