



Central Massachusetts Regional Brownfields Plan



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Produced by the **Central Massachusetts Regional Planning Commission**
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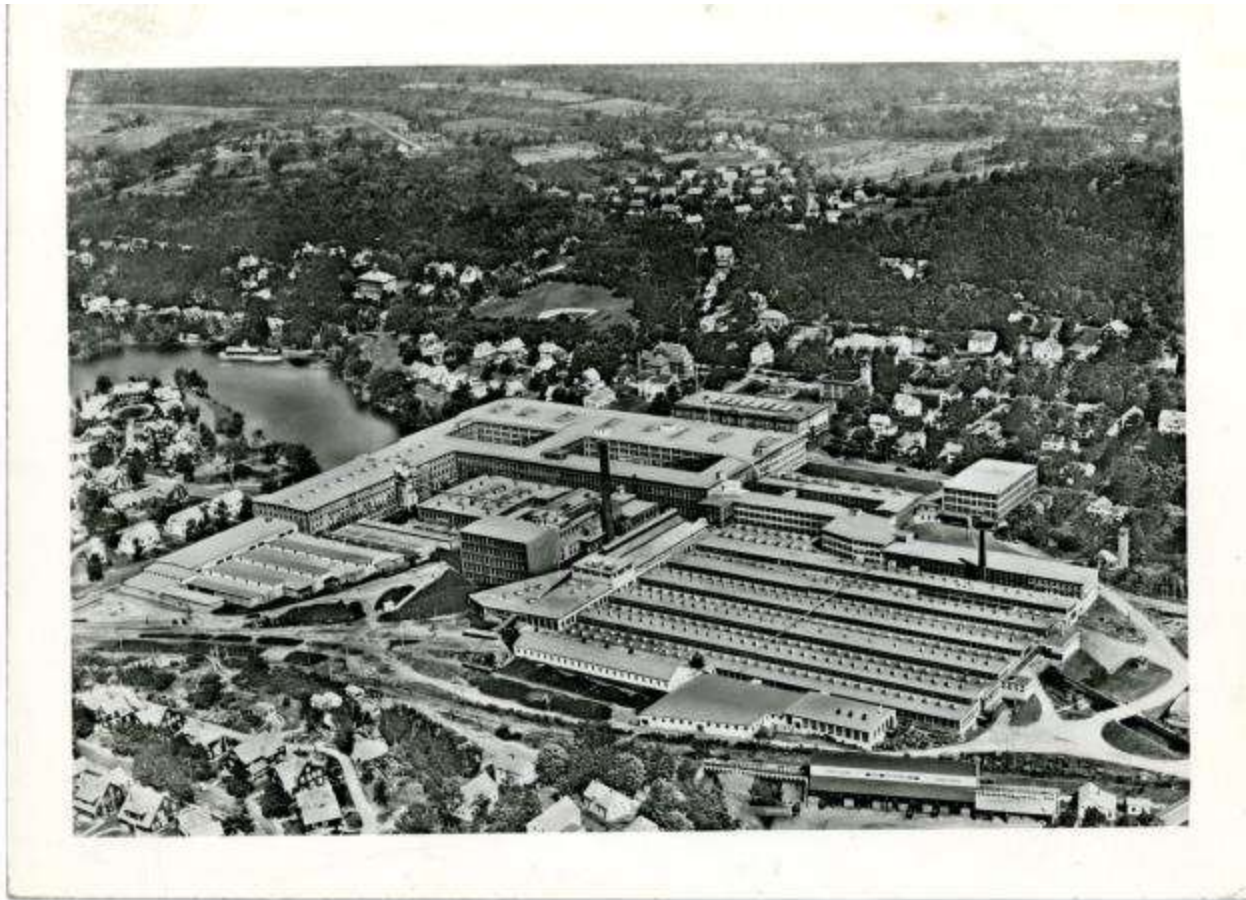
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SECTION 1 Introduction

The Central Massachusetts Regional Brownfields Plan reviews the general costs of brownfields and the benefits of their revitalization, assesses the scope of the brownfields issue on a regional and municipal level, and identifies Areas of Brownfield Interest (ABIs). These are defined as neighborhood-scale areas with regional impacts where brownfields are pervasive and resources to address them are needed. The plan then presents environmental, economic and demographic attributes within each ABI and offers neighborhood-wide and site-specific strategies and next steps for each ABI and for the region.



Draper Corp. Complex, Hopedale, Mass. around 1930 (Photo courtesy Bancroft Memorial Library via Digital Commonwealth)

A 200 Year Legacy

Central Massachusetts is one of America's oldest industrial regions. Blessed with abundant rivers and close proximity to the ports and investors in New England's coastal cities, Worcester and its environs provided the necessary conditions for early 19th century mills that required fast-moving water for machine power. In the decades following the opening of the Blackstone Canal in 1828 – which linked Worcester to the port of Providence, Rhode Island – factories producing textile-manufacturing equipment, machine tools, wire and other high-value goods supplanted former farm villages, creating new mill towns and urban neighborhoods. These were often true company towns, where industrial firms provided and steered their host communities' housing, shopping, schools, infrastructure and social and civic life.

As recorded in US Census records, manufacturing came to dominate employment in the area, with more than 54% of workers in Worcester in that sector in 1920, and almost 41% in the Worcester metro area as late as 1950. By mid-century, competition from other US regions and overseas had combined with technological change to reduce the area's competitive advantage for manufacturing employment. The 1960s, '70s and '80s saw many regional manufacturers downsize, relocate or close. Industrial jobs fell to 30.5% of Worcester metro area employment in 1980, 17.3% in 2000, then to 13.2% in 2014, with many of the remaining jobs moving from the cities and historic mill towns to suburban locations. Median per capita income in the region fell from 4% above the US rate in 1960 to 4% below in 1980, before rebounding in the 1990s as the regional economy transitioned to an "eds-and-meds" focus. With many former manufacturing and commercial sites in its historic industrial and commercial centers abandoned or underutilized, Central Massachusetts is left with the physical legacy of its manufacturing heyday. This situation presents both challenges and opportunities for community revitalization in the region.

Goals of the Brownfields Plan

Neighborhoods are increasingly the preferred scale when addressing brownfields through public policy and programs. Academic research has demonstrated since the 1990s that the impacts of pervasive brownfields are most acutely felt at a neighborhood level, where concentrations of derelict sites can substantially impact quality of life, human health and the environment, and economic development within fairly small geographic areas. The US Environmental Protection Agency (US EPA) has embraced neighborhood-level planning through its Brownfields Area-Wide Planning program, launched in 2010. The Massachusetts Department of Environmental Protection (MassDEP) has likewise used a neighborhood approach for examining cumulative environmental impacts in historically underserved districts in Springfield and Worcester over the past four years.

The core purposes of this plan therefore are 1) to identify neighborhood-scale areas within the 40-town CMRPC area where brownfields assistance resources are needed most, and 2) to provide neighborhood-wide and site-specific strategies for fostering revitalization of brownfields within these areas and for other key sites. Secondly, the plan provides regional and municipal context for the brownfields issue, raises awareness of brownfields and brownfields-revitalization tools among local governments and other stakeholders who may lack experience and capacity in this topic area, serves as a road map to guide CMRPC's brownfields efforts over the next five-to-ten years, and can be used as a tool to support requests for state and federal resources.

This plan is not intended to be a comprehensive inventory of brownfields within the region.

Planning Process

The Regional Brownfields Plan was approved for development under 2016 District Local Technical Assistance (DLTA) funding at the **October** 2016 meeting of CMRPC's Physical Development Committee, with the plan to be completed by December 31, 2016. To guide the planning process and foster participation by regional stakeholders, CMRPC's lapsed Brownfields Advisory Committee (formerly known as the Brownfields Steering Committee) was reconvened through invitations to existing and new members. Committee meetings were held to discuss the plan and related topics on October 18, 2016 and November 22, 2016. As brownfield sites and areas of interest in the region were identified through planning, additional community outreach was made through direct contact with local officials. Materials from the Brownfields Advisory Committee meetings are included as Appendix **XXX**.

SECTION 2 Brownfields Background

Defining "Brownfield"

US EPA defines a brownfield site as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." Brownfields are therefore sites with known or perceived contamination. Massachusetts does not have an official definition for the term "brownfield" and in practice uses EPA's definition. EPA's definition is used throughout this plan, with the understanding that contaminants or perceived contaminants include those in soil, groundwater, and indoor air, as well as hazardous building materials such as lead paint and asbestos.

Impacts of Brownfields

The negative impacts of brownfields can, for the most part, be categorized in three broad areas: economic impacts, risks to human health and the environment, and reductions in quality of life for residents of affected neighborhoods.

Underutilized, vacant and abandoned brownfields reduce the amount of municipal territory that is fully taxable for residential and business uses. This reduction in usage leads directly to the loss of local property tax revenues, with no corresponding reduction in the burden of infrastructure maintenance, thereby putting strain on municipal budgets. Indirect tax losses may also occur because brownfields may negatively impact the value of adjacent uncontaminated properties. Brownfields likewise can discourage private investment due to uncertainty about liability and cleanup costs, leading to long-term underinvestment in former industrial neighborhoods and mill villages. In these neighborhoods, many small businesses that relied historically on well-paid factory workers for their clientele have suffered and closed shop, leaving a vacuum in the retail sector and exacerbating job losses. Remaining local residents often have little choice but to take low-paying service jobs in the growing suburbs, sometimes hours away on inefficient suburban public transport networks.

Environmental and health impacts from brownfields vary from site to site, but can be substantial. Ground- and surface water quality is sometimes compromised by contaminants leaking from underground tanks. Ecological diversity among plant and animal communities can be reduced through exposure to contaminants in the soil and water. Human health is affected through exposure to soil contaminants through direct contact or through urban agriculture, and drinking water supplies can be made unsafe through groundwater or sediment contaminants. Indoors, health can be affected through building materials (asbestos, lead paint, and PCBs) or by air contaminants from soil vapor. Brownfields add to cumulative environmental health concerns in low-income neighborhoods where air pollution, poorly-managed potable water systems, residential lead exposure from older housing stock and other risks are also present.

In a neighborhood with extensive or concentrated brownfields, nearly every aspect of everyday life is impacted. Vacant and underused sites attract illegal activities, from squatting and illegal waste disposal to drug dealing and violent crime. A less tangible effect of concentrated brownfields is social fragmentation, both within neighborhoods and between affected communities and the larger community. Brownfields – especially abandoned industrial facilities that reach many acres in footprint – can act as physical barriers that isolate populations and create enclaves, potentially reducing access to transportation, social networks and social services. In neighborhoods where brownfields are commonplace, people living in close proximity to derelict structures may become distressed by the risks and demoralized by the stigma associated with their surroundings.

Benefits of Redevelopment

Assessment, cleanup and redevelopment of brownfields can counteract the impacts described above and often provides an opportunity to revitalize affected communities through sustainable infill development. In a local example, the historic Felters Company mill near Millbury's town center was cleaned up and repurposed as a mixed office/retail complex in 2013 following two decades of intermittent and partial use. Since then, the assessed value of the 1910-era textile factory has increased from \$1,474,300 to \$2,225,800. At the FY16 municipal tax rate of \$16.46 per thousand, the Town of Millbury now receives \$12,370 in additional taxes per year. Cleanup operations at the site removed the source of oil contamination that had formerly affected the adjacent Blackstone River, and remediated a number of other contaminants that posed potential threats to users of the property. Businesses in the former mill employ dozens of workers and add vitality to the town center. While many brownfields in the region lack the market potential of the Felters Co. property, nearly all brownfields have the potential to be reused for purposes that support the economy, the environment, and/or community livability.

Assistance Resources

In recognition of the troubled economic and environmental condition of many post-industrial communities, beginning in the 1990s the federal and state governments passed legislation and created programs to assist with brownfields revitalization. Current federal resources include US EPA's brownfields program, which offers highly competitive national grants for planning, site assessment, and cleanup of brownfields, with a number of grantee and site eligibility constraints. EPA's Boston (Region 1) office also offers the semi-competitive Targeted Brownfields Assessment grant-of-service program. Community Development Block Grant (CDBG) entitlement funds from the US Department of Housing and Urban Development or competitive funds received through the Massachusetts Department of Housing and Community Development can also be used most aspects of brownfields revitalization. While not specifically designed for brownfields assistance, various other federal incentives such as the Historic Preservation Tax Credit, New Market Tax Credit, and Low-Income Housing Tax Credit programs may also be applied to brownfield sites with appropriate reuses.

At the state level, MassDEP provides technical assistance for specific brownfields through its Central Massachusetts regional office in Worcester (note that a few CMRPC region communities are within MassDEP's western region). MassDEP's cleanup regulations allow for various liability protections to foster brownfields cleanups. The state's Brownfields Redevelopment Fund is administered by the Massachusetts Development Finance Agency (MDFA, or MassDevelopment), which has an office in Worcester. The fund offers assessment and cleanup loans to eligible private parties and can offer recoverable grants to municipalities. Projects must be located within a state-designated Economic Target Area. MassDevelopment is currently launching its Site Readiness Program, which may be of use preparing cleaned-up brownfields for redevelopment. The Massachusetts Department of Revenue offers a brownfields tax credit program; various other state tax incentives can be useful at specific sites.

