

IMAGINE BELLEVILLE

ADOPTED
JUNE 16, 2014

SECTION 2

Growth Capacity and Infrastructure



Introduction

At the time of Belleville's last *Comprehensive Plan* in 2000, the community was poised for growth in many ways. And that growth came during the 2000s, when Belleville posted its fastest rate of population increase since before 1960 (7.4 percent, with some 3,100 new residents added). However, perhaps even greater growth potential was diminished by the nationwide economic recession late in the decade. One indication of this gap between potential and actual is the inventory of platted but unbuilt residential lots the City was left with in recent years as highlighted later in *Section 4, Housing and Neighborhoods*. As discussed further in this section and plan, growth drivers that fueled this optimism included the early and immediate success of a new Lindenwood University (LU-B) campus in Belleville, as well as continued expansion of Southwestern Illinois College (SWIC), further investment in local medical facilities and services, and the tremendous and ongoing positive impact to the entire area's economic base from Scott Air Force Base (AFB).

The key question going forward - and the central focus of this plan section - is what is Belleville's capacity to accommodate further desired growth and development

in the years ahead? Especially to support a mix of both new development at the edges of the City, and hoped-for and needed redevelopment within the interior of the established City. The critical components of growth capacity, for purposes of comprehensive planning, are water, wastewater, and storm drainage infrastructure, and public safety services involving police and fire protection. Other types of public facilities and services also factor into growth capacity (e.g., schools, parks) and are addressed elsewhere in this plan or administered by other public agencies in coordination with the City of Belleville.

On the one hand, Belleville, as a long-established community, bears the burden of having to commit a fair amount of its available public dollars to rehabilitating aging utility infrastructure. On the other hand, this investment will put Belleville in a strong position relative to many other cities, in terms of its basic growth capacity, for the years and decades ahead. Especially at a time when the "report card" for the nationwide infrastructure status and outlook remains disappointing, as evaluated and scored each year by the American Society of Civil Engineers (ASCE).¹

¹ 2013 Report Card for America's Infrastructure. American Society of Civil Engineers. Accessed on 03/21/14 at <http://www.infrastructurereportcard.org/>.

ASCE issues an annual report and call for action that “depicts the condition and performance of the nation’s infrastructure in the familiar form of a school report card - assigning letter grades that are based on physical condition and needed fiscal investments for improvement.” The 2013 national Report Card assigned a D+ for all forms of U.S. infrastructure, ranging from utility and flood protection infrastructure (drinking water, wastewater, dams and levees) to all forms of transportation infrastructure (roads and bridges, freight rail, aviation, inland waterways, and transit). Both drinking water and wastewater received a D grade. ASCE continues to assign such low grades to draw attention to the ever-increasing scale of the national infrastructure challenge, and to the costs of continued deferral of necessary capital investments at all levels of government. For the nation to reach an acceptable grade by 2020, ASCE estimated necessary investment of \$3.6 trillion starting in 2013.

The last ASCE Report Card issued specifically for Illinois was in 2010, with a next update upcoming in 2014. As of 2010 Illinois received D+ grades for both drinking water and wastewater infrastructure. At that time Illinois reported \$15 billion in drinking water infrastructure needs over the next 20 years, and \$17.5 billion in needed wastewater investments.

As this plan section shows, Belleville is in an enviable position in terms of its capacity to fulfill water demand and treat wastewater for ultimate discharge back into the local environment. However, like many other cities, Belleville faces the challenge of aging “pipes in the ground,” which are the conduits that distribute potable water from treatment facilities to homes, businesses and institutions; those in the sanitary sewer system that collect wastewater from across the community for centralized treatment; and those that convey stormwater to drainage basins and waterways. These

underground networks will require ongoing and steady investments in rehabilitation and upgrades to ensure system integrity and avoid costly emergency repairs and risks to public health.

As always, municipal government must continually re-assess its ultimate priorities and allocate its available resources accordingly through annual and multi-year budgeting processes. In the process, an unwavering commitment to public safety services is anticipated and widely supported in the community, balanced with Belleville’s crucial physical infrastructure needs. And as elected officials and their professional advisors well understand, police and fire services are not only among the most labor intensive of municipal functions, but also require well-trained and equipped personnel to serve their community effectively while ensuring the safety of the men and women involved in this essential service delivery.

Approach

The assessment of Belleville’s growth capacity for this plan section began with review of previous findings and action strategies set out in the *2000-2020 Comprehensive Plan* and proceeded to compilation of the newest available data and performance indicators, discussions with the City’s elected leadership and key professional staff, and consideration of the perceptions held by average residents and local organizations about the status and outlook for the area’s utility infrastructure and public safety services. In some cases, such as for drinking water, this required interaction with other entities responsible for such services more than the City itself, or with other levels of government that also provide similar services in the vicinity of Belleville.

The background and direction of this plan section also reflect discussions with the Comprehensive Plan

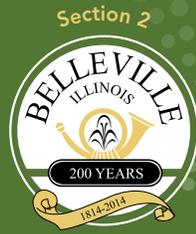


Figure 2.1, City of Belleville Projected Population Growth, 2010 - 2040



	1960	1970	1980	1990	2000	2010	2020	2030	2040
■ 0.63% Avg Annual Growth	37,264	41,699	41,580	42,785	41,410	44,483	47,556	50,629	53,702
◆ 0.72% Avg Annual Growth	37,264	41,699	41,580	42,785	41,410	44,483	47,784	51,330	55,139

Source: Kendig Keast Collaborative, U.S Census Bureau.

Advisory Committee on tools available to Illinois cities for dealing with the opportunities and challenges that come with population growth and expansion of municipal jurisdiction over time. As reflected in this and other plan sections, the committee strongly endorsed further formalization of the City’s processes for identifying, prioritizing, and funding key infrastructure projects through a multi-year Capital Improvements Program (CIP). Committee members also emphasized the importance of “telling the story” about Belleville’s commitment to upgrading its infrastructure, and about progress in maintaining a safe and secure community through ongoing resource commitments made to staffing, facilities, and equipment for local public safety services. They were troubled by the extent of misperceptions and misinformation on these topics within and outside of Belleville, and see it as the responsibility of not only City government but the entire community to spread the word about all the positive effort and energy going toward Belleville’s future.

Population Outlook

Population projections are an important component of a long-range planning process. They help to determine

and quantify the demands that will be placed on public facilities and services based on the potential pace and scale of the community’s physical growth. Projections reflect local, regional, and even national and international trends and offer a basis to prepare for the future. However, forecasting population changes can be challenging, particularly for the long term, because it is often difficult to account for all circumstances that may arise. Therefore, it will be important for the City to monitor population and economic growth continually to account for both short- and longer-term shifts that can influence development activity and trends in the City and larger region.

Demographers caution that population projections become trickier as the geographic area gets smaller, making city-level population the most difficult to forecast. This is because population change within a city is strongly influenced by less predictable factors such as housing prices, availability of vacant land to develop, and annexation of additional territory, which may already have existing residents and results in an instant increase in the city-wide total.

