

Pioneer Valley Planning Commission

Pioneer Valley Regional Brownfields Plan

*Cleaning up our industrial legacy.
Building stronger neighborhoods and communities.*



Produced by the Pioneer Valley Planning Commission with the support of the U.S. Department of Housing and Urban Development Sustainable Communities Initiative Regional Planning Grant Program.

February / 2014





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ACKNOWLEDGEMENTS

This project was funded through a Sustainable Communities Initiative grant from the U.S. Department of Housing and Urban Development (HUD), received by PVPC in partnership with the Capitol Region Council of Governments (CRCOG). PVPC would like to thank HUD and CRCOG for an outstanding partnership, and in particular acknowledge the efforts of the following staff:

Dwayne Marsh, U.S. Department of Housing and Urban Development (HUD)
Kate Dykgraaf, HUD
Lyle Wray, Capitol Region Council of Governments (CRCOG)
Mary Ellen Kowalewski, CRCOG

The work that provided the basis for this publication was supported by funding under an award with the U.S. Department of Housing and Urban Development. The substance and findings of the work are dedicated to the public. The author and publisher are solely responsible for the accuracy of the statements and interpretations contained in this publication. Such interpretations do not necessarily reflect the views of the Government.

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INTRODUCTION

BROWNFIELDS – MANAGING OUR INDUSTRIAL LEGACY

INTRODUCTION

The Pioneer Valley Regional Brownfield Plan identifies 20 neighborhood scale Areas of Brownfield Interest (ABI) where brownfields are pervasive, and resources to address them are most needed. The plan provides an analysis of the disproportionate number of brownfields within low income and minority block groups and offers a series of strategies for each ABI relative to site specific environmental assessment, cleanup and/or redevelopment planning.

LEGACY OF BROWNFIELDS

The Pioneer Valley of western Massachusetts is one of America's oldest industrial regions. Bisected by the Connecticut River and crisscrossed by its whitewater tributaries, the Valley provided ideal conditions for early 19th century mills that required water for power, transportation, and waste disposal. In the decades following 1800, factories producing textiles, paper, shoes, machine tools, and firearms – including the famous Springfield rifle – supplanted former farm villages, creating new mill towns and urban neighborhoods. These were often true company towns, where local industrial firms provided and controlled their host communities' housing, shopping, schools, infrastructure and social and civic life.

In 1960, employment in the Pioneer Valley's forty-three cities and towns was concentrated strongly in manufacturing, with more than 33% of workers in that sector. The area's household income was higher than the national average. Unfortunately, by the later 1960s, competition from other US regions and overseas combined with technological changes to reduce the area's competitive advantage for industry. The 1970s and '80s saw more than 45% of all regional manufacturers close. Industrial jobs fell to 19.7% of overall employment (1990), then to 11.6% (2008-2010), replaced largely by lower-paying service jobs. Household adjusted income fell to barely two-thirds of the national average in the same timeframe¹. As these industries closed or relocated outside of the region, their industrial footprint was left behind, significantly impacting the community.

BROWNFIELDS DEFINED

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. Thus, brownfields are sites with known or perceived contamination. Many of the formerly industrialized neighborhoods in the Pioneer Valley region, once booming centers of economic growth,

¹ 2009 Federal Reserve Bank of Boston; 1990 US Census; 2008-2010 American Communities Survey

contain multiple brownfields. As a result, brownfields continue to depress the local economy and impair neighborhood revitalization.

AREAS OF BROWNFIELD INTEREST (ABI)

This chapter presents a region-wide brownfields plan that has identified 20 'Areas of Brownfields Interest' (ABIs) throughout the region. For the purposes of this plan, an ABI is defined as: neighborhood-scale areas (each defined by clustered Census Designated Places and/or Block Groups), where brownfields are pervasive, but resources to address them are often lacking. Advancing a vision for a sustainable Pioneer Valley region requires investment in assessment and remediation of brownfields so that redevelopment can occur in historically concentrated areas of development, rather than green space. A listing of the geographic area used for to delineate each ABI is contained in the Appendices.

To identify ABIs, the pervasiveness of brownfields was determined by the number of MA DEP reported open or closed 21E sites at the clustered Census Designated Places and/or Block Group scale. A scoring model was developed that assigns points based on land use history, proximity to 21E sites, density of 21E sites, inclusion in an environmental justice mapped area, and proximity to brownfield assisted sites. Neighborhood-sized areas with a score of 16 points or more were considered ABIs. The scoring model is described in detail under the Inventory and Analysis section. The 20 ABIs identified in this plan include:

- Amherst Center
- Belchertown Center
- Chicopee Center and Chicopee Falls
- Willimansett, Chicopee
- Downtown Easthampton
- Downtown Holyoke
- Downtown Northampton
- Downtown Springfield
- East Springfield
- Forest Park, Springfield
- Hill-McKnight and Six Corners, Springfield
- Indian Orchard, Springfield
- North End, Springfield
- South End, Springfield
- Ludlow Center
- Downtown Ware
- Downtown Westfield
- Merrick and Riverdale, West Springfield
- Monson Center
- Palmer Villages

Other brownfields, or neighborhoods with clusters of brownfields, that did not qualify as ABIs but are of regional significance include:

- Route 20, Hilltowns
- Agawam Games and Lanes, North Agawam
- Russell Mills, Route 20

- South Hadley Falls
- Trent Tire, Brimfield
- Westover Air Force Base
- Route 9, Hadley
- Hatfield Mill
- Middlefield General Store

IMPACT OF BROWNFIELDS

The effect of brownfields at the neighborhood scale is well documented. As city residents and businesses with access to capital migrated to outer suburbs in the decades after 1960, many working class neighborhoods were left with a legacy of contaminated and vacant facilities, deteriorating infrastructure, and abandoned homes. The remaining residents of these blighted communities, often poor and/or minorities, were left to bear the burden of this wholesale disinvestment and its physical remnants. Environmental health risks are the most acute problem faced, but in neighborhoods with concentrations of brownfields, there are more insidious challenges to everyday quality of life, employment accessibility, and housing supply and affordability.²

Table 1 Pioneer Valley ABI Population, Race, Ethnicity and Age

Demographic Indicators	All ABIs	PV Region
Total Population	247,841	621,570
% White or Caucasian	68.9%	79.6%
% People of Color	31.1%	20.4%
% Latino or Hispanic	26.1%	16.8%
% under Age 18	24.2%	21.9%
% Age 65 or above	10.8%	13.8%

Source: 2010 US Census

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 city. Brownfields – especially abandoned industrial facilities that reach several hundred acres in footprint – can act as physical barriers that isolate populations and create enclaves, potentially reducing access to transportation, social networks and social services. Residents of such pockets may well be in need of these services; there is some evidence that people living in close proximity to derelict structures are distressed by the risks and stigma associated with their situation.³

² McCarthy, Linda. (2002) The Brownfields Dual Land Use Policy Challenge: Reducing Barriers to Private Redevelopment While Connecting Reuse to Broader Community Goals. Land Use Policy. Volume 19: pp.287-296.

³ Greenberg, Michael and M. Jane Lewis. (2000). Brownfields Redevelopment, Preferences and Public Involvement: A Case Study of an Ethnically Mixed Neighborhood. Urban Studies. Volume 37(13): pp. 2501-2514.

Pioneer Valley ABIs, like most low-income areas, suffer from a lack of employment opportunities. Many such communities historically functioned as “company towns”, sustained economically by unskilled and semi-skilled jobs at local industrial plants. When macroeconomic conditions evolved and industrial jobs were lost to the suburbs, high technology, or overseas, unemployment rates soared. Local small businesses that relied on decently paid workers for their clientele suffered and closed shop, leaving a vacuum in the retail sector and exacerbating unemployment numbers.⁴ Remaining local residents often had little choice but to take low-paying service jobs in the surging suburbs, sometimes hours away on inefficient suburban public transport networks.⁵ Unemployment rates are not available at the ABI level (Census Block Groups), however, Table 2 demonstrates that ABIs in the Pioneer Valley region have almost double the percent of households with incomes under \$10,000 and \$30,000, and 23% more of the population in rental housing than the rest of the region. Detailed demographic indicators for each ABI are contained in the Appendices.

Table 2 Pioneer Valley ABI Economic Indicators

Demographic Indicators	All ABIs	PV Region
% of households under \$10,000 in income	15.8%	9.0%
% of households under \$30,000 in income	46.0%	22.7%
% of households in rental housing	57.4%	34.0%

Until recently, contamination on brownfields deterred investment by potential employers, leaving affected neighborhoods effectively jobless. Over two decades ago, Congress passed the Comprehensive Environmental Response Compensation and Liability Act of 1980 (“Superfund”), creating justifiable concern for owners, developers, and others involved with commercial real estate. Strict liability under the Superfund generally extended to “owners” and “operators” of polluting businesses, as well as to owners of polluted property where the pollution was caused by a previous owner or had migrated from other locations. This potential liability had a significant impact on commercial real estate transactions, in some cases killing a sale, the financing for a sale, or the development of a contaminated property. In cases where a transaction moved forward, the threat of Superfund liability required extensive pre-acquisition negotiations in order to allocate the risks created by the Superfund. As a result, many brownfields were left abandoned or underdeveloped. The law was subsequently amended, by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Small Business Liability Relief and Brownfields Revitalization Act of 2002.

In Massachusetts, on August 5, 1998 Governor Cellucci signed into law the “Brownfields Act”, establishing new incentives to encourage parties to clean up and redevelop contaminated property in Massachusetts. This Act provides liability relief and financial incentives to attract new investment in these properties while ensuring that the Commonwealth’s environmental standards are met. Subsequently in 2002, President Bush signed into law the “Small Business Liability Relief and Brownfields Revitalization Act,” Pub. L. 107-118, 115 Stat. 2356 (the “Act”). Among other changes, the Act amended the Superfund law to provide: (1) exemption from Superfund liability to certain owners of

⁴ U.S. Environmental Protection Agency. (1999a). A Sustainable Brownfields Model Framework. Environmental Protection Agency: Washington, D.C.

⁵ Bullard, Robert D., Glenn S. Johnson and Angel O. Torres. (2004). Highway Robbery: Transportation Racism and New Routes to Equity. South End Press: Cambridge, Massachusetts.

real property adjacent to property on which there is environmental pollution; (2) exemption from Superfund liability to prospective purchasers to the extent liability is based solely on ownership or operation of polluted property; and (3) clarification regarding the circumstances under which a person will be deemed to have undertaken "all appropriate inquiry" prior to purchase of polluted property.

This series of legislative initiatives significantly spurred brownfield redevelopment nationwide. As projects moved forward, and familiarization with the liability relief provided under the various laws was demonstrated through successful projects, interest in brownfield redevelopment began to grow.

NUMBER AND SIZE OF BROWNFIELDS

As defined above, brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presences or potential presences of a hazardous substance, pollutant or contaminant. Thus, brownfields are sites with known or perceived contamination. Known contamination can be tracked through the Massachusetts Department of Environmental Protection's (MassDEP) 21E Database. This is also referred to as the Voluntary Control Program or VCP. The 21E database tracks sites with reportable quantities of petroleum or hazardous material contamination in what is called the 21E Database. 21E is in reference to the Massachusetts General Laws Chapter 21E which is the Oil and Hazardous Material Release Prevention Response Act. This database does not include sites perceived to be contaminated based on past land use or a generally blighted condition. It is only for sites with actual releases, at levels considered reportable under MGL 21E.

Not all of the sites in the 21E database are available as a mapped datalayer from MassDEP; only the Tier Classified sites are mapped. Therefore, the mapped datalayer represent only a subset of the total reported Chapter 21E sites. Chapter 21E sites that have not yet been Tier Classified, or are not required to be Tier Classified, are not mapped, and thus were not used as part of the metrics calculated for determining the Areas of Brownfield Interest (ABIs). For example, there are 855 tier-classified sites in the Pioneer Valley region in DEP's 21e database, out of a total of 4,089 21e sites (in the Pioneer Valley region). Table 5 on page 13 includes the results of the metrics applied to each ABI.

The individual ABI factsheets provided in the Appendices include community feedback about important brownfield sites, some of which may or may not be 21e sites. Many of the sites identified by the communities come under the "perceived" contamination, or are simply blighted and possibly abandoned and vacant.

Detailed brownfield inventories at the community level, inclusive of both known and perceived contaminated sites, have only been developed in Springfield and Holyoke. Chicopee recently developed a detailed brownfield inventory for the Downtown West End with funding provided by an EPA Brownfield Area-wide Planning Grant. These inventories include properties with both known and *perceived* contamination, i.e. sites both included in the 21e database, and not. Some other communities maintain a list of brownfields relevant to short and long-term community planning goals, and consider them to be brownfield inventories. The ABI factsheets were reviewed by the municipality and input about brownfield priorities incorporated.

Other criteria used at the local level for determining if a property is a brownfield are tax status, and past land use. Many brownfields are abandoned, blighted properties that are tax delinquent. Cleanup and redevelopment of these sites are extremely important to the vitality of a community. A municipality

has the authority to acquire a tax delinquent property through a Tax Title Taking. By acquiring a property in this manner, and after completion of an All Appropriate Inquiry Phase I Site Assessment, a municipality is waived liability for the site contamination. The municipality must still comply with all state regulations governing cleanup, however, as the owner of the property acquired it through a Tax Title Taking, the municipality is eligible for federal brownfield assessment and cleanup funds from EPA. This plan did not research the tax status of the properties in the 21e database, and thus does not use tax status criteria to identify brownfields regionally.

Past land use is also an important criteria for evaluating the likelihood of environmental contamination. Gas stations, laundromats, dry cleaners and former industrial complexes are notorious for site contamination. Even if there has not been a reportable release to DEP as recorded in the 21e database, but one of these land uses has occurred there in the past, a contamination is perceived to have occurred. This perceived contamination is a significant impediment to redevelopment as it can have great financial consequence that can kill a project if not properly factored into the financing and intended reuse upfront. Past land use is a criteria used to determine the 20 ABIs in the region, measured in acres of historic industrial land use using industrial and commercial land use data back to 1971.

As stated above, to identify ABIs and the number of brownfields, we used the number of MA DEP reported open or closed 21E sites in DEP’s Voluntary Control Program (VCP). More than 4,000 contaminated sites in the Pioneer Valley have been reported to the Massachusetts Department of Environmental Protection’s (MassDEP) Voluntary Cleanup Program (VCP) since 1993, with about 500 in need of further assessment and/or cleanup. Petroleum-only sites make up about 200 of the active sites, with dozens more co-mingled with hazardous materials. Known and suspected brownfields in the area range in size from less than a quarter acre to more than 170 acres. Based on GIS analysis, at least 7,500 acres of property in the Pioneer Valley have been impacted by reported contaminants. Despite these large numbers, we know from past experience that many additional sites are not on any official list, but are revealed during face-to-face outreach to local officials, residents and landowners.

Table 3 Tier Classified Oil and Hazardous Material Reported Releases, MassDEP 21e Sites (Mapped by MassDEP)

	# Sites in ABIs	# Sites in PVPC Region	ABI %
DEP tier-classified 21e sites	524	855	61.2%
Open tier-classified 21e sites	148	230	64.3%
<i>Source: MassDEP, GIS mapped sites</i>			

Sites are usually Tier Classified by a Licensed Site Professional (LSP) using the Numerical Ranking System (NRS), and submitted to DEP. The NRS scores sites on a point system based on a variety of factors. These include the site's complexity, the type of contamination, and the potential for human or environmental exposure to the contamination. In addition, some sites are automatically classified as Tier 1 sites if they pose an imminent hazard, affect public water supplies, or miss regulatory deadlines. The MassDEP Tier Classified Oil and/or Hazardous Material Sites datalayer is a statewide point dataset containing the approximate location of oil and/or hazardous material disposal sites that have been (1) reported and (2) Tier Classified under M.G.L. Chapter 21E and the Massachusetts Contingency Plan (MCP).

HEALTH IMPACTS

Public health indicators show links between disease and brownfields-related environmental factors such as lead paint and air pollution, which are concentrated disproportionately in older industrial neighborhoods like the ABIs. Aging housing stock accounts for much of the lead hazard. About 55% of housing units in the Pioneer Valley were built prior to 1960 – this measure exceeds 90% in former mill worker neighborhoods like the West End of downtown Chicopee. With less than 10% of the state’s population, the Pioneer Valley contains 18% of the state’s high-risk municipalities for childhood lead poisoning. In places like the West End of Chicopee, the prevalence of abandoned brownfields keeps property values low and deters investments, such as lead paint abatement, by landlords and property owners due to concerns that the cost of abatement activities will not be recouped in resale value and/or rental income. Overall, the ABIs – nearly all of which are old mill neighborhoods – are home to relatively high percentages of minority residents, raising the issue of environmental justice. (See Table 1 above)

Air quality is a concern due to the region’s major highways (I-90 and I-91), power plants and remaining mills. With the region’s transit-accessible downtowns burdened by brownfields and largely replaced as employment centers, car dependence will continue to impact air quality. In Hampden County, which contains more than three-quarters of the Pioneer Valley’s population, hospitalizations for asthma are 53% higher than the state rate, with especially high rates for Hispanics (91% higher than the state rate), who are about 5 times more likely to need hospitalization than non-Hispanic whites⁶.

Health and safety are also concerns due to the intermingling of residences and underutilized industrial facilities in the ABIs’ old mill towns and neighborhoods. Many of these sites are completely unsecured. In these underserved areas, children and adults find recreational opportunities where they can, including (for example) at the former manufactured gas plant site in Ware, where there is evidence of trespassing (illegal dumping, vandalism, etc). This site was a Phase I subject in PVPC’s EPA assessment grant in 2010, and is suspected to contain PAHs and other contaminants. PVPC and the Town of Ware have worked with MassDEP to make sure that the site is evaluated and secured, pending further assessment and cleanup. Other brownfields in the region are known to have exposed residents or workers to asbestos, PCBs, VOCs, TCE and other chemicals.

QUALITY OF LIFE IMPACTS

Brownfields have caused significant damage to the region’s overall quality of life and have been particularly destructive to downtowns and village centers. Brownfields-impacted neighborhoods like those in Westfield and Ware have seen crime, including vandalism, on the increase as the recent recession shut down many of the last downtown manufacturers and the retail establishments that relied on them. Downtown streets from Ware to Westfield to Chicopee to Springfield have vacant storefronts. 87% of the City of Springfield’s 2010 city-wide brownfield properties are vacant. Illegal dumping has been reported at abandoned sites throughout the region. Access to recreational resources

⁶ Massachusetts Department of Public Health

has been another casualty of contamination, as many local rivers are too dirty to fish or swim in, and fenced-off vacant mills prevent access to long stretches of riverfronts.

The burden of brownfields has been borne largely by the residents of the ABIs. Residents of ABIs tend to be disproportionately poor and minorities, and to an elevated degree, to be those who are most vulnerable to contaminants (minorities, children and women of child-bearing age). An intangible but meaningful impact has been the loss of identity and pride in former industrial communities. The Mayor of Chicopee was quoted in *The Reminder*, a local paper, saying "Five generations of students have walked past the abandoned facilities. No wonder they think there's no future here."

ENVIRONMENTAL IMPACTS

Many of the Pioneer Valley's brownfields are concentrated along its waterways due to their water power mill industry heritage, where many sites are known or suspected to have impacted wetlands, sediments, and surface water. As recently as the 1960s, the Connecticut River was designated as "suitable for transportation of sewage and industrial waste." In downtown Chicopee, large amounts of soil contaminants – mainly oil – from the former Delta Industrial Park still flow into the Chicopee River during seasonal flooding. Habitat for two species of endangered mussel, migratory birds, and the endangered short-nose sturgeon is threatened. Other waterfront sites in Chicopee, Ware and Brimfield are known to have released chemicals to waterways historically, with unknown lingering impacts.

The former Gas Works in Holyoke manufactured combustible gas from coal and oil for residential, commercial, and industrial heating and lighting from 1852 to 1951. The former Gas Works once occupied a 2-acre peninsula on the Connecticut River 1500 feet downstream of the Holyoke Dam. Historic operations resulted in large releases of tar and oil to soil, groundwater, sediment, and surface water. In 1990, oil/tar was observed discharging into the Hadley Falls tailrace and reported to the Massachusetts Department of Environmental Protection (Mass DEP). According to records research and calculations performed by Mass DEP, this manufactured gas plant ("MGP") produced approximately ten million gallons of MGP tar during its 100 years of operations. Assessment and cleanup at this site remain on-going.

Brownfields also have pernicious indirect environmental effects. They occupy a sizeable proportion of commercial- and industrial-zoned land in most regional downtowns. Over several decades, in part because of obstacles to cleanup and redevelopment related to liability, the area's retail sector and surviving large commercial and industrial employers have gradually relocated from downtowns to greenfield sites in former agricultural parts of the Valley. These new employment centers have attracted commuters and residential development to outlying areas. Between 1970 and 2000, the Valley's population grew less than 5%, while developed land increased 49%. This migration has caused habitat loss and has created a car-based culture, wasting energy, adding to carbon emissions, and contributing to documented air pollution.⁷

Table 4 Impact of ABIs on Region

⁷ Valley Vision 2, Pioneer Valley Planning Commission

	Total in ABIs	Total in PVPC Region	ABI %
Population (source: Census 2010)	247,841	621,570	34.6%
21E Sites (source: MassDEP mapped sites GIS layer)	524	855	61.2%
Total Land Area (acres) (source: MassGIS)	62,720	754,560	8.3%
Industrial Land Area (acres) (source: MassGIS)	4,896	9,910	49.4%

DISPROPORTIONATE IMPACTS

The identified ABIs are mostly former mill neighborhoods showing highly disproportionate exposure to contaminated 21E sites due to historical land use patterns of high density housing located close to jobs in industrial facilities. As the table above demonstrates, the ABIs host almost two-thirds of the region’s MassDEP-mapped contaminated sites, in an area where only a third of its residents live. ABIs also include more than half of all current and historic industrial land in the region, despite occupying only 8.3% of the total land area. With some variation among the individual neighborhoods, the ABIs overall tend to include a high proportion of minorities and Latinos and a high share of at-risk groups, including children and women of child-bearing age.