MassDEP offers a more detailed list of resources (both state and federal) on its website:

<http://www.mass.gov/eea/agencies/massdep/cleanup/programs/#resources>

Many of these resources are competitively allocated or are not widely advertised. Local capacity is therefore essential to accessing these resources, but is often lacking, especially in rural communities.

SECTION 3 Regional & Municipal Context

Central Massachusetts Overview

Contaminated sites including brownfields remain widespread in the region. Almost 4,600 releases ("sites" or "RTNs") of hazardous substances and petroleum have been reported to the Massachusetts Department of Environmental Protection's MGL Chapter 21e program in the CMRPC area since 1993. Of these sites, almost 2,600 (or 56.1%) were reported for oil-related contaminants, while nearly 1,100 were for hazardous substances or mixed contaminants (23.9%). The remaining sites were not required to be classified or have not yet been classified. Roughly 89.7% of reported sites have been successfully remediated or otherwise closed out of MassDEP's 21e system, though some have deed restrictions that preclude certain property uses until additional cleanup work is completed.

The remaining 468 sites are open and require additional assessment, risk analysis, and/or remediation before reaching regulatory closure. Of the open sites, 51 are considered Tier 1 sites, the most risky to human health and the environment in the 21e program. Another 105 sites are designated as Tier 1d, indicating sites that are out of compliance with state cleanup regulations. While not all open 21e sites can be considered brownfields and other brownfields exist outside the 21e system (see Limitations of 21e Data below), the open sites provide a ballpark idea of the remaining scale of the brownfields issue in Central Massachusetts.

In addition to MassDEP's 21e data, US EPA and Massachusetts Development Finance Agency (MassDevelopment) maintain smaller lists of previously assisted brownfields that can help illustrate the distribution of brownfields within the region. To date, MassDevelopment has provided loan and/or grant funding for assessment or cleanup of 45 properties in the region through its Brownfields Redevelopment Fund. US EPA has provided brownfields grants, loans and/or grants of service to assist 55 sites in the area, mostly through grants to the City of Worcester and to CMRPC.

The regional economic impact of contaminated sites including brownfields continues to be substantial. For example, a geographic information systems (GIS) overlay performed for this plan finds that the remaining open Chapter 21e sites in the region are located on real estate valued at \$574 million, based on municipal property tax assessments. Redevelopment or reuse of affected properties that are underutilized would result in millions of dollars of increased property value and would substantially boost local tax revenues.

Municipal Patterns

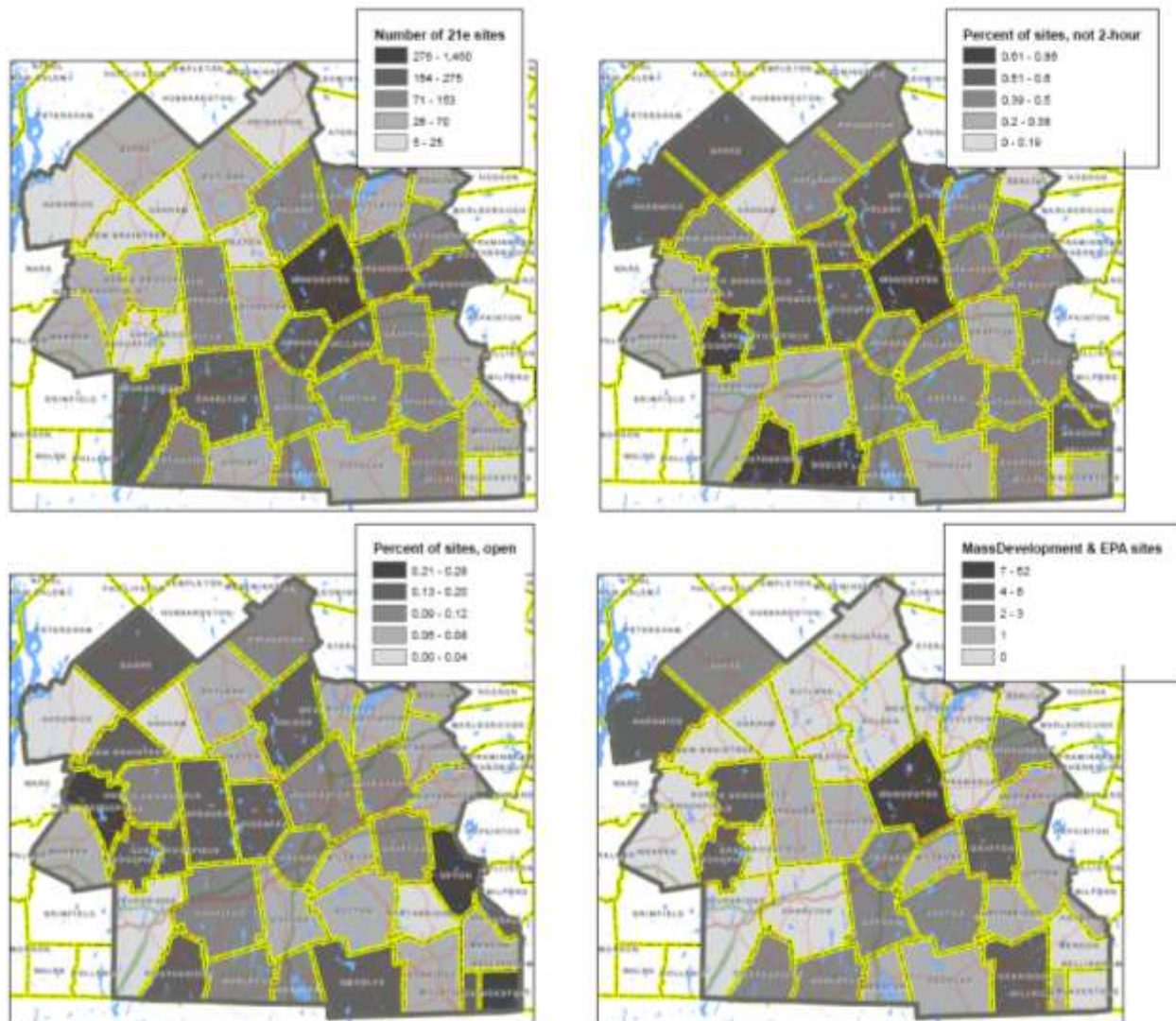
On a town-by-town basis, reported contaminated sites including brownfields are broadly correlated with population and population density, transportation networks (especially major roadways, where road spills are most common) and extensive industrial legacy. Worcester, by far, is the most affected community in the region, with nearly 1,500 Chapter 21e sites, of which 164 remain open and 28 are Tier 1d noncompliant sites. Other communities with notable numbers of sites are Auburn (275 sites, 29 open), Charlton (238 and 27), Westborough (236 and 13), Shrewsbury (206 and 19), Millbury (172 and 12), Sturbridge, (184 and 13) and Southbridge (153 and 22). Of the communities mentioned here, most contain primarily 2-hour sites, a Chapter 21e category which includes roadway spills and other generally short-term types of contamination that are not usually associated with brownfields. Exceptions are Worcester and Southbridge, where only 35% and 34.6% of sites respectively are in the 2-hour category, suggesting that contaminated sites in these communities are more likely to be long-term projects, such as brownfields, than in other municipalities with large numbers of sites.

Town/City	Total 21e RTHs ¹	2-Hour RTHs	Not 2-Hour RTHs	OSI RTHs	Hazardous Substance & Contaminated RTHs	Unclassified RTHs	Closed 21e RTHs	Open 21e RTHs	Tier Ia to c RTHs	Tier II RTHs	Tier III RTHs	MDFA BRU Sites ²	US EPA BRU Sites ³	Property Value Impacted by Open 21e RTHs ⁴
AUBURN	275	150	125	161	56	38	246	29	5	4	9	0	2	\$66,381,400
BARRE	42	17	25	27	6	9	34	8	1	1	8	0	2	\$24,509,600
BERLIN	39	33	6	24	5	10	36	3	0	0	3	0	0	\$457,300
BLACKSTONE	25	16	9	14	3	8	18	7	0	0	3	0	0	\$1,913,500
BOYLSTON	34	17	17	16	12	8	32	2	0	2	0	0	0	\$324,800
BROOKFIELD	14	2	12	9	4	1	12	2	0	0	0	0	4	\$217,300
CHARLTON	238	176	62	120	64	54	211	27	4	0	9	0	0	\$7,514,200
DOUGLAS	28	19	9	18	4	6	23	5	1	0	2	0	1	\$412,800
DUDLEY	70	25	45	39	22	9	64	8	1	0	1	0	2	\$249,000
EAST BROOKFIELD	11	5	6	6	4	1	9	2	2	0	0	0	0	\$879,200
GRAFTON	117	72	45	64	24	29	103	14	1	2	1	3	1	\$34,776,000
HARDWICK	24	10	14	15	6	3	23	1	0	0	0	0	4	\$0
HOLDEN	87	38	49	30	20	17	74	13	3	1	2	0	0	\$28,822,600
HOPEDALE	42	18	24	22	13	7	36	6	2	1	1	0	1	\$4,378,300
LEICESTER	57	26	31	35	9	13	49	8	2	1	3	1	0	\$1,992,000
MENDON	31	14	17	17	11	5	29	2	0	0	2	0	0	\$477,800
MILLBURY	172	100	72	97	36	39	160	12	1	2	2	1	0	\$15,429,300
MILLVILLE	16	13	3	10	2	4	15	3	1	0	2	0	1	\$1,023,100
NEW BRAintree	5	3	2	4	0	1	4	1	0	0	0	0	0	\$205,000
NORTH BROOKFIELD	42	20	22	25	8	9	38	4	0	1	0	1	5	\$1,000,600
NORTHBOROUGH	112	61	51	65	28	19	104	8	0	1	1	0	2	\$12,123,800
NORTHBRIDGE	73	37	36	35	10	28	71	2	0	0	1	0	1	\$2,827,800
OAKHAM	8	8	0	6	1	1	8	0	0	0	0	0	0	\$0
OXFORD	133	74	59	68	42	23	122	11	2	0	4	3	0	\$4,092,300
PAKTON	19	9	10	16	2	1	18	1	1	0	0	0	0	\$165,900
PRINCETON	21	12	9	13	5	3	19	2	0	0	0	0	0	\$0
RUTLAND	28	14	14	15	8	5	26	2	0	1	0	0	0	\$177,200
SHREWSBURY	206	110	96	129	34	43	187	19	1	1	3	0	0	\$32,475,300
SOUTHBRIDGE	153	53	100	78	46	29	131	22	0	7	2	1	1	\$37,496,700
SPENCER	78	33	45	38	25	15	65	13	3	2	2	0	1	\$14,868,000
STURBRIDGE	184	129	55	126	27	31	177	7	0	5	2	5	0	\$1,458,200
SUTTON	85	50	35	56	17	12	79	6	2	1	1	1	2	\$2,631,200
UPTON	30	17	13	14	9	7	22	8	1	0	3	1	0	\$2,466,800
UNBRIDGE	88	48	42	47	21	20	82	8	3	1	0	3	1	\$2,337,300
WARREN	48	30	18	27	9	12	45	3	1	0	0	0	0	\$1,481,337
WEBSTER	121	64	57	82	20	19	106	15	0	1	7	1	0	\$3,413,800
WEST BOYLSTON	83	35	48	45	17	21	79	4	0	1	0	0	0	\$5,150,400
WEST BROOKFIELD	29	20	9	12	10	7	22	7	0	1	2	0	0	\$1,452,300
WESTBOROUGH	236	139	97	141	47	48	223	13	2	0	3	0	1	\$51,163,200
WORCESTER	1,460	512	948	774	405	281	1,296	164	11	32	28	29	23	\$206,787,600
CMRPC Region	4,564	2,227	2,337	2,560	1,082	912	4,096	468	51	66	185	45	55	\$578,952,937

1 - FGL Ch. 21e database downloaded from MassDEP on 5-13-16
2 - Received from MassDevelopment on 5-5-16
3 - Cleanup in My Community brownfields dataset downloaded from EPA on 5-14-16 (incl. sites added by TBA and grants to Towns/sites and CMRPC)
4 - Assessed total value of properties containing open DEP-mapped 21e sites based on parcel data in CMRPC's GIS library on 12-16-16 (FY varies by community)

While the highest numbers of 21e sites are present in the region's most populous communities, many rural municipalities are impacted by brownfields and other contaminated properties that belie their small size. The Town of Barre, for example, with a population just over 5,000, has 42 Chapter 21e sites, of which 8 require additional assessment or cleanup to reach regulatory closure. Relatively low real estate values in some rural areas (especially in the western part of the region) can discourage cleanup of brownfields where remediation costs exceed land prices.