Adding to the forecasting challenge in Belleville, as in any community that has seen variable growth or even

54,425 persons

projected in 2040.



some population loss in recent years, is the lack of a clear trend to which traditional projection methods may be applied.

City of Belleville Projections

Given this context, **Figure 2.1, City of Belleville Projected Population Growth, 2010 - 2040**, provides a comparison of two potential scenarios for future population change in the community. The projections build on the latest decennial Census figure of 44,483 persons for 2010, and identify potential population levels out to 2040. *Figure 2.1* also provides historical perspective since 1960. As highlighted in *Section 1, Introduction*, it is notable that Belleville added nearly 3,100 residents during the 2000s, which ended with the severe economic downturn years of 2007-2009 across the nation. Many other communities like Belleville saw the departure of individuals and families who needed to relocate for employment or better opportunities.

The historical portion of the chart, for the previous Census years of 1960 through 2010, includes decades when Belleville experienced a net loss of population (0.3 percent in the 1970s, and then 3.2 percent in the 1990s). It also encompasses the most recent decade of the 2000s in which Belleville saw 7.4 percent growth in population - the highest rate for the City since before 1960 when suburbanization had emerged as a dominant pattern in the region and nation.

The projection in *Figure 2.1* that yields an average annual growth rate of 0.63 percent - and a total population of roughly 53,700 in 2040 - is a "straight-line" projection based on the trend from past decades, including the more robust growth during the 2000s. This method involves the same quantity of people being added during each decade from 2010 to 2040, which in this case is 3,073 persons per decade, or 9,219 persons over

the 30 years. This would represent just under 21 percent growth in Belleville's population over these decades. But it also suggests a declining rate of growth over time as the same number of people are being added to an ever-expanding total.

A second projection method leads to a 0.72 percent average annual growth rate over the 2010-2040 forecast period - and a 2040 population of 55,139 - as shown in *Figure 2.1*. This method utilizes a constant rate of growth versus the fixed quantity of growth in the straight-line projection. The slight difference in the average growth rate per year adds 1,437 more persons under this projection, for 10,656 additional residents by 2040 (3,301 during the 2010s; 3,546 in the 2020s; and 3,809 in the 2030s). This would amount to 24 percent growth over the 30-year projection period compared to 20.7 percent with the first method.

It is wise for cities to think in terms of a range of potential growth rather than an absolute number given the uncertainty of any small-area forecast that extends beyond a few years. It is assumed for this *Comprehensive Plan* that Belleville's 2040 population will fall within a range of 53,700 to 55,150 persons, which yields a midpoint of 54,425 persons (and midpoints of 47,670 in 2020 and 50,980 in 2030). This would represent an average annual growth rate of 0.67 percent through 2040 - and the addition of just under 10,000 new residents - from a base of 44,483 persons as of Census 2010.

Should Belleville leaders decide at some future point that a faster growth pace is desired and manageable, then they can join other communities that move beyond simply projecting from past trends or aiming to maintain a steady population share of a larger area. Instead, some communities choose to set out target population levels which they hope to attain through aggressive



Figure 2.2, Comparison of Population Projections for City of Belleville



Belleville could grow by...

0.67%

ON AVERAGE EACH YEAR

Source: Kendig Keast Collaborative; Belleville Parks, Recreation and Greenways Master Plan (2008); Belleville Comprehensive Plan 2000-2020 (2000).

economic development efforts and/or territorial growth through annexation. Annexations that involve already-populated areas, which immediately add new residents to a municipal jurisdiction, will skew projections that accounted only for more gradual demographic processes within current boundaries, both from natural population change (births minus deaths among existing residents) and net migration from persons relocating into and out of the community.

Comparison to Previous Projections

Illustrated in **Figure 2.2, Comparison of Population Projections for City of Belleville**, are the future population numbers for this *Comprehensive Plan* juxtaposed with earlier projections from the *2000 – 2020 Comprehensive Plan* (which projected only to 2020) and the *City's 2008 Parks, Recreation and Greenways Master Plan* (which projected to 2030).

BELLEVILLE COMPREHENSIVE PLAN 2000-2020

The previous *2000 – 2020 Comprehensive Plan* included low-, moderate- and high-growth population projection scenarios. Under these scenarios, the 2010 population in Belleville was anticipated to range from as low as 44,316 to as high as 49,905, with a mid-range projection of 47,081. The results of Census 2010 showed a population of 44,483, which was just above the lowest projection number. This outcome relative to the plan projections in 2000 suggested little change in Belleville's growth equation as the low-growth scenario was meant to

reflect "the status quo, projecting the growth trends experienced between 1960 and 1990 into the future."

Extending the varying growth assumptions by another decade, the *2000 – 2020 Comprehensive Plan* indicated that the City's population in 2020 could range from 46,016 (low) to 51,857 (moderate), or to 58,209 (high). While the City would gain only about 4,600 residents over 20 years under the low-growth scenario (11 percent growth), the moderate scenario assumed stronger growth for all of St. Clair County, translating to more rapid gains within Belleville, which would add about 10,500 residents at this pace (25 percent growth). The most optimistic scenario had Belleville approaching the 60,000 population mark by the early 2020s, with 16,800 more residents in 2020 compared to 2000 (40 percent growth). This scenario assumed area-wide Metro East gains driven by continued growth along and near the Interstate 64 corridor and other communities with good connections to Downtown St. Louis via the local highway network and MetroLink.

The Population Projections section in the *2000 – 2020 Comprehensive Plan* concluded that, "The status quo/ low growth projections most likely do not accurately reflect the growth potential in the area. This projection [approximately 46,000 in 2020] is viewed as too low since it merely reflects historical population trends and does not account for more recent development patterns." The moderate-growth scenario [approximately 51,850 in 2020] was adopted as the foundation for the 2000 plan since the potential pace suggested by the high-

10,000 NEW RESIDENTS

over the next 25 years.

growth projection was seen as more appropriate to areas closer to Interstate 64.

The somewhat less aggressive growth assumptions in this *Comprehensive Plan*, relative to the outlook in 2000, reflect residual effects of the national economic recession and housing market bust experienced in the interim, as well as uncertainty about long-term regional and county-wide growth potential. The *2040 Regional Transportation Plan* released by the East-West Gateway Council of Governments in 2011 includes a map showing the potential geographic distribution of regional population growth over the next several decades, but the plan never explicitly identifies future regional or county-level population numbers. Likewise, the St. Clair County *Comprehensive Plan* (2011) provides no specific projections beyond current population information at the time for St. Clair County.

Additionally, the first few years of U.S. Census Bureau population estimates for Belleville since Census 2010 indicate a stable population situation, or possibly even a minor decrease. Relative to the 44,478 population total reported from Census 2010 (which the Bureau later revised slightly upward to 44,490 for ongoing estimation purposes), the respective estimates in 2011 and 2012, as of July 1 each year, were 44,138 and 43,765. The same is true for St. Clair County with the newest available Bureau estimate, as of July 2012, showing the County population declining by 0.4 percent since Census 2010, to 268,858 persons.²

² Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2012. U.S. Census Bureau, Population Division. December 2012. NOTE: The Bureau also points out that the ongoing and multi-year American Community Survey (ACS) is another source of population, demographic and housing unit estimates between decennial censuses, but the Population Estimates Program produces and disseminates what are considered the Bureau's official interim estimates of population for the nation, states, counties, cities and towns.