ECONOMIC IMPACTS

With the manufacturing economy further impaired by the recent recession, serious challenges face the Pioneer Valley's residents, businesses, and government institutions. As a region, the Pioneer Valley's per capita income in 2000 stood at \$20,056, compared to the state average of \$25,952. Since then, the region (\$25,317) has fallen further behind the state (\$33,460). For example, ABIs for Agawam (\$23,708), Chicopee (\$19,700), Ware (\$19,486) and Westfield (\$17,657) are well below the regional income mark, while Ludlow (\$27,035) is higher, but still significantly below the state average. Overall, the 20 ABI neighborhoods (at \$19,189) are significantly poorer than the region. ABIs in the largest former mill cities demonstrate even higher needs, with poverty as high as 58% in downtown Holyoke and 48% in Springfield's South End. In total, residents of the 20 ABIs have a poverty rate of 27.1%. The state rate is 10.1%. [2000 & 2010 US Census: 2005-2009 American Communities Survey]

The job picture is not much better for area residents. As of August 2011, Massachusetts reported 7% unemployment, whereas the Pioneer Valley region was at 8.8% (including 10% in Hampden County, home to most of the Valley's residents). Recent unemployment data are not available for sub-municipal areas (including the ABIs). However, in municipalities that contain ABIs, unemployment totaled 8.5% in August. The very low income levels noted in the paragraph above suggest that unemployment is much higher in the ABIs themselves. The Pioneer Valley region's economy is still reeling from a sharp decline – nearly 10.5% in the five municipalities detailed above – in manufacturing sector jobs during the recent 2008 to 2009 recession. [Bureau of Labor Statistics: Massachusetts Division of Labor and Workforce Development]

This combination of low wages and high unemployment has resulted in a substantial foreclosure problem in the area. As a region, the Valley's annual foreclosure rate of .46% last year was substantially higher than the state rate of .29%. Brownfields-impacted communities such as downtown Westfield and Chicopee Center had rates greater than 1.82% and, as a result, were designated as "Extremely High Density" foreclosure areas in a 2010 PVPC publication. [The Warren Group: PVPC Foreclosure Update]

PLANNING PROCESS AND METHODOLOGY

Development of this chapter was completed with the guidance of the Pioneer Valley Brownfields Advisory Committee, convened by PVPC and consisting of representatives from municipalities, MA DEP, Mass Development, and non-profit organizations. The Committee met three times in 2012 to develop the brownfield inventory and assessment for the region and identify the 20 ABIs. Once completed, the ABIs were issued for public comment and priority strategies sought for implementation for each ABI.

Pioneer Valley Brownfield Advisory Committee Members:

Carl Dietz, City of Chicopee

Lee Pouliot, City of Chicopee

Samalid Hogan, City of Springfield

Karen Mendrala, City of Holyoke

Ben Fish, MA DEP WERO

Eva Tor, MA DEP WERO

Sean Calnan, MassDevelopment

Maureen Belliveau, Westfield BID

Giovanna Di Chiro, Nuestras Raices

Tom Taffee, Pioneer Valley Asthma Coalition

Karen Cullen, Town of Ware

INVENTORY & ASSESSMENT

ABI DATA SOURCES

Areas of Brownfield Interest (ABIs) were identified using a GIS based analysis matrix that considered land use history, environmental justice populations, proximity to contaminated sites, density of contaminated sites, and proximity to a site that has received some level of brownfield assistance. The metadata used for the GIS analysis is included in Appendix B. Census designated areas receiving 16 points or more were identified as an ABI. Table 5 ABI Metrics Score provides the matrix results for each ABI. Table 5 Assisted Sites provides a summary of the status of brownfields within each municipality in the Pioneer Valley region, and state and federal funding and/or technical assistance received by site.

Table 5 ABI Metrics Score

	Amherst Center	Belchertown Center	Chicopee Center & Falls	Willimansett	Easthampton Downtown	Northampton Downtown	Holyoke Downtown	Springfield Downtown	East Springfield	Forest Park	Hill-McKnight &	Indian Orchard	North End	South End	Ludlow	Ware Downtown	Westfield Downtown	Merrick & Riverdale	Monson	Palmer Villages	All ABIs	
DEP Tier Classified 21e sites	15	8	22	16	17	35	49	11	45	15	50	46	31	14	18	9	42	44	6	31	524	
Open Tier Classified 21e sites	3	2	7	3	4	9	11	7	19	3	22	9	10	3	2	3	14	7	3	7	148	
EPA assisted BF Projects	0	0	2	2	1	5	15	2	0	1	13	5	5	3	0	2	3	2	2	0	63	
MDFA assisted BF Projects	1	1	4	3	3	1	16	1	2	0	5	3	4	4	0	1	4	5	1	0	59	
DEP BF sites	0	1	10	5	4	4	15	0	5	0	11	4	7	3	2	2	4	4	2	3	86	
EJ Area Present	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
ABI Score	22	20	25	24	25	24	26	26	25	24	26	25	26	26	20	21	26	24	19	19	26	
Historical Industrial Land (acres)	22	46	216	215	186	199	511	87	485	12	386	838	266	31	243	162	390	583	45	228	4,896	

Table 6 Assisted Sites

Town/City	Total 21e Sites ¹	2-Hour Sites	Not 2-Hour Sites	Oil Sites	Hazardous, Comingled & Unclassified Sites	Closed 21e Sites	Open 21e Sites	Tier 1a to c	Tier 1d	M DFA Projects ²	EPA Projects ³	EPA Grants to Munis ⁴	DEP BF Program Sites ⁵
AGAWAM	154	71	83	99	55	143	11	1	0	3	0	0	4
AMHERST	140	48	92	92	48	132	8	0	0	1	0	0	1
BELCHERTOWN	76	28	48	46	30	69	7	2	0	1	0	0	2
BLANDFORD	47	34	13	31	16	41	6	0	1	0	0	0	0
BRIMFIELD	31	19	12	16	15	27	4	0	1	0	1	0	1
CHESTER	12	4	8	9	3	11	1	0	0	0	2	0	1
CHESTERFIELD	7	2	5	5	2	7	0	0	0	0	0	0	0
CHICOPEE	378	164	214	223	155	331	47	7	0	7	5	1	20
CUMMINGTON	11	6	5	7	4	11	0	0	0	0	0	0	0
EAST LONGMEADOW	84	27	57	55	29	73	11	1	0	0	0	0	0
EASTHAMPTON	80	28	52	52	28	72	8	1	1	3	1	1	5
GOSHEN	4	2	2	3	1	4	0	0	0	0	0	0	0
GRANBY	50	32	18	35	15	43	7	2	0	0	0	0	0
GRANVILLE	16	10	6	9	7	14	2	0	1	0	0	0	0
HADLEY	41	17	24	30	11	35	6	1	0	0	0	0	0
HAMPDEN	19	8	11	11	8	17	2	0	0	0	0	0	1
HATFIELD	35	23	12	18	17	30	5	0	2	0	0	0	2
HOLLAND	9	6	3	7	2	9	0	0	0	0	0	0	0
HOLYOKE	246	88	158	142	104	216	30	4	8	21	20	5	17
HUNTINGTON	13	7	6	10	3	13	0	0	0	0	0	0	0
LONGMEADOW	122	31	91	100	22	118	4	0	1	0	0	0	0
LUDLOW	145	68	77	93	52	126	19	1	1	0	0	0	2
MIDDLEFIELD	4	2	2	4	0	2	2	0	1	0	1	0	1

MONSON	66	37	29	44	22	58	8	3	0	1	2	1	2
MONTGOMERY	3	3	0	2	1	3	0	0	0	0	0	0	0
NORTHAMPTON	214	82	132	134	80	190	24	0	0	3	5	1	4
PALMER	161	79	82	108	53	151	10	2	0	0	0	0	3
PELHAM	6	6	0	4	2	6	0	0	0	0	0	0	0
PLAINFIELD	4	3	1	1	3	3	1	0	0	0	0	0	0
RUSSELL	25	15	10	19	6	22	3	0	0	0	0	0	1
SOUTH HADLEY	120	46	74	79	41	112	8	0	2	1	0	0	0
SOUTHAMPTON	12	4	8	7	5	9	3	0	1	0	0	0	1
SOUTHWICK	50	26	24	33	17	45	5	0	0	1	0	0	1
SPRINGFIELD	988	424	564	566	422	863	125	2	24	21	30	10	31
TOLLAND	4	2	2	4	0	3	1	0	0	0	0	0	0
WALES	7	7	0	4	3	6	1	0	1	0	0	0	0
WARE	54	26	28	34	20	49	5	0	2	1	2	0	2
WEST SPRINGFIELD	262	108	154	159	103	248	14	0	0	5	2	2	4
WESTFIELD	277	79	198	166	111	234	43	1	2	5	3	1	4
WESTHAMPTON	2	1	1	2	0	2	0	0	0	0	0	0	0
WILBRAHAM	74	34	40	59	15	70	4	0	1	0	0	0	1
WILLIAMSBURG	19	4	15	14	5	18	1	0	0	0	0	0	0
WORTHINGTON	17	12	5	7	10	16	1	0	1	0	1	0	1
TOTAL	4,089	1,723	2,366	2,543	1,546	3,652	437	28	51	74	75	22	112

1 - 21E database downloaded from MassDEP on 1-27-12

2 - data compiled from MDFA Brownfields Redevelopment Fund annual reports through FY2010 (latest available).

3 - data compiled from EPA website and ACRES database through grant year FY2011

4 - data compiled from EPA website and ACRES database through grant year FY2011 (does not include grants to PVPC, DEP or under TBA program)

5 - data received as GIS data layer from MassDEP GIS section during 1-2012

PVPC BROWNFIELD PROGRAMS - PAST AND PRESENT

The Pioneer Valley Planning Commission has been providing assistance to municipalities and brownfield property owners for almost 20 years. The purpose of the Pioneer Valley Regional Brownfields Plan is to guide the PVPC's brownfield program in the next five to ten years. The following is a summary of the funding and technical assistance PVPC has been able to offer the region during this time.

Grant Name	Grant Period	Funded Amount	Balance of Funds as 10/1/2011
FY12 Petroleum and Hazardous Material Assessment	1/1/13 – 12/31/15	\$400,000	\$400,000
FY11 Brownfield Area-wide Planning Grant – Chicopee West End Neighborhood	10/1/10-12/31/12	\$175,000	\$0
FY 2009 RLF (Transitioned from pilot)	4/21/2008 – 12/31/2014	\$2,751,000	\$1.7 million
FY 2006 PVPC Haz. Mat. Site Assessment	7/1/2006 – 6/30/2010	\$200,000.00	\$0
FY 2006 Petroleum Site Assessment	7/1/2006 – 6/30/2009	\$200,000.00	\$0
FY 2005 Petroleum Site Assessment	9/1/2004 – 9/1/2006	\$150,000.00	\$0
FY 1998 Haz Mat Site Assessment	10/1/1998 – 3/31/2003	\$200,000.00	\$0
		\$4,076,000	

PIONEER VALLEY BROWNFIELD REVOLVING LOAN FUND

Applications for brownfields cleanup assistance through the RLF are accepted on a rolling basis, with roughly \$1.7 million available as of November 2012. Loans are available to eligible private parties, while eligible municipalities, redevelopment authorities and nonprofits can receive assistance through loans, subgrants, or a combination of the two. Loan and subgrant terms are established on a project-by-project basis and require approval by PVPC's brownfields Loan Review Subcommittee and legal counsel. Generally, projects in environmental justice communities, very small towns, and where other funding is unavailable will receive more beneficial terms, as will projects where the redevelopment plan demonstrates substantial benefit through economic development or environmental protection. Subgrants are capped by EPA at \$200,000 per property (a waiver may be requested). Petroleum-only sites are not eligible for assistance through the RLF.

PROJECT SNAPSHOTS

Town of Chester, Wood-waste Landfill Assessment and Cleanup

- Phase III RAP and a redevelopment plan for the Town of Chester’s wood-waste landfill cleanup project.
- \$220,000 under its RLF for site cleanup. The project made it possible for the construction of a \$7,000,000 regional elementary school.

Town of Chester, Former Baystate Abrasives Facility

- Phase II site assessment; identified two leaking USTs. UST removal with town funds.

Town of Worthington, Alberts Farm

- Phase I and II site assessments

City of Easthampton, Former Hannifan Automotive

- Phase I, Phase II site assessment, Phase III Remedial Alternatives Analysis
- City received FY07 EPA Cleanup Grant and performed remediation resulting in RAO.

Town of Middlefield, Middlefield General Store

- Phase II site assessment
- Phase III Remedial Alternatives Plan
- MA DEP performed partial site cleanup activities in 2011.

Town of West Springfield, Morin Manufacturing Facility

- Phase II site assessment
- Class A-2 RAO

City of Westfield, 43-80 Elm Street

- Tier II extension filing
- Summary remedial actions review
- City redeveloping site as multi-modal transportation facility

FEDERAL AND STATE PROGRAMS

Table 7 provides a detailed list of resources available to brownfield property owners, municipalities, and potential developers. Most brownfield sites require a complementing range of assistance resources to move a property from assessment into cleanup and ultimately redevelopment.

Table 7 Program Assistance

PROGRAM	Assessment	Cleanup	Grant	Loan	Tax Incentive	Liability Protection	Technical Assistance
Brownfields Economic Development Initiative (BEDI)		M	M				
EPA Brownfield Assessment Grants	P/NP		P/NP				
EPA Brownfield Cleanup Grants		P/NP	P/NP				
Cities and Towns Municipal Grants Programs		P/NP	M				
Underground Storage Tank Petroleum Cleanup Fund (LUST)	PO	PO	PO				
Community Development Fund	M	M	M				
Economic Development Fund	M	M	M	M			
Mini-Entitlement Program	SDC	SDC	SDC				
MA Opportunity Relocation and Expansion (MORE) Jobs Capital Program		SDC	SDC				
Brownfields Redevelopment Fund, MassDevelopment	SDC	SDC		SDC			
Clean Water State Revolving Fund (CWSRF)		M		M			
Brownfields Tax Incentive		PO			PO		
Brownfields Credit for Rehabilitation of Contaminated Property		PO			PO		
Municipal Tax Abatement Program		M			M		
Economic Development Incentive Program (EDIP)		SDC			SDC		
Historic Rehabilitation Tax Credit		M			M		
Brownfields Covenant Program		PO				PO	
Brownfields Redevelopment Access to Capital Program (BRAC)	PO	PO				PO	
Liability Relief Provision of the MA Brownfields Act						ALL	
Targeted Brownfields Assessment Program	P/NP						P/NP
MassDEP Assessment/Cleanup Grant of Service		P/NP					P/NP
MassDEP Technical Assistance Grants							P/NP

Eligibility Guidance – Each program has specific eligibility requirements. See program guidance for detailed information.

P/NP – public entities and non-profits **M** – municipalities **SDC** – Specially designated communities **PO** – Property Owners
ALL – All of the above

Source: Berkshire Regional Planning Commission, 2012. Berkshire Brownfields Resources Directory.
<http://www.berkshirerplanning.org/regional/documents/BerkshireBrownfieldsResourcesDirectory.pdf>

ANALYSIS

OPPORTUNITIES

Today there are fewer obstacles to brownfield redevelopment than there were several decades ago due to various state and federal laws designed to facilitate brownfield assessment and cleanup. As a result, brownfields, both large and small, are successfully being redeveloped in the region.

CHALLENGES

LIMITS ON FUNDING

For the fourth consecutive year, the Commonwealth of Massachusetts slashed its annual budget for unrestricted (non-school) local aid in July (by 7.3%). Since the start of the recent recession in 2008, Massachusetts' cities and towns have seen state local aid cuts totaling more than 37%. Increased state assistance for local finances will almost certainly not be available in the foreseeable future. Moreover, many local cities and towns have been forced to reallocate funding for recovery from the June 1, 2011 EF3 tornado that struck the eastern third of our region (including five ABIs), causing an estimated \$140 million in damage⁸.

Municipalities in our region have had a tough time trying to make up for lost state assistance. More than a dozen towns in the Valley are simply too small (under 2,500 people) to take on new financial burdens. Moreover, state law limits property tax rate increases to 2.5% per year. In a housing market where home values (and property tax assessments) have plummeted 10-15% in four years, this cap has resulted in markedly lower local government revenues. A standard method for determining the financial viability of municipalities is the equalized property valuation (EQV), which captures the value of all assets from which local property tax revenues are derived. The average Massachusetts municipality now has an EQV of \$156,493 per capita (down about \$10,000 since 2008). The five municipalities with ABIs detailed in this report fare less well: Chicopee (\$69,650), Westfield (\$83,281), Ludlow (\$92,441), Ware (\$84,760), and Agawam (\$103,952). These numbers bear out the struggle communities have had in making the transition from manufacturing to other activities, and reflect the drag that brownfields, foreclosures and other non-revenue properties can have on local finances.⁹ Federal funding from EPA has become increasingly competitive.

⁸ Mass. Executive Office of Administration and Finance: FEMA

⁹ 2010 US Census: Mass. Department of Revenue

RECOMMENDED STRATEGIES

STRATEGIES

CROSS CUTTING STRATEGIES ICONS

The following icons are used in reference to issues and strategies also identified in the other nine Sustainable Knowledge Corridor Element Plans, called as “cross cutting strategies”. To learn more about the cross cutting strategy as it may pertain to the topics and analysis in the cross cutting Element Plan, visit www.SustainableKnowledgeCorridor.org.