Potential impacts to property value from open 21e sites vary markedly by community and are approximately tied to municipal property and market strength. In Worcester, nearly \$207 million in properties contain one or more active 21e sites; this represents more than one-third of the regional total. Other communities where ongoing contaminated properties such as brownfields may impact the real estate market and local tax revenues substantially are: Auburn (\$66 million in properties with open 21e sites), Westborough (\$51 million), Southbridge (\$37 million), Grafton (\$35 million), Shrewsbury (\$32 million), Holden (\$29 million) and Barre (\$25 million).



Previous brownfields assistance through MassDevelopment and US EPA is loosely tied to the overall scale of 21e sites for each community. Almost two-thirds of all past MassDevelopment projects in the region are located in Worcester, which has roughly one-third of the region's population and its open 21e sites. This overrepresentation of projects in Worcester is likely explained by the nature of MassDevelopment's brownfields program, which (in addition to providing recoverable grants to municipalities) makes brownfields loans to private parties seeking to redevelop sites for business uses. As the region's business center and with central parts of the city seeing strong real estate investment since the late '90s, Worcester is more apt to benefit from brownfield projects driven by private parties. Other communities benefiting from multiple MassDevelopment projects are concentrated east (Grafton) and south (Uxbridge, Oxford) of Worcester, where the real estate market is also relatively strong.

US EPA brownfield projects have been spread more evenly across the region, with 18 communities receiving assistance either directly from EPA, or through an EPA grant to CMRPC. CMRPC received \$400,000 in EPA assessment funds in FY 2009 and completed assessments at 16 sites in 12 communities by 2013. The City of Worcester has received seven grants from EPA since 1996, totaling close to \$4 million for numerous assessment and cleanup projects. Four Worcester-based nonprofits have also received EPA cleanup grants to aid with five redevelopment projects in the city. Several smaller towns

have demonstrated the ability to obtain their own EPA grants and/or grants-of-service, including Barre, Brookfield, Dudley, Hardwick, Hopedale, North Brookfield and Northborough.

Other municipalities and business communities with relatively large numbers of open 21e sites which have not yet accessed federal and state assistance programs significantly include: Auburn, Blackstone, Charlton, Holden, Millbury, Northborough, Shrewsbury, Southbridge, Spencer, Webster and Westborough. While some of these communities are among the region's strongest commercial and industrial real estate markets and may not need public assistance to move brownfields toward redevelopment, others may benefit from capacity building efforts to increase awareness of available programs and of brownfields in general. Some communities – especially small towns reliant on volunteers to lead projects – which have had success using federal and state resources previously may benefit from refresher training on the brownfields topic.

Limitations of 21e Data

As defined in Section 2, brownfields are sites with known or perceived contamination that has a detrimental impact on site usage. Unfortunately, no official and comprehensive inventory of brownfields is available from the federal or state governments. As a result, reported contaminated sites tracked in the MGL Chapter 21e database maintained by the Massachusetts Department of Environmental Protection (MassDEP) are often used as a proxy for brownfields, and they are used as such in this section. The 21e database tracks releases of reportable quantities of petroleum or hazardous substance contamination in soil, groundwater, and indoor air. While the database is a useful starting point for any discussion of brownfields in Massachusetts, it is not intended to be a brownfields inventory. It includes many sites that are ephemeral or superficial in nature, such as roadway spills. Conversely, the database lacks sites where hazardous building materials such as asbestos and lead paint are present. (These sites are separately reported only after remediation activities are complete.) Moreover, contamination is often reported to MassDEP under MGL 21e only when due diligence is conducted as part of a potential property transaction, meaning that properties with poor or marginal market potential – often in rural areas or low-income neighborhoods – may be underrepresented. The 21e database also lacks sites that are perceived to be contaminated based solely on past land use or a generally blighted condition. Finally, the 21e system does not take into account whether or not a site is underutilized or vacant. Local knowledge is essential to filling these data gaps.

Metadata for this and other datasets used in the plan are included in Appendix **XXX**.

SECTION 4 Areas of Brownfields Interest

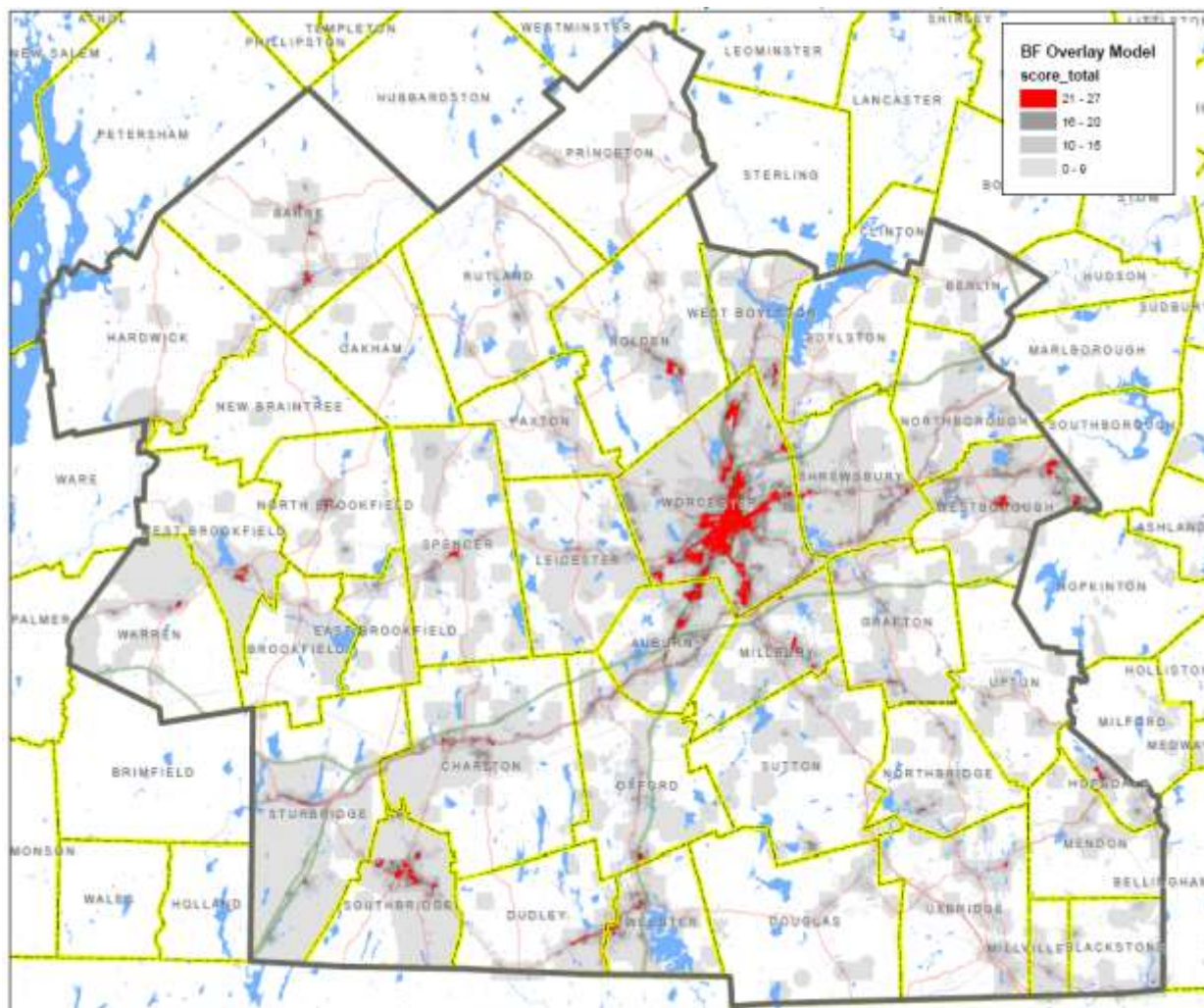
Brownfields Overlay Model

As mentioned elsewhere, neighborhoods are increasingly the preferred scale when addressing brownfields through public policy and programs, and US EPA assistance resources are now being allocated partly on a neighborhood basis. In order to identify neighborhood-scale areas within Central Massachusetts that are disproportionately affected by brownfields, CMRPC developed a GIS overlay model for use as a screening tool.

The GIS overlay model supplements MassDEP's 21e dataset with a number of other factors that are associated with brownfields, or which suggest that specific neighborhoods should potentially be highlighted for cleanup and revitalization resources. Including 21e data, these factors are: proximity to known contaminated sites (open or closed 21e sites), density of known contaminated sites (open or closed 21e sites), proximity to previously-assisted brownfields (EPA and MassDevelopment project sites), location within an area currently or previously used for industrial or commercial purposes, location within a designated Environmental Justice (EJ) area, and location within a designated **Priority Development Area (PDA)**. Note that the 21e dataset used in this GIS exercise includes only sites mapped by MassDEP, rather than the entire 21e universe. Some 68% of all 21e sites in the region (3,094 of 4,564) have been mapped, including all tier-classified sites, which typically require cleanup.

These factors were weighted as below to create a simple overlay model, with land throughout the region assigned a ranking from 0 points (lowest potential exposure to brownfields) to 27 points (highest potential exposure to brownfields):

<u>Topic</u>	<u>Ranking Criteria</u>	<u>Score</u>
Land Use History	Industrial Land Use	5
Land Use History	Commercial or Transportation Land Use	3
Land Use History	Other Land Uses	0
Environmental Justice	Environmental Justice Areas	3
Environmental Justice	Non-Environmental Justice Areas	0
Priority Development Designation	Priority Development Areas	3
Priority Development Designation	Non-Priority Development Areas	0
Contaminated Sites: Proximity	Distance to DEP-mapped Chapter 21E Site (<250m)	5
Contaminated Sites: Proximity	Distance to DEP-mapped Chapter 21E Site (250m to 500m)	3
Contaminated Sites: Proximity	Distance to DEP-mapped Chapter 21E Site (>500m)	0
Contaminated Sites: Proximity	Distance to 'Open' DEP-mapped Chapter 21E Site (<250m)	2
Contaminated Sites: Proximity	Distance to 'Open' DEP-mapped Chapter 21E Site (250m to 500m)	1
Contaminated Sites: Proximity	Distance to 'Open' DEP-mapped Chapter 21E Site (>500m)	0
Contaminated Sites: Density	Density of DEP-mapped Chapter 21E Sites (>4/km sq)	5
Contaminated Sites: Density	Density of DEP-mapped Chapter 21E Sites (2 to 4/km sq)	3
Contaminated Sites: Density	Density of DEP-mapped Chapter 21E Sites (<2/km sq)	0
Contaminated Sites: Density	Density of 'Open' DEP-mapped Chapter 21E Sites (>2/km sq)	2
Contaminated Sites: Density	Density of 'Open' DEP-mapped Chapter 21E Sites (2/km sq)	1
Contaminated Sites: Density	Density of 'Open' DEP-mapped Chapter 21E Sites (<2/km sq)	0
Assisted Brownfields: Proximity	Distance to EPA- or MDFA-Assisted Brownfield (<250m)	2
Assisted Brownfields: Proximity	Distance to EPA- or MDFA-Assisted Brownfield (250m to 500m)	1
Assisted Brownfields: Proximity	Distance to EPA- or MDFA-Assisted Brownfield (>500m)	0

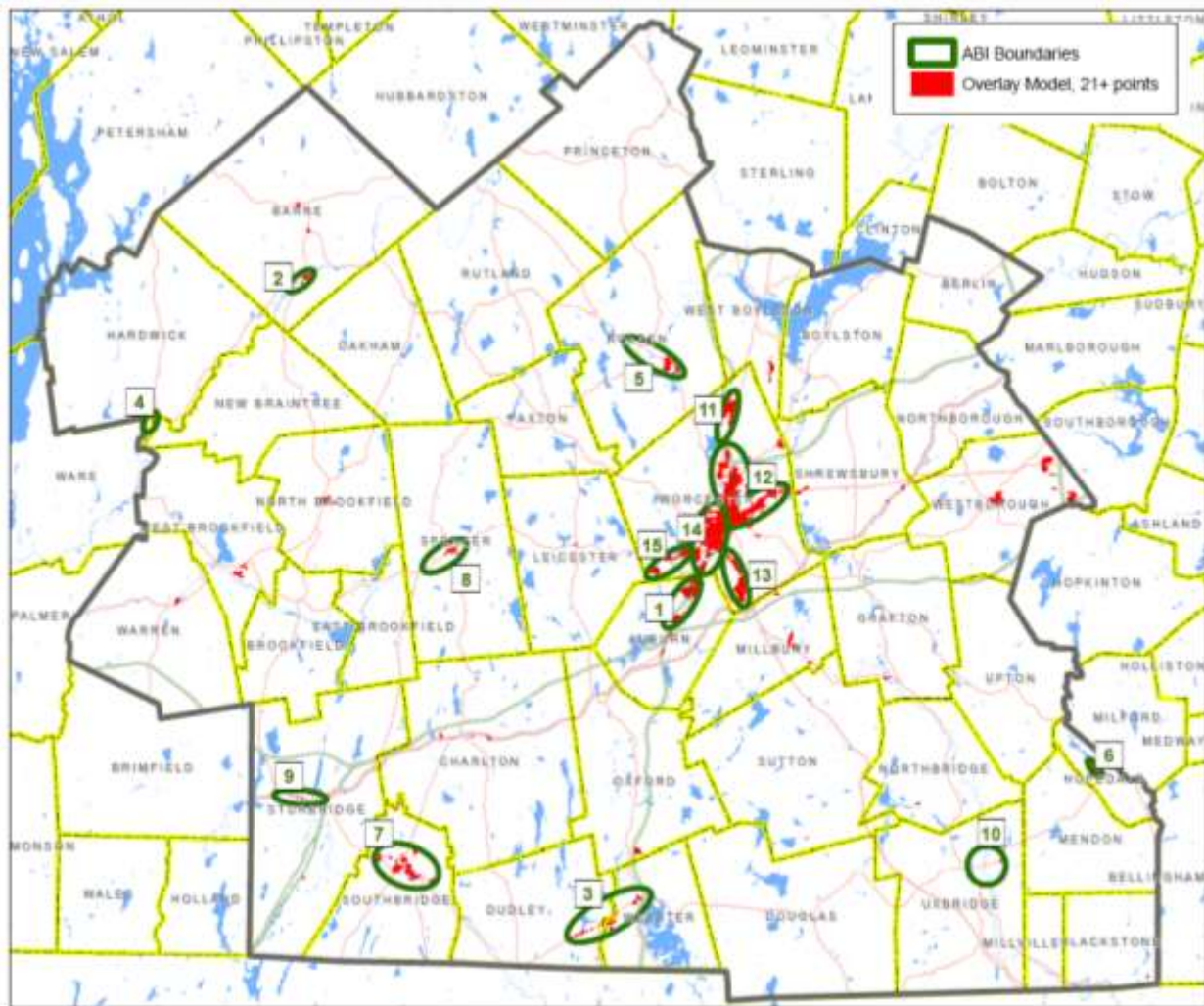


Results of the overlay model are mapped above. Metadata for the GIS layers utilized are provided in Appendix **XXX**.

Designation of Areas of Brownfields Interest

Using areas mapped in red above as a starting point, CMRPC screened available data sources and interviewed municipal staff when possible to identify neighborhood-scale "Areas of Brownfields Interest" (ABIs) throughout the region. The term "ABI" does not imply that all or most properties located therein are brownfields or are otherwise contaminated; the intention of the designation is to focus attention on neighborhoods and village centers in the region where remaining brownfields or potential brownfields are clustered, so that resources to address them can be allocated appropriately. Screening criteria included:

- Peak score in the brownfields overlay model of 21 or more (mapped here in red)
- 21+ score area is in a concentrated district or corridor (does not have to be fully contiguous)
- Contains multiple open or deed-restricted MassDEP 21e sites, and/or known or suspected asbestos or lead paint properties (not necessarily 21e sites)
- Contains multiple known vacant/underutilized properties with known or perceived contamination



Resources used in screening included site-specific Chapter 21e reports and status updates, US EPA-funded reports (where available), local and regional planning documents, news reports, air photographs, and input from municipal staff.

Locations otherwise meeting these quantitative criteria were excluded as ABIs if the reported contaminated sites were predominantly cleaned up and/or redeveloped, or if the local market is robust enough that sites are routinely revitalized without assistance. Potential ABIs in Grafton, Millbury, Oxford, Shrewsbury, West Boylston, West Brookfield, Westborough and other communities were excluded mostly on these qualitative bases. Fifteen ABIs were ultimately identified within the CMRPC region. Mapped above, they are:

- 1) Auburn: Southbridge Street Corridor ABI
- 2) Barre: South Barre ABI
- 3) Dudley & Webster: Main Street Corridor ABI
- 4) Hardwick: Gilbertville ABI
- 5) Holden: Main Street Corridor ABI
- 6) Hopedale: Draper Mill & Vicinity ABI

- 7) Southbridge: Commercial District ABI
- 8) Spencer: Downtown ABI
- 9) Sturbridge: Route 20 Corridor ABI
- 10) Uxbridge: Mill Villages ABI
- 11) Worcester, District 1: Greendale ABI
- 12) Worcester, District 2: Downtown/East Side ABI
- 13) Worcester, District 3: Quinsigamond Village & Lower Vernon Hill ABI
- 14) Worcester, District 4 Main Middle, Main South & South Worcester ABI
- 15) Worcester, District 5: Park Avenue & Webster Square ABI

Conceptual boundaries for the ABIs were sketched roughly based on locations highlighted in the GIS model and on knowledge of local priority sites. Within the City of Worcester, borders were determined in part by City Council district limits.

Localized maps and environmental and socioeconomic profiles for each ABI are provided in Section 5, along with a list of priority sites and recommended strategies.

Disproportionate Burdens

As expected, the 15 ABIs are disproportionately impacted by brownfields and other contaminated sites in comparison to the CMRPC region as a whole. With 22% of the region's residents and occupying only 2.4% of its land area, the ABIs contain 37.4% of the region's mapped 21e sites, and 42.4% of open mapped sites where cleanup is not yet complete. Roughly 43.2% of the region's real property impacted by open 21e sites, or \$248 million, lies within the ABIs.

	All ABIs	CM Region
DEP mapped 21e sites	1,158	3,094
Open DEP mapped 21e sites	154	363
Value of 21e impacted property (\$)	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$248,083,300	\$573,952,937
EPA assisted brownfields	28	55
MassDev assisted brownfields	27	45
EJ area(s) present?	Yes	Yes
Total area (acres)	15,074	614,686
Historic/current industrial land (acres)	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS		

Demographic and socioeconomic data indicate that these disproportionate impacts from brownfields can be considered an environmental justice (EJ) concern. Data from US Census block groups associated with the ABIs show that ABI residents are disproportionately minorities and low-income households. While some 15.4% of the region's residents are people of color or mixed race, nearly 26% of ABI residents identify within those categories. Latinos make up just below 10% of regional residents, but are 22% of ABI residents. Children, who are among the most vulnerable groups to environmental contaminants, make up 27% of ABI residents as compared to 18% of all residents. ABI residents are more likely to live in aging homes with lead paint, with almost 83% of ABI housing units built before lead

paint was banned in the late 1970s, as compared to 68% in the region as a whole. ABI households are almost twice as likely as regional households to have very low incomes (\$30,000 or less) or extremely low incomes (\$10,000 or less). Nearly one in eight (12%) homes in the ABI neighborhoods is vacant, while a majority of ABI residents (63%) live in rental housing, well above the regional average of 35.7%.

	All ABIs	CM Region
Total Population	124,093	562,861
% White or Caucasian	74.5%	84.6%
% People of Color/Mixed Race	25.5%	15.4%
% Latino or Hispanic (Any Race)	22.0%	9.9%
% Under Age 18	26.7%	18.0%
% Age 65 or above	11.8%	13.3%
% of Housing Units renter occupied	63.0%	35.7%
% of Housing Units built before 1979	82.7%	67.6%
% of Housing Units Vacant	12.0%	7.9%
% of Households under \$10,000 income/yr	10.7%	6.1%
% of Households under \$30,000 income/yr	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates		

Socioeconomic and environmental data summaries for individual ABIs are provided in Section 5.

SECTION 5 Revitalization Strategies

Regional Strategies

Based on the regional needs summarized in Section 3, overall conditions in the ABIs outlined in Section 4, and input from CMRPC's Brownfields Advisory Committee, the following regional strategies are recommended for the next 5 to 10 years:

- CMRPC should maintain an appropriate level of staff expertise in the brownfields topic area
- CMRPC's Brownfields Advisory Committee should meet 1 to 2 times per year and should serve as a regional clearinghouse for brownfields awareness and information, including information on resources available from the federal and state governments and through CMRPC
 - The Advisory Committee's membership should be expanded to better represent the region's real estate development, environmental justice, and environmental professional communities
 - Communities that lack internal brownfields assistance capacity should occasionally be invited to attend Advisory Committee meetings to present their brownfields concerns and receive input from the Committee
 - A forum should be held for real estate developers who are active in brownfield-impacted communities to boost awareness of incentives available to the private sector
 - If regional brownfields funds are awarded to CMRPC, the Advisory Committee should serve as the steering committee to provide input on site selection (may require more frequent meetings)
- CMRPC should offer brownfields technical assistance through DLTA and Local Planning Assistance (LPA) hours or by fee-for-service, for topics including:
 - Technical assistance for specific priority sites
 - Local capacity building
 - Grant writing and grant management
- CMRPC should seek and obtain US EPA community-wide brownfields assessment grant funds
 - ABIs should be prioritized to some degree for assessment funds
- When requested, CMRPC should aid member communities with applications for US EPA brownfields cleanup grant funds for specific sites, and should provide project and grant management services using grant funds
- When requested, CMRPC should aid member communities with applications for US EPA brownfields area-wide planning grant funds for affected neighborhoods based on the ABIs, and should provide project and grant management services using grant funds
- CMRPC should identify alternative/supplemental funding sources to replace any losses incurred from indirect costs that are ineligible under US EPA brownfields grants

Local Strategies

Based on the municipal needs summarized in Section 3, overall conditions in the ABIs outlined in Section 4, input from CMRPC's Brownfields Advisory Committee, and discussions with local staff, the following local strategies are recommended for the next 5 to 10 years:

- Seek US EPA community-wide assessment grant funds
 - Worcester, Southbridge, Dudley/Webster (coalition)
- Seek US EPA revolving loan funds
 - Worcester

- Seek US EPA area-wide planning grant funds for local ABIs
 - Worcester, Southbridge, potentially Dudley/Webster
- Seek capacity-building information and training from MassDEP and/or CMRPC
 - Auburn, Blackstone, Charlton, Dudley, Holden, Hopedale, Oxford, Southbridge, Spencer, West Brookfield, potentially others based on staff/volunteer turnover
- Execute/revise Community Compacts with Commonwealth to include brownfields as best practice area (an option created in 2016) to possibly gain greater access to state assistance
 - All communities with ABIs or sites of local concern

ABI Strategies

Strategies for individual ABIs and possible brownfield sites therein are provided in the ABI profiles on the following pages.

Other Sites of Interest

While the primary goal of this plan is to identify and recommend strategies for neighborhoods and village centers where brownfields are pervasive and resources to address them are insufficient, CMRPC noted several isolated potential brownfields in the region during the course of this plan's development. Many of these sites also deserve attention and resources.

Site Name	Address	Town	21e Status	Potential Next Step(s)
Barre Landfill	Town Farm Road	Barre	N/A	Assessment; reuse planning, marketing
GL Finney	15 Post Road	Brookfield	TCLASS	Assessment
Spencer Plating	45 Mill Street	Brookfield	N/A	Assessment (HBM)
Charlton Woolen Mill	6 City Depot Road	Charlton	Tier 1d	Assessment; reuse planning, marketing
Fisherville Mill	60 Main Street	Grafton	Phase IV	Cleanup; reuse planning, marketing
Worcester Spinning & Finishing	80 Chapel Street	Leicester	Tier 1d	Assessment
Railroad Property	Railroad Court	Millbury	N/A	Reuse planning, marketing
United Rubber	181 Main Street	Millville	N/A	Assessment
Aztec Industries	10 Grove Street	North Brookfield	RAO	Reuse planning, marketing
Northbridge Auto Wrecking	2040 Providence Road	Northbridge	Tier 1d	Assessment
Manchaug Mills	9 Main Street	Sutton	RAO	Add'l redevelopment (recreational trail)
Wrights Mill	85 South Street	Warren	RAO	Reuse planning, marketing
S & S Auto	Reed Street	Warren	Phase II	Cleanup
Tufts Machine Corp.	55 East Main Street	Westborough	N/A	Reuse planning, marketing

Auburn: Southbridge Street Corridor ABI Profile



Egerton Minerals site, 120 Southbridge Street (CMRPC photo)

	Auburn: Southbridge Street Corridor ABI	All ABIs	CM Region
DEP mapped 21e sites	64	1,158	3,094
Open DEP mapped 21e sites	12	154	363
Value of 21e impacted property (\$)	\$92,389,000	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$49,582,700	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	901	15,074	614,686
Historic/current industrial land (acres)	122	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Auburn: Southbridge Street Corridor ABI	All ABIs	CM Region
Total Population	2,338	124,093	562,861
% White or Caucasian	90.9%	74.5%	84.6%
% People of Color/Mixed Race	9.1%	25.5%	15.4%
% Latino or Hispanic (Any Race)	6.9%	22.0%	9.9%
% Under Age 18	24.2%	26.7%	18.0%
% Age 65 or above	11.9%	11.8%	13.3%
% of Housing Units renter occupied	14.3%	63.0%	35.7%
% of Housing Units built before 1979	82.0%	82.7%	67.6%
% of Housing Units Vacant	4.7%	12.0%	7.9%
% of Households under \$10,000 income/yr	3.9%	10.7%	6.1%
% of Households under \$30,000 income/yr	10.4%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Egerton Minerals site, 120 Southbridge Street
- Former Mill, 5 Main Street