BELLEVILLE PARKS, RECREATION AND GREENWAYS MASTER PLAN (2008)

The future population assumptions in this more recent City plan were drawn from a "share ratio trend" method, after consideration of numbers generated from several other projection methods. The selected method focuses on the City's relative share of St. Clair County's total population over time. In the two most recent Census years Belleville accounted for just over 16 percent of the County population (41,410 of 256,082 - or 16.2 percent in 2000; and 44,483 of 270,056 - or 16.5 percent in 2010).

It should be noted that the projections done in 2007-08 for purposes of parks and recreation planning occurred before the conclusion of the 2000s decade. This decade turned out to be a turnaround period of relatively brisk net growth for Belleville despite the national economic recession late in the decade. Within the 2008 parks plan it is pointed out that the U.S. Census Bureau had placed Belleville's estimated population in 2006 at 41,095, which was lower than the 2000 Census count of 41,410 by just over 300 persons.

The plan goes on to underscore that the time period under consideration is critical. For example, if one considers the decennial Census figures for Belleville from 1980 to 2000, this shows the community experiencing an average decline in population of 0.05 percent each year over these 20 years. In effect, this was a stagnant population situation, with Belleville's population loss only marginally less than the average annual decline of 0.1 percent occurring within all of St. Clair County. However, if each decade is considered separately, Belleville actually grew by nearly three percent during the 1980s (from 41,580 to 42,785 residents), but then saw a 3.2 percent decline during the 1990s (to 41,410 residents). Viewed in this way, the community had a net population loss of only 170 persons over the 20-year period.



Regional Context

St. Louis Metropolitan Area

The St. Louis metropolitan area is defined most broadly by the federal government as the St. Louis-St. Charles-Farmington, MO-IL Consolidated Statistical Area (CSA). The CSA includes the City of St. Louis; the Metro East counties of southern Illinois (Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, and St. Clair); the Missouri counties of Franklin, Jefferson, Lincoln, St. Charles (outside the City of St. Louis), Warren, and Washington, plus part of Crawford County; and the Farmington, Missouri, "micropolitan statistical area," which includes Washington County and St. Francois County in Missouri. According to the newest U.S. Census Bureau estimate, as of July 2012 the CSA had surpassed the 2.9 million mark to remain the 19th largest CSA in the nation as in 2011.¹

The earlier Metropolitan Statistical Area (MSA) designation - which included most of the CSA except for the Farmington, Missouri, "micropolitan" area cited above - nearly doubled in population from the 1950 to the 2010 Census. The MSA added 1.27 million residents over those 60 years (82.5 percent growth). However, the dominant regional storyline of the last half century is the area's slowing rate of growth, from average annual growth rates of 2.1 percent and 3.6 percent in the 1950s and 1960s, respectively, to less than one percent annual growth per year since the 1990s, following a 0.63 percent average annual decline in population during the 1970s.

Internal to this trend was significant geographic movement of population, with the City of St. Louis population dropping by roughly half since 1970 to about one-third of its 1950 level (approximately 319,000 in 2010 compared to some 850,000 residents in 1950 according to the East-West Gateway Council of Governments in the 2011 Technical Supplement to its Regional Transportation Plan 2040). According to the Director of the Simon Center for Regional Forecasting, "this is one of the most rapid population losses of a major city in the U.S. The city's annual loss of people averaged one percent for 50 years." Similarly, decentralization of area population to more suburban and rural locations has caused St. Louis County to see only minimal growth since 1970 due to net out-migration. Despite growth in population and local economies elsewhere in the region, the St. Louis MSA has steadily fallen from the eighth largest in the nation in 1950 to 10th in both 1960 and 1970, 14th in 1980, 16th in 1990, 17th in 2000, and 18th in 2010.²

However, a more positive sign for the region from the 2000s is that average annual population growth during that decade was 0.8 percent, which was nearly double the 0.45 percent rate of the 1990s. If maintained into the 2010s and beyond, a regional growth rate in a range between 0.6 and 0.8 percent per year would be similar to that projected in this Comprehensive Plan for Belleville over the next several decades - 0.67 percent on average each year.

St. Clair County

St. Clair County remains the most populated county in Illinois south of the greater Chicagoland region - with Belleville, its county seat, the largest Illinois city south of Springfield.³ As stated in the County's 2011 Comprehensive Plan:

The completion of Interstate 255, improvements to local downtown areas, and the economic benefits of Scott Air Force Base have all been major contributors to the growth of St. Clair County. St. Clair County's share of the MSA population has remained steady at about nine percent since 2000. The 2010 share of 9.4 percent was based on the County's Census 2010 population of 270,056.

In its *Technical Supplement to the Regional Transportation Plan 2040*, the East-West Gateway Council of Governments highlighted that St. Clair County increased its population by 5.5 percent during the 2000s after having lost population the three previous decades. Another significant regional trend involved the Illinois portion of the region growing by the same 5.5 percent during the decade - adding nearly 30,000 residents - while the five Missouri counties in the COG's transportation planning area grew by three percent. However, with a larger base of population in 2000, the Missouri side added almost twice as many residents during the 2000s as the Illinois side, but the Illinois gain was notable.⁴

1 Annual Estimates of the Population of Combined Statistical Areas: April 1, 2010 to July 1, 2012. U.S. Census Bureau, Population Division. March 2013.

2 Economic, Demographic and Entrepreneurial Profile of the St. Louis Region. Jack Strauss, Director of the Simon Center for Regional Forecasting. September 2012. Accessed on 03.08.14 at http://www.stlpartnership.com/cmss_files/attachmentlibrary/Economic-Demographic-and-Entrepreneurial-Profile-of-St.-Louis.pdf.

3 St. Clair County Economic Development Department. Accessed on 03.08.14 at <http://www.co.st-clair.il.us/departments/econDev/Documents/StClairCountyQuickFacts.pdf>.

4 State of the System and Technical Supplement to Regional Transportation Plan 2040. East-West Gateway Council of Governments. 2011. Accessed 03.08.14 at <http://www.ewgateway.org/trans/longrgrplan/longrgrplan.htm>.



< 60%
of area water treatment capacity is currently utilized

with both adequate quantity and quality of water supply for the decades ahead.