 FOOD SECURITY	 LAND USE	 CLIMATE ACTION
 GREEN INFRASTRUCTURE	 TRANSPORTATION	 ECONOMIC DEVELOPMENT
 HOUSING	 BROWNFIELDS	 ENVIRONMENT

STRATEGY	DESCRIPTION	LEAD ROLE	CROSS CUTTING STRATEGIES
Petroleum and hazardous material site assessments under PVPC’s EPA Brownfield Site Assessment Grant	PVPC received \$400,000 in site assessment funds from EPA in 2012. Municipalities will be solicited to apply for site assessments under this program by March 2013.	PVPC	 
Continued operation of PVPC’s Brownfield Revolving Loan Fund (RLF)	Applications for brownfield cleanup assistance through the RLF are accepted on a rolling basis, with roughly \$1.7 million available as of November 2012. Loans are available to eligible private parties, while eligible municipalities, redevelopment authorities and nonprofits can receive assistance through loans, subgrants, or a combination of the two.	PVPC	 
Continue quarterly meetings of the Regional Brownfield Advisory Committee	Facilitate regional coordination of technical assistance for brownfield assessments, cleanup and redevelopment.	PVPC	 
Transit Oriented Development	Advance Transit Oriented Development (TOD) in urban centers to support redevelopment	PVPC, Municipalities	 
ABI Specific Strategies			
<i>Amherst Center and North Amherst</i>			

Site Cleanup	Pelham Road at Fort River Crossing/ former Manufactured Coal Gasification plant	Amherst Planning Department	  
Phase I Site Assessments	College Street at Fort hill auto and other auto sites on College Street; WMECO site on College Street; Main Street – Depot Site; North Amherst – various automotive sites; Several South Amherst farms.	Amherst Planning Department	 
<i>Belchertown Center</i>			
Site Cleanup	Belchertown State School – asbestos removal	Belchertown Planning Department	  
Develop Brownfield Inventory	Conduct inventory of potential brownfield sites for Phase I Site Assessments	Belchertown Planning Department	 
<i>Chicopee Center and Chicopee Falls</i>			
Site Redevelopment	Advance Phase I redevelopment at Facemate including Senior Center Construction and private mixed use redevelopment; Initiate Uniroyal Phase II redevelopment as appropriate; Advance redevelopment at Cabotville and Lyman Mills including needed infrastructure improvements; Advance site acquisition, assessment, and any required cleanup to develop proposed canal walk fronting mills; Develop and implement a marketing plan for Downtown and West End; Advance discussions about access to the delta properties including the train viaduct crossing; Support infill projects throughout neighborhoods	Chicopee Office of Community Department; Planning Department	   
Site Cleanup	Advance hazardous building material abatement and demolition of remaining Uniroyal structures; Apply for Cleanup Grants after site assessments, as needed; Advance assessment and cleanup at Delta Park and former Hampton Steam Plant properties;	Chicopee Office of Community Department; Planning Department	  
Site Assessment	Continue working with Michelin N.A. to complete environmental assessment and required cleanup; Prioritize Downtown West End	Chicopee Office of Community Department; Planning	 

	brownfields for assessment under EPA Community –Wide Assessment Grant;	Department	
<i>Willimansett, Chicopee</i>			
Develop Brownfield Inventory	Develop brownfield inventory for Willimansett neighborhood and Chicopee Street	Chicopee Office of Community Development; Planning Department	
Site Assessment and Cleanup Planning	Conduct Phase I site assessments on inventories sites; Perform Phase II assessments and cleanup planning as needed.	Chicopee Office of Community Development; Planning Department	
Redevelopment Planning	Redevelopment planning for RAO sites; Apply for EPA Area-wide Planning Grant for prioritized sites	Chicopee Office of Community Development; Planning Department	
<i>Downtown Easthampton</i>			
Redevelopment Planning	154-158 Everett Street	Easthampton Planning Department	
Site Cleanup	Building hazardous material cleanup at 1 Ferry Street, Hampton Mills	Site Owner; Easthampton Planning Department	
Site Assessment	Phase II site assessment at Easthampton Wastewater Treatment Plant; cleanup as needed	Easthampton Planning Department	
<i>Downtown Holyoke</i>			
Redevelopment Planning	Close out 84 Sargeant Street and make ready for redevelopment, which may include demolition; Assess vacant lots for potential community garden construction in partnership with Nuestras Raices.	Holyoke Planning Department; Nuestras Raices	
Site Cleanup	Initiate cleanup at 37 Appleton Street; Hazardous material removal at train station; Removal of fire damaged material from 277 Main Street; Complete remediation at 191 Appleton Street; Perform cleanup at Former Mountain Road Firing Range	Holyoke Planning Department	
Site Assessment	Site assessment and cleanup at 216 Appleton Street, which may include partial demolition; Complete Phase II site assessment at 68g Main Street, and site cleanup;	Holyoke Planning Department	

<i>Downtown Northampton</i>			
Site Assessment	Roundhouse Parking Lot- continued site assessment, cleanup and redevelopment planning; Hampton Avenue Parking Lot – continued site assessment, cleanup and redevelopment planning; Hampton Avenue Parking Lot – continued site assessment, cleanup and redevelopment planning; 459 Pleasant Street – Continued site assessment, cleanup and redevelopment planning; King Street (former Honda Auto Dealership) – site assessment, cleanup and redevelopment planning	Northampton Planning Department	 
<i>Downtown Springfield</i>			
Union Station	Complete site cleanup, including partial demolition (baggage warehouse); Site cleanup at adjacent vacant lot (former Hotel Charles); Complete Phase I construction of bus terminal and parking garage; Restore pedestrian tunnel linking the station with train boarding platforms and Lyman Street; Advance Phase II construction including addition of more office and retail space in the terminal building	Springfield Planning Department	   
1600 Main Street	Support City of Springfield efforts to seek private developer	Springfield Planning Department	
<i>East Springfield</i>			
Memorial industrial Park II	Support Springfield Redevelopment Authority's efforts to redevelop 650,000 sq.ft. of industrial, commercial, general office space, or combination of these uses (new Memorial Industrial Park II)	Springfield Redevelopment Authority; Springfield Planning Department	
1003 St James Street	Support private property owner on-going site assessment at 1003 St James Street	Springfield Planning Department	
Phase I Site Assessment	ES Hobson Street (near 59) NS Rear Bay Street 632-636 Page Blvd NS and ES Page Blvd and Roosevelt Ave NS Boston and Albany Railroad	Springfield Planning Department	 
<i>Forest Park, Springfield</i>			

Phase I Site Assessment	SS Belmont Ave (near 30-34) SS Locust Street (206-212) WS Longhill Street (18-20) 121 Oakland Street & WS Lansing Place WS Randall Place (near 56-68)	Springfield Planning Department	 
<i>Hill, McKnight & Six Corners, Springfield</i>			
Phase II Site Assessment, and cleanup as needed	846 Bay Street 155 Hickory Street Walnut Street sites	Springfield Planning Department	 
Redevelopment Planning	836, 846, 876 Bay Street	Springfield Planning Department	
<i>Indian Orchard, Springfield</i>			
Phase I Site Assessment	241 Main Street NS Cardinal Street (near 139) NS Corthell (near 184) 284 Rear Main Street WS Moxon Street NS Worcester Street (near 950) - Support site assessment and cleanup on privately owned portion of site.	Springfield Planning Department	 
<i>North End, Springfield</i>			
Phase II Site Assessment and Cleanup as needed	Chandler Street (29, 30, 61) WS Main Street (2580-2582) 2505-2495 Main Street	Springfield Planning Department	  
Site Redevelopment Planning	Promote site redevelopment on Dwight Street properties; Identify redevelopment options for: <ul style="list-style-type: none"> o ES Main Street (2353-2365) o ES Main Street (2931-2947) 	Springfield Planning Department	
Phase I Site Assessment	14 Grosvenor Street 11 Grosvenor Street and 1061 Dwight Street Rear End Napier Street NS 40 Napier Street 12 Sheldon Street NS Carew Street (136) Rear 2702-2708 Main Street	Springfield Planning Department	 
<i>South End, Springfield</i>			
Redevelopment Planning	Support implementation of the South End Urban Renewal Plan to promote private investment throughout the neighborhood; Identify redevelopment options for the Gemini Site; Support Springfield Redevelopment	Springfield Redevelopment Authority; Springfield Planning Department	

	Authority's efforts to seek Gemini site developer;		
Site Assessment	Prioritize site assessment and cleanup at inventoried sites.	Springfield Planning Department	 
<i>Ludlow Center</i>			
Site Cleanup	Ludlow Mills – newly designated Brownfield Support Team (BST) site; continued site cleanup and removal of hazardous building materials	Westmass Area Redevelopment Corporation; MassDEP BST	  
<i>Downtown Ware</i>			
Site Assessment and Cleanup	Monroe Street MCP site – Phase II site assessment and cleanup	Ware Planning Department	  
<i>Downtown Westfield</i>			
Site Cleanup	Perform cleanup at proposed intermodal site (Elm, Arnold and Church Streets) and prepare for mixed use redevelopment	Westfield Planning Department	  
Redevelopment Planning	Advance redevelopment at School Street site (former City Cleaners); Advance redevelopment of 41 Jefferson Street (former machine shop); Advance redevelopment of Columbia site on Cycle Street	Westfield Planning Department	
<i>Merrick and Riverdale, West Springfield</i>			
Trade Center on Union Street	Phase I and II site assessments; cleanup as needed;	West Springfield Planning Department	  
Nondo Tire, Route 5 (north)	Phase I site assessment; Phase II site assessment and cleanup as necessary; redevelopment planning (planned terminus for proposed CT Riverwalk and Bikeway)	West Springfield Planning Department	   
<i>Monson Center</i>			
Site Cleanup	Site Cleanup at 2&3 South Main Street	Monson Planning Department	  
Site Assessment	Omega Processing – Phase II site assessment and cleanup as needed; Hillside School, 29 Thompson Street – Phase I and II site assessments, cleanup, and redevelopment planning	Monson Planning Department	 
<i>Palmer Villages</i>			
	PSC Resources – Phase I and II site assessments; cleanup as needed	Palmer Planning Department	 

IMPLEMENTATION PROJECTS

PROJECT NAME	RESPONSIBLE PARTY	TIMELINE FOR COMPLETION
Petroleum and hazardous material site assessments under PVPC's EPA Brownfield Site Assessment Grant	PVPC received \$400,000 in site assessment from EPA in 2012. An RFP for a Licensed Site Professional will be issued in early 2013. Municipalities will be solicited to apply for site assessments under this program by March 2013.	2013-2015
Continued operation of PVPC's Brownfield Revolving Loan Fund	Applications for brownfield cleanup assistance through the RLF are accepted on a rolling basis, with roughly \$1.7 million available as of November 2012. Loans are available to eligible private parties, while eligible municipalities, redevelopment authorities and nonprofits can receive assistance through loans, subgrants, or a combination of the two.	2013-2020
Continue quarterly meetings of the Regional Brownfield Advisory Committee	Facilitate regional coordination of technical assistance for brownfield assessments, cleanup and redevelopment.	2013-2020
Petroleum and hazardous material site assessments under PVPC's EPA Brownfield Site Assessment Grant	PVPC received \$400,000 in site assessment from EPA in 2012. An RFP for a Licensed Site Professional will be issued in early 2013. Municipalities will be solicited to apply for site assessments under this program by March 2013.	2013-2015

APPENDIX A ABI FACTSHEETS

Amherst Center
Belchertown Center
Chicopee Center and Chicopee Falls
Willimansett, Chicopee
Downtown Easthampton
Downtown Holyoke
Downtown Northampton
Downtown Springfield
East Springfield
Forest Park, Springfield
Hill-McKnight and Six Corners, Springfield
Indian Orchard, Springfield
North End, Springfield
South End, Springfield
Ludlow Center
Downtown Ware
Downtown Westfield
Merrick and Riverdale, West Springfield
Monson Center
Palmer Villages

APPENDIX B MAP DATA SOURCES AND METADATA

Areas of Brownfield Interest (ABIs) were identified using a GIS based analysis matrix that considered land use history, environmental justice populations, proximity to contaminated sites, density of contaminated sites, and proximity to a site that has received some level of brownfield assistance.

Topic: Land Use History

Source: MassGIS, Land Use (2005) & Land Use (1951 – 1999) layers

Date: Downloaded 8/2011

Summary: Layer displays categorized land use patterns for 1971, 1985, 1999 and 2005 (incomplete 1951 data set was not used)

Notes: Areas designated 'Industrial' on the maps were categorized as industrial (lucode 16) or waste disposal (lucode 19) in any year. Areas designated 'Commercial or Transportation' on the maps were categorized as commercial (lucode 15), mining (lucode 5), transportation (lucode 18), powerline/utility (lucode 24), transitional [often vacant lots] (lucode 17) or junkyard (lucode 39) in any year. Note: land that transitioned from 'Industrial' to 'Commercial or Transportation' (or vice versa) over time was classified for this analysis as 'Industrial.'

Topic: Contaminated Sites: Proximity & Contaminated Sites: Density

Source: MassDEP, BWSC_ALL layer

Date: Received from MassDEP GIS staff 1/2012

Summary: Layer displays tier-classified Chapter 21E sites that have been mapped by MassDEP staff

Notes: Sites designated 'Open' on the maps had any status other than RAO, ADQREG, DEPNFA, DEPND5, LSPNFA, PENNDS, or RAONR. Note: this layer includes a subset of the full Chapter 21E site universe; most 21E sites are not mapped by MassDEP. Spatial buffers for Proximity analysis were 250m and 500m. Density analysis was performed by calculating the number of sites present within each feature of a grid composed of 1km squares.

Topic: Environmental Justice

Source: Pioneer Valley Metropolitan Planning Organization, Poverty 2009 & Minority 2009 layers

Date: Received from PVPC/MPO GIS staff 1/2012

Summary: Layer displays Environmental Justice communities as designated in 2012 Regional Transportation Plan (published 2011)

Notes: Areas designated 'Environmental Justice Areas' on the maps are composed of US Census 2000 block groups with a poverty rate in 2000 higher than the regional average (13.5%) and/or a minority population share higher than the regional average (21.9%).

Topic: Assisted Brownfields: Proximity

Sources: Composite layer from three sources. MassDEP, Brownfields_CF_111123 layer: MassDevelopment, FY2008 through FY2010 annual reports: US EPA website

Date: Received layer from MassDEP GIS staff 1/2012: received reports from MassDevelopment 9/2011: researched information on US EPA website 8/2011

Summary: Layer displays all known sites assisted through US EPA and MassDevelopment's brownfields grant/loan programs and all sites that have received information, technical assistance or targeted enforcement actions through MassDEP's brownfields program.

Notes: MassDEP Brownfields information was received as a GIS data layer, based in part on the BWSC_ALL layer mentioned above (other sites were added through address matching and manually, using aerial photos as a base map). MassDevelopment and US EPA data were compiled manually onto spreadsheets and mapped using address matching. Spatial buffers for Proximity analysis were 250m and 500m.

Topic: ABI Scores

Source: Composite of the layers described above
Date: Created 1/2012
Summary: Layer displays land areas scored as described in the ABI Analysis Matrix
Notes: The score layer was created through an overlay analysis of the layers described above.
Maximum (indicating highest brownfields interest) score is 26, minimum score is 0.

Display-Only Data Layers

Topic: Roads

Source: MassGIS, MassDOT Roads & US Census TIGER Roads layers
Date: Downloaded 8/2011
Summary: Shows regional road network

Topic: Water Bodies

Source: MassGIS, MassDEP Hydrography (1:25,000) layer
Date: Downloaded 8/2011
Summary: Shows regional waterways

Topic: Town Boundaries

Source: MassGIS, Community Boundaries (Towns) layer
Date: Downloaded 8/2011
Summary: Shows boundaries of Pioneer Valley cities and towns

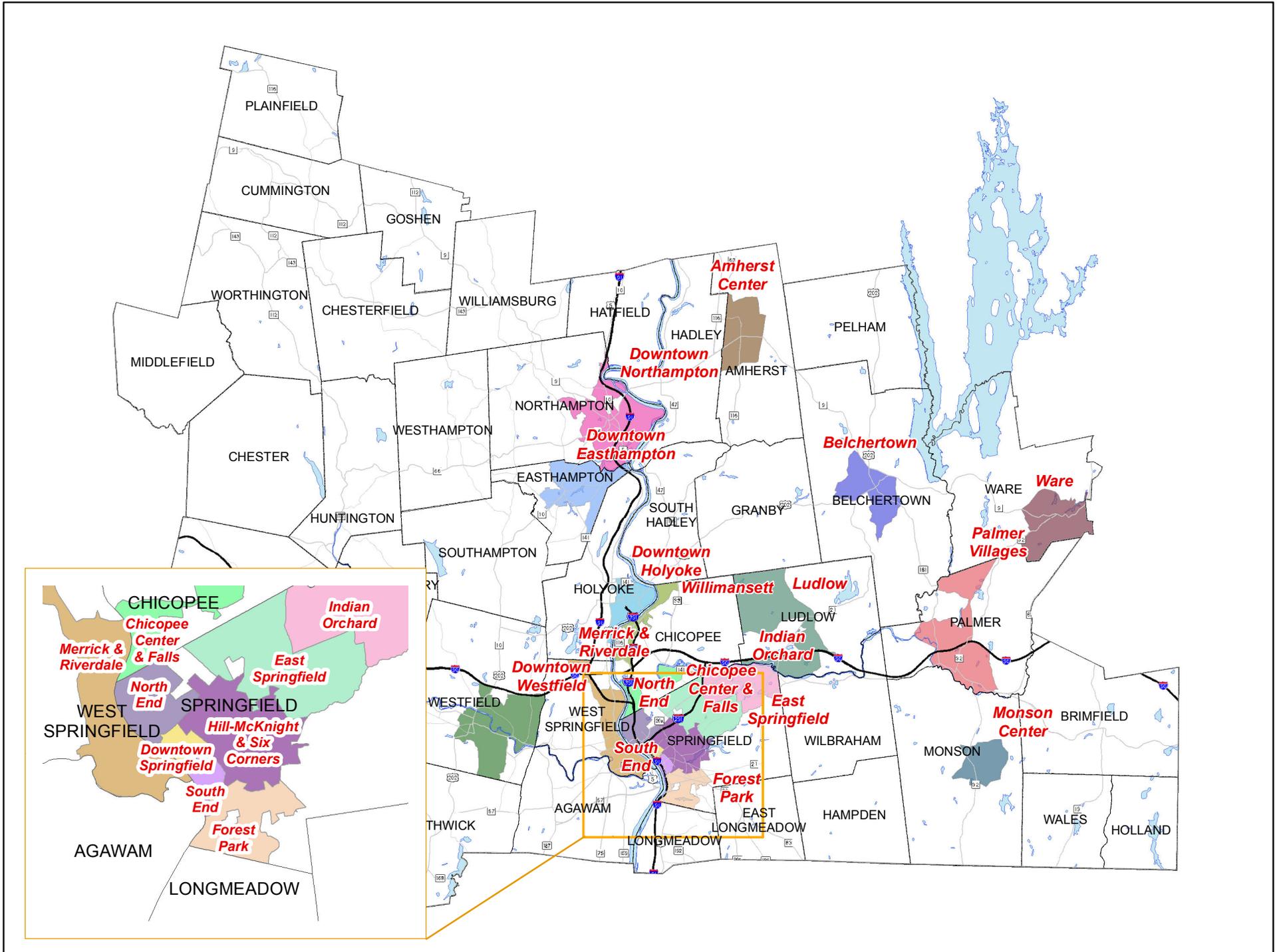
Topic: Open Space

Source: MassGIS, Protected and Recreational Open Space layer
Date: Downloaded 8/2011
Summary: Shows protected lands within Pioneer Valley

Topic: Census Block Groups

Source: MassGIS, Data Layers from the 2010 US Census
Date: Downloaded 8/2011
Summary: Shows 2010 census block group boundaries

SKC Element Plan Work Map

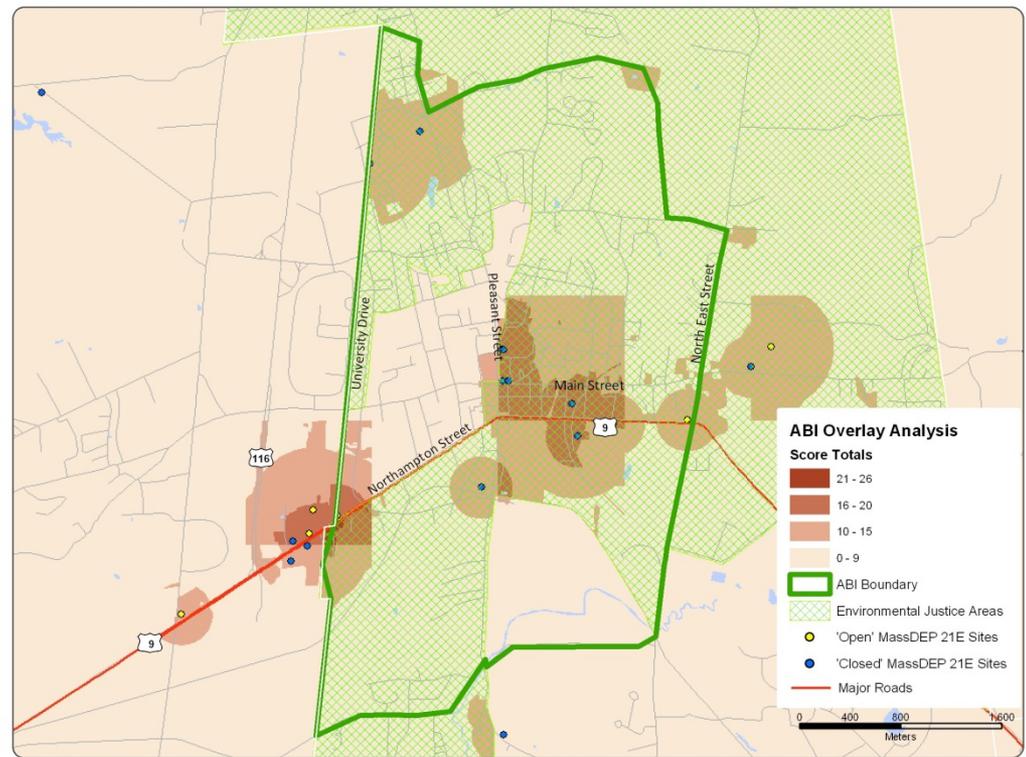


ABI: Amherst Center

Includes North Amherst

Key Known or Suspected Brownfield Sites:

- Pelham Road at Fort River Crossing
- College Street at Fort Hill Auto and other automotive sites on College Street
- WMECO site on College Street
- Main Street – Depot Site
- North Amherst – various automotive sites (past and current) including filling stations, salvage yards, car repair shops and towing yards
- Several South Amherst farms



Brownfield Indicators

	Amherst Center ABI	All ABIs	PV Region
DEP tier-classified 21e sites	15	524	855
Open tier-classified 21e sites	3	148	230
EPA assisted BF projects	0	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	0	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	22	26	26
Historic industrial land (acres)	22	4,896	9,910

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



**Pioneer Valley
Planning Commission**

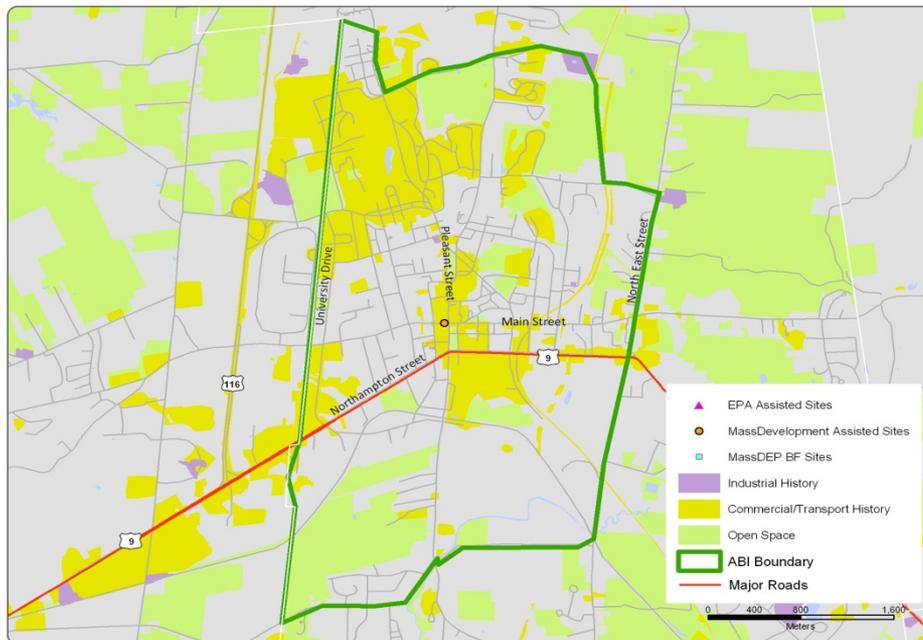
Demographic Indicators

	Amherst Center ABI	All ABIs	PV Region
Total Population	19,065	247,841	621,570
% White or Caucasian	79.5%	68.9%	79.6%
% People of Color	20.5%	31.1%	20.4%
% Latino or Hispanic	6.1%	26.1%	16.8%
% under Age 18	5.3%	24.2%	21.9%
% Age 65 or above	5.9%	10.8%	13.8%
% in Rental housing	60.7%	57.4%	34.0%
% of Households under \$10,000 in income	14.2%	15.8%	9.0%
% of Households under \$30,000 in income	43.3%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