Recommended Revitalization Strategies

- Auburn should work with CMRPC to obtain and access assessment funds
- Egerton Minerals site is a Chapter 21e Tier 1d site (out of compliance) on a commercial corridor; requires further assessment
- Former Mill is not a reported 21e site but is a derelict industrial structure in a residential area; Phase I assessment and hazardous building materials survey are recommended

Barre: South Barre ABI Profile



Barre Wool Combing site, 10 Main Street (CMRPC photo)

	Barre: South Barre ABI	All ABIs	CM Region
DEP mapped 21e sites	4	1,158	3,094
Open DEP mapped 21e sites	3	154	363
Value of 21e impacted property (\$)	\$949,800	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$105,300	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	296	15,074	614,686
Historic/current industrial land (acres)	34	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Barre: South Barre ABI	All ABIs	CM Region
Total Population	567	124,093	562,861
% White or Caucasian	100.0%	74.5%	84.6%
% People of Color/Mixed Race	0.0%	25.5%	15.4%
% Latino or Hispanic (Any Race)	0.0%	22.0%	9.9%
% Under Age 18	31.0%	26.7%	18.0%
% Age 65 or above	1.6%	11.8%	13.3%
% of Housing Units renter occupied	44.2%	63.0%	35.7%
% of Housing Units built before 1979	71.8%	82.7%	67.6%
% of Housing Units Vacant	40.8%	12.0%	7.9%
% of Households under \$10,000 income/yr	0.0%	10.7%	6.1%
% of Households under \$30,000 income/yr	0.0%	30.5%	17.2%

Data from US Census 2014 five-year ACS estimates. Lack of data for some measures is likely due to small ACS sample.



Key Known or Potential Brownfields

- Barre Wool Combing site, 10 Main Street
- Swensons Garage site, 116 Main Street

Recommended Revitalization Strategies

- Barre should work with CMRPC to obtain and access assessment funds
- Barre Wool Combing site is a large former industrial complex that has been closed out of the Chapter 21e system; one large historic mill structure (in poor condition) remains; a hazardous building materials survey (if not yet performed) is recommended to support reuse planning and marketing efforts
- Swensons Garage site is a Chapter 21e Tier 1d site (out of compliance) on a commercial corridor; requires further assessment

Dudley & Webster: Main Street Corridor ABI Profile



Stevens Linen Works, Ardlock Place (Town of Dudley photo)

	Dudley & Webster: Main Street Corridor ABI	All ABIs	CM Region
DEP mapped 21e sites	111	1,158	3,094
Open DEP mapped 21e sites	13	154	363
Value of 21e impacted property (\$)	\$48,424,300	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$3,367,000	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	1	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	2,122	15,074	614,686
Historic/current industrial land (acres)	179	2,440	9,375

Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS

	Dudley & Webster: Main Street Corridor ABI	All ABIs	CM Region
Total Population	12,264	124,093	562,861
% White or Caucasian	86.7%	74.5%	84.6%
% People of Color/Mixed Race	13.3%	25.5%	15.4%
% Latino or Hispanic (Any Race)	9.5%	22.0%	9.9%
% Under Age 18	25.0%	26.7%	18.0%
% Age 65 or above	13.7%	11.8%	13.3%
% of Housing Units renter occupied	61.1%	63.0%	35.7%
% of Housing Units built before 1979	87.8%	82.7%	67.6%
% of Housing Units Vacant	13.9%	12.0%	7.9%
% of Households under \$10,000 income/yr	7.6%	10.7%	6.1%
% of Households under \$30,000 income/yr	29.8%	30.5%	17.2%

Data from US Census 2014 five-year ACS estimates



Key Known or Potential Brownfields

- Stevens Linen Works site, Ardlock Place and vicinity (Dudley)
- Globe Texaco, 10 West Main Street (Dudley)
- Gas Station site, 121 West Main Street (Dudley)
- Manufactured Gas Plant site, 7 Main Street (Webster)
- Anglo Fabrics site, Pearl Street (Webster)

Recommended Revitalization Strategies

- Dudley and Webster should work with CMRPC to obtain and access assessment funds
- Dudley and Webster should consider obtaining US EPA Brownfields Area-Wide Planning resources to develop a detailed plan for revitalization of the corridor's brownfields, with one community acting as the lead applicant or in collaboration with CMRPC
- Stevens Linen Works site is a historic former mill complex that is not a reported Chapter 21e site; parts of the complex are actively used by businesses; a hazardous building materials survey (if not yet performed) and Phase I assessment are recommended to support reuse planning and marketing efforts for further revitalization
- Globe Texaco site is a derelict gas station; a closure statement (RAO) was submitted under Chapter 21e but the closure was not accepted by MassDEP; additional assessment is required
- Gas Station site is a Chapter 21e Tier 1d site (out of compliance) on a commercial corridor; requires further assessment
- Manufactured Gas Plant is a former coal gasification facility site now owned by National Grid which uses part of the site for storage; site is located on the French River in Webster's urban core; site has a temporary closure under Chapter 21e with periodic reviews required; reuse planning is recommended to evaluate additional potential uses
- Anglo Fabrics is a large former mill complex that was almost totally destroyed by fire in 2014, creating a large area of asbestos-affected debris and soil; it is not a reported Chapter 21e site; US EPA's START contractor was approved for time-critical remedial activities in mid-2016; the Town of Webster should coordinate with US EPA and MassDEP to understand what assessment/cleanup actions will remain subsequent to US EPA's work, and should conduct reuse planning and marketing efforts to support revitalization

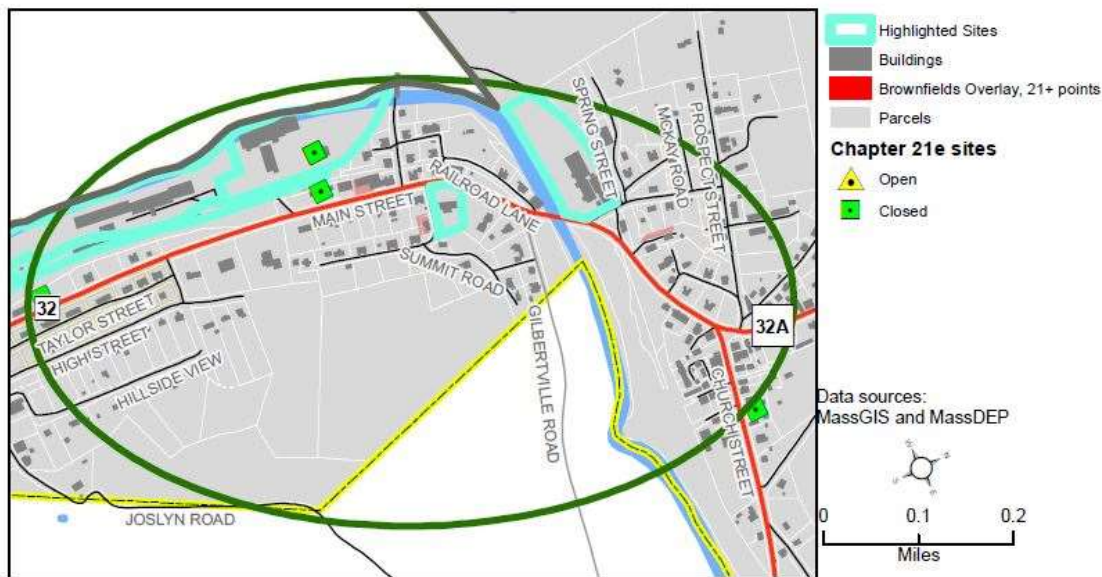
Hardwick: Gilbertville ABI Profile



Hardwick Knitted Fabrics Mill, 94 Main Street (CMRPC photo)

	Hardwick: Gilbertville ABI	All ABIs	CM Region
DEP mapped 21e sites	5	1,158	3,094
Open DEP mapped 21e sites	0	154	363
Value of 21e impacted property (\$)	\$589,300	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$0	\$248,083,300	\$573,952,937
EPA assisted brownfields	3	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	190	15,074	614,686
Historic/current industrial land (acres)	19	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Hardwick: Gilbertville ABI	All ABIs	CM Region
Total Population	946	124,093	562,861
% White or Caucasian	93.0%	74.5%	84.6%
% People of Color/Mixed Race	6.8%	25.5%	15.4%
% Latino or Hispanic (Any Race)	4.6%	22.0%	9.9%
% Under Age 18	24.0%	26.7%	18.0%
% Age 65 or above	16.7%	11.8%	13.3%
% of Housing Units renter occupied	51.0%	63.0%	35.7%
% of Housing Units built before 1979	82.2%	82.7%	67.6%
% of Housing Units Vacant	18.9%	12.0%	7.9%
% of Households under \$10,000 income/yr	16.0%	10.7%	6.1%
% of Households under \$30,000 income/yr	19.2%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Hardwick Knitted Fabrics Mill, 94 Main Street
- Pioneer Foundry, 266 Main Street
- Gilbert Building, 179 Main Street

Recommended Revitalization Strategies

- Hardwick Knitted Fabrics is a historic riverfront mill complex that is not a reported Chapter 21e site; the site has been vacant for many years, with some interest from developers and the Town in redevelopment for mixed use, including Town offices; a Phase I assessment was completed using EPA funds through CMRPC in 2010, finding 5 RECs; a hazardous building materials survey should be conducted if one has not been already; continued reuse planning and market study is recommended to evaluate additional potential uses
- Pioneer Foundry is a former manufacturing complex on the Ware River; a closure statement (RAO) was submitted under Chapter 21e in 2013, following demolition of several former mill buildings and soil cleanup; the complex is partly used today for storage but remains underutilized; reuse planning is recommended to evaluate additional potential uses
- Gilbert Building is a Town-owned 1900-era structure used initially as a public school then converted for use as a senior center and youth center; these vacated the space in 2014, in part due to concerns about hazardous building materials and a possible leaking underground storage tank identified in a Phase I assessment was completed using EPA funds through CMRPC in 2011; the Town has considered the property as the site of a new senior center and possibly other Town offices; CDBG funds were used to conduct a hazardous building materials assessment and to remove the tank and a limited amount of contaminated soil, leading to a closure (PSNC) under Chapter 21e expected in January 2017; reuse planning is recommended to evaluate potential uses at this now-vacant historic structure

Holden: Main Street Corridor ABI Profile



Reed Rico site, 18 Industrial Drive (CMRPC photo)

	Holden: Main Street Corridor ABI	All ABIs	CM Region
DEP mapped 21e sites	43	1,158	3,094
Open DEP mapped 21e sites	8	154	363
Value of 21e impacted property (\$)	\$40,037,700	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$28,466,700	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	1,027	15,074	614,686
Historic/current industrial land (acres)	106	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Holden: Main Street Corridor ABI	All ABIs	CM Region
Total Population	3,940	124,093	562,861
% White or Caucasian	95.6%	74.5%	84.6%
% People of Color/Mixed Race	5.4%	25.5%	15.4%
% Latino or Hispanic (Any Race)	3.8%	22.0%	9.9%
% Under Age 18	25.5%	26.7%	18.0%
% Age 65 or above	18.1%	11.8%	13.3%
% of Housing Units renter occupied	16.6%	63.0%	35.7%
% of Housing Units built before 1979	66.8%	82.7%	67.6%
% of Housing Units Vacant	8.3%	12.0%	7.9%
% of Households under \$10,000 income/yr	3.4%	10.7%	6.1%
% of Households under \$30,000 income/yr	12.6%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Reed-Rico, 18 Industrial Drive
- ECC Corp., 156 Princeton Street

Recommended Revitalization Strategies

- Reed-Rico is a vacant postwar industrial facility that has a temporary closure status (RAO-C) under Chapter 21e, following substantial cleanup work since the 1980s for mostly petroleum-related contaminants; the Town has recently identified it as a possible location for a new DPW facility; periodic monitoring reports required by MassDEP show that levels of contamination are gradually decreasing as a result of ongoing treatment; reuse planning is recommended to evaluate the site for compatibility with a future DPW use with regard to ongoing and future cleanup needs
- ECC Corp. is a vacant postwar electroplating and electronics plant where remediation has been conducted previously by US EPA (through the RCRA program) and MassDEP to address water contamination; the property owner has not complied with a MassDEP consent order and the site is now considered out of compliance under Chapter 21e; the Town and MassDEP are concerned about possible impacts from this site to a public water supply well on nearby Spring; ongoing assessment is recommended to monitor drinking water impacts, and immediate response actions may be required; note that this site is located just outside of the conceptual ABI boundary illustrated here, in the Jefferson area of Holden

Hopedale: Draper Mill and Vicinity ABI Profile



Draper Corp. complex, 24 Hopedale Street (Wikimedia Commons photo)

	Hopedale: Draper Mill & Vicinity ABI	All ABIs	CM Region
DEP mapped 21e sites	12	1,158	3,094
Open DEP mapped 21e sites	2	154	363
Value of 21e impacted property (\$)	\$3,946,700	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$1,909,200	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	113	15,074	614,686
Historic/current industrial land (acres)	59	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Hopedale: Draper Mill & Vicinity ABI	All ABIs	CM Region
Total Population	1,475	124,093	562,861
% White or Caucasian	98.6%	74.5%	84.6%
% People of Color/Mixed Race	1.4%	25.5%	15.4%
% Latino or Hispanic (Any Race)	0.7%	22.0%	9.9%
% Under Age 18	25.6%	26.7%	18.0%
% Age 65 or above	26.9%	11.8%	13.3%
% of Housing Units renter occupied	34.7%	63.0%	35.7%
% of Housing Units built before 1979	74.7%	82.7%	67.6%
% of Housing Units Vacant	4.8%	12.0%	7.9%
% of Households under \$10,000 income/yr	5.2%	10.7%	6.1%
% of Households under \$30,000 income/yr	33.0%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Draper Corp. complex, 24 Hopedale Street
- Grafton & Upton Railroad Yard, 12 Depot Street

Recommended Revitalization Strategies

- Draper Corp. complex is a 60-acre industrial site in the town's center with more than 1 million square feet of historic mill space available, vacant since the late 1970s; it has a temporary closure status (RAO-C) under Chapter 21e, following cleanup work for mostly petroleum-related contaminants and demolition/remediation of several asbestos-impacted buildings; the Town has proposed mixed use redevelopment, and the owner is reportedly (April 2016) trying to sell the property for redevelopment; periodic monitoring reports required by MassDEP show that levels of contamination are gradually decreasing through natural attenuation; additional reuse planning and marketing are recommended; a hazardous building materials survey is recommended for the remaining structures, if not already completed
- Grafton & Upton Railroad Yard is located adjacent to the Draper site near the town's center; the property is used by the railroad for intermodal freight rail distribution, but the property is underutilized; the Town is hopeful that the railyard and Draper site can be revitalized in a complementary fashion; the site is listed under Chapter 21e for groundwater and soil contaminants, with a cleanup plan recently filed with MassDEP; continued cleanup is recommended to foster full utilization of the site

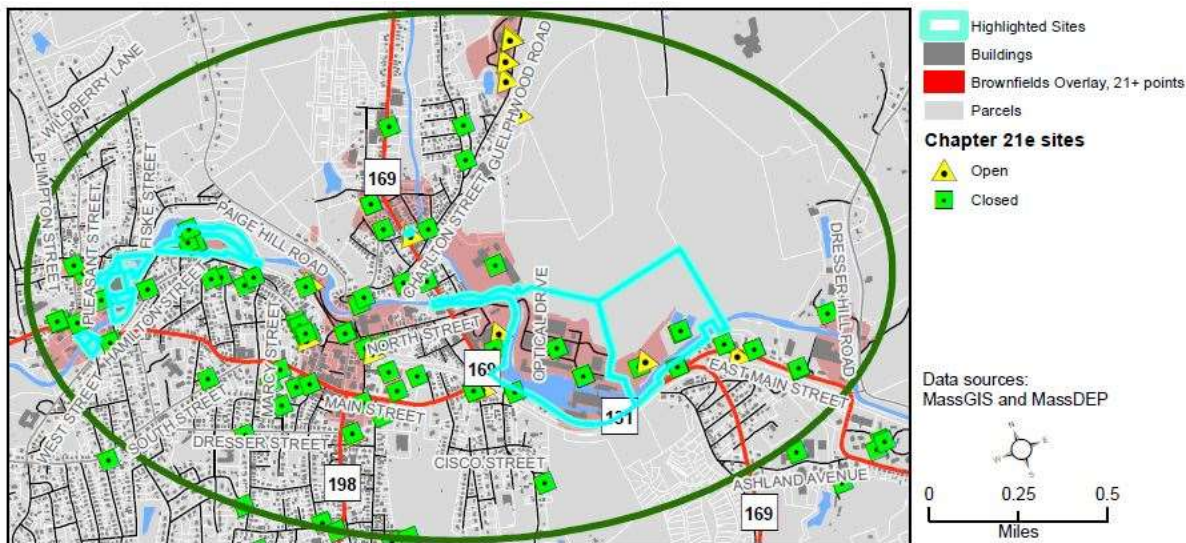
Southbridge: Commercial District ABI Profile



30 Mill Street (L) and 382 Elm Street (R) (Town of Southbridge photos)

	Southbridge: Commercial District ABI	All ABIs	CM Region
DEP mapped 21e sites	98	1,158	3,094
Open DEP mapped 21e sites	16	154	363
Value of 21e impacted property (\$)	\$89,033,900	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$36,744,800	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	1,809	15,074	614,686
Historic/current industrial land (acres)	205	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Southbridge: Commercial District ABI	All ABIs	CM Region
Total Population	6,456	124,093	562,861
% White or Caucasian	67.6%	74.5%	84.6%
% People of Color/Mixed Race	32.4%	25.5%	15.4%
% Latino or Hispanic (Any Race)	43.6%	22.0%	9.9%
% Under Age 18	28.0%	26.7%	18.0%
% Age 65 or above	12.9%	11.8%	13.3%
% of Housing Units renter occupied	79.3%	63.0%	35.7%
% of Housing Units built before 1979	86.4%	82.7%	67.6%
% of Housing Units Vacant	13.8%	12.0%	7.9%
% of Households under \$10,000 income/yr	7.4%	10.7%	6.1%
% of Households under \$30,000 income/yr	39.5%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Lucy's Laundry, 236 Mechanic Street
- Mill Street cluster, 30-76 Mill Street
- American Optical, Optical Drive and Cabot Street
- Dexter-Russell, Inc., 44 River Street
- 831 Main Street
- 833 Main Street
- 380-394 Elm Street

Recommended Revitalization Strategies

- Southbridge should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Southbridge should consider obtaining US EPA Brownfields Area-Wide Planning resources to develop a detailed plan for revitalization of the downtown area's brownfields
- Southbridge should consider allocating a portion of its CDBG mini-entitlement for brownfields assessment and/or cleanup activities when brownfields-specific resources are not available
- Lucy's Laundry is a vacant former laundromat that is Tier 1d (noncompliant) under Chapter 21e; the property is located at the northern gateway to downtown Southbridge and the Town is interested in seeing it redeveloped; Phase I and Phase II assessments were conducted using EPA funds through CMRPC in 2010 and 2012 respectively, finding PCE and other contaminants from historic laundry operations in soil and groundwater; additional assessment is recommended to better define risks and establish any cleanup needs
- Mill Street cluster is a group of vacant/underutilized historic industrial and commercial structures with multiple owners; the cluster located in downtown Southbridge in a prominent site along the Quineboag River and the Town would like to see revitalization of the area; no reports of contamination have been made under Chapter 21e, but due to historic and ongoing industrial operations and older building materials there is potential for contamination; Phase I assessments and hazardous building materials surveys are recommended; ; reuse planning and marketing are recommended

- American Optical is a sprawling former industrial complex in central Southbridge; portions of the site have been successfully redeveloped, largely as a hotel and conference center; remaining warehouse spaces are underutilized; a number of 21e sites in the complex have been cleaned up and closed under Chapter 21e; there is an active 21e release on a rear parcel of the complex in a former drum storage area, with cleanup work ongoing; cleanup completion is recommended at the active 12e site; hazardous building materials surveys are recommended for the historic warehouses, if not completed already; ; reuse planning and marketing are recommended for the remaining warehouses
- Dexter-Russell, Inc. is a manufacturing facility in central Southbridge; a number of 21e sites at the property have been cleaned up and closed under Chapter 21e; an active 21e site with petroleum-related contaminants is being cleaned toward a temporary closure; completion of this closure is recommended
- 831 Main Street is a historic commercial/industrial building in downtown Southbridge that the Town has identified as underutilized; it is not a reported 21e site; due to older building materials and historic uses there is potential for contamination; a Phase I assessment and a hazardous building materials survey are recommended; reuse planning and marketing are recommended
- 833 Main Street is a historic commercial/industrial building in downtown Southbridge that the Town has identified as underutilized; it is not a reported 21e site; due to older building materials and historic uses there is potential for contamination; a Phase I assessment and a hazardous building materials survey are recommended; reuse planning and marketing are recommended
- 380-394 Elm Street is an industrial building that the Town has identified as underutilized; the site is closed (RAO) under Chapter 21e, with past PCE contamination cleaned up; due to ongoing/historic site uses and older building materials a Phase I assessment and a hazardous building materials survey are recommended; reuse planning and marketing are recommended

Spencer: Downtown ABI Profile



1 Linden Street (Town of Spencer photo)

	Spencer: Downtown ABI	All ABIs	CM Region
DEP mapped 21e sites	22	1,158	3,094
Open DEP mapped 21e sites	3	154	363
Value of 21e impacted property (\$)	\$12,299,500	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$530,800	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	732	15,074	614,686
Historic/current industrial land (acres)	75	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Spencer: Downtown ABI	All ABIs	CM Region
Total Population	5,344	124,093	562,861
% White or Caucasian	95.1%	74.5%	84.6%
% People of Color/Mixed Race	4.9%	25.5%	15.4%
% Latino or Hispanic (Any Race)	5.2%	22.0%	9.9%
% Under Age 18	22.2%	26.7%	18.0%
% Age 65 or above	15.9%	11.8%	13.3%
% of Housing Units renter occupied	47.7%	63.0%	35.7%
% of Housing Units built before 1979	86.6%	82.7%	67.6%
% of Housing Units Vacant	13.4%	12.0%	7.9%
% of Households under \$10,000 income/yr	6.4%	10.7%	6.1%
% of Households under \$30,000 income/yr	34.8%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Jones Boot & Shoe Co., 200 Main Street
- 1 Linden Street
- Green Block, 31 Mechanic Street
- Manufactured Gas Plant site, Elm Street
- Fire Station, 11 Cherry Street
- Warehouse, 15 Wall Street
- Gobi's Auto Service, 18 Olde Main Street

Recommended Revitalization Strategies

- Spencer should work with CMRPC to obtain and access assessment funds
- Jones Boot & Shoe Co. is not a reported 21e site; the property includes an underutilized historic industrial structure (a lumber yard currently uses the ground floor) at the east gateway to downtown Spencer that has been identified in past planning as a key area for revitalization; Phase I assessment and hazardous building materials survey are recommended due to historic uses and the age of the structure
- 1 Linden Street is not a reported 21e site; the property includes an underutilized historic industrial structure (apparently used for storage) and it has been identified in past planning as a suitable for revitalization; it is adjacent to the Jones Co. site; Phase I assessment and hazardous building materials survey are recommended due to historic uses and the age of the structure
- Green Block is not a reported 21e site; it is a derelict and structurally deficient former retail block dating to the 1880s; past planning has identified it as a potential demolition and redevelopment site; a hazardous building materials survey is recommended due to the age of the structure
- Manufactured Gas Plant site is a former coal gasification plant site cleaned up and closed out under Chapter 21e, with a use restriction on a portion of the site; much of the site is vacant and undeveloped; future redevelopment interest may warrant additional cleanup at the site to enable removal of the use restriction
- Fire Station is a historic former Town of Spencer fire house that is not a Chapter 21e site; it has been identified in past planning as suitable for residential or commercial reuse; hazardous building materials (lead paint and asbestos) were identified in an ASTM Phase I assessment conducted by MassDEP using EPA brownfields funds in 2009; remediation is recommended to improve the ability of the Town to sell the property for reuse

- Warehouse, 15 Wall Street is a vacant and derelict 1840s warehouse just off of Spencer's Main Street that is not a Chapter 21e site; it has been recommended in past planning as suitable for demolition and redevelopment as parking and/or a pocket park to support the Main Street corridor; Phase I assessment and hazardous building materials survey are recommended due to historic uses and the age of the structure
- Gobi's Auto Service is a former gas station that is an active Chapter 21e site due to petroleum related contaminants; response actions have stopped due to financial inability of the owner; additional assessment is recommended to return the site to compliance and further redevelopment of the property

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Sturbridge: Route 20 Corridor ABI Profile



Holland Road Mill, 9 Holland Road (CMRPC photo)

	Sturbridge: Route 20 Corridor ABI	All ABIs	CM Region
DEP mapped 21e sites	28	1,158	3,094
Open DEP mapped 21e sites	1	154	363
Value of 21e impacted property (\$)	\$46,050,000	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$315,100	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	516	15,074	614,686
Historic/current industrial land (acres)	30	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Sturbridge: Route 20 Corridor ABI	All ABIs	CM Region
Total Population	3,829	124,093	562,861
% White or Caucasian	98.1%	74.5%	84.6%
% People of Color/Mixed Race	1.8%	25.5%	15.4%
% Latino or Hispanic (Any Race)	4.4%	22.0%	9.9%
% Under Age 18	27.4%	26.7%	18.0%
% Age 65 or above	19.2%	11.8%	13.3%
% of Housing Units renter occupied	31.6%	63.0%	35.7%
% of Housing Units built before 1979	50.7%	82.7%	67.6%
% of Housing Units Vacant	7.4%	12.0%	7.9%
% of Households under \$10,000 income/yr	8.5%	10.7%	6.1%
% of Households under \$30,000 income/yr	16.5%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Holland Road Mill, 9 Holland Road
- Wheelabrator site, 441 Main Street
- Mobil site, 365 Main Street

Recommended Revitalization Strategies

- Holland Road Mill is an underutilized historic mill on the Quinebaug River that is not a Chapter 21e site; current use is as an unpermitted flea market, but there has been recent developer interest and the property is located close to natural amenities and tourist destinations; Phase I assessment and hazardous building materials survey are recommended due to historic uses and the age of the structure; additional reuse planning and marketing are recommended should the current developer interest not result in revitalization of the property
- Wheelabrator is a multi-user industrial facility with a temporary closure (RAO-C) under Chapter 21e for a past oil release, with ongoing reporting required; it is actively used by businesses but has historically been underutilized
- Mobil site is a former gas station site that was closed out of the Chapter 21e system in 2015 after a lengthy cleanup for a petroleum release; the property is currently vacant but is on a prime redevelopment parcel on Route 20; there has been recent developer interest in the site for use as a new gas station

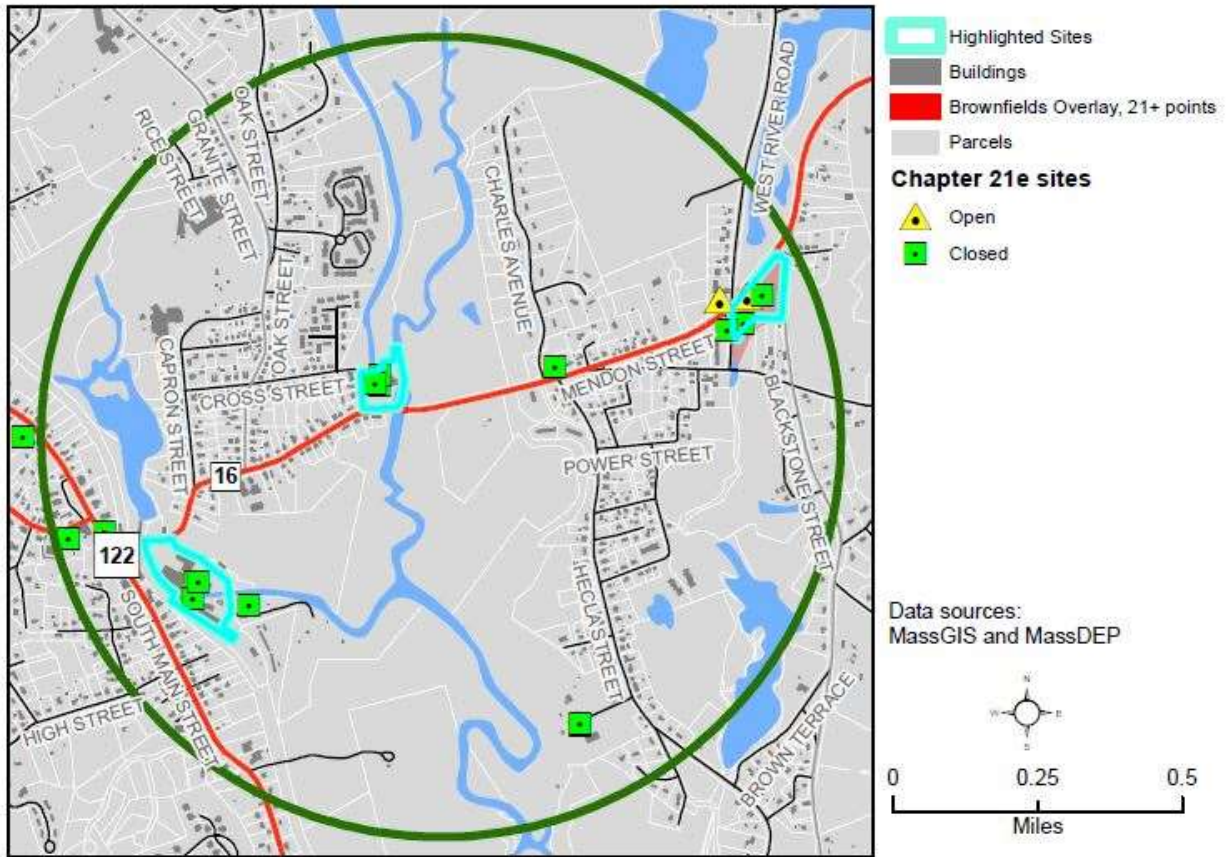
Uxbridge: Mill Villages ABI Profile



Stanley Mills, 146 Mendon Street (Wikimedia Commons photo)

	Uxbridge: Mill Villages ABI	All ABIs	CM Region
DEP mapped 21e sites	20	1,158	3,094
Open DEP mapped 21e sites	2	154	363
Value of 21e impacted property (\$)	\$4,307,800	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$474,000	\$248,083,300	\$573,952,937
EPA assisted brownfields	1	28	55
MassDev assisted brownfields	3	27	45
EJ area(s) present?	No	Yes	Yes
Total area (acres)	960	15,074	614,686
Historic/current industrial land (acres)	47	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Uxbridge: Mill Villages ABI	All ABIs	CM Region
Total Population	6,020	124,093	562,861
% White or Caucasian	97.1%	74.5%	84.6%
% People of Color/Mixed Race	2.9%	25.5%	15.4%
% Latino or Hispanic (Any Race)	1.6%	22.0%	9.9%
% Under Age 18	27.0%	26.7%	18.0%
% Age 65 or above	12.0%	11.8%	13.3%
% of Housing Units renter occupied	17.8%	63.0%	35.7%
% of Housing Units built before 1979	56.5%	82.7%	67.6%
% of Housing Units Vacant	2.1%	12.0%	7.9%
% of Households under \$10,000 income/yr	2.5%	10.7%	6.1%
% of Households under \$30,000 income/yr	14.5%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Bernat Mill, 19 Depot Street
- Waucantuck Mill, 325 Mendon Street
- Stanley Woolen Mills, 146 Mendon Street

Recommended Revitalization Strategies

- Uxbridge should focus on reuse planning and marketing strategies for the three key properties
- Bernat Mill is a former industrial site on the Mumford River where a historic mill was destroyed by fire in 2007, resulting in a substantial amount of debris contaminated by hazardous substances; the site was closed out under Chapter 21e in 2010; reuse planning and marketing are recommended to foster revitalization
- Waucantuck Mill is historic a former industrial complex on the West River that was almost completely demolished in 2010 to allow for remediation of various types of contamination; it is an active site under Chapter 21e, with cleanup plans recently submitted; completion of the cleanup is required; reuse planning and marketing are recommended to foster revitalization following completion of the cleanup
- Stanley Woolen Mills is a historic industrial complex on the Blackstone River; it is an active Chapter 21e site as a result of various releases to soil and groundwater; it is currently in a long-term monitoring program leading to a permanent closure; the main mill is currently occupied by a variety of small businesses but is considered underutilized by the Town; marketing is recommended to foster greater utilization of the property

Worcester D1: Greendale ABI Profile



Saint-Gobain Abrasives, New Bond Street (CMRPC photo)

	Worcester: D1 Greendale ABI	All ABIs	CM Region
DEP mapped 21e sites	72	1,158	3,094
Open DEP mapped 21e sites	10	154	363
Value of 21e impacted property (\$)	\$120,417,500	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$13,052,600	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	589	15,074	614,686
Historic/current industrial land (acres)	324	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Worcester: D1 Greendale ABI	All ABIs	CM Region
Total Population	5,689	124,093	562,861
% White or Caucasian	78.5%	74.5%	84.6%
% People of Color/Mixed Race	21.5%	25.5%	15.4%
% Latino or Hispanic (Any Race)	8.1%	22.0%	9.9%
% Under Age 18	23.5%	26.7%	18.0%
% Age 65 or above	14.2%	11.8%	13.3%
% of Housing Units renter occupied	41.5%	63.0%	35.7%
% of Housing Units built before 1979	86.3%	82.7%	67.6%
% of Housing Units Vacant	8.8%	12.0%	7.9%
% of Households under \$10,000 income/yr	4.5%	10.7%	6.1%
% of Households under \$30,000 income/yr	22.3%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Saint-Gobain Abrasives, New Bond Street
- Pullman Street Industrial Park, Pullman/Brooks/Higgins Streets
- Showcase Cinemas, 135 Brook Street
- Plantation Industrial Park, Plantation Street/Bowditch Drive

Recommended Revitalization Strategies

- Worcester should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Worcester should pursue additional US EPA cleanup Revolving Loan Fund funds to assist privately-owned brownfield sites in this area
- Saint-Gobain Abrasives is a major manufacturer and employer with multiple closed Chapter 21e sites; the Saint-Gobain property occupies most of the former Norton Abrasives complex, which dates back to the late 1800s; portions of the property are underutilized; while there are no active 21e sites on the property, given the intensive industrial history and potential for eventual closure of the plant, it is recommended that the City coordinate with Saint-Gobain on long-range reuse planning; Worcester should seek US EPA area-wide planning grant funds should the property become vacant
- Pullman Street Industrial Park is a large industrial and commercial area with multiple parcels; numerous closed and a few open Chapter 21e sites are present; some parcels are underutilized; it has been designated as a Priority Development Area of regional significance in the 495/MetroWest Development Compact Plan; it is recommended that the City work with the various property owners to identify areas of need for brownfields assistance resources to enable revitalization of this area
- Showcase Cinemas is a movie theater complex adjacent to I-190; one closed Chapter 21e site related to a former industrial use occupies part of the property; given the current competition in the theater industry and potential for eventual closure of the theater, as well as the site's reuse potential due to its highway proximity, it is recommended that the City coordinate with Showcase Cinemas on long-range reuse planning
- Also located in Worcester's Council District 1 but outside of the Greendale area ABI, the Plantation Industrial Park has a number of open and closed Chapter 21e sites

Worcester D2: Downtown/East Side ABI Profile



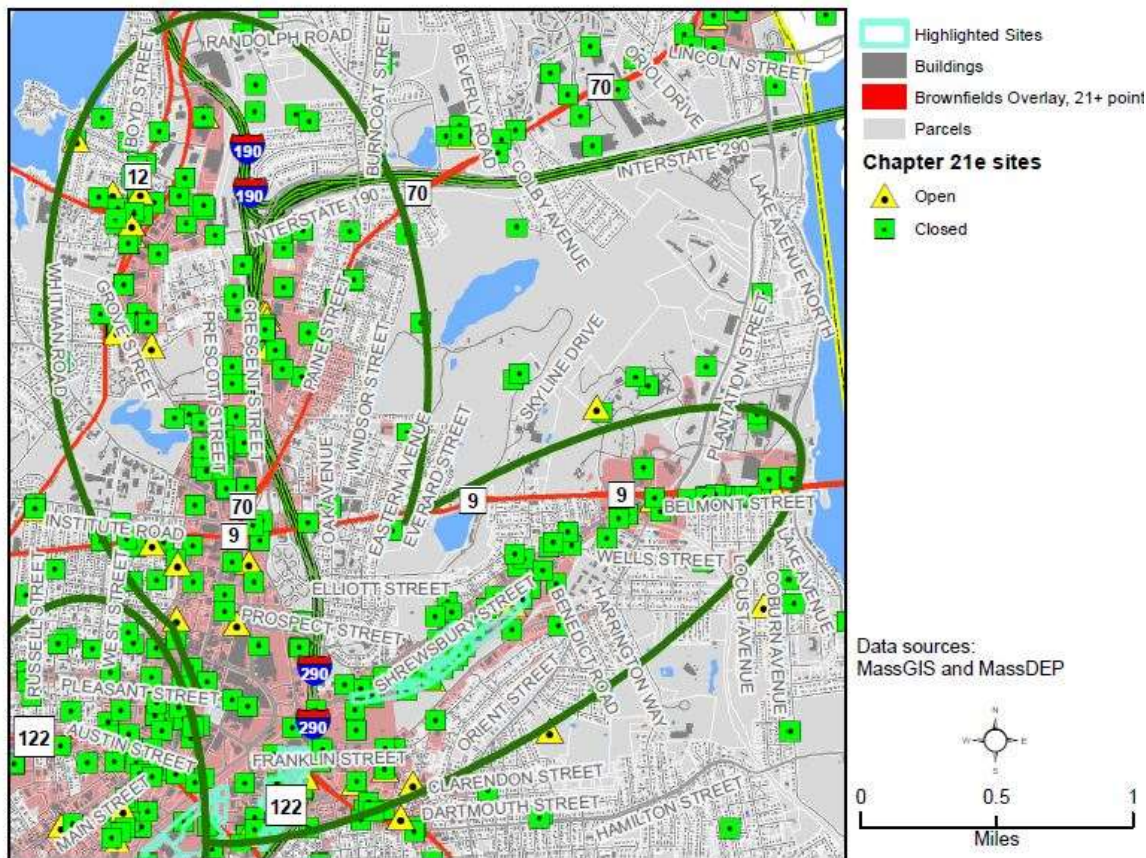
Harding Street Mills, Canal District, Worcester (CMRPC photo)

	Worcester: D2 Downtown/ East Side ABI	All ABIs	CM Region
DEP mapped 21e sites	326	1,158	3,094
Open DEP mapped 21e sites	34	154	363
Value of 21e impacted property (\$)	\$1,028,200,926	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$37,452,500	\$248,083,300	\$573,952,937
EPA assisted brownfields	6	28	55
MassDev assisted brownfields	10	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	2,809	15,074	614,686
Historic/current industrial land (acres)	526	2,440	9,375

Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS

	Worcester: D2 Downtown/ East Side ABI	All ABIs	CM Region
Total Population	28,277	124,093	562,861
% White or Caucasian	66.7%	74.5%	84.6%
% People of Color/Mixed Race	33.2%	25.5%	15.4%
% Latino or Hispanic (Any Race)	22.7%	22.0%	9.9%
% Under Age 18	25.7%	26.7%	18.0%
% Age 65 or above	10.9%	11.8%	13.3%
% of Housing Units renter occupied	75.0%	63.0%	35.7%
% of Housing Units built before 1979	82.1%	82.7%	67.6%
% of Housing Units Vacant	14.1%	12.0%	7.9%
% of Households under \$10,000 income/yr	12.6%	10.7%	6.1%
% of Households under \$30,000 income/yr	32.0%	30.5%	17.2%

Data from US Census 2014 five-year ACS estimates



Key Known or Potential Brownfields

- Canal District, Harding/Water/Harrison/Winter/Temple/Pond Streets
- Wyman Gordon, Washington/Gordon/Lamartine/Madison Streets
- East Worcester Street/Albany Street

Recommended Revitalization Strategies

- Worcester should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Worcester should pursue additional US EPA cleanup Revolving Loan Fund funds to assist privately-owned brownfield sites in this area
- Worcester should consider obtaining US EPA Brownfields Area-Wide Planning resources to develop a detailed plan for revitalization of the Canal District and Wyman-Gordon area
- Canal District was Worcester's initial manufacturing settlement developed along the Blackstone Canal; a number of mostly closed Chapter 21e sites are present, as are various properties with potential for hazardous building materials such as asbestos and lead paint; revitalization for mostly entertainment sector purposes has been strong in recent decades, with examples of both adaptive reuse and full redevelopment; despite recent and ongoing revitalization, a number of key buildings and parcels remain underutilized; several sites require additional assessment

- Wyman-Gordon is a large former metal manufacturing complex; numerous closed Chapter 21e sites are present; it is vacant, with most buildings demolished; it has been designated as a development site in the City's recent Urban Renewal Plan following decades of little progress with revitalization; additional reuse planning may be useful as the market changes
- East Worcester and Albany Streets contain a number of closed 21e sites related to current and historic manufacturing-related activities; the area is adjacent to the thriving Shrewsbury Street retail/ recreation corridor and CSX intermodal yard; some sites may require assessment

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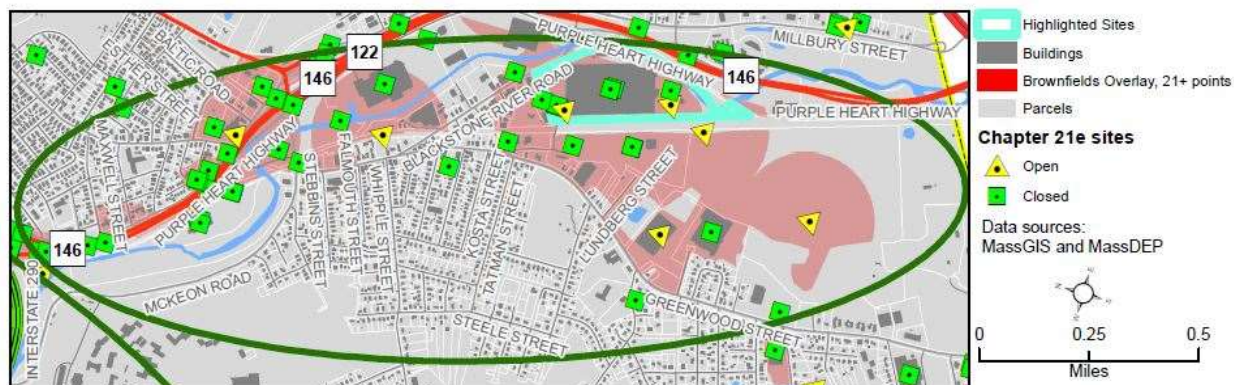
Worcester D3: Quinsigamond Village and Lower Vernon Hill ABI Profile



Liberty Central Industrial Park, Blackstone River Road, Worcester (CMRPC)

	Worcester: D3 Quinsigamond Village & Lower Vernon Hill ABI	All ABIs	CM Region
DEP mapped 21e sites	56	1,158	3,094
Open DEP mapped 21e sites	7	154	363
Value of 21e impacted property (\$)	\$111,878,200	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$45,899,400	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	0	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	791	15,074	614,686
Historic/current industrial land (acres)	322	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Worcester: D3 Quinsigamond Village & Lower Vernon Hill ABI	All ABIs	CM Region
Total Population	7,374	124,093	562,861
% White or Caucasian	67.7%	74.5%	84.6%
% People of Color/Mixed Race	32.3%	25.5%	15.4%
% Latino or Hispanic (Any Race)	18.6%	22.0%	9.9%
% Under Age 18	27.7%	26.7%	18.0%
% Age 65 or above	11.1%	11.8%	13.3%
% of Housing Units renter occupied	67.4%	63.0%	35.7%
% of Housing Units built before 1979	80.7%	82.7%	67.6%
% of Housing Units Vacant	9.9%	12.0%	7.9%
% of Households under \$10,000 income/yr	11.3%	10.7%	6.1%
% of Households under \$30,000 income/yr	27.3%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Liberty Central Industrial Park, Blackstone River Road
- Southwest Cutoff (Route 20)

Recommended Revitalization Strategies

- Worcester should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Worcester should pursue additional US EPA cleanup Revolving Loan Fund funds to assist privately-owned brownfield sites in this area
- Liberty Central Industrial Park is an active commercial/industrial area; an active 21e site is present on the property due to an oil spill; an approved cleanup plan is in place but no cleanup activity has yet occurred; completion of the cleanup is recommended
- Also located in Worcester's Council District 3 but outside of the Quinsigamond Village/Lower Vernon Hill area ABI, the Southwest Cutoff (Route 20) area has a number of closed 21e sites related to past and ongoing industrial uses; sewer service is currently being installed in the area, which is likely to increase development opportunities; assessment and/or cleanup resources may become necessary as properties are transferred

Worcester D4: Main Middle, Main South, and South Worcester ABI Profile



Whittall Mills, Brussels Street, Worcester (CMRPC photo)

	Worcester: D4 Main Middle, Main South & South Worcester ABI	All ABIs	CM Region
DEP mapped 21e sites	242	1,158	3,094
Open DEP mapped 21e sites	36	154	363
Value of 21e impacted property (\$)	\$470,560,500	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$26,701,700	\$248,083,300	\$573,952,937
EPA assisted brownfields	13	28	55
MassDev assisted brownfields	12	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	1,573	15,074	614,686
Historic/current industrial land (acres)	286	2,440	9,375
Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS			

	Worcester: D4 Main Middle, Main South & South Worcester ABI	All ABIs	CM Region
Total Population	33,953	124,093	562,861
% White or Caucasian	63.1%	74.5%	84.6%
% People of Color/Mixed Race	36.9%	25.5%	15.4%
% Latino or Hispanic (Any Race)	38.2%	22.0%	9.9%
% Under Age 18	29.7%	26.7%	18.0%
% Age 65 or above	8.8%	11.8%	13.3%
% of Housing Units renter occupied	81.9%	63.0%	35.7%
% of Housing Units built before 1979	90.7%	82.7%	67.6%
% of Housing Units Vacant	12.7%	12.0%	7.9%
% of Households under \$10,000 income/yr	17.4%	10.7%	6.1%
% of Households under \$30,000 income/yr	39.2%	30.5%	17.2%
Data from US Census 2014 five-year ACS estimates			



Key Known or Potential Brownfields

- Chess King, 44 Hammond Street
- Crompton and Knowles, Grand/Hollis/Gardner Streets
- Beacon-Hermon Manufacturing District, Beacon/Hermon/Jackson Streets
- Southbridge-Sargent Manufacturing District, Southbridge/Sargent/Gold Streets
- Whittall Mills, Brussels/Crompton/Woodward Streets

Recommended Revitalization Strategies

- Worcester should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Worcester should pursue additional US EPA cleanup Revolving Loan Fund funds to assist privately-owned brownfield sites in this area
- Worcester should consider obtaining US EPA Brownfields Area-Wide Planning resources to develop a detailed plan for revitalization of brownfields throughout this area
- Chess King is a derelict former manufacturing facility that occupies a full city block; there are no reported Chapter 21e issues; given the former industrial use of the building, a hazardous building materials survey is recommended if one has not already been performed
- Crompton and Knowles is a former loom manufacturing complex; one former mill building was recently rehabilitated as rental housing for low to moderate income households; portions of the mills were demolished, with much of the site now vacant; two MGL Chapter 21e sites are located on the property, both listed as Tier 1D (out of compliance); site assessment is recommended to help return the site to compliance and enable further redevelopment
- Beacon-Hermon Manufacturing District is an historic area of 1800s-era industrial buildings; one major building (the former Junction Shops) was recently rehabilitated as rental housing; several other buildings remain underutilized or vacant; one active and several closed Chapter 21e sites are present; the active site (metal contamination in soils) is being remediated; hazardous building materials surveys and additional assessment are recommended
- Southbridge-Sargent Manufacturing District is an historic area of 1800s-era industrial buildings; most are underutilized or vacant; one closed Chapter 21e site is present; hazardous building materials surveys and additional assessment are recommended
- Whittall Mills is an underutilized former carpet-manufacturing complex located on the Blackstone River; one closed Chapter 21e site is present; hazardous building materials surveys and additional assessment are recommended

Worcester D5: Park Avenue and Webster Square ABI Profile



70 Webster Street, Worcester (CMRPC photo)

	Worcester: D5 Park Avenue & Webster Square ABI	All ABIs	CM Region
DEP mapped 21e sites	55	1,158	3,094
Open DEP mapped 21e sites	7	154	363
Value of 21e impacted property (\$)	\$65,634,700	\$2,134,719,826	\$4,937,212,179
Value of open 21e impacted property (\$)	\$3,481,500	\$248,083,300	\$573,952,937
EPA assisted brownfields	0	28	55
MassDev assisted brownfields	1	27	45
EJ area(s) present?	Yes	Yes	Yes
Total area (acres)	644	15,074	614,686
Historic/current industrial land (acres)	125	2,440	9,375

Data from MassDEP, US EPA, MassDevelopment, CMRPC and MassGIS

	Worcester: D5 Park Avenue & Webster Square ABI	All ABIs	CM Region
Total Population	5,621	124,093	562,861
% White or Caucasian	74.8%	74.5%	84.6%
% People of Color/Mixed Race	25.2%	25.5%	15.4%
% Latino or Hispanic (Any Race)	20.3%	22.0%	9.9%
% Under Age 18	23.7%	26.7%	18.0%
% Age 65 or above	10.9%	11.8%	13.3%
% of Housing Units renter occupied	36.2%	63.0%	35.7%
% of Housing Units built before 1979	84.6%	82.7%	67.6%
% of Housing Units Vacant	10.2%	12.0%	7.9%
% of Households under \$10,000 income/yr	4.5%	10.7%	6.1%
% of Households under \$30,000 income/yr	25.5%	30.5%	17.2%

Data from US Census 2014 five-year ACS estimates



Key Known or Potential Brownfields

- Webster Street Manufacturing District
 - 70 Webster Street
 - 80, 88, 91 Webster Street
 - 97 Webster Street

Recommended Revitalization Strategies

- Worcester should work with CMRPC to obtain and access assessment funds and/or should obtain assessment funds on its own
- Webster Street Manufacturing District is an area of late 1800s/early 1900s industrial buildings in the Webster Square neighborhood; some are underutilized or vacant; no Chapter 21e sites are present; hazardous building materials surveys and additional assessment are recommended