The 2008 plan rightly anticipated the marked uptick in Belleville’s population by the time of Census 2010 (to 44,483 persons) by contending that, despite continued Census Bureau estimates of slight population decline in Belleville to that point in the 2000s, “consideration of local information such as the numbers of building permits issued each year and the number of lots platted suggests population is increasing within the City.” As shown in *Figure 2.2*, the *Parks, Recreation and Greenways Master Plan* adopted a 2030 projection of 51,500 residents based on an assumed base-year figure of 45,700 in 2008 and associated projections of 46,200 in 2010 (about 1,700 higher than the actual Census 2010 count) and 49,000 in 2020. These figures assume that the long-term trend, since 1970, of Belleville gradually increasing its share of the county-wide population will continue over the next several decades, reaching 18.3 percent of the St. Clair County total in 2030 (51,482 City residents relative to 282,091 County residents).

A key factor behind these 2008 projections is assumed growth in the County population from approximately 271,250 persons in 2010 (the actual Census 2010 count a few years later was 270,056) to nearly 282,100 persons in 2030. The County-level projections were incorporated from the *U.S. Census State Interim Population Projections by Age and Sex: 2004-2030*. However, other sources of future population scenarios for St. Clair County suggest a potential trend of population loss in the decades ahead. So, as with any statistical or forecasting exercise, especially for relatively small geographic areas, a measure of caution is strongly advised, along with the need for routine monitoring of other “on the ground” indicators of population change such as building occupancy permits and utility connections.

Infrastructure Context

The utility infrastructure available to Belleville residents, businesses and institutions as overviewed in this section includes public potable water, public sanitary sewer, and stormwater management. Public infrastructure is an important foundation of quality of life for a community, providing for the basic health and safety of residents. Efficient facilities are vital to most daily activities and require regular maintenance and upgrading both to meet the demands of a growing population and to be sensitive to environmental resources.

The quality and availability of these services influence an area’s economic development prospects and the type and density of future development. Additionally, development patterns can have a significant impact on the ability of a city to pay for and maintain these services in the future.

Table 2.1, Interurban District¹ Water Supply Statistics

Customer Type	Gallons Per Day (GPD) ² Usage	Number of Connections
Residential	112 ³	43,706
Commercial	330	2,928
Industrial	10,023	74
Other (Schools, Parks, Municipal Facilities, etc.)	4,409	343

1 The City of Belleville is located in the Illinois American Water Interurban District. This District serves customers in Belleville, East St. Louis, Granite City, Bond-Madison, Millstadt, Waterloo, and Shiloh. Reference *Map 2.1, Water Utilities*, for the service area boundaries.

2 This figure represents the average gallons per day per customer.

3 This can increase to approximately 150 in summer months.

Source: Illinois American Water (ILAW), November 2013



The City of Belleville's inventory of infrastructure was reviewed at a large-scale, planning level of detail based on information provided by City personnel, resource agencies, and available mapping. Three types of utility infrastructure services are assessed in this section:

- Public potable water, which encompasses water supply, treatment, storage, and water delivery to residents.
- Public sanitary sewer service systems, which collect wastewater from all sources and convey it to a treatment facility.
- Stormwater management, which encompasses managing runoff from rain events to control or mitigate its impacts through a system of conveyance, treatment, recharge, and/or reuse, and through management of the most extreme weather events for public safety.

Water

Illinois American Water (ILAW), a subsidiary of American Water/RWE AG (Essen, Germany), provides potable water to the City of Belleville and surrounding area, as illustrated in **Map 2.1, Water Utilities**, via the East St. Louis Water Treatment Plant (WTP). The Mississippi River is the sole source of supply for the East St. Louis WTP. Currently, quantity and quality of the water supply is adequate with no major issues; however, typical of an aging supply system, ILAW is focusing on water main replacement projects throughout the City, as well as updates to the aged water distribution system. Current customer statistics, as provided by ILAW, are provided in **Table 2.1, City of Belleville Water Supply Statistics**.

The ILAW Belleville service area is part of the Interurban District. This district serves customers in East St. Louis, Granite City, Bond-Madison, Millstadt, Waterloo, and Shiloh, in addition to the City of Belleville. The two

WTPs that provide water to this district include the aforementioned East St. Louis WTP, as well as the Granite City WTP. The East St. Louis WTP supplies East St. Louis, Belleville, Shiloh, Millstadt, and Waterloo. The Granite City and Bond-Madison customers are served by the Granite City WTP. The East St. Louis WTP has a rated capacity of nearly 57 million gallons per day (MGD), and the Granite City WTP has a rated capacity of approximately 15 MGD. The average daily demand relative to the current available capacity of the entire Interurban District is over 42 MGD, meaning that remaining system capacity far exceeds current demands, by approximately 30 MGD.

Sanitary Sewer System

The City of Belleville provides sanitary sewer service to most municipal residents (approximately 17,500 connections) as well as to portions of surrounding municipalities (see **Map 2.2 Sanitary Sewer System**). Some Belleville residents located in Stookey Township and St. Clair Township utilize their respective local government sewer department services and treatment plants.

As part of the sanitary sewer service, the City owns and operates a sewage treatment plant, nearly 300 miles of associated sewage collection lines, 4,000 manholes, and 50 lift stations. The 75-year old sewage treatment plant operates 24 hours per day and is permitted to treat eight million gallons per day (MGD), with a maximum excess flow capacity of 16 MGD. The average daily flow through the treatment system is currently five MGD, meaning approximately three MGD of available capacity remains under normal operating conditions.

The City of Belleville and the surrounding area is served by four facility planning areas (FPAs): City of Belleville, St. Clair Township, Stookey Township, and the Village of Swansea. FPAs are demarcated areas in which current and/or future wastewater is accounted for and therefore



2/3 of the City's own sanitary sewer plant capacity is currently utilized

and this will drop to nearly 50 percent with pending capacity upgrades. The network of collection pipes under the City presents much greater challenges given their age and interaction with stormwater flows in many areas. This stormwater intrusion is a key reason added plant capacity is needed, to reduce system overflows.

primarily follow township and municipal boundaries. The Clean Water Act established FPAs to examine issues key to centralized wastewater treatment such as how much treatment capacity is needed, what the financial and environmental costs of providing treatment will be, and what different treatment alternatives are available. The limits of the Belleville FPA are shown on *Map 2.2 Sanitary Sewer System*. Much of the land within the southern and eastern portions of the Belleville FPA are not developed.

Many of the City's existing sewer lines are nearly 100 years old. As such, approximately 70 percent of the sewer lines and associated manholes require updating. Furthermore, due to a "combined" sewer system, in which a single pipe conveys both untreated wastewater and stormwater, when rain water flow is too great for the single pipe, the flow spills into nearby streams, lakes, or rivers. This is also referred to as Combined Sewer Overflow, or CSO.

The City has been consistently implementing the separation of combined systems with every roadway improvement project that is undertaken. To further address the combined system issues, the City has developed a Long Term Control Plan (LTCP) which was necessary as a combined system is no longer allowed under current Environmental Protection Agency standards. The LTCP identifies 13 CSO locations and lists improvements to reduce the CSO locations to less than two, at a total cost of approximately \$112 million.

The LTCP was implemented in 2007 as a project divided into five phases, with an estimated completion date of 2027; however, due to other necessary immediate projects, the completion date has been extended. Phase 1, involving expansion of the sewage treatment plant capacity by nearly 40 percent to approximately 13 MGD, addresses the most fundamental - and costly -

issue with the City's wastewater system. Phases 1 and 2 (design and construction of gravity relief sewers) are being completed concurrently, with Phase 1 anticipated for completion in early 2014 and Phase 2 later in 2014. Upon completion of these two phases, four of the 13 CSO locations will have been addressed. The remaining CSO locations will be addressed in Phases 3 through 5.

Other recent improvements to the sanitary sewer system include:

- Upgrade and replacement of all pumps, valves, and electrical controls for all plant pumping stations;
- Renovation of the grit collection system at the treatment plant;
- Total renovation of the treatment plant tertiary filter system and building;
- Renovation of the bar screens at the treatment plant; and,
- Replacement of the treatment plant's boiler with an updated system.

Overall, in terms of capacity and addressing current issues, the outlook for the sanitary sewer system is good. Recommended actions to address future issues include the elimination of any significant ground/surface water infiltration and inflow into the wastewater collection system, as well as ongoing updating of the combined sewer lines to completely eliminate CSO occurrences.

Also, due primarily to inflow and infiltration, the City has to pump water at several locations during storm events to prevent flooding. As such, the City has contracted several consultants in recent years to conduct inflow and infiltration (I&I) studies. The studies were intended to identify inflow and infiltration areas, estimate volume of flow from I&I, recommend available methods for correction, and estimate the cost associated with the



correction methods. The studies were completed in an effort to provide the City with the true condition and capacity of the collection system, after accounting for I&I effects, and thus prioritize improvements to reduce treatment plant operating costs, reduce localized flooding, and potentially extend treatment capacity that would, in turn, minimize and postpone future plant expansions. The first of many projects to address I&I will begin the summer of 2014.

Stormwater Management

The City of Belleville's incorporated area is mostly located within the Stolberg Lake-Richland Creek sub-watershed of the Lower Kaskaskia River subbasin, with portions extending into other adjacent drainage areas, as illustrated in **Map 2.3, Watersheds**. Stormwater collection piping and conveyance systems are located throughout much of the City.

In 2008, St. Clair County drafted a Stormwater Control Ordinance for the County and its municipalities (including the City of Belleville), which included programs and best practices to control runoff. Final adoption of the ordinance occurred in 2010.

It is the responsibility of the City of Belleville to fund improvements, repairs, and new storm sewer lines within its jurisdiction. Generally, the City addresses site-specific drainage issues as they arise through site plan review and the overall development approval process. The City is currently drafting the Orchards Drainage Study, which is expected to outline a coordinated series of stormwater improvement projects intended to eliminate repeated flooding at approximately 20 locations in the Orchards. The City is also working on repetitious flooding at the Sherman Street, C Street, and Lucinda Avenue areas.

Other observed drainage issues are regularly discussed by City leaders in regards to Bicentennial Park; however, the park is designed to perform many functions, including collecting, cleansing, and storing stormwater. The park was developed on flood-prone land as a best use for this strategically located and ecologically rich property. Bicentennial Park provides a positive link between older and newer areas of Belleville and serves to provide additional park and greenspace as identified in the *2008 Parks, Recreation and Greenways Master Plan*. Flooding at the park is generally the result of unusual peak rainfall events; therefore, the stormwater management approach in this area preserves the biodiversity of the park and essentially contributes an environmental amenity to the community.

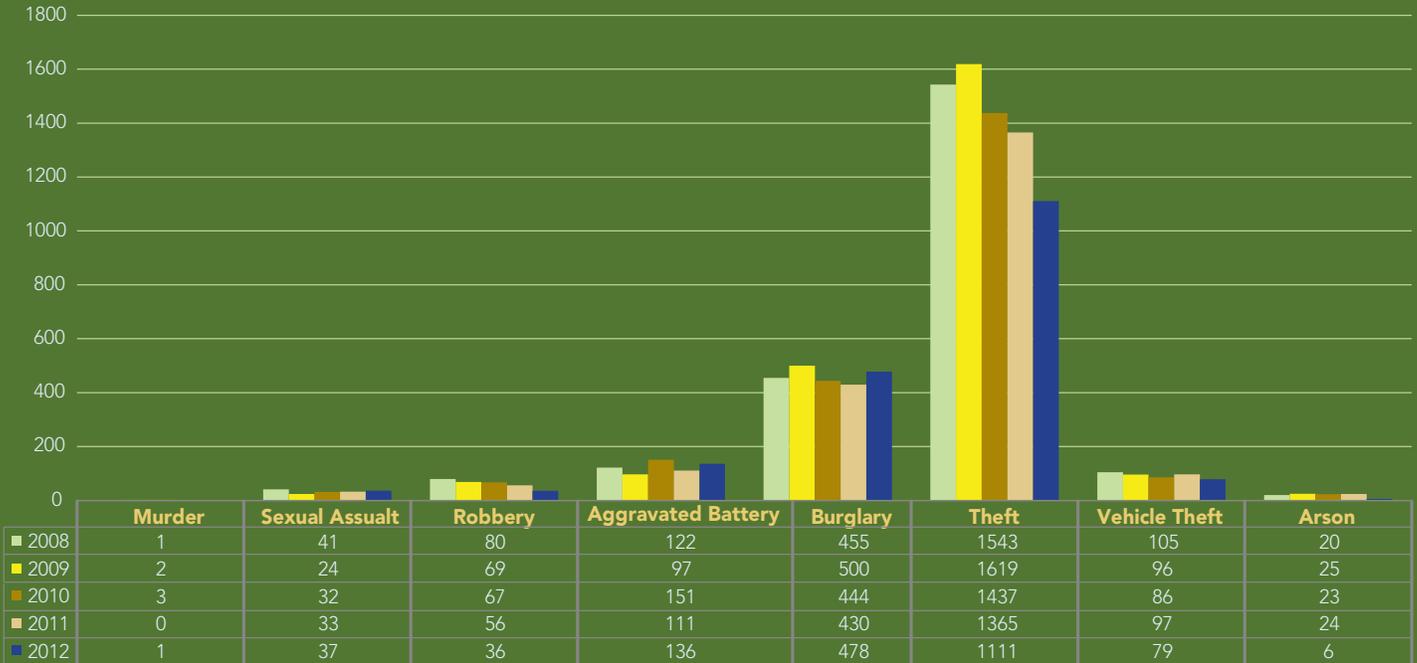
Public Safety Context

Police Services

Having a strong Police Department, and thereby a safe community, remains a top priority of the City of Belleville, especially as a key factor in attracting new residents. Discussions with Belleville Police Department (BPD) leadership yielded the following highlights on the department's status and outlook for serving the existing community plus Belleville's projected growth in the years ahead:

- BPD has a "quality of life" emphasis in its operational approach, especially by focusing on street crimes and engaging people in the community versus just reacting to calls received (e.g., acting on the principle that simple traffic stops are known to reduce criminal activity).
- Given the cost of each new officer, BPD is able to add (accounting for salary, benefits, training, vehicle, and incorporation of specialized equipment into vehicles), the department strategically targets

Figure 2.3, Belleville Index Crime Statistics, 2008 - 2012



its available personnel within the City based on constant monitoring of crime trends and concentrations.

- A review of statistics from 1999-2011 showed little change in Belleville’s crime indicators - and improvement in the incidence of homicides and automobile thefts - which BPD has highlighted and publicized more widely, especially through social media outlets in recent years. The most recent statistics show that Belleville had only one murder in 2012 after none in 2011 and three in 2010 due to increased gang activity at that time.
- Belleville has a relatively high volume of calls for police response given the nature of the community, such as serving as the St. Clair County seat, including criminal courts, the County jail, and probation activities; housing locations for various social services; and having multiple higher education and high school campuses. In short, Belleville has a daily flow of people and situations that increase the potential for crime - plus, sharing a border with another community (East St. Louis) that continues to rank high on national listings of cities with significant crime issues.
- Given these circumstances, typical benchmarks for assessing adequate police staffing relative

to local population size break down in situations like Belleville, requiring more localized study to determine appropriate staffing. When BPD leaders visited their counterparts in Moline, Illinois, a city with similar population and police staffing, they discovered that Moline had approximately 15,000 total calls in 2011 while BPD had to deal with some 51,000 total calls.

- BPD also observed a higher level of technology implementation in Moline’s police operations (e.g., GPS on vehicles and real-time, on-screen monitoring of vehicle locations including Sheriff’s vehicles). As Belleville continues to invest in its own technology upgrades, BPD leaders consider their department the most sophisticated in Illinois south of Springfield (e.g., for crime scene investigation) - second only to the Illinois State Police in southern Illinois. Technology also leads to labor efficiencies and time savings, such as a new BPD records management system that enables officers to complete reports in their vehicles, facilitates better communication with officers on the move, and enhances links to the Sheriff’s Department. The associated use of “e-ticketing” technology allows officers to make more stops, with the benefit that more tickets leads to more warrants, which leads

to more success against drug-related crime. The City also uses Cyber-Reach technology to send emails, automated phone calls, or text messages to residents in the case of severe weather or emergencies. This technology is beneficial across multiple departments.

- As with other areas of municipal government, BPD also faces the challenges associated with the extensive physical size and unusual shape of the City. Despite this geographic context, BPD continues to achieve an average response time of two to four minutes, and has maintained this level of responsiveness even with the City's annexation of additional territory in recent years.
- BPD's relocation to a new headquarters location, which was announced during the time of this *Comprehensive Plan*, is expected to satisfy the department's space needs for the foreseeable future. Additionally, the new BPD facility on the western end of Downtown will be more favorable for circulation of police vehicles relative to the more complicated one-way street pattern in BPD's former location adjacent to City Hall in the center of Downtown.
- Art on the Square and other special events in Belleville have gone very well for BPD, enabling the department to "grow and learn" as such events have gained prominence. The department focuses on perimeter and internal-to-event security, traffic control, and monitoring of Metro transit activity, drawing praise in the process for the friendliness of its officers with visitors and vendors. Officers generally enjoy working the special events, and find that the people such events draw typically do not increase crime potential within the community.

STAFFING

- As of late 2013, BPD had 82 sworn officers and 25 civilian employees, with the possibility of adding up to four more officers in the near term depending on available budget. COPS grants from the U.S. Department of Justice have supported some additional officer hiring, along with grants for other purposes.
- Belleville's sprawling nature and unique shape of its City limits make it difficult to establish police districts. Therefore, BPD aims for balanced districts to maintain response times, and adjusts district boundaries periodically based on ongoing monitoring of calls for service by district to identify geographic concentrations and peaks. BPD uses this approach to pinpoint where added officers are most needed, and to avoid pulling officers from one district to respond in another, which only reduces coverage in their own district. As resources allow, BPD is also considering the possibility of "roaming" officers not tied to a particular district, which could be helpful on the west end of the City.
- BPD is increasing the use of special units (e.g., street crimes) to tackle specific and urgent "hot spot" problems. Given the effectiveness of this approach, further staffing increases are likely to go toward such units versus typical district patrols, ideally in two-person teams.

FACILITIES^{3,4}

- At the time of this *Comprehensive Plan*, BPD was preparing for a significant move to a new headquarters location, within the pre-existing Bank of Belleville office building at 720 W. Main Street. This building purchase option was approved by City Council in February 2014 after consideration of possibly renovating existing City buildings or constructing a new police facility, which carried a higher overall price tag. This building is illustrated in **Map 2.4, Public Safety Facilities**.
- The new building has approximately 40,000 square feet of space, which will give BPD some surplus of space to grow into in the years ahead. In addition to the \$3.1 million purchase price, the City expects to spend another \$7 million to retrofit the building for police operations (e.g., communications, holding cells, evidence vaults, etc.).
- The new building enables BPD to consolidate employees and functions (including evidence storage) previously spread across four locations that totaled less than 17,000 square feet and were all inadequate with substandard building conditions.
- Other benefits of the new location cited by BPD leadership include: ample parking on the three-acre site; a secure yet highly visible building; increased meeting space for training activities

³ "Belleville police get new \$3.1 million home." Jacqueline Lee. Belleville News-Democrat. February 3, 2014.

⁴ "Belleville will spend up to \$18 million to move police station." Jacqueline Lee. Belleville News-Democrat. February 4, 2014.

New Police Station

The City of Belleville selected the Bank of Belleville building at 720 West Main Street as its new location. Building modifications will begin in FY 2014 and, when complete, will provide 40,000 square feet of space for police management operations and communications. The new location is in close proximity to the St. Clair County courthouse and jail, new Illinois State Police crime lab, Belleville City Hall and downtown Belleville.

Source: Belleville News Democrat (<http://www.bnd.com/2014/02/04/3039563/bank-of-belleville-pledges-to.html>)



The Bank of Belleville building will serve as the Police Department's new facility.



and hosting coordination sessions with other area police agencies; and its proximity to the St. Clair County courthouse and jail, new Illinois State Police crime lab near LU-B, and Downtown Belleville and City Hall.

- Another plus of the new BPD location is its potential catalyst role as another spur to revitalization along the West Main Street corridor in central Belleville.
- BPD makes only limited use of another existing facility on the west side, which is currently used mainly by the Metro East Auto Theft Task Force. The department also has an outdoor firing range behind the City's wastewater treatment facility.
- The BPD relocation will also lead to a much-needed renovation and re-purposing of space at City Hall and related facilities at 101 S. Illinois Street, which were also studied for potential relocation but are more cost-effective to remodel for an estimated \$5 million. The City Hall building dates to 1957, does not provide adequate space for current City functions in the building, and does not meet Americans with Disabilities Act standards, which was also a factor in BPD not being able to host meetings in its main Downtown building.

SERVICE AREA COVERAGE AND RESPONSE TIME

- BPD provides policing across the 23 square miles of the current City limits, and also responds to mutual aid requests from other area police agencies as appropriate. The department also coordinates efforts with the U.S. Drug Enforcement Administration and through the Metro East Auto Theft Task Force, St. Clair County Sheriff's Department Drug Tactical Unit, and the Major Case Squad of Greater St. Louis. Additionally, having the new State Crime Lab in Belleville will save considerable driving time and distance for Belleville officers transporting evidence, and will bring many other police agencies into the community for training and other events.
- BPD has no formal response time target but consistently meets its informal target range of two to four minutes on average. The department handles its own dispatching, including 911 call response, and also provides dispatch service for the Belleville Fire Department.
- Potential further annexation of territory by the City would require re-evaluation and possible adjustment of police districts, as BPD has done with previous annexations, to ensure response times are



The new State Crime Lab facility was under construction during the time of this *Comprehensive Plan* process and will bring the newest technology to Belleville in a state-of-the-art building meant to house such high-grade and sensitive technology.



maintained and to monitor any changing patterns in the location or types of calls, especially for more serious versus routine matters.

AREAS OF NEED

- As BPD has increasingly focused on “telling its own story” rather than relying on typical media coverage and out-of-context comparisons with other communities, the entire community must continue to make headway on changing misperceptions of Belleville. From an operational standpoint, BPD focuses on arrests and crime-fighting results rather than just tallying and reporting the number of calls and incidents. Lessons learned from social media strategies in other communities are also paying off for BPD.
- Potential incorporation of transport vans into BPD operations would avoid using district patrol cars to transport detainees, which can leave a gap in district coverage for 45-60 minutes.
- Better protection of parked BPD vehicles from winter weather and storm damage will extend the life and utility of this essential and costly aspect of the department’s operations.
- Implementation of the City’s newly-adopted *Crime-Free Housing Ordinance* was just beginning at the time of this *Comprehensive Plan*, and will require early monitoring and evaluation.

Fire Services

Effective fire prevention and response capabilities are especially crucial in an older community with many residential and non-residential structures that pre-date contemporary construction codes and best practices. The background and informational points compiled

below reflect input from the Belleville Fire Department (BFD) regarding its status and outlook for serving the existing community plus Belleville’s projected growth in the years ahead. In Belleville’s case, emergency medical services (EMS) are provided by private ambulance companies that request and receive assistance from BFD when needed.

- The City of Belleville enjoys an Insurance Services Office (ISO) rating of 3. This makes Belleville a leader among southern Illinois communities, and only 26 percent of fire departments in the U.S. achieve an ISO rating of 3 or better. BFD attributes this excellent rating to the extensive training of its personnel and aggressive building plan review and building inspection programs.
- BFD has had grant success, most recently with \$78,000 added in Fiscal Year 2012-13 through a Department of Homeland Security Staffing for Adequate Fire and Emergency Response Grant, and with varying amounts of Foreign Fire Insurance funds that support department purchases, including its newest vehicle acquisition.

STAFFING

- BFD reports adequate staffing for its current day-to-day operations. This includes “24/7” staffing of the City’s four engine houses with 63 Career State Certified Firefighters.
- The current organizational structure for this staffing includes a Fire Chief, Deputy Fire Chief, Assistant Fire Chief, four Battalion Chiefs, 16 Captains, 16 Engineers, and 24 Firefighters, along with two administrative assistants.
- BFD’s four battalions each have 15 firefighters who work 24-on/72-off shifts.
- BFD’s staffing model is based on National Fire Protection Association (NFPA) Standard 1710, which

ISO Ratings

The Insurance Services Office (ISO) collects information on public fire protection and analyzes the data using a Fire Suppression Rating Schedule (FSRS). ISO assigns a Public Protection Classification (PPC) from 1 to 10. Class 1 represents the best public protection, and Class 10 indicates less than the minimum recognized protection.

By classifying a community’s ability to suppress fires, ISO helps communities evaluate their public fire protection services. The program provides an objective, nationwide standard that helps fire departments in planning and budgeting for facilities, equipment and training. Most importantly, by helping communities to secure lower fire insurance premiums based on better citizen and property protection, the PPC program provides incentives and rewards for communities that choose to improve their firefighting capabilities and services.

calls for a first alarm response of 15 firefighters for a structure fire, all with specific roles once on-site, and with the ability to place this personnel contingent anywhere with the department’s response area within eight minutes. BFD is able to meet this standard when it is fully staffed.

FACILITIES

- BFD’s four current engine houses are located at 315 Carlyle Avenue (#1 in east Belleville), 2200 W. Washington Street (#2 on the near west side), 6200 W. Main (#3 farther northwest), and at 1125 S. Illinois Street (#4 to the south of Downtown near Illinois Route 15, and also the location of the department’s administrative offices and Emergency Operations Center, or EOC, since opening in 2009). These engine houses are illustrated in *Map 2.4, Public Safety Facilities*.
- The EOC at Engine House #4 includes a training room that can accommodate 49 persons. Additionally, Engine House #2 can host approximately 25 individuals, which is beneficial for department-wide training activities given its central location, which ensures that adequate response times can still be maintained throughout the community.
- The City also owns property where Southwestern Illinois College has its Fire Service Training Center, which gives BFD local access to burn buildings for live fire training versus having to send its personnel elsewhere for such training.
- As noted above, BFD aims to implement National Fire Protection Association (NFPA) Standard 1710, which calls for a maximum eight-minute response time anywhere with the agency’s service area. In practice, BFD attempts to reach all incident scenes within four to six minutes, which is attainable in most cases, but sometimes difficult for the most distant locations in Belleville’s more spread-out west end.
- BFD had 1,541 total fire calls in 2012 compared to 1,487 in 2008, although highs of 1,714 and 1,731 were registered in 2009 and 2010.⁵ Calls involving structure fires have shown a downward trend in recent years, from 103 in 2008 to 55 in 2011 and 58 in 2012, respectively. Overall, however, all forms of service calls recorded by BFD have increased by roughly 1,000 over the same five-year period, from just under 3,700 in 2008 to more than 4,700 in 2012 (28 percent increase). This includes the fire calls above, public service calls involving community outreach and fire prevention activities, and various types of inspections conducted by the department. In 2012, inspection activities accounted for 64 percent of all BFD calls, which was up from 55 percent in 2008.
- BFD is part of the statewide Mutual Aid Box Alarm System (Division 32), through which member departments can request assistance from neighboring agencies when needed, and statewide when the scope of a disaster is too large even for a regional response. This includes most fire departments in St. Clair County, plus the City of St. Louis Fire Department. From 2010 through 2012, BFD reported an average of 22 mutual aid responses, which was up significantly from six and eight in 2008 and 2009, respectively.

SERVICE AREA COVERAGE AND RESPONSE TIME

- BFD responds to calls for service within four “run districts” associated with its four engine houses (a map of the current run districts is available on the “Apparatus” portion of the BFD webpages on the City website).

⁵ Belleville Fire Department Annual Report 2012. Accessed 03/22/14 at <http://www.belleville.net/DocumentCenter/View/878>.



Engine House No. 4, at 1125 S. Illinois Street, is the newest BFD facility (completed in 2009), and houses the Emergency Operations Center.

- BFD uses a county-wide radio system, which is also part of the statewide Starcom 21 system.
- The 2000-2020 *Comprehensive Plan* cited the City's annexation activity as a challenge for BFD. However, the area's somewhat slower rate of growth due to the recent economic recession enabled BFD to keep pace in terms of its service capabilities.

AREAS OF NEED

- BFD currently pays overtime to maintain a Battalion Chief on duty at all times to act as a shift supervisor. The hiring of four additional firefighters would help to ensure shift supervision is covered daily.
- Another strategic staffing issue is the need for a dedicated training officer to ensure adequate time is devoted to provision of required and operational training in accordance with State of Illinois requirements for particular positions. BFD needs an Illinois Office of the State Fire Marshal certified Instructor 2 (or higher) with demonstrated proficiency in both classroom and fire ground training scenarios.
- While engine houses #1 and #4 are modern facilities that will be suitable for years to come, engine house #3 on the west side is more than 80 years old and, as a result, has low doors and restricted vehicle bay lengths. For this reason it cannot house an aerial or support vehicle such as an ambulance should that function ever be assigned to this location.
- From a locational standpoint, the City's westernmost facility at engine house #3 is adequate, but a newer replacement facility for that area might be better sited closer to Memorial Hospital or, alternately, even farther west, should the City ever annex more territory from Northwest, Signal Hill, or any other adjoining Fire District.
- The long-term location of engine house #2 could also come into play given the surrounding growth of and numerous property acquisitions by LU-B, including a house that was on BFD property. An additional consideration for engine house #2 is its limitations as a two-bay station that is not suitable should BFD ever take on emergency medical services (EMS) responsibilities or other specialty response such as hazardous materials or a confined space rescue unit to respond from this central location. The location of engine house #2 might also need to shift farther west along West Main should annexation activity lead to a more westward location of a new engine house #3, or possibly acquisition by the City of a former Fire District facility to replace #3.
- Should east side growth lead to annexation farther eastward past SWIC around the Illinois Route 161 corridor, together with the possibility of the expanding SWIC campus coming into the City limits at some point, then the City would need a fifth engine house near SWIC - and a new station would require 12 additional BFD personnel.
- To keep its fire apparatus up to date, BFD suggests replacing one vehicle every three to four years as this would keep its four primary apparatus all within 12-16 years old, and its four back-up apparatus all within 24-32 years old. Currently the department has a back-up pumper that is 36 years old, another that is 29 years old, and one that is 22 years old, so all three require replacement in the next 10 years to observe the vehicle age targets above.
- Additionally, BFD plans on an eight-year life cycle for vehicles that start out as Chief response vehicles and then transition to fire investigation unit use when no longer considered reliable for front line service. The department has four such vehicles, so

In Which Directions and Areas Should Belleville Grow?

- “Because we are virtually landlocked in certain areas our options are fewer than most communities. I would vote for eastward expansion first, plenty of open farm ground and this could prove to be very viable in the future for quality of life opportunities for the City of Belleville.”

This participant suggested growth **to the east** off of Illinois Route 15, where highway access is already in place, and especially to attract people associated with Scott Air Force Base. **Southward growth** toward Smithton or Millstadt is a next option, but this will cost more as adequate road networks are not yet established.

- One participant suggested **mostly south and southeastward growth** in the vicinity of major highways and roads (e.g., Illinois Routes 159 and 158, Frank Scott Parkway, southeast toward Green Mount Road, and east along Mascoutah Avenue):

“These areas offer opportunities for new homes, which many young people with families prefer. We must continue to improve our existing neighborhoods but must offer quality housing opportunities for young families that prefer that type of housing/living.”

- Another participant emphasized **infilling Belleville’s urban core**:

“Develop policies to rehabilitate vacant buildings and develop vacant lots in [central Neighborhood Zones such as A, H, I, J, K] to develop a more compact, pedestrian friendly, mass transportation accessible community and to reduce the pressure for urban sprawl.”



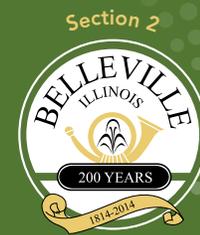
one should be replaced every two years to maintain the eight-year service life target for each vehicle.

- To better an already commendable ISO rating of 3, BFD sees opportunities to expand its training activities and enhance its building inspection and fire prevention programs even further, along with implementing a modern dispatch system and updated backup radio system. Specific BFD equipment needs include: (1) near-term replacement of older self-contained breathing apparatus (40 current units), which would likely be a joint purchase with the foreign fire fund; (2) eventual replacement of radios currently used by both BFD and BPD that are part of the county-wide radio system, and related potential communications moves that could have budgetary benefits and also give BFD a backup system; and, (3) upgraded computers. The strategic issue of potentially re-organizing the department structure to reflect a Fire Marshal model is addressed later in the Strategic Recommendations portion of this plan section.

Key Issues and Considerations

The following key issues related to Belleville’s growth outlook and capacity to provide adequate utility infrastructure and public services emerged through early community outreach efforts, discussions with City officials and staff, and work sessions with the Comprehensive Plan Advisory Committee.

- An ongoing need in Belleville, carried over from the 2000-2020 *Comprehensive Plan*, is for growth and increased tax base to pay for infrastructure, services and desired amenities.
- Belleville’s physical size and unusual jurisdiction shape are key challenges for public service delivery, as well as for community cohesion and identity.



Guiding Principles for Growth Capacity and Infrastructure

- Given the physical nature of Belleville, corridors will continue to be focal points for new growth and economic investment, especially in the vicinity of Illinois Route 15 to the south and Green Mount Road to the east.
 - As an older community relative to some of its suburban neighbors, Belleville will continue to deal with aging infrastructure and the cost of rehabilitating and upgrading systems originally constructed many decades in the past, sometimes to satisfy mandates from higher levels of government.
 - Effective storm water management is essential to safeguard public health and welfare, especially in newly developing areas of Belleville with more significant topography, plus in locations within the developed area that experience drainage issues or ponding with the largest rain events.
 - Public safety will continue to be a core priority of Belleville officials, and is likely to continue accounting for a significant share of annual budgets to support adequate police and fire staffing, facilities and equipment.
 - Belleville will have to weigh the need for and merits of fringe area annexations relative to potential incorporation of interior “donut hole” areas within the established City. In either case, the City must also confirm it has the capacity to serve particular target areas, and evaluate the fiscal implications of every annexation that may be considered.
 - As documented in the *Parks, Recreation and Greenways Master Plan (2008)* and the *2000-2020 Comprehensive Plan (1999)*, Belleville will need to look for opportunities to add significant pieces to its public parkland inventory, especially through advance land acquisition in newly developing areas that show potential for greenway features and sizable open space preservation.
 - Belleville will need to emphasize continued investment in local amenities and community aesthetