



Land Use Trends

Broome County has a distinctive development pattern that consists of a densely settled urban core with associated suburban fringe, narrow transportation corridors that follow the river valleys, rural village nodes, and the open spaces found in rural landscapes.

The development patterns of Broome County were first defined by our steep slopes and rich river valleys. Native Americans and early European settlers utilized the rivers for navigation, and found the valley soils to be fertile for farming. The consequence of this was the urban core of the community formed first around the confluence of the Chenango and Susquehanna Rivers and then spread along the river valleys.

As development increased, roads, canals and railroads were constructed in the same river valleys connecting Broome County communities with the rest of the state and the growing nation. The construction of the Erie Canal spanning the northern tier of New York prompted the building of a canal roughly following the Chenango River's course. Operating from 1836 to 1878, the Chenango Canal dramatically cut shipping times between Binghamton and Albany and connected the growing manufacturing base here with the port of New York City via the Hudson River. Railroads finally reached the community in 1848, and they supplanted the Chenango Canal. Rail lines continued to encourage industrial development in the river valleys, and rail remains an important means of transport for high volume industrial users.

With the rise of the automobile in the 1950's and 60's, the development pattern of the community spread further into the suburbs. The Federal and the State highway systems took precedence over rail for moving goods and materials. With improvements to local and county roads linked to the State and Interstate system, the suburbanization of Broome County began. No longer did factory workers expect to walk from home to their jobs. Instead, bedroom communities such as Vestal, Conklin, Kirkwood and Maine began to grow dramatically. From 1950 to 1970, the City of Binghamton lost one-fifth of its population, while the suburban towns such as Chenango, Maine, the Town of Binghamton and Vestal exploded. Vestal's population tripled in this time from under 9,000 to nearly 27,000.

This outmigration was recognized as a threat to the urban core communities in the 1963 Broome County Comprehensive Plan, and one of the key solutions proposed was 'urban renewal'. Urban renewal is a catchall phrase for a series of federally funded programs that involved acquisition of a sizeable number of inner-city properties which are then demolished for large scale redevelopment and

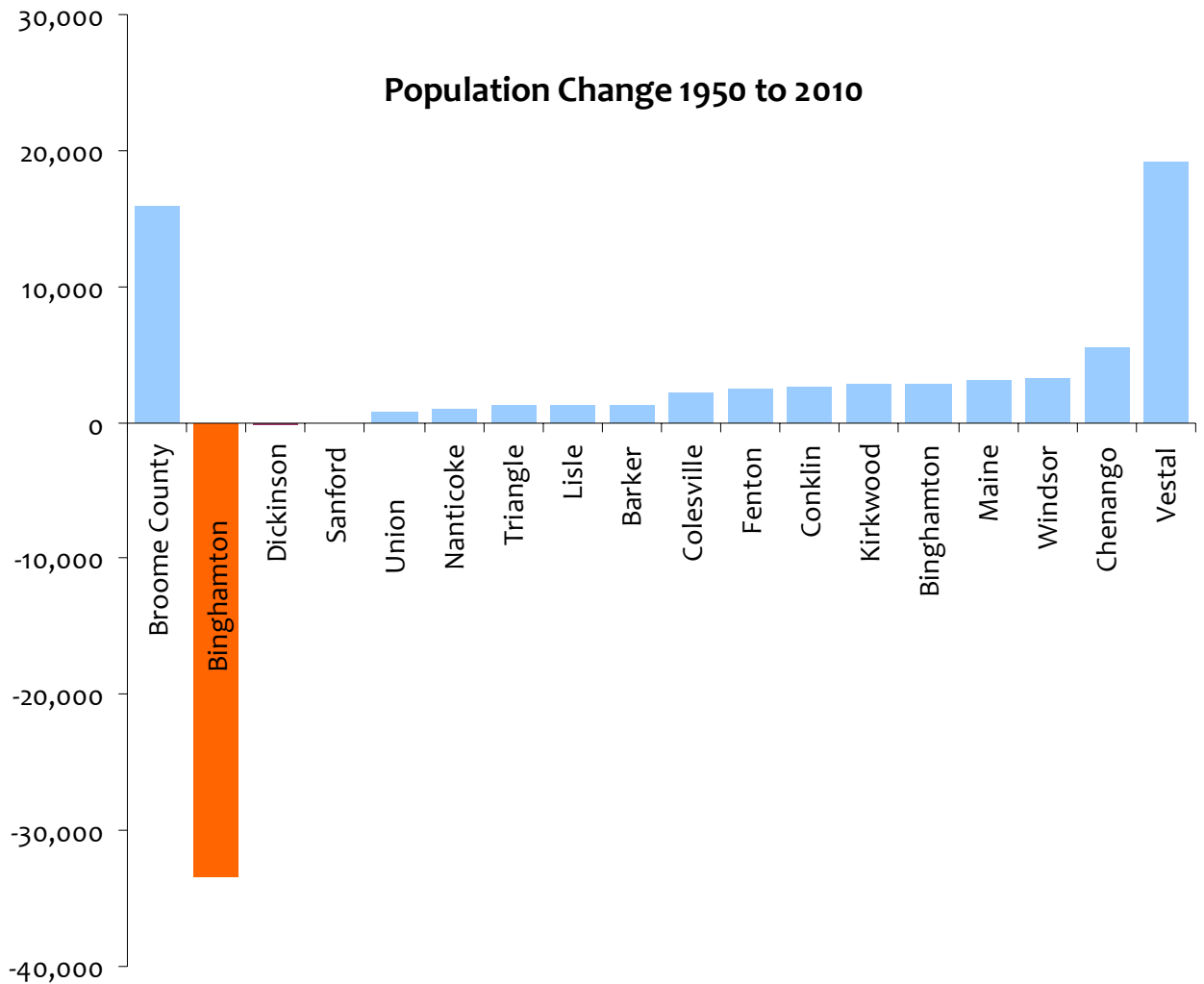


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transportation projects. Urban renewal era projects in Broome County include Northshore Drive, the Broome County Veterans Memorial Arena, the Holiday Inn-Arena, and several other large scale commercial projects all located in downtown Binghamton. These projects replaced small scale buildings which accommodated pedestrian traffic with much bigger projects meant to appeal to the automobile traveler.

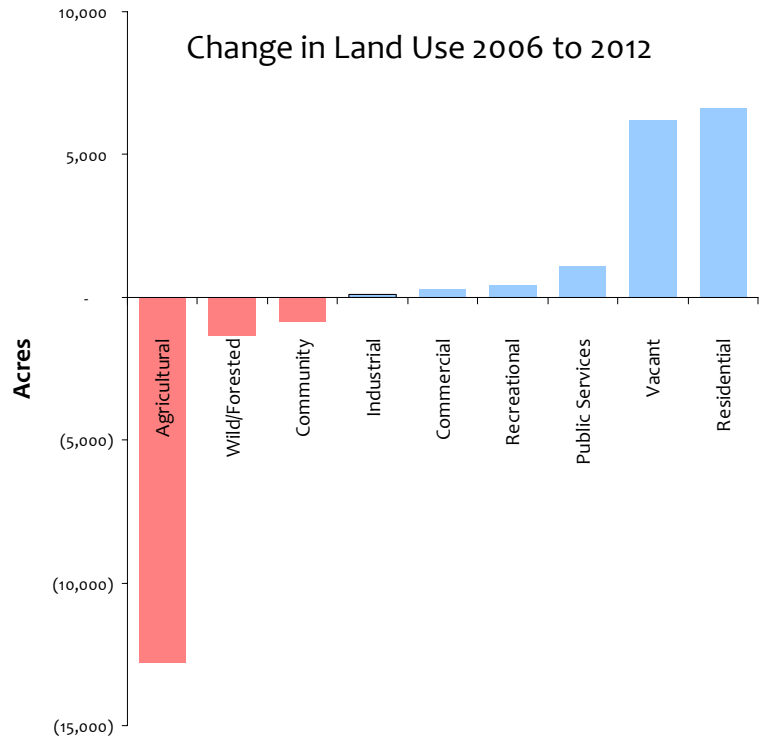
Urban renewal, however, did little to stem the outmigration. By 2010, the City of Binghamton had lost 33,388 from its 1950 level, and the villages across the county lost population. This trend is discussed more in the People chapter. This chart illustrates the movement from the urban core to the suburban communities:





Current Land Use Pattern

The mix of land uses in the County is evolving. Between 2006 and 2012 roughly 12,800 acres of agricultural land were lost. Roughly half of this land is no longer farmed and is now considered vacant land. Another 6,600 acres has been converted to residential uses. The changing land uses are shown in this chart.



This conversion of agricultural land to residential land uses is a concern because, on average, residential land uses do not cover their costs in municipal services. Numerous case studies prepared by the American Farmland Trust and others show that residential uses pay more in tax revenues, but they demand substantially more in services. For every \$1.00 of revenue generated by residential land uses, \$1.16 in services is required. This compares to \$0.35 for working and open lands. Agriculture and working lands are discussed in greater detail in Open Space chapter.

Countywide Land Use - 2012		
Land Use Category	Acres	%
Agricultural	36,580	9%
Residential	191,411	45%
Commercial	4,991	1%
Industrial	3,073	1%
Community Services	6,265	1%
Public Services	4,631	1%
Recreational	7,682	2%
Vacant	147,191	35%
Wild/Forest	24,007	6%

Based on tax assessor's records, currently the largest land use in the county is residential. This includes single family homes, apartments, mobile homes and mobile home parks. Combined these land uses comprise nearly 200,000 acres and almost half of the county. The next highest category is vacant land at roughly 150,000



acres or 35% of the county. The 2012 land uses are show in the above table and the attached map.

Corridors and Gateways

With the rise of the automobile, the transportation routes in Broome County have created a network of corridors and gateways that impact land use patterns. The transportation corridors favor commercial development in areas with good access to the heavily traveled roads. In addition to the impact of vehicular access, the perception of this community by visitors is shaped by the appearance of the buildings and streetscapes in the key gateways. For this plan, we have divided the transportation network into primary and secondary corridors and gateways.

Primary Corridors: Because Broome County is at the crossroads of three major interstates (I-81, I-88 and the future I-86), our primary transportation corridors see very high volumes of traffic. The average traffic at the confluence of I-81 and the future I-86 is over 50,000 vehicles per day. These primary corridors are defined as those roadways that have a New York State Department of Transportation functional classification of ‘Interstate’ or ‘Expressway’. In Broome County, they are as follows:

- Interstate 81
- Interstate 88
- NYS Route 17 (future Interstate 86)

Secondary Corridors: Our secondary corridors see lower traffic volumes but are still very heavily traveled. For the purpose of this plan, we have defined the Secondary Corridors as roads that have a New York State Department of Transportation functional classification of ‘Principal’ or ‘Minor’ Arterial, an average daily traffic volume of greater than 5,000 vehicles, and extend through more than one municipality. Because so many local and regional travelers use these corridors, their appearance greatly influences perceptions of the community. As a result, the secondary transportation corridors merit special attention. These secondary corridors are as follows:

- Conklin Road - NYS Route 7
- NYS Route 7 - NYS Route 363 - Brandywine Highway
- Main Street - Court Street - NYS Route 17C - US Route 11
- NYS Route 26
- Front Street - Route 11 - Route 12
- Vestal Parkway - NYS Route 434
- Airport Road



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A map of the primary and secondary corridors is attached.

As residents and travelers use these major and secondary corridors, they are greeted by gateways to the community as a whole, and to specific portions of the urban core. Sometimes these gateways are within a local municipality, other times a gateway is located in an adjacent municipality. The key gateways across the county are shown on the Transportation Corridors map.



Two of these gateways are especially important. Because Broome County is at the New York-Pennsylvania border, and is on one of the most heavily traveled north-south Interstates, the I-81 corridor is an especially important gateway. Over 50,000 visitors, many from out of state, travel through the county on this highway every day. The sites that they see form their opinion of this community.

The other significant gateway is Airport Road. Over the past decade, approximately 250,000 passengers have flown in and out of the Greater Binghamton Airport on an annual basis. Based on Department of Aviation surveys, approximately 70% of these flyers are business travelers. Business travelers who use the Greater Binghamton Airport generally drive south on Airport Road to their local destination. Over the past 5 years, the Broome County Department of Aviation has made \$32 million in investments to improve the function and appearance of the airport. But those improvements end with the airport campus. As business travelers travel down Airport Road, they pass by numerous derelict buildings which leave an unfavorable impression of the community.





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Although less significant in terms of daily traffic, the connections between the Broome County to Tompkins County and the City of Ithaca are also important. Ithaca is home to Cornell University and the Ithaca College as well as a host of cultural activities. In addition, Tompkins County is one of the most affluent counties in the upstate region. Travelers from Broome County to Tompkins County and Ithaca use Route 79 or Route 38B, making these smaller rural routes noteworthy gateways.

Brownfields and Blight

Another factor in the changing land use pattern is the blighting influence of the abandoned and distressed properties in the urban core. Deteriorated building stock was cited by several stakeholder groups as a key weakness of the community. Broome County has a long history of industrial development. From cigar production to shoes factories to computers, the county has been at the center of every major phase of the industrial revolution. And historically, industrial and residential development was mixed, with many workers walking from home to their factory job. As manufacturing processes changed to favor large, horizontal layouts, the turn-of-the century plants became increasingly inefficient to operate. Some companies shuttered their plants and relocated elsewhere, others built new facilities on greenfield sites on the periphery of the urban core, and unfortunately, some firms abandoned their properties altogether. As these plants sat idle, they inevitably deteriorated and became eyesores. Because of their industrial legacy, these sites are now considered brownfields.

A brownfield is any property whose development or redevelopment is compromised by real or perceived environmental contamination. The key impacts of brownfields sites are:

- In some cases, brownfields are a threat to the public health and safety
- Brownfields tend to sit idle due to liability concerns
- As they deteriorate, brownfields have a negative impact on property values

In 2000, the Broome County Environmental Management Council (EMC), a grassroots citizen's advisory committee, formed a subcommittee to address brownfield redevelopment in the county. Working with the EMC brownfield subcommittee, the Broome County Planning assembled a database and inventory of known or suspected brownfield sites. There are currently 97 sites in the brownfields database.

Of the 97 sites, 32 have groundwater contamination, 26 have soil contamination, and at least 5 have off-site migration of contaminants. In addition to these known sites, there are numerous others that have the potential to pose a threat to human health



and the environment. The Brownfields map shows the general location of these sites.

In an effort to prioritize brownfield sites, and gain a greater understanding of their threat potential, the EMC Brownfields Subcommittee developed a sophisticated screening tool. Using the EMC’s process, the *hazard potential* of sites is characterized first based on both the toxicity and the amount of contaminant present. As part of this process, the amount of information available regarding the site is also considered. Then the *exposure potential* for receptors is considered. The final result of this portion of the screening process, is a letter grade that indicates the hazard potential of each site. The following table summarizes the hazard potential rankings:

Health Risk Assessment at Brownfield Sites

Site Hazard Potential Ranking	Visitors	Employees	Residents	Construction/Utility Workers	Number of Ranked Sites
A	Low	Low	Low	Low-Medium	2
B	Low	Low	Low-Medium	Low-Medium	2
B-	Low	Low	Low-Medium	Low-Medium	11
C	Low	Low-Medium	Medium	High	13
C-	Low	Medium	Medium	High	20
D	Low-Medium	Medium-High	Medium-High	High	18
D-	Medium	High	High	High	12

According to this ranking methodology, there are 63 sites which pose a medium to high threat to residents and a high threat to construction and utility workers (sites ranked C or lower). In addition, there are 19 sites which are not yet ranked. The end result of the EMC’s work was the [Brownfields Inventory and Ranking Project Summary Report](#).

As these contaminated properties sit idle, they deteriorate and cause disinvestment by neighboring property owners. Professor Keith R. Ihlanfeldt, Florida State University, and Associate Professor Laura O. Taylor, Georgia State University, completed an EPA-funded study of Fulton County, Georgia entitled “Assessing the Impacts of Environmental Contamination on Commercial and Industrial Properties”. The study found a ‘spillover effect’ on property values up to 2 miles from the site of contamination. The researchers found that properties closer to contaminated sites had lower property values. The Brownfields map shows where these abandoned sites would have the greatest impact on property values in Broome County.



The negative impact of abandoned and deteriorated buildings was mentioned as a weakness in several stakeholder meetings, including Preservation Association of the Southern Tier, Susquehanna Heritage Area and the Western Broome Central Business Districts. Removing or addressing blighted buildings was also mentioned in numerous comments in the survey. Related to this, over 84% of the respondents to the survey thought that preserving our cultural and architectural heritage was a major (44%) or minor (40%) opportunity.

Flooding and Land Use Patterns

An increasingly significant factor in shaping local land use pattern is flooding and floodplain mapping. In 1936, the Susquehanna River valley in New York and Pennsylvania experienced a catastrophic flood. At the time, there was no flood protection system in place to prevent widespread devastation. Through the Flood Control Act of 1936, the Army Corps of Engineers built floodwalls, levees, and the Whitney Point Reservoir to provide flood protection for the urban core area. This federally constructed flood infrastructure was augmented by 19 flood control structures that Broome County built and manages, mostly in the western portion of the County.

This network protected the urbanized area from significant damage during the 1972 Hurricane Agnes flood. However, record-breaking floods in 2006 and again in 2011 exposed the vulnerability of an infrastructure-based approach to flood control. Flooding is discussed further in the [Water Resources](#) chapter.

The Federal Emergency Management Agency (FEMA) response to the floods of 2006 was to prepare new flood maps for the region. They developed preliminary flood maps intended to replace the ones that had been in use since the 1970's and 1980's in Broome County. This remapping process is currently on hold pending the development of a new methodology by FEMA for determining the floodplain in areas with levees and floodwalls, but the draft maps have been released. These preliminary maps dramatically shift the boundaries of the Special Flood Hazard Area (SFHA), commonly known as the 100-year floodplain, placing an additional 6,190 properties into the SFHA for the first time. The greatest number of properties are being added in the urban core of the County. The most significant increases are as follows:



Properties within the Special Flood Hazard Area				
Community	Existing Flood Map	Preliminary Flood Map	Added	Percent Increase
City of Binghamton	298	2,420	2,122	812%
Town of Union (including Endicott and Johnson City)	1,437	3,519	2,082	245%
Town of Vestal	926	1,747	821	189%

Although not finalized by FEMA, these preliminary maps were shown to be highly accurate when the flood of 2011 struck. A map of the changes to the flood plain is attached.

Flooding has a tremendous impact on land use patterns. As evidence of the impact of flooding on land use, the Town of Conklin lost 8.4 percent of its population between 2000 and 2010, while the County’s population held steady. This impact is in part due to the fact that the hardest hit communities of Conklin, Kirkwood, Union, Vestal and the City of Binghamton have all participated in the FEMA-funded buyout program. Through this grant program, vulnerable homes are purchased and demolished by the local municipality and retained as greenspace. Approximately 150 homes have been acquired through this program, and several hundred more are proposed. Homes purchased and demolished through the buyout process are taken off the tax rolls and this vacant land is never developed again. A map of the FEMA funded buyouts is attached.

Inclusion of such large tracts of the urbanized area into the SFHA has the potential to dramatically alter development patterns. Buildings in the floodplain are subject to tougher building codes, and there is a requirement for flood insurance on all properties with a federally backed mortgage. Additionally, lenders may be reluctant to provide loans for properties in the SFHA. The result of this may be the devaluation of properties in the urban core and accelerated suburbanization and sprawl as developers seek to build out of the floodplain.

Public Water and Sewer

One check on the suburbanization of the County is the lack of infrastructure in the outer ring of communities. The lack of public water and sewer has tended to slow growth. A map showing the extent of public water and sewer within the County is



attached. Outside of the public water and sewer service areas, development tends to be single family homes on larger lots. Large scale apartment, congregate care facilities, major commercial projects and industrial development are generally not feasible without access to sewers and public water. Increasingly, however, smaller-scale sewage treatment plants are being constructed for communities such as Chenango and a portion of the Town of Windsor to address existing sewage problems and accommodate growth. With the rise of ‘package plants’, sewage treatment is being handled on a less centralized basis. The result may be new nodes of development in the more rural areas of the county. Wastewater infrastructure is discussed in greater detail in the [Water Resources](#) chapter.

Slope

Another significant check on the spread of development out of the river valleys is the steep topography of the area. Slope conditions are one of the most important factors that affect the development potential of land. Slopes of less than 10 percent are most suitable for development

Slope	Percent of Land Area	Acres
Less than 5%	22%	10,216
5-10%	26%	11,771
10-15%	20%	9,169
15-20%	12%	5,303
More than 20%	20%	9,306

while development on land with slopes of 10-15 percent incurs significant additional construction expense. Land with slopes greater than 15 percent is usually unsuitable for development. Slope percentages for land in the County are shown below and illustrated on the [Slope](#) map. Less than 1/2 of the county (48%) has slopes of less than 10%, making it very challenging to find large flat parcels for development.

Zoning

The historical land use patterns show us how the community has developed over time. Through a comprehensive plan, we have an opportunity to guide future development patterns. The most powerful tool for guiding development is zoning and related ordinances such as site plan review. In New York, this power can only be enacted at the town, village or city level. State law gives local governments the power to ‘provide for the protection and enhancement of the physical and visual environment’. In the context of land use and comprehensive plans, this translates to the power to enact and enforce zoning and related ordinances. This is the concept of ‘municipal home rule’.



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Traditional zoning divides a community into various districts and permits or disallows land uses by zoning district. Some uses are ‘permitted by right’ while others may require a greater level of review and scrutiny. In Broome County, 19 of the 23 municipalities have some form of zoning. Among these communities there are over 120 different zoning districts. This overabundance of zoning districts was cited as a weakness during the stakeholders meeting that we conducted with the Aging Futures Partnership. We have summarized these districts into the following general categories:

Nearly two-thirds of the County is zoned agricultural or rural residential which typically allows agricultural uses. Residential zoning, which includes multi-family and mobile

Local Zoning		
Zoning Category	Acres	%
Agriculture/Rural Residential	293,204	64%
Residential	68,414	15%
Business/Commercial	10,115	2%
Industrial	7,377	2%
Recreation/Open Space	6,306	1%
No Zoning	70,569	15%

home parks, is the next highest category, accounting for 15% of the county’s acreage. Tied with residential, is the 15% of the county that has no zoning restrictions. Business and Industrial zoning districts each count for just 2% of the local acreage. A map of the zoning districts countywide is attached.

Four communities (the Town and Village of Lisle, Nanticoke, and Triangle) in the County have no zoning regulations. Communities without zoning have no ability to regulate land uses within their borders. The result is that noxious uses which adversely affect community character are free to operate without any conditions. Comprehensive plans for both the Town of Lisle and Triangle call for the adoption of land use regulations (zoning). Nanticoke and the Village of Lisle do not have comprehensive plans.

Future Land Use

The rural character of Broome County is eroded by the loss of agricultural land and the spread of development. Over one-third of survey respondents thought that loss of community character was a major obstacle to the County achieving its goals, and nearly one-quarter were concerned about the loss of open space. Almost half of respondents (48%) thought that ‘Protecting our open spaces and rural landscapes’ was a major opportunity for the County to pursue. Over 40% wanted to see commercial and industrial development concentrated in the urban core communities.



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A vibrant urban core compliments the outlying communities, giving rural residents a destination for work and entertainment. One respondent to the survey summed it up this way, “No matter what we do, if the cores of our communities are still struggling and dilapidated, it will hurt economic growth in other areas.”

In addition to issues of community character, well-managed farmland provides groundwater recharge areas and helps control storm water runoff. Development of farmland increases impervious surfaces such as parking lots and this leads to increased runoff during storm events. Agriculture is discussed further in the Working Lands chapter.

Another result of the competing forces shaping land use in Broome County is the current lack of developable land. Planning staff conducted a sample search of the County’s Geographic Information System for developable land with the following criteria:

- The land is vacant
- 20-acre minimum
- Within one mile of a highway ramp
- Outside of the floodplain
- Access to natural gas and public water and sewer
- No steep slopes
- Industrially or commercially zoned

Despite 35% of the land (147,191 acres) in the County being vacant, no parcels met these modest criteria. Without shovel ready development sites, the County cannot compete for economic development opportunities presented by site selection firms, and we cannot accommodate local firms looking to expand their operations.

One response to the lack of developable land for economic development is to focus our resources on brownfield sites. These abandoned, distressed properties require less investment in infrastructure and their redevelopment can reverse a pattern of disinvestment in the surrounding neighborhood. To date Broome County Planning





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has secured over \$1,000,000 in state and federal grants for brownfield assessment, clean up, and end use planning. In addition, the County created a Brownfield Clean Up program funded by an occupancy tax on hotel and motel rooms. The result of this effort is redevelopment and developer interest at a number of brownfield sites across the county.

There have been successes redeveloping local brownfields for industrial and commercial use. Two striking examples are the redevelopment of the Ranger-Paracord site in Johnson City to a state-of-the-art regional printing facility for Gannett Publishing and the construction of the Charles Street Business Park on the former Anitec campus in Binghamton's First Ward. These multi-million dollar ventures can serve as a model for future industrial investments.

There has also been a recent trend of residential development in the urban core. Notable examples of this include:

- Rehabilitation of upper stories of individual row type buildings in downtown Binghamton to upscale loft apartments
- Redevelopment of 20 Hawley Street to luxury student housing by Alfred Weissman Real Estate.
- Construction of major housing developments, including senior housing complexes, in Johnson City and the town of Union.



These developments do not alone reverse decades of outmigration from the core communities, but they do illustrate market trends that can be encouraged.