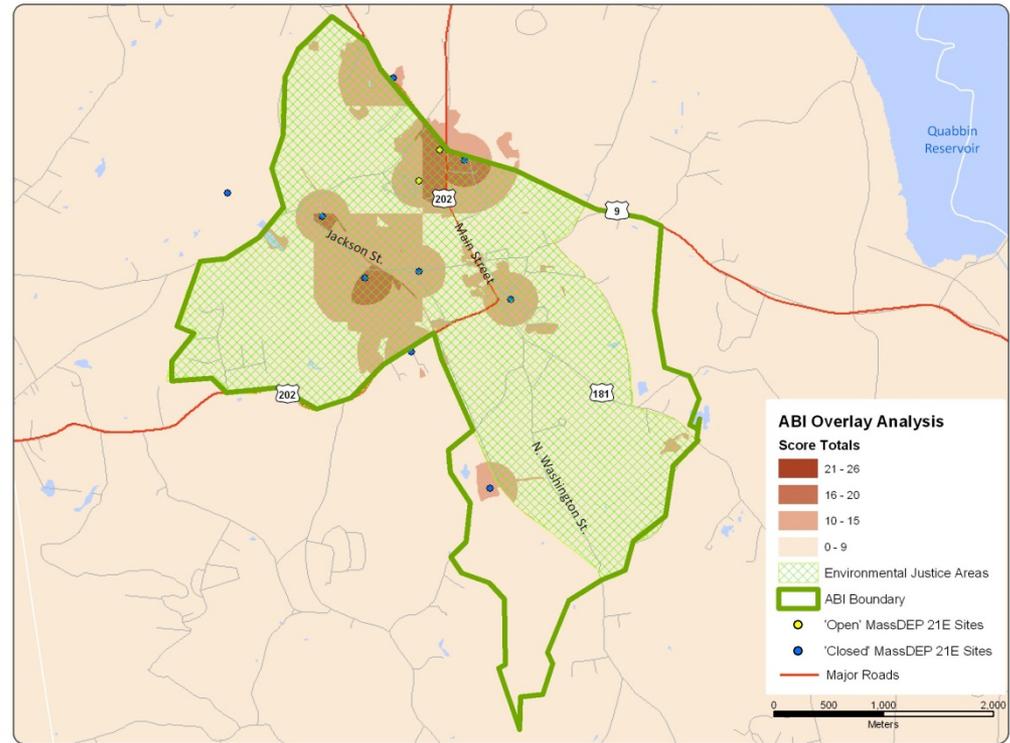
- Pelham Road at Fort River Crossing – cleanup at former coal gasification plant
- Phase I Site Assessments:
 - College Street at Fort Hill Auto and other automotive sites on College Street
 - WMECO site on College Street
 - Main Street – Depot Site
 - North Amherst – various automotive sites (past and current) including filling stations, salvage yards, car repair shops and towing yards
 - Several South Amherst farms



ABI: Belchertown Center

Key Known or Suspected Brownfield Sites:

- Belchertown State School



Brownfield Indicators

	Belchertown ABI	All ABIs	PV Region
DEP tier-classified 21e sites	8	524	855
Open tier-classified 21e sites	2	148	230
EPA assisted BF projects	0	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	1	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	20	26	26
Historic industrial land (acres)	46	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

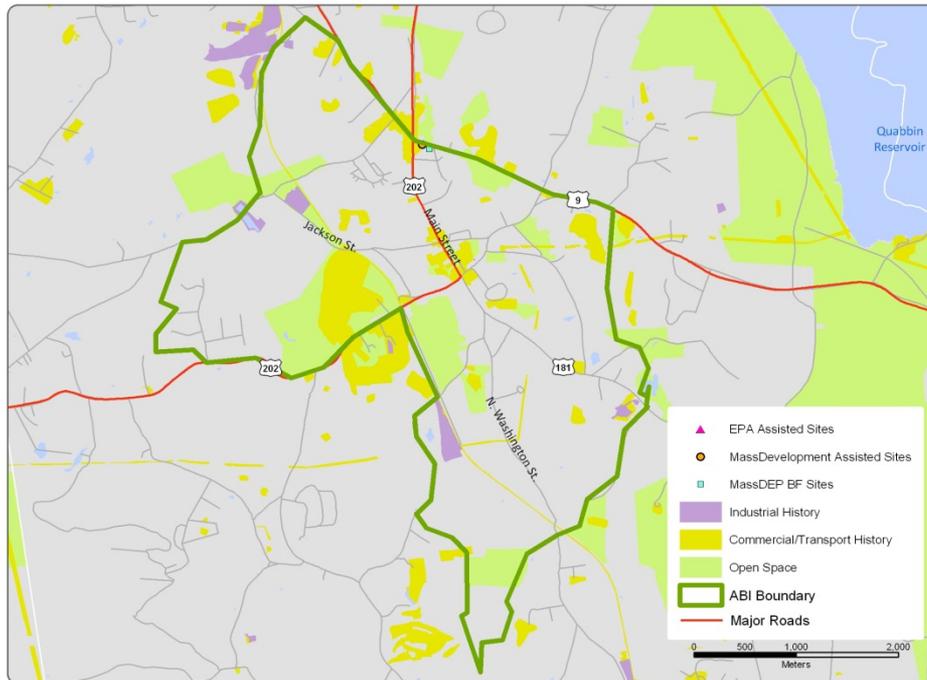
Demographic Indicators

	Belchertown ABI	All ABIs	PV Region
Total Population	6,170	247,841	621,570
% White or Caucasian	95.0%	68.9%	79.6%
% People of Color	5.0%	31.1%	20.4%
% Latino or Hispanic	3.4%	26.1%	16.8%
% under Age 18	23.2%	24.2%	21.9%
% Age 65 or above	15.5%	10.8%	13.8%
% in Rental housing	44.3%	57.4%	34.0%
% of Households under \$10,000 in income	6.9%	15.8%	9.0%
% of Households under \$30,000 in income	35.1%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

- Belchertown State School – Known asbestos problem; site cleanup
- Conduct inventory of potential brownfield sites for Phase I assessments



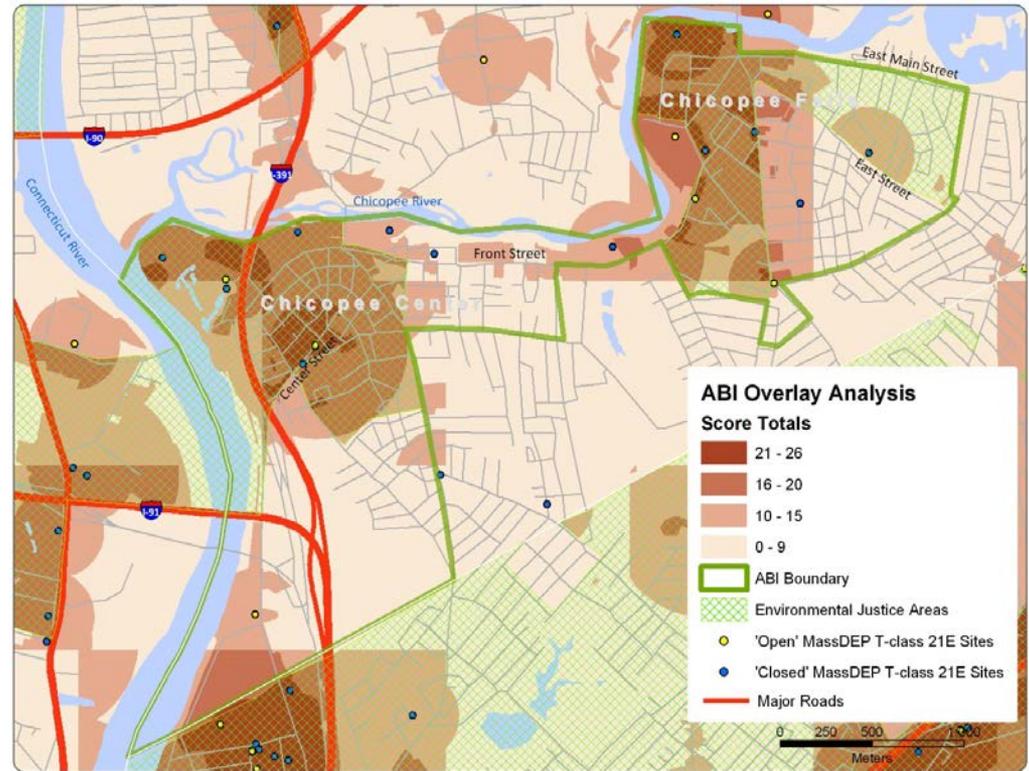
ABI: Chicopee Center & Chicopee Falls

Key Known or Suspected Brownfield Sites:

- Former Uniroyal property, Oak Street
- Former Facemate property, Main Street
- Former Savage Arms, Main Street
- Cabotville Mill complex , Front Street
- City Frontage, Front Street
- Lyman Paper Complex , Depot Street
- Former Delta Industrial Park, Depot Street
- Former Hampden Steam Plant, Depot Street
- Riverfront Property, Exchange Street

Infill Brownfields:

- Former Mobil Service Station, Center Street
- Former Racing Oil, Center Street
- City Water Department, Tremont Street



Brownfield Indicators

	Chicopee Center & Falls ABI	All ABIs	PV Region
DEP tier-classified 21e sites	22	524	855
Open tier-classified 21e sites	7	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	4	59	69
DEP BF sites	10	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	25	26	26
Historic industrial land (acres)	216	4896	9910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

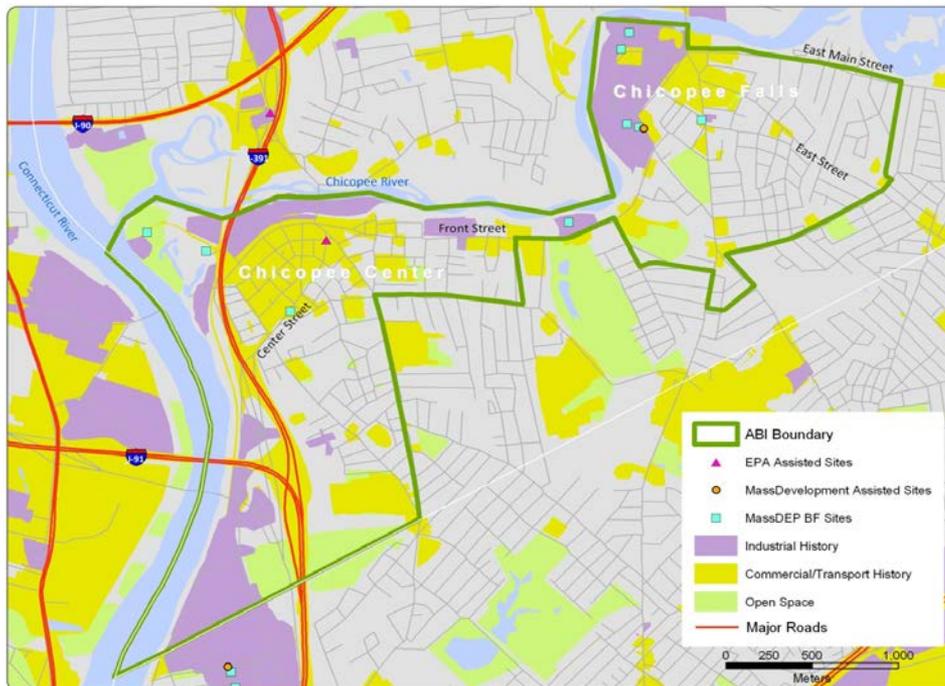


**Pioneer Valley
Planning Commission**

Demographic Indicators

	Chicopee Center & Falls ABI	All ABIs	PV Region
Total Population	10,936	247,841	621,570
% White or Caucasian	83.8%	68.9%	79.6%
% People of Color	16.2%	31.1%	20.4%
% Latino or Hispanic	16.5%	26.1%	16.8%
% under Age 18	24.3%	24.2%	21.9%
% Age 65 or above	13.1%	10.8%	13.8%
% in Rental housing	63.7%	57.4%	34.0%
% of Households under \$10,000 in income	14.1%	15.8%	9.0%
% of Households under \$30,000 in income	45.8%	46.0%	22.7%

Data from 2010 US Census (Income data from 20105-year ACS estimates)



Recommended Actions:

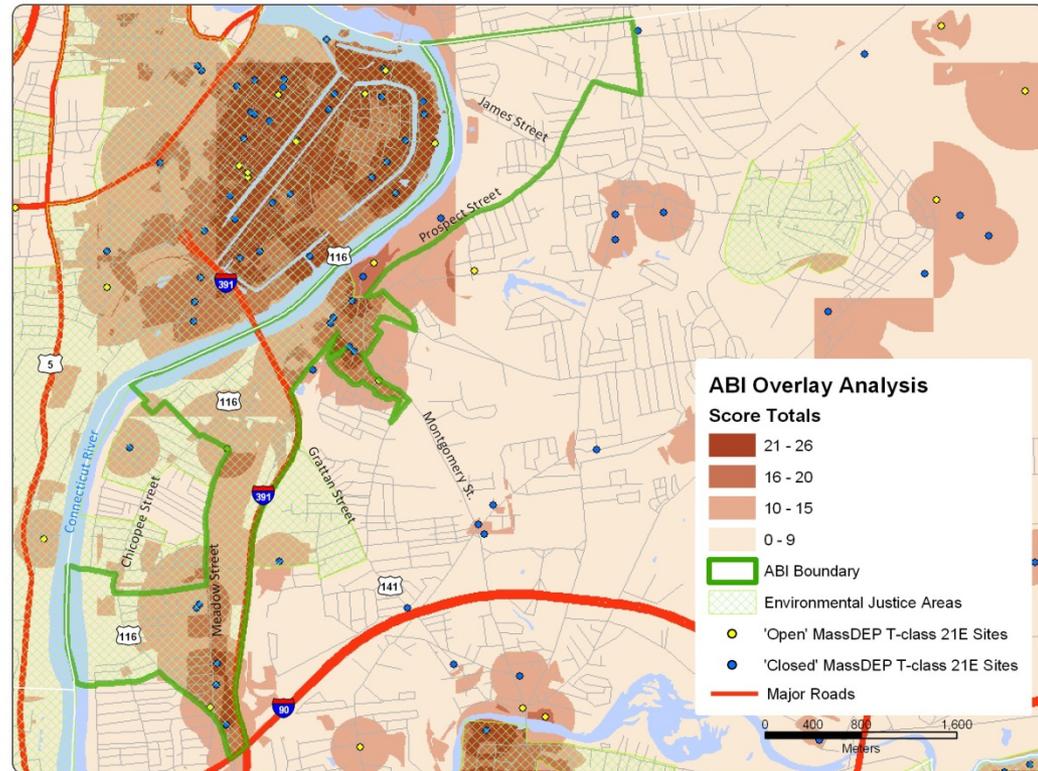
- **Implement RiverMills Master Plan -**
 - Advance Phase I redevelopment at Facemate including Senior Center Construction and private mixed use redevelopment
 - Advance hazardous building material abatement and demolition of remaining Uniroyal structures
 - Continue working with Michelin N.A. to complete environmental assessment and required cleanup
 - Initiate Phase II redevelopment (Uniroyal) as appropriate

- **Implement Chicopee AWP Recommendations –**
 - Advance redevelopment at Cabotville and Lyman Mills including needed infrastructure improvements
 - Advance site acquisition, assessment, and any required cleanup to develop proposed canal walk fronting mills
 - Develop and implement a marketing plan for Downtown and West End
 - Prioritize AWP brownfields for assessment under EPA Community –Wide Assessment Grant
 - Apply for Cleanup Grants as needed
 - Advance assessment and cleanup at Delta Park and former Hampton Steam Plant properties
 - Advance discussions about access to the delta properties including the train viaduct crossing
 - Support infill projects throughout neighborhoods

ABI: Willimansett (City of Chicopee)

Key Known or Suspected Brownfield Sites:

- Hallahan Property, 875 Meadow Street
- A&R Automotive, 165 East Meadow Street
- Chicopee Industrial Contractors, 107 North Chicopee Street
- North Chicopee Street properties – former industrial properties adjacent to ABI
- Meadow Street industrial corridor
- Willamansett Waste, Narragansett Street
- Former Westover Greenhouses, Chicopee Street



Brownfield Indicators

	Willimansett ABI	All ABIs	PV Region
DEP tier-classified 21e sites	16	524	855
Open tier-classified 21e sites	3	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	3	59	69
DEP BF sites	5	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	24	26	26
Historic industrial land (acres)	215	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

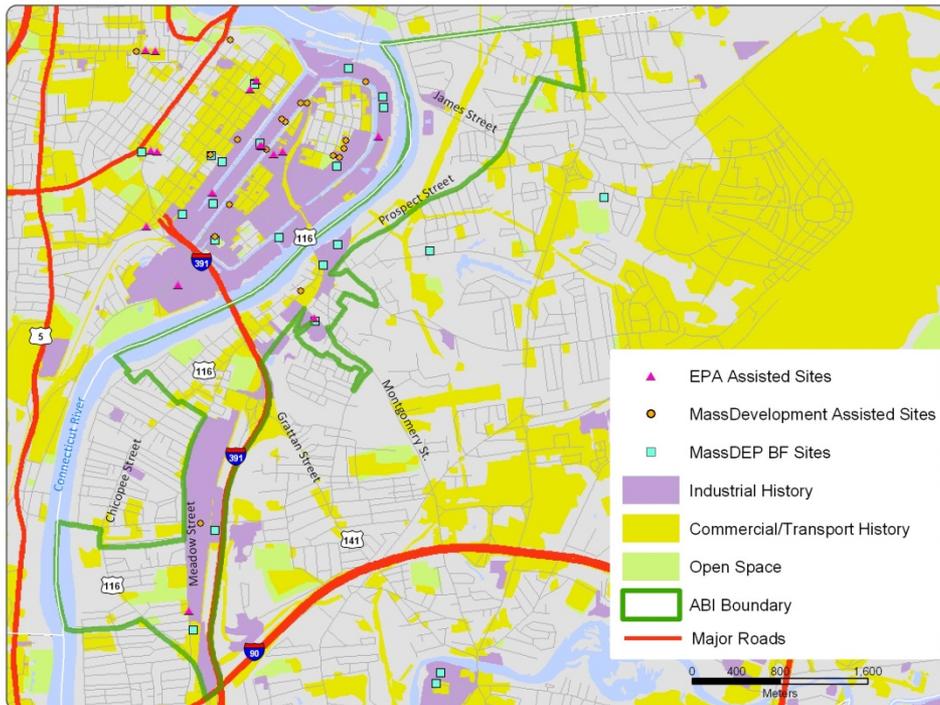
Demographic Indicators

	Willimansett ABI	All ABIs	PV Region
Total Population	7,915	247,841	621,570
% White or Caucasian	83.5%	68.9%	79.6%
% People of Color	16.5%	31.1%	20.4%
% Latino or Hispanic	22.9%	26.1%	16.8%
% under Age 18	25.0%	24.2%	21.9%
% Age 65 or above	11.7%	10.8%	13.8%
% in Rental housing	59.1%	57.4%	34.0%
% of Households under \$10,000 in income	14.0%	15.8%	9.0%
% of Households under \$30,000 in income	47.7%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

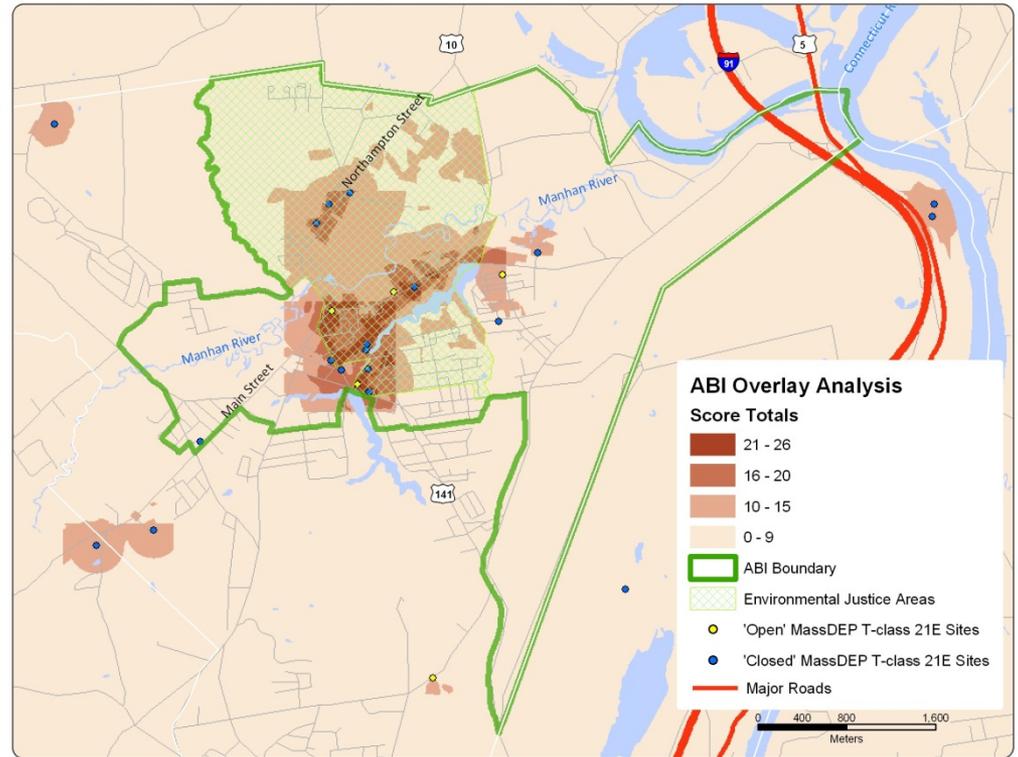
- Develop complete brownfield inventory for ABI and Chicopee Street
- Advance site assessments
- Advance site cleanup
- Support redevelopment of RAO sites
- Consider planning to apply for EPA Area-wide Planning Grant for prioritized sites



ABI: Downtown Easthampton

Key Known or Suspected Brownfield Sites:

- 154-158 Everett Street
- 1 Ferry Street, Hampton Mills
- Easthampton Wastewater Treatment Plant



	Brownfields		
	Downtown Easthampton ABI	All ABIs	PV Region
DEP tier-classified 21e sites	17	524	855
Open tier-classified 21e sites	4	148	230
EPA assisted BF projects	1	63	70
MDFA assisted BF projects	3	59	69
DEP BF sites	4	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	25	26	26
Historic industrial land (acres)	186	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

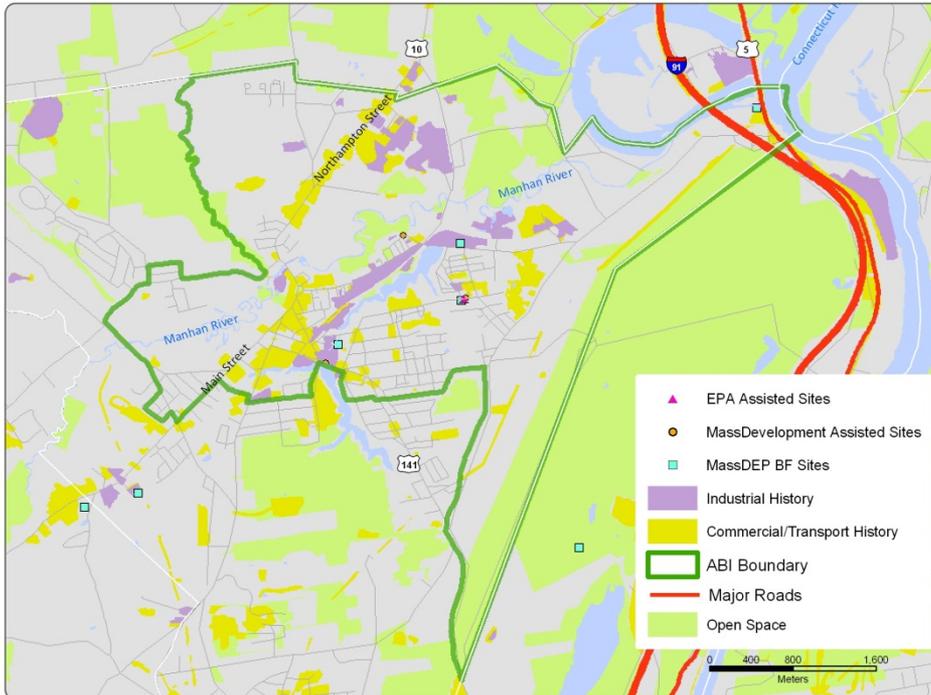
Demographic Indicators

	Downtown Easthampton ABI	All ABIs	PV Region
Total Population	7,754	247,841	621,570
% White or Caucasian	93.5%	68.9%	79.6%
% People of Color	6.5%	31.1%	20.4%
% Latino or Hispanic	3.9%	26.1%	16.8%
% under Age 18	16.9%	24.2%	21.9%
% Age 65 or above	14.1%	10.8%	13.8%
% in Rental housing	49.2%	57.4%	34.0%
% of Households under \$10,000 in income	7.8%	15.8%	9.0%
% of Households under \$30,000 in income	29.6%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

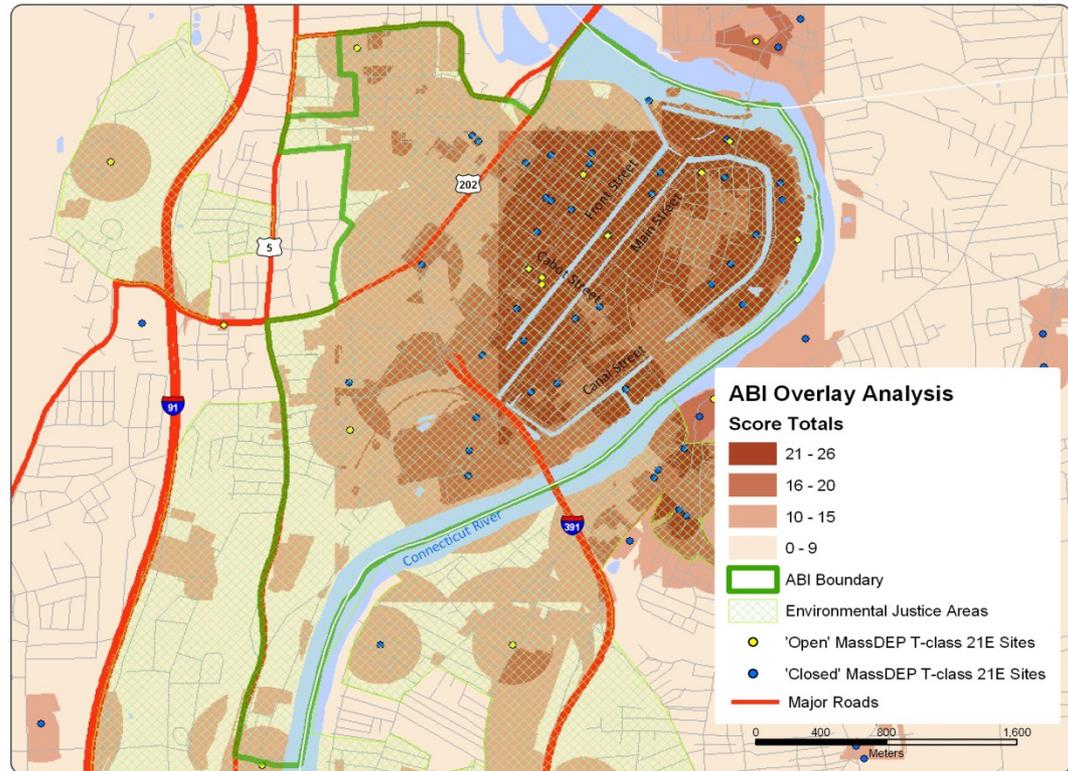
- 154-158 Everett Street – redevelopment planning
- 1 Ferry Street, Hampton Mills – building hazardous material cleanup
- Easthampton Wastewater Treatment Plant – Phase II site assessment, cleanup as needed



ABI: Downtown Holyoke

Key Known or Suspected Brownfield Sites:

- 37 Appleton Street (Worthington Pump)
- 84 Sargeant Street (Parsons Paper)
- 216 Appleton Street (Hart Wool)
- 191 Appleton Street
- 277 Main Street
- 689 Main Street
- 5 Bowers Street
- Rail Platform
- Former Train Station



Brownfield Indicators

	Downtown Holyoke ABI	All ABIs	PV Region
DEP tier-classified 21e sites	49	524	855
Open tier-classified 21e sites	11	148	230
EPA assisted BF projects	15	63	70
MDFA assisted BF projects	16	59	69
DEP BF sites	15	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	26	26	26
Historic industrial land (acres)	511	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

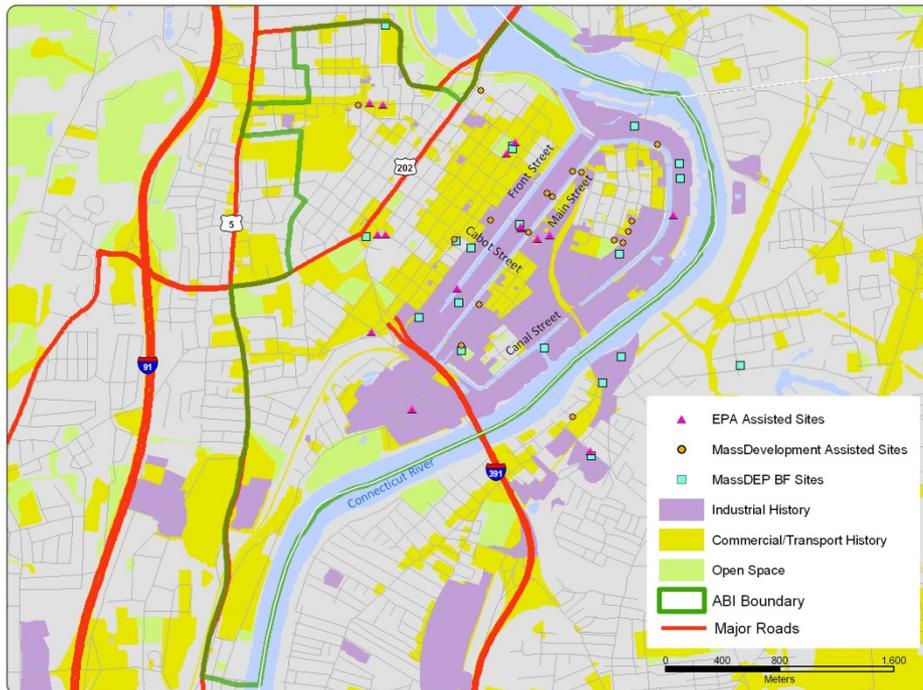


**Pioneer Valley
Planning Commission**

Demographic Indicators

	Downtown Holyoke ABI	All ABIs	PV Region
Total Population	21,060	247,841	621,570
% White or Caucasian	56.4%	68.9%	79.6%
% People of Color	43.6%	31.1%	20.4%
% Latino or Hispanic	63.8%	26.1%	16.8%
% under Age 18	30.8%	24.2%	21.9%
% Age 65 or above	9.1%	10.8%	13.8%
% in Rental housing	75.8%	57.4%	34.0%
% of Households under \$10,000 in income	29.5%	15.8%	9.0%
% of Households under \$30,000 in income	65.7%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



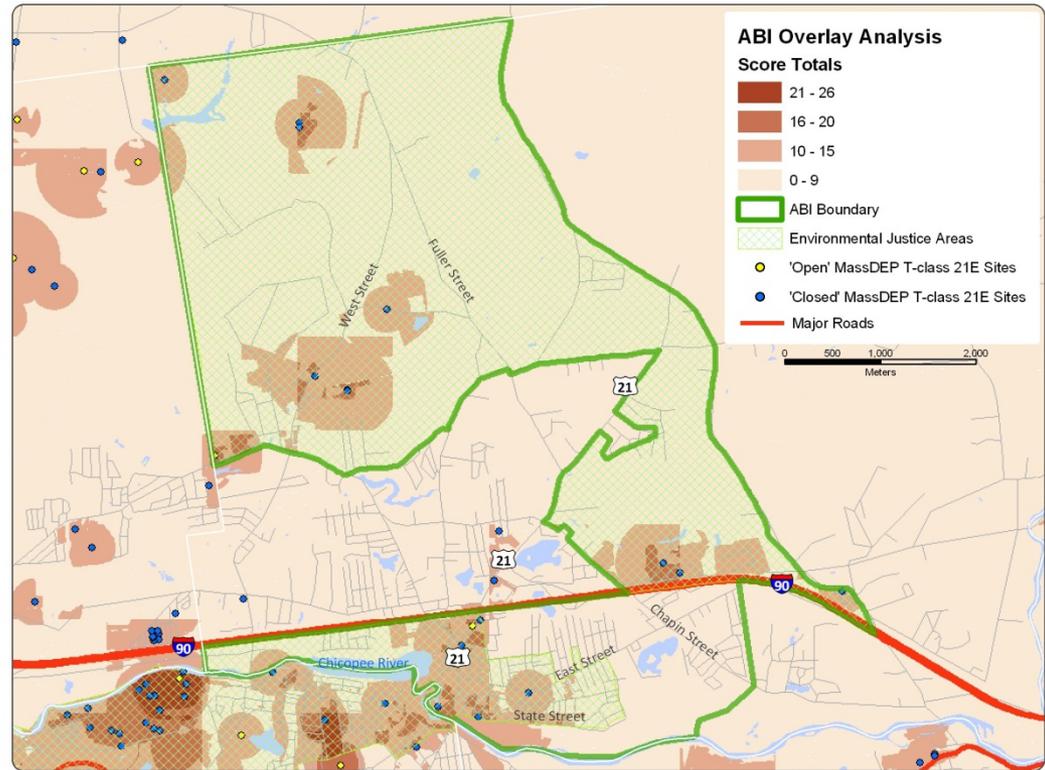
Recommended Actions:

- Close out 84 Sargeant Street and make ready for redevelopment, which may include demolition
- Initiate cleanup at 37 Appleton Street
- Site assessment and cleanup at 216 Appleton Street, which may include partial demolition
- Hazardous material removal at train station
- Removal of fire damaged material from 277 Main Street
- Complete remediation at 191 Appleton Street
- Complete Phase II site assessment at 689 Main Street, and site cleanup
- Perform cleanup at Former Mountain Road Firing Range
- Assess vacant lots for potential community garden construction in partnership with Nuestras Raices

ABI: Ludlow

Key Known or Suspected Brownfield Sites:

- Ludlow Mills



Brownfield Indicators

	Ludlow ABI	All ABIs	PV Region
DEP tier-classified 21e sites	18	524	855
Open tier-classified 21e sites	2	148	230
EPA assisted BF projects	0	63	70
MDFA assisted BF projects	0	59	69
DEP BF sites	2	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	20	26	26
Historic industrial land (acres)	243	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

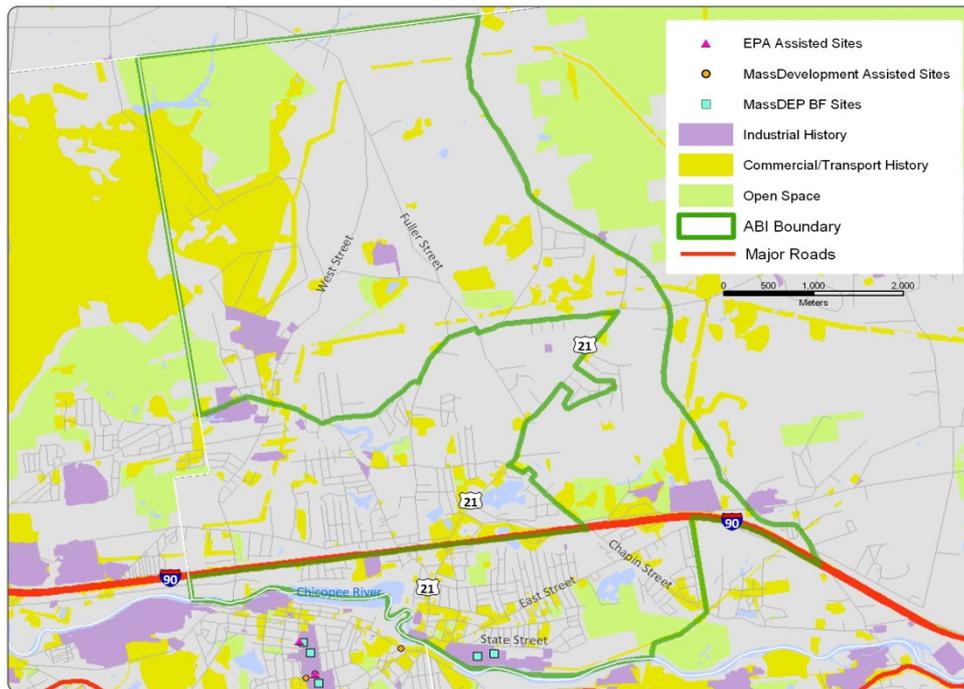
Demographic Indicators

	Ludlow ABI	All ABIs	PV Region
Total Population	10,709	247,841	621,570
% White or Caucasian	91.4%	68.9%	79.6%
% People of Color	8.6%	31.1%	20.4%
% Latino or Hispanic	9.1%	26.1%	16.8%
% under Age 18	17.6%	24.2%	21.9%
% Age 65 or above	16.9%	10.8%	13.8%
% in Rental housing	28.8%	57.4%	34.0%
% of Households under \$10,000 in income	3.6%	15.8%	9.0%
% of Households under \$30,000 in income	24.1%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

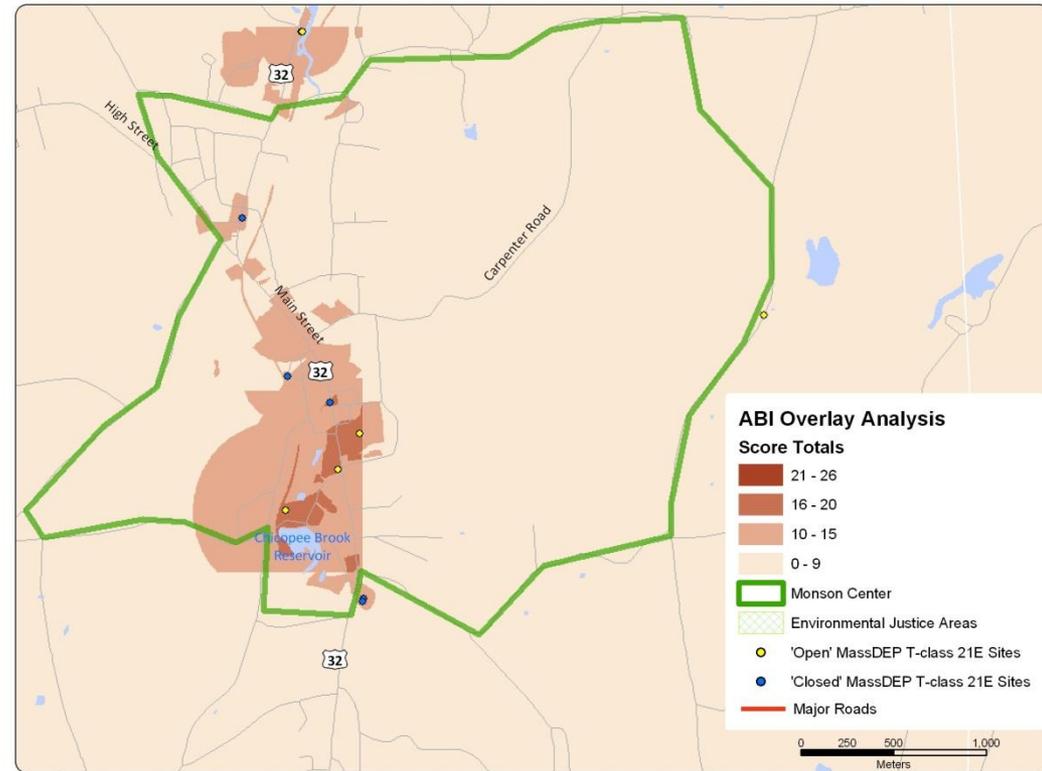
- Ludlow Mills – newly designated Brownfield Support Team (BST) site ; continued site cleanup and removal of hazardous building materials



ABI: Monson Center

Key Known or Suspected Brownfield Sites:

- 2&3 South Main Street
- Omega Processing, 21 Bliss Street
- Cushman Mill, Former M&M Chemical, Cushman Street
- Former Zeros Corporation, South Main Street



Brownfield Indicators

	Monson ABI	All ABIs	PV Region
DEP tier-classified 21e sites	6	524	855
Open tier-classified 21e sites	3	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	2	86	112
EJ area(s) present?	No	Yes	Yes
Max. ABI score	19	26	26
Historic industrial land (acres)	45	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

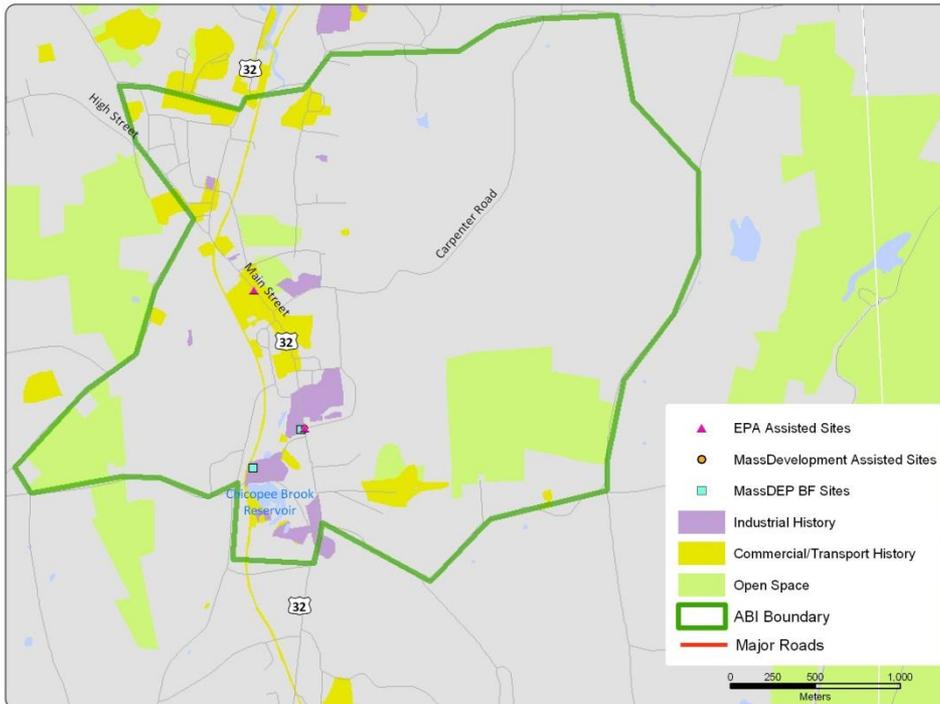


**Pioneer Valley
Planning Commission**

Demographic Indicators

	Monson ABI	All ABIs	PV Region
Total Population	2,899	247,841	621,570
% White or Caucasian	92.6%	68.9%	79.6%
% People of Color	7.4%	31.1%	20.4%
% Latino or Hispanic	2.9%	26.1%	16.8%
% under Age 18	26.3%	24.2%	21.9%
% Age 65 or above	12.1%	10.8%	13.8%
% in Rental housing	31.4%	57.4%	34.0%
% of Households under \$10,000 in income	13.2%	15.8%	9.0%
% of Households under \$30,000 in income	30.8%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



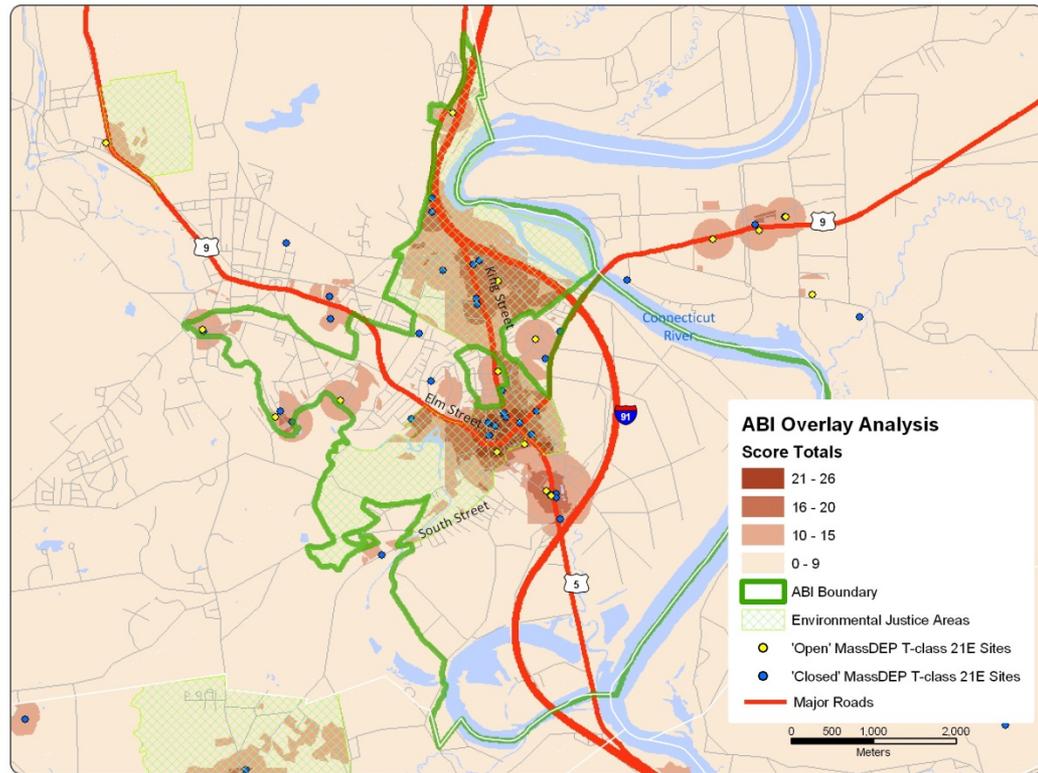
Recommended Actions:

- 2&3 South Main Street – site cleanup
- Omega Processing – Phase II assessment and cleanup as needed
- Cushman Mill, Former M&M Chemical, Cushman Street – assessment, cleanup and redevelopment planning
- Former Zeros Corporation, South Main Street – redevelopment planning

ABI: Downtown Northampton

Key Known or Suspected Brownfield Sites:

- Roundhouse Parking Lot (Manufactured Gas Plant Release)
- Hampton Avenue Parking Lot (Manufactured Gas Plant Release)
- 459 Pleasant Street (Staab Service Station/Pleasant Journey Auto)
- King Street (former Honda Auto Dealership)



Brownfield Indicators

	Downtown Northampton ABI	All ABIs	PV Region
DEP tier-classified 21e sites	35	524	855
Open tier-classified 21e sites	9	148	230
EPA assisted BF projects	5	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	4	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	24	26	26
Historic industrial land (acres)	199	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

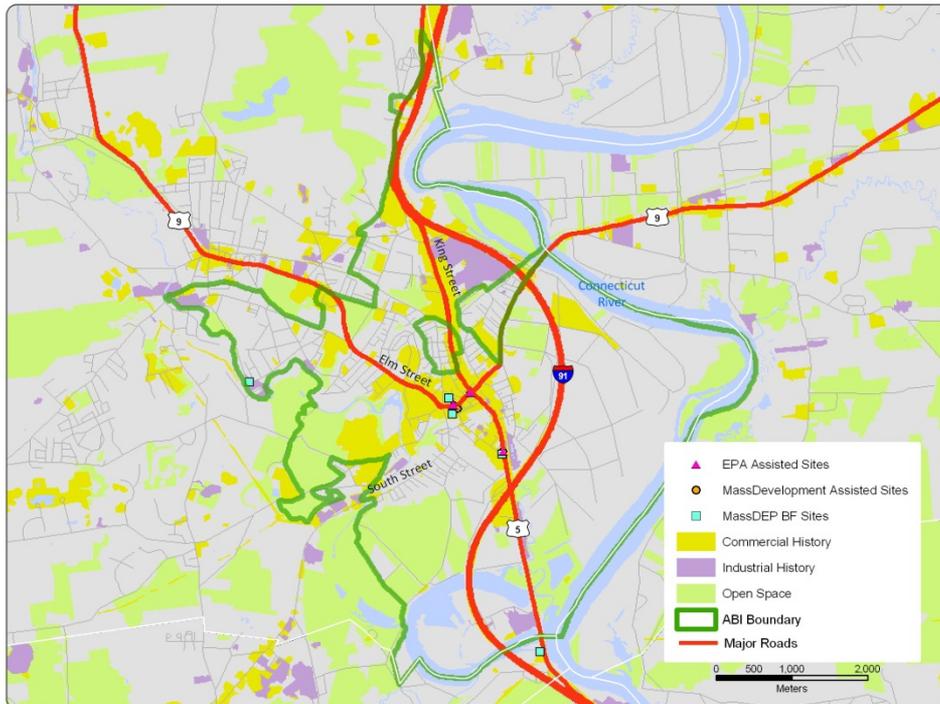


**Pioneer Valley
Planning Commission**

Demographic Indicators

	Downtown Northampton ABI	All ABIs	PV Region
Total Population	13,410	247,841	621,570
% White or Caucasian	85.9%	68.9%	79.6%
% People of Color	14.1%	31.1%	20.4%
% Latino or Hispanic	6.3%	26.1%	16.8%
% under Age 18	13.1%	24.2%	21.9%
% Age 65 or above	10.5%	10.8%	13.8%
% in Rental housing	53.4%	57.4%	34.0%
% of Households under \$10,000 in income	11.4%	15.8%	9.0%
% of Households under \$30,000 in income	21.4%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



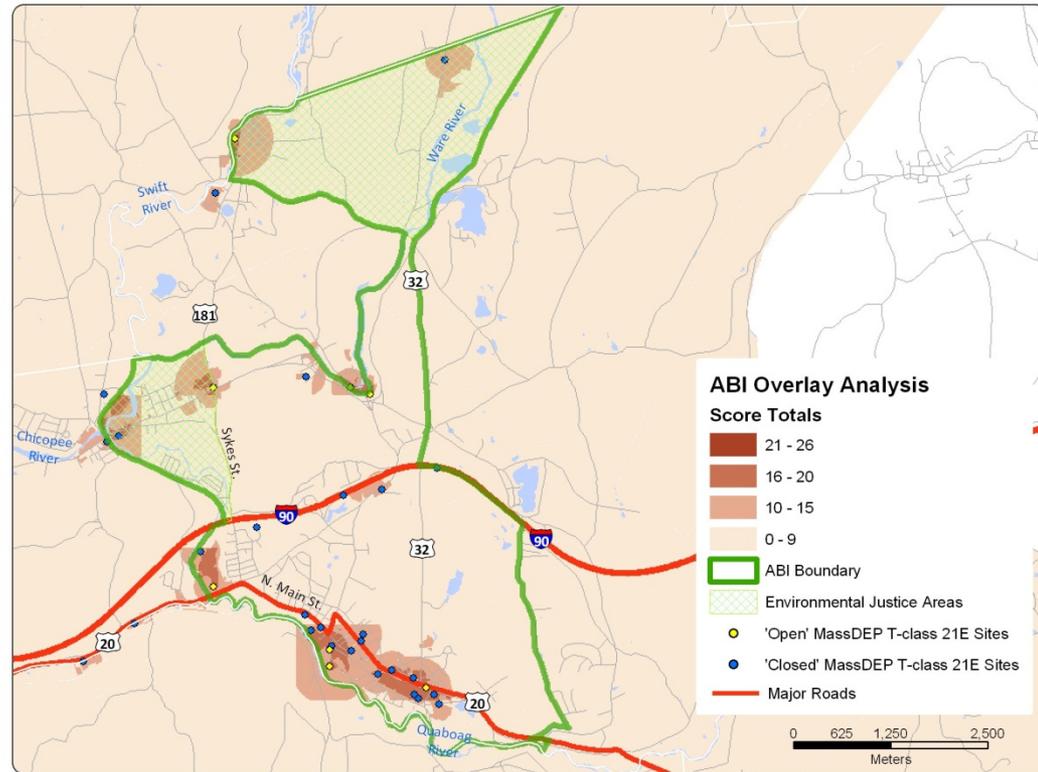
Recommended Actions:

- Roundhouse Parking Lot – Continued site assessment, cleanup and redevelopment planning
- Hampton Avenue Parking Lot (Manufactured Gas Plant Release) – continued site assessment, cleanup, and redevelopment planning
- 459 Pleasant Street – Continued site assessment, cleanup and redevelopment planning
- King Street (former Honda Auto Dealership) – Site assessment, cleanup and redevelopment planning

ABI: Palmer Villages

Key Known or Suspected Brownfield Sites:

- PSC Resources (Tier 1A)



Brownfield Indicators

	Palmer Villages ABI	All ABIs	PV Region
DEP tier-classified 21e sites	31	524	855
Open tier-classified 21e sites	7	148	230
EPA assisted BF projects	0	63	70
MDFA assisted BF projects	0	59	69
DEP BF sites	3	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	19	26	26
Historic industrial land (acres)	228	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
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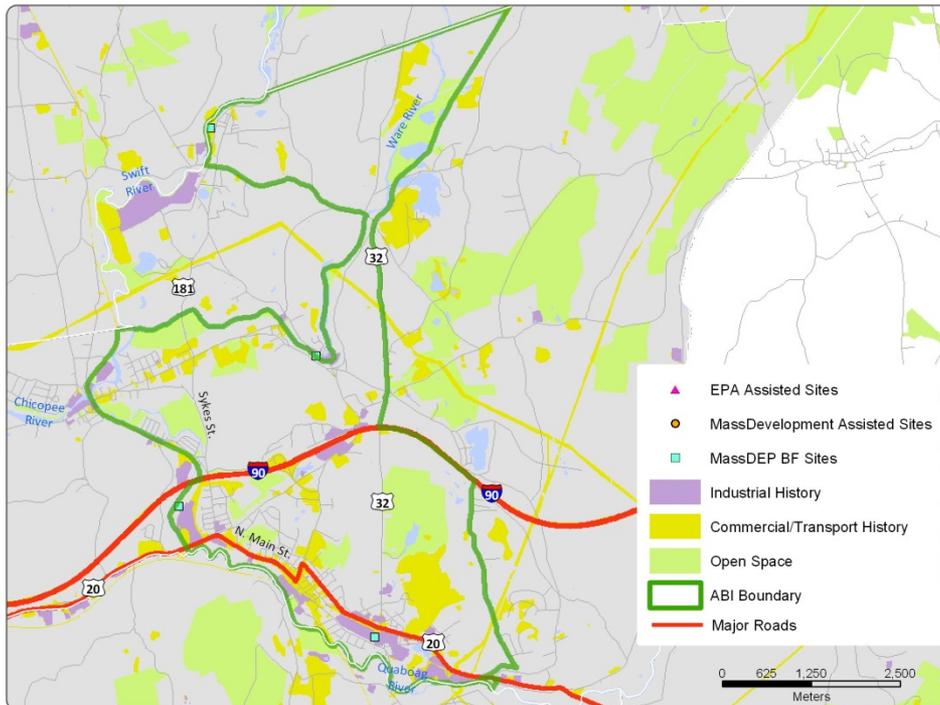
Demographic Indicators

	Palmer Villages ABI	All ABIs	PV Region
Total Population	6,856	247,841	621,570
% White or Caucasian	96.1%	68.9%	79.6%
% People of Color	3.9%	31.1%	20.4%
% Latino or Hispanic	1.7%	26.1%	16.8%
% under Age 18	20.1%	24.2%	21.9%
% Age 65 or above	15.2%	10.8%	13.8%
% in Rental housing	35.5%	57.4%	34.0%
% of Households under \$10,000 in income	9.2%	15.8%	9.0%
% of Households under \$30,000 in income	34.1%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

- PSC Resources – Phase I and II site assessment; cleanup as needed

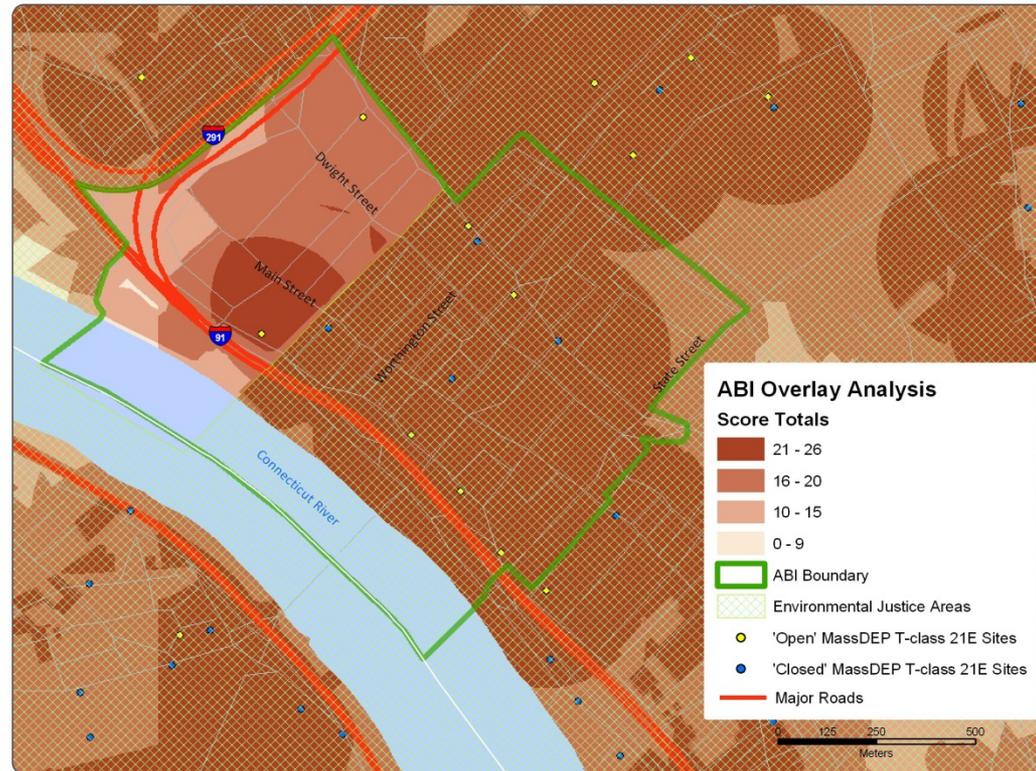


ABI: Downtown Springfield

Includes Metro Center Neighborhood

Key Known or Suspected Brownfield Sites:

- Union Station/Frank B Murray Building
- 1600 Main Street (former Asylum night club)
- 135-141, 151, 155 Lyman Street
- 147 Lyman Street
- NS Winter Street (21-27, 32, 48)
- 680 Worthington Street
- NS Worthington Street (72-80, 740, 744, 750, 756-764, 768-774, 848-850)
- SS Worthington Street (743)
- NS Bliss Street (former Springfield Gas Light Co.)
- ES Chestnut Street (near 232)
- Chestnut Street (141, 151-166)
- WS Sackett Avenue
- Taylor Street (101, 245-247)
- ES Federal Street (121-123)



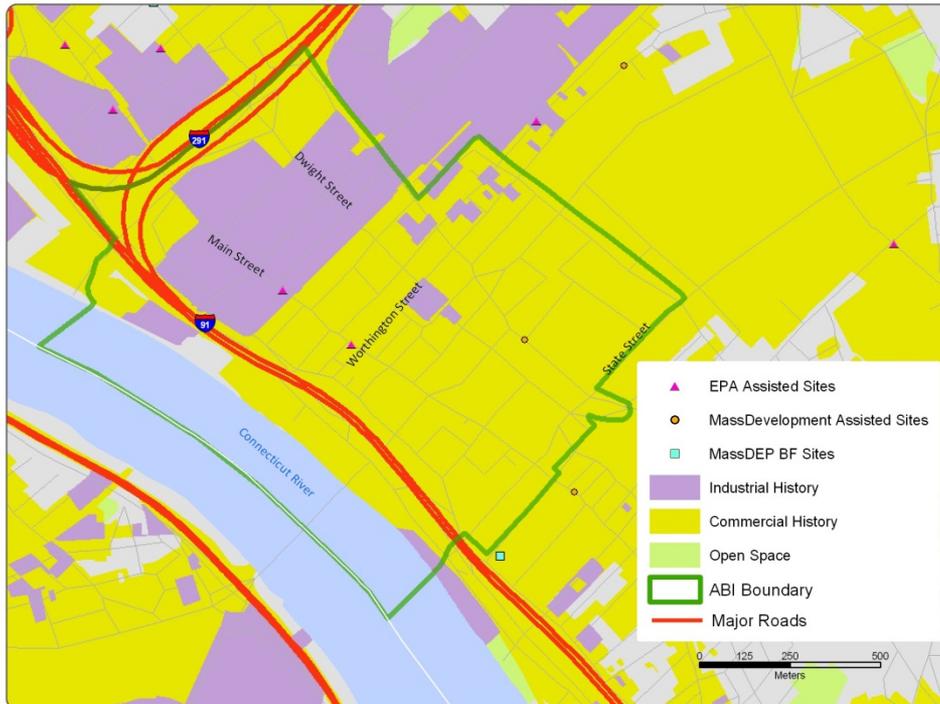
Brownfield Indicators			
	Downtown Springfield ABI	All ABIs	PV Region
DEP tier-classified 21e sites	11	524	855
Open tier-classified 21e sites	7	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	0	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	26	26	26
Historic industrial land (acres)	87	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

Demographic Indicators

	Downtown Springfield ABI	All ABIs	PV Region
Total Population	2,502	247,841	621,570
% White or Caucasian	46.3%	68.9%	79.6%
% People of Color	53.7%	31.1%	20.4%
% Latino or Hispanic	53.8%	26.1%	16.8%
% under Age 18	16.8%	24.2%	21.9%
% Age 65 or above	8.8%	10.8%	13.8%
% in Rental housing	94.6%	57.4%	34.0%
% of Households under \$10,000 in income	34.3%	15.8%	9.0%
% of Households under \$30,000 in income	71.1%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



Recommended Actions:

Union Station -

- Complete site cleanup, including partial demolition (baggage warehouse)
- Site cleanup at adjacent vacant lot (former Hotel Charles)
- Complete Phase I construction of bus terminal and parking garage
- Restore pedestrian tunnel linking the station with train boarding platforms and Lyman Street
- Advance Phase II construction including addition of more office and retail space in the terminal building

1600 Main Street –

- Support City of Springfield efforts to seek private developer

Other Sites –

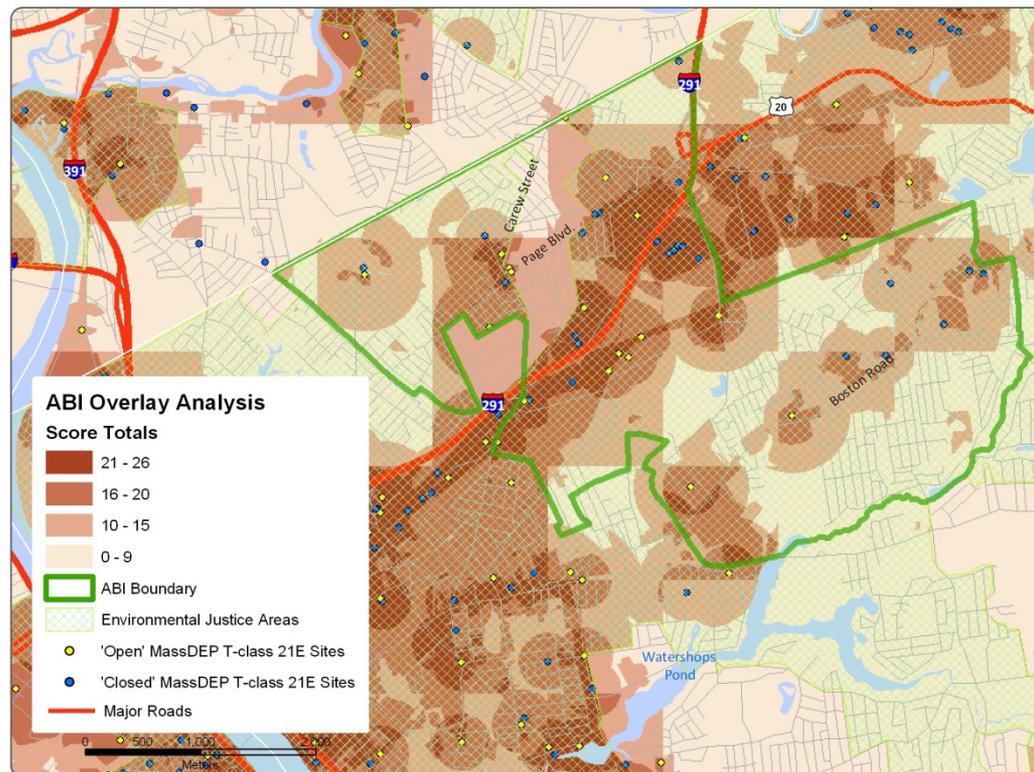
- Site assessment, cleanup and redevelopment

ABI: East Springfield

Includes East Springfield and Pine Point Neighborhoods

Key Known or Suspected Brownfield Sites:

- Smith and Wesson Industrial Park, Roosevelt Avenue
- NS Boston and Albany Railroad
- NS Rear Bay Street
- ES Hobson Street (near 59)
- 1003 St James Ave and SS Detroit Street
- 632-636 Page Blvd
- NS and ES Page Blvd and Roosevelt Ave



Brownfield Indicators

	East Springfield ABI	All ABIs	PV Region
DEP tier-classified 21e sites	45	524	855
Open tier-classified 21e sites	19	148	230
EPA assisted BF projects	0	63	70
MDFA assisted BF projects	2	59	69
DEP BF sites	5	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	25	26	26
Historic industrial land (acres)	485	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

Demographic Indicators

	East Springfield ABI	All ABIs	PV Region
Total Population	22,338	247,841	621,570
% White or Caucasian	53.7%	68.9%	79.6%
% People of Color	46.3%	31.1%	20.4%
% Latino or Hispanic	30.6%	26.1%	16.8%
% under Age 18	27.4%	24.2%	21.9%
% Age 65 or above	11.7%	10.8%	13.8%
% in Rental housing	36.2%	57.4%	34.0%
% of Households under \$10,000 in income	12.9%	15.8%	9.0%
% of Households under \$30,000 in income	41.7%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



Recommended Actions:

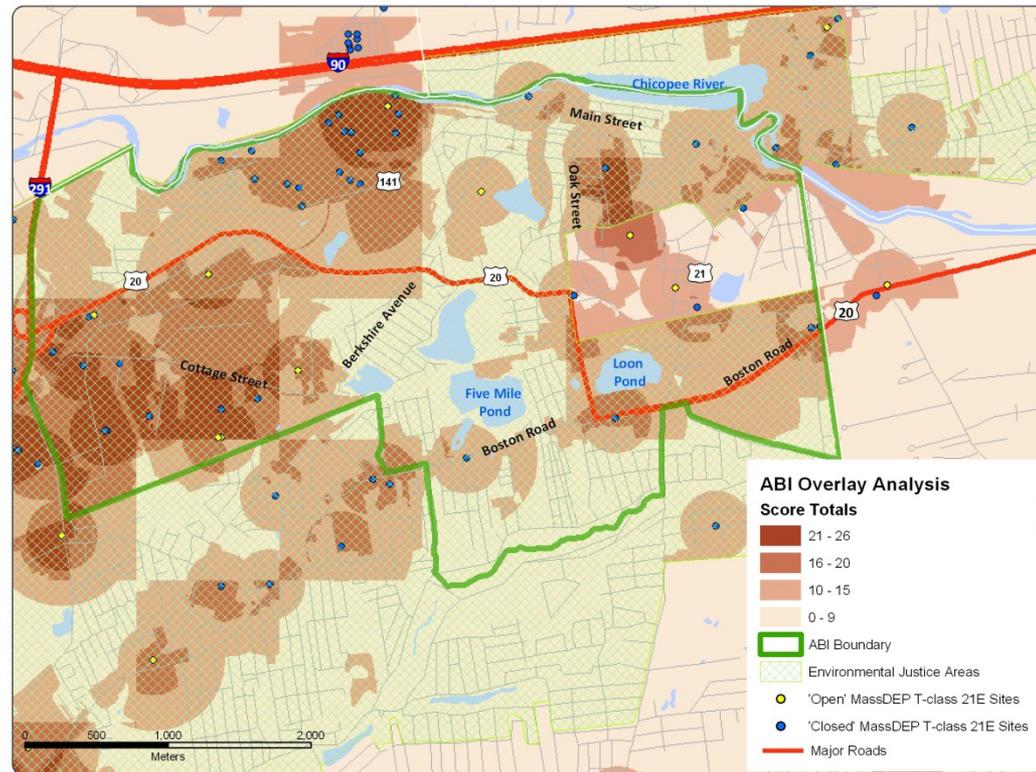
- Support Springfield Redevelopment Authority's efforts to redevelop 650,000 sq.ft. of industrial, commercial, general office space, or combination of these uses (new Memorial Industrial Park II)
- Support private property owner on-going site assessment at 1003 St James Street
- Phase I Site Assessments at:
 - ES Hobson Street (near 59)
 - NS Rear Bay Street
 - 632-636 Page Blvd
 - NS and ES Page Blvd and Roosevelt Ave
 - NS Boston and Albany Railroad

ABI: Indian Orchard (City of Springfield)

Includes Indian Orchard and part of
Boston Road Neighborhoods

Key Known or Suspected Brownfield Sites:

- 241 Main Street
- 284 Rear Main Street
- NS Cardinal Street (near 139)
- NS Corthell Street (near 184)
- 121-165 Pinevale Street (former Chapman Valve Site)
- WS Moxon Street
- NS Worcester Street (near 950)



Brownfield Indicators

	Indian Orchard ABI	All ABIs	PV Region
DEP tier-classified 21e sites	46	524	855
Open tier-classified 21e sites	9	148	230
EPA assisted BF projects	5	63	70
MDFA assisted BF projects	3	59	69
DEP BF sites	4	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	25	26	26
Historic industrial land (acres)	838	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

Demographic Indicators

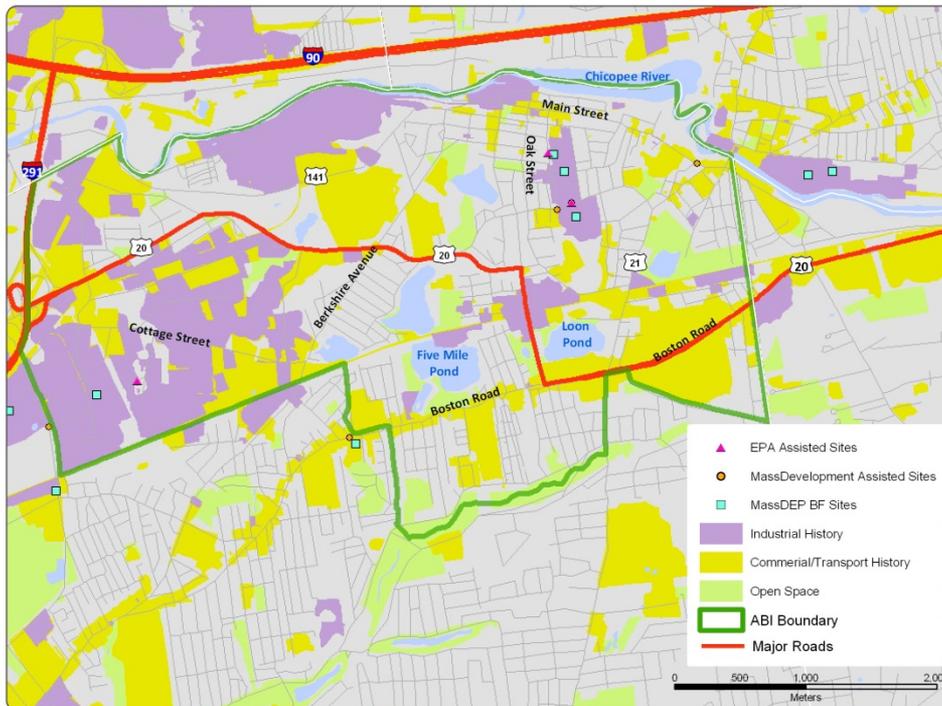
	Indian Orchard ABI	All ABIs	PV Region
Total Population	13,540	247,841	621,570
% White or Caucasian	65.8%	68.9%	79.6%
% People of Color	34.2%	31.1%	20.4%
% Latino or Hispanic	26.7%	26.1%	16.8%
% under Age 18	27.8%	24.2%	21.9%
% Age 65 or above	10.7%	10.8%	13.8%
% in Rental housing	47.5%	57.4%	34.0%
% of Households under \$10,000 in income	11.1%	15.8%	9.0%
% of Households under \$30,000 in income	45.9%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

- Perform Phase I Site Assessments at:
 - 241 Main Street
 - NS Cardinal Street (near 139)
 - NS Corthell (near 184)
 - 284 Rear Main Street
 - WS Moxon Street
 - NS Worcester Street (near 950)

- Support site assessment and cleanup on privately owned portion of site.

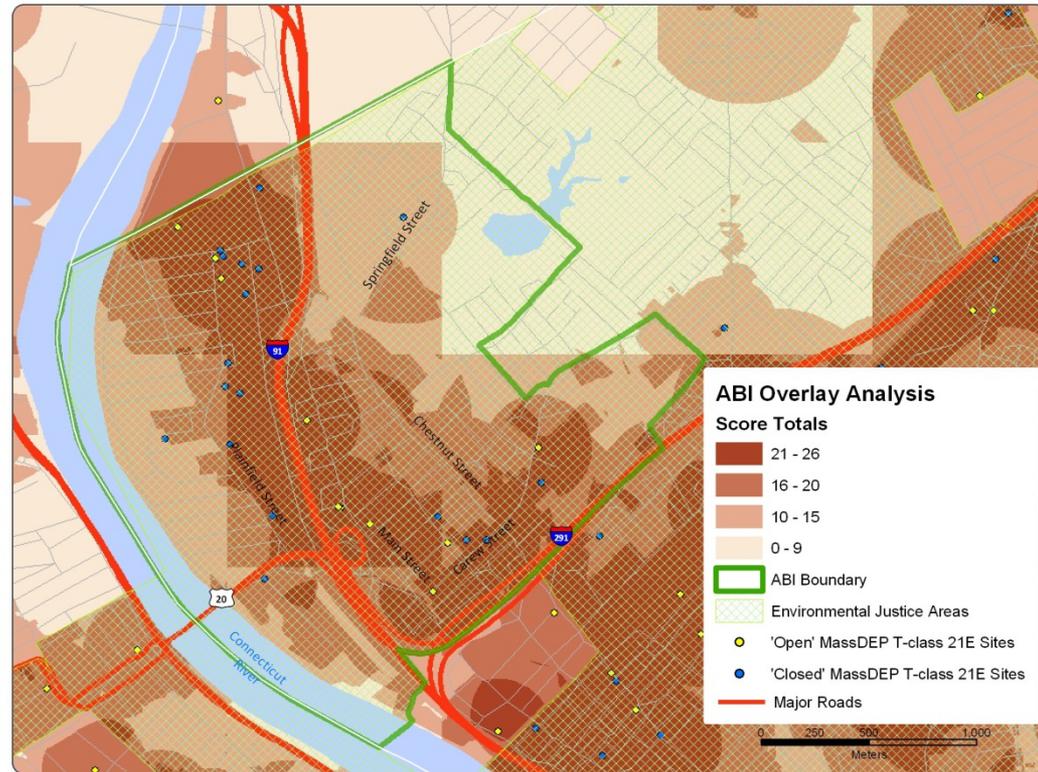


ABI: North End (City of Springfield)

Includes Memorial Square and some of Brightwood and Liberty Heights Neighborhoods)

Key Known or Suspected Brownfield Sites:

- Chandler Street (29, 30, 61)
- 1101 Dwight Street
- ES Dwight Street (1109, 1049)
- 14 Grosvenor Street
- 11 Grosvenor Street and 1061 Dwight Street
- Rear End Napier Street
- 12 Sheldon Street
- NS Carew Street (136)
- WS Main Street (2580-2582)
- Rear 2702-2708 Main Street
- ES Main Street (2353-2365)
- ES Main Street (2931-2947)
- NS 40 Napier Street



Brownfield Indicators

	North End ABI	All ABIs	PV Region
DEP tier-classified 21e sites	31	524	855
Open tier-classified 21e sites	10	148	230
EPA assisted BF projects	5	63	70
MDFA assisted BF projects	4	59	69
DEP BF sites	7	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	26	26	26
Historic industrial land (acres)	266	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

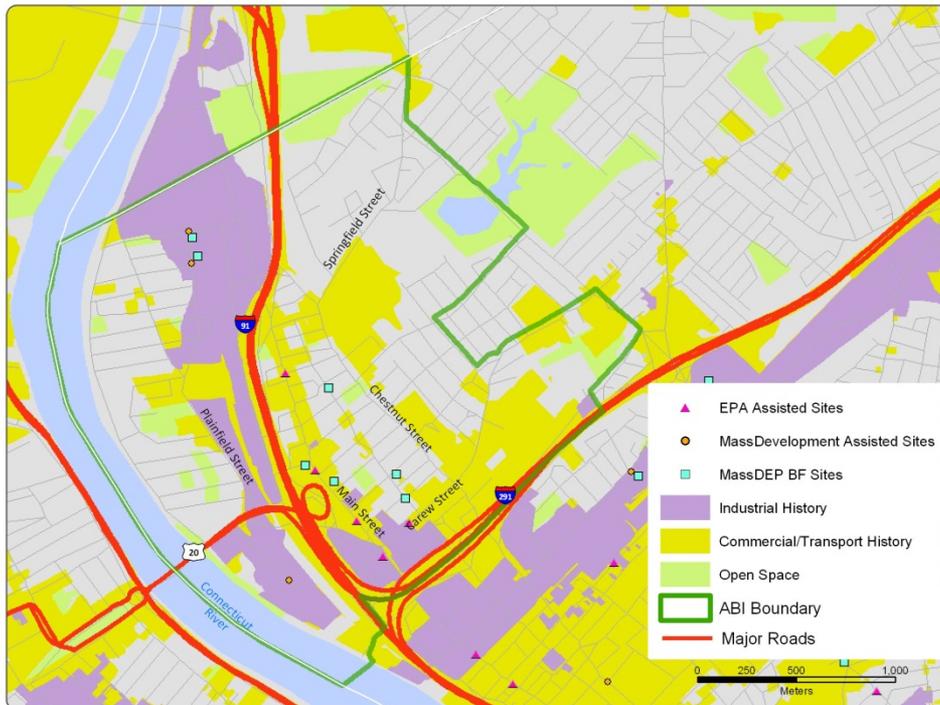


**Pioneer Valley
Planning Commission**

Demographic Indicators

	North End ABI	All ABIs	PV Region
Total Population	12,257	247,841	621,570
% White or Caucasian	45.2%	68.9%	79.6%
% People of Color	54.8%	31.1%	20.4%
% Latino or Hispanic	76.7%	26.1%	16.8%
% under Age 18	34.4%	24.2%	21.9%
% Age 65 or above	9.7%	10.8%	13.8%
% in Rental housing	79.4%	57.4%	34.0%
% of Households under \$10,000 in income	28.4%	15.8%	9.0%
% of Households under \$30,000 in income	67.4%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



Recommended Actions:

- Site assessment and cleanup as needed at:
 - Chandler Street (29, 30, 61)
 - WS Main Street (2580-2582)
 - 2505-2495 Main Street

- Promote site redevelopment on Dwight Street properties

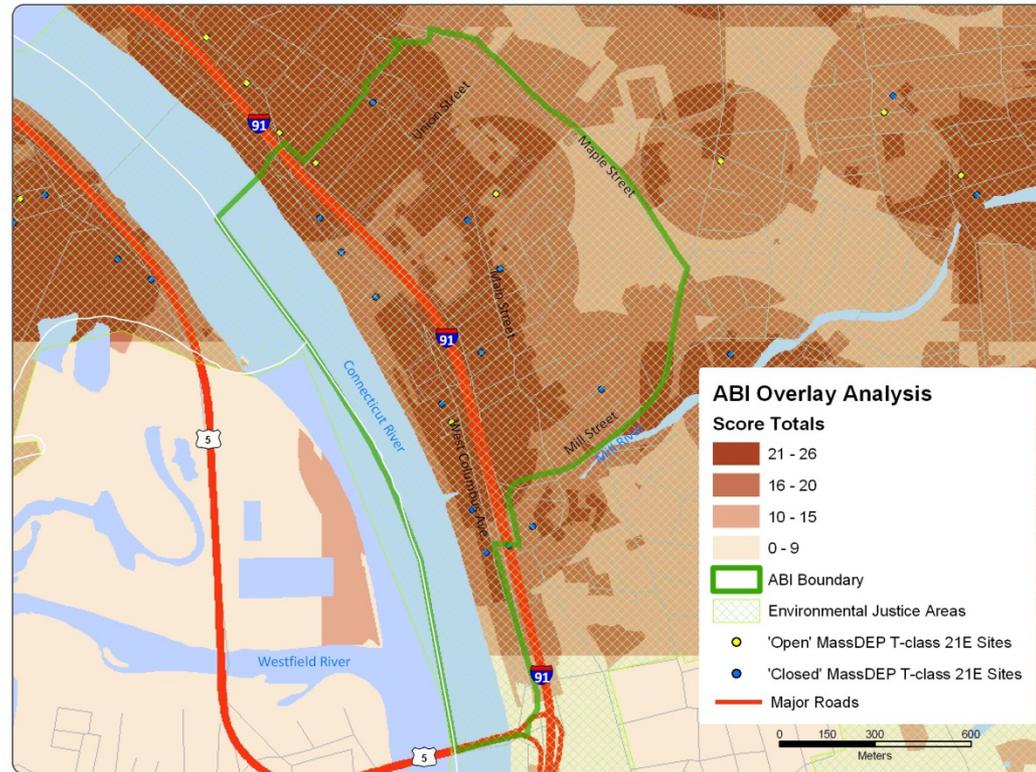
- Phase I Site Assessments at:
 - 14 Grosvenor Street
 - 11 Grosvenor Street and 1061 Dwight Street
 - Rear End Napier Street
 - NS 40 Napier Street
 - 12 Sheldon Street
 - NS Carew Street (136)
 - Rear 2702-2708 Main Street

- Identify redevelopment options for:
 - ES Main Street (2353-2365)
 - ES Main Street (2931-2947)

ABI: South End (City of Springfield)

Key Known or Suspected Brownfield Sites:

- York Street Site, West Columbus Ave and York Street
- Gemini Site, Main, Morris, Central and Winthrop Streets
- Main Street (609-611, 708)
- ES Main Street (827-845)
- 11-15 Adams Street
- NS Central Street (44, 48, 72, 76-78)
- 971-973 East Columbus Ave
- 176 Maple Street
- NS Morris Street (50-52, 58-62, 64-66, 70-72)
- SS Morris Street (61-63, 65-67)
- NS Winthrop Street (52-54)



Brownfield Indicators

	South End ABI	All ABIs	PV Region
DEP tier-classified 21e sites	14	524	855
Open tier-classified 21e sites	3	148	230
EPA assisted BF projects	3	63	70
MDFA assisted BF projects	4	59	69
DEP BF sites	3	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	26	26	26
Historic industrial land (acres)	31	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

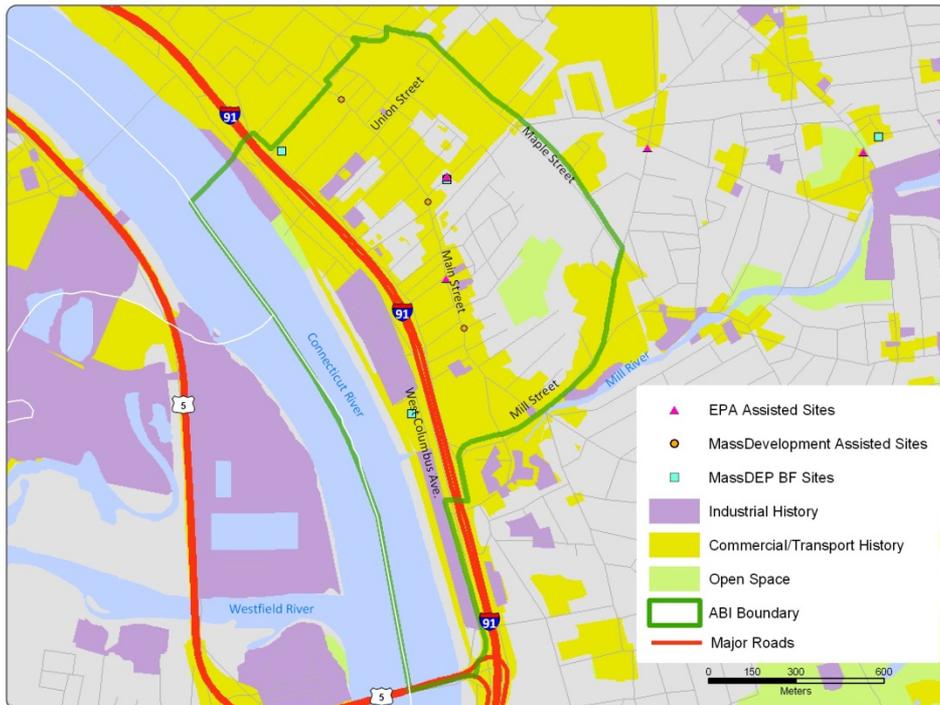
Demographic Indicators

	South End ABI	All ABIs	PV Region
Total Population	4,386	247,841	621,570
% White or Caucasian	47.5%	68.9%	79.6%
% People of Color	52.5%	31.1%	20.4%
% Latino or Hispanic	52.7%	26.1%	16.8%
% under Age 18	28.1%	24.2%	21.9%
% Age 65 or above	7.2%	10.8%	13.8%
% in Rental housing	90.9%	57.4%	34.0%
% of Households under \$10,000 in income	23.4%	15.8%	9.0%
% of Households under \$30,000 in income	68.1%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

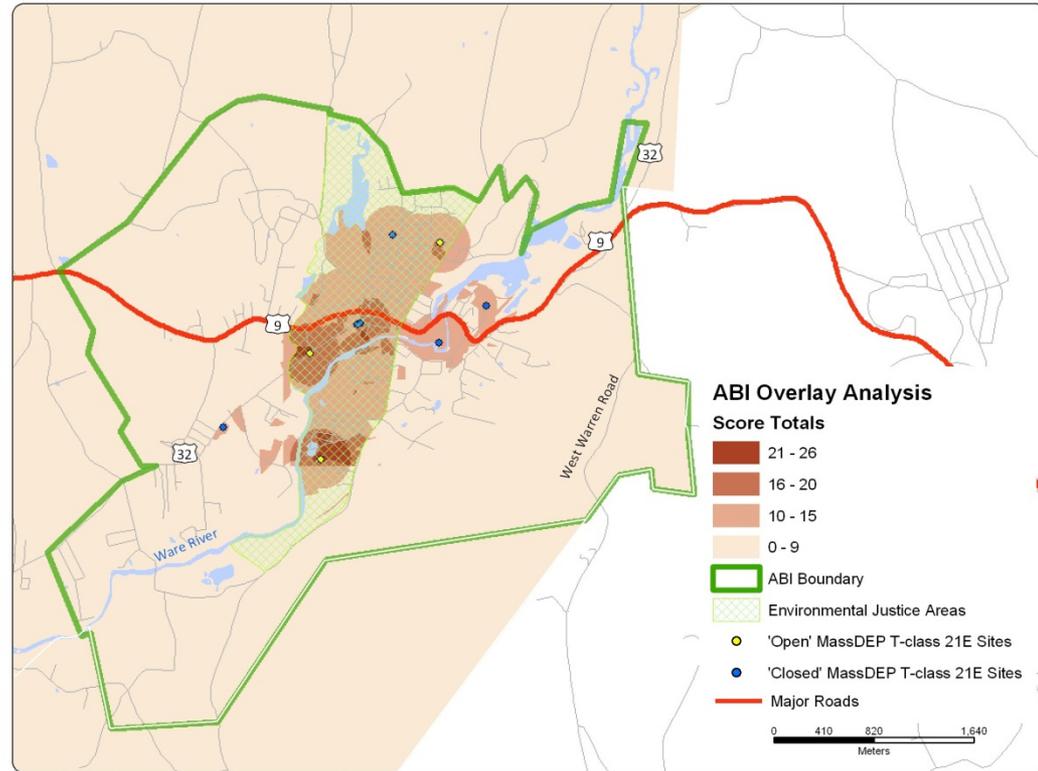
- Support implementation of the South End Urban Renewal Plan to promote private investment throughout the neighborhood
- Identify redevelopment options for the Gemini Site
- Support Springfield Redevelopment Authority's efforts to seek Gemini site developer
- Prioritize site assessment and cleanup at identified sites



ABI: Downtown Ware

Key Known or Suspected Brownfield Sites:

- Monroe Street MGP Site



Brownfield Indicators

	Downtown Ware ABI	All ABIs	PV Region
DEP tier-classified 21e sites	9	524	855
Open tier-classified 21e sites	3	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	1	59	69
DEP BF sites	2	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	21	26	26
Historic industrial land (acres)	162	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS



**Pioneer Valley
Planning Commission**

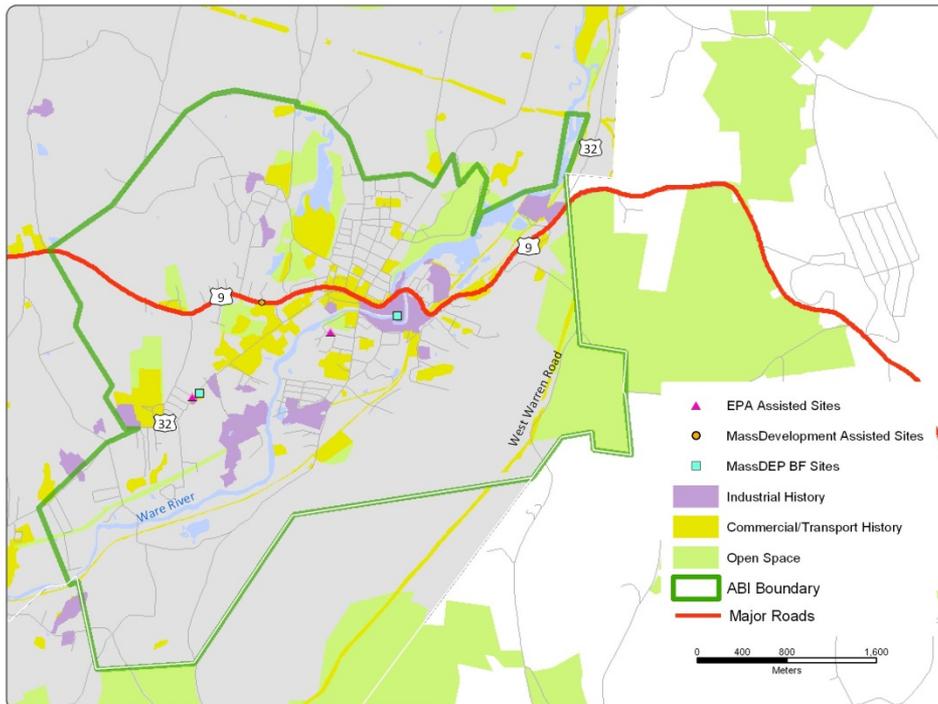
Demographic Indicators

	Downtown Ware ABI	All ABIs	PV Region
Total Population	2,107	247,841	621,570
% White or Caucasian	97.5%	68.9%	79.6%
% People of Color	2.5%	31.1%	20.4%
% Latino or Hispanic	1.4%	26.1%	16.8%
% under Age 18	23.8%	24.2%	21.9%
% Age 65 or above	13.1%	10.8%	13.8%
% in Rental housing	34.3%	57.4%	34.0%
% of Households under \$10,000 in income	9.5%	15.8%	9.0%
% of Households under \$30,000 in income	42.4%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)

Recommended Actions:

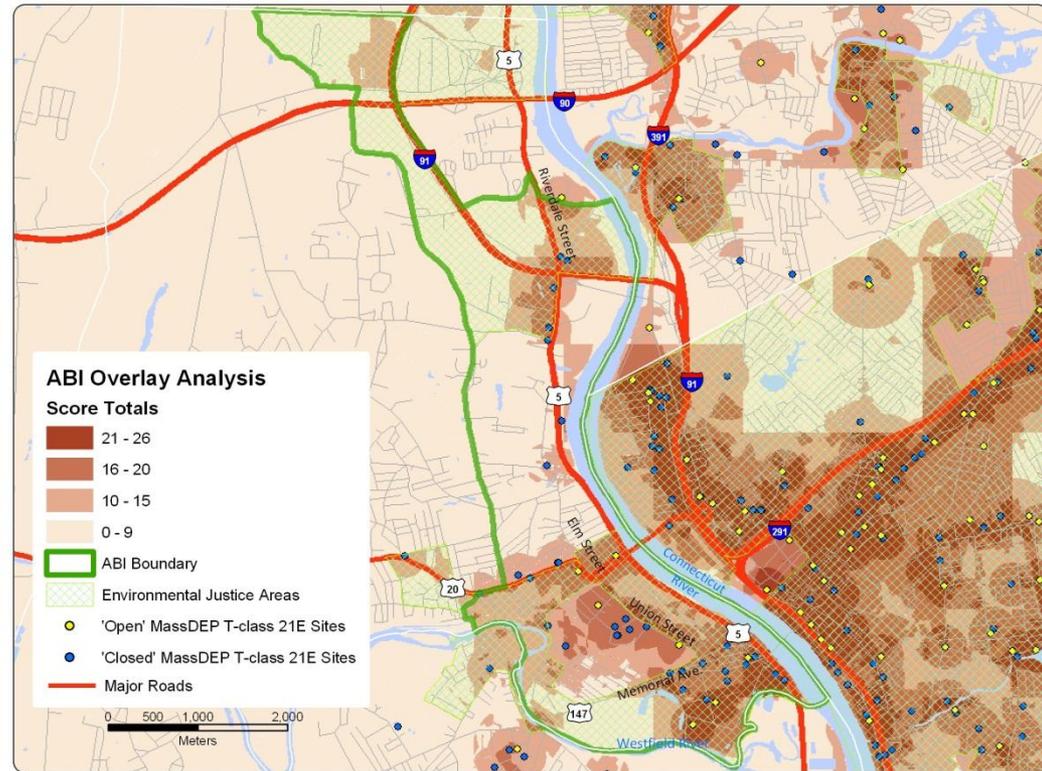
- Monroe Street MCP Site – Phase II assessment and cleanup



ABI: Merrick & Riverdale (Town of West Springfield)

Key Known or Suspected Brownfield Sites:

- Trade Center on Union Street
- Nondo Tire, 1595 Riverdale Street (Route 5)



Brownfield Indicators

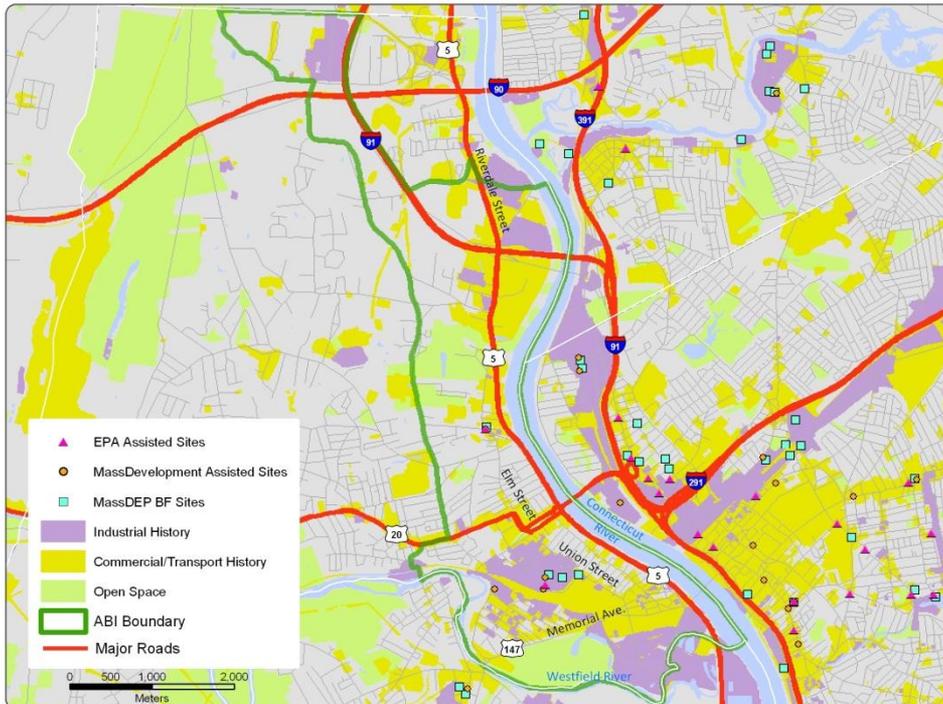
	Merrick & Riverdale ABI	All ABIs	PV Region
DEP tier-classified 21e sites	44	524	855
Open tier-classified 21e sites	7	148	230
EPA assisted BF projects	2	63	70
MDFA assisted BF projects	5	59	69
DEP BF sites	4	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	24	26	26
Historic industrial land (acres)	583	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

Demographic Indicators

	Merrick & Riverdale ABI	All ABIs	PV Region
Total Population	12,676	247,841	621,570
% White or Caucasian	81.2%	68.9%	79.6%
% People of Color	18.8%	31.1%	20.4%
% Latino or Hispanic	11.5%	26.1%	16.8%
% under Age 18	22.3%	24.2%	21.9%
% Age 65 or above	11.0%	10.8%	13.8%
% in Rental housing	61.4%	57.4%	34.0%
% of Households under \$10,000 in income	9.3%	15.8%	9.0%
% of Households under \$30,000 in income	37.7%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



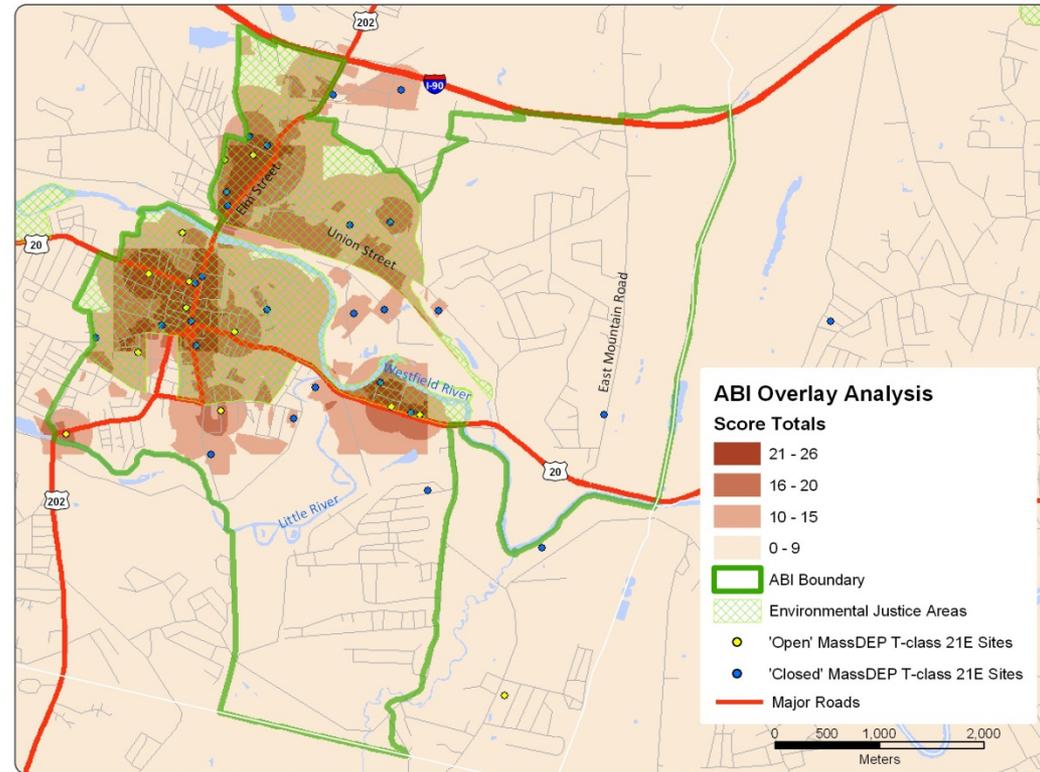
Recommended Actions:

- Trade Center on Union Street – Phase I and II site assessment; cleanup as needed
- Nondo Tire, Route 5 (north) – Phase I site assessment; Phase II site assessment and cleanup as necessary; redevelopment planning (planned terminus for proposed Connecticut Riverwalk and Bikeway)

ABI: Downtown Westfield

Key Known or Suspected Brownfield Sites:

- School Street – City Cleaners Site
- 41 Jefferson Street (former machine shop)
- Cycle Street – Columbia site



Brownfield Indicators

	Downtown Westfield ABI	All ABIs	PV Region
DEP tier-classified 21e sites	42	524	855
Open tier-classified 21e sites	14	148	230
EPA assisted BF projects	3	63	70
MDFA assisted BF projects	4	59	69
DEP BF sites	4	86	112
EJ area(s) present?	Yes	Yes	Yes
Max. ABI score	26	26	26
Historic industrial land (acres)	390	4,896	9,910

Data from MassDEP, EPA, MDFA, PVPC (for EJ) and MassGIS

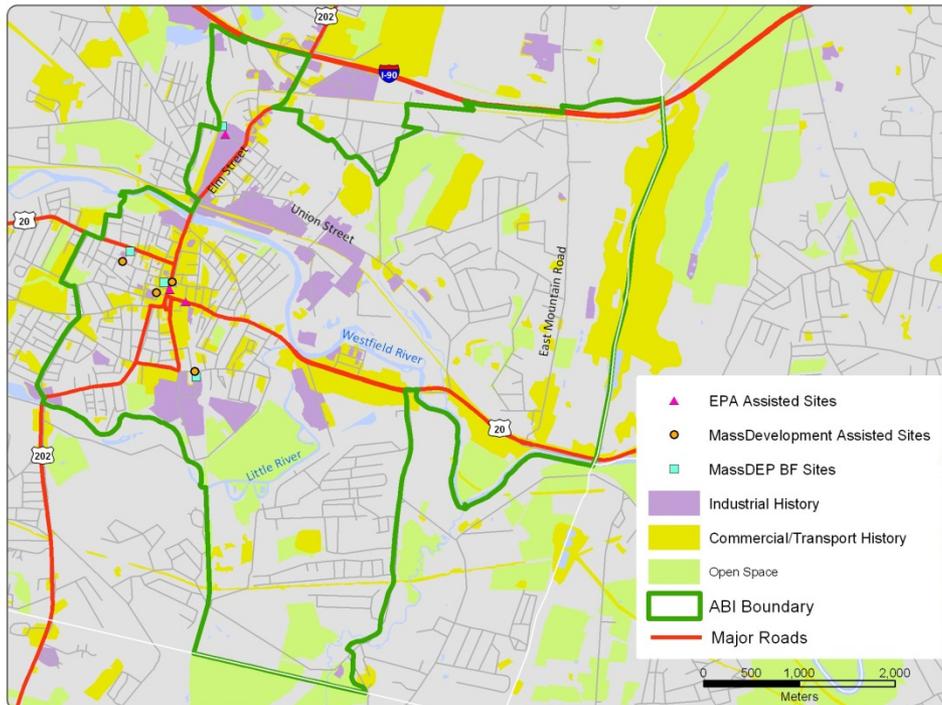


**Pioneer Valley
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Demographic Indicators

	Downtown Westfield ABI	All ABIs	PV Region
Total Population	18,781	247,841	621,570
% White or Caucasian	91.2%	68.9%	79.6%
% People of Color	8.8%	31.1%	20.4%
% Latino or Hispanic	9.5%	26.1%	16.8%
% under Age 18	24.7%	24.2%	21.9%
% Age 65 or above	13.4%	10.8%	13.8%
% in Rental housing	46.2%	57.4%	34.0%
% of Households under \$10,000 in income	14.0%	15.8%	9.0%
% of Households under \$30,000 in income	41.3%	46.0%	22.7%

Data from 2010 US Census (income data from 2010 5-year ACS estimates)



Recommended Actions:

- Perform cleanup at proposed intermodal site (Elm, Arnold and Church Streets) and prepare for mixed use redevelopment
- Advance redevelopment at School Street site (former City Cleaners)
- Advance redevelopment of 41 Jefferson Street (former machine shop)
- Advance redevelopment of Columbia site on Cycle Street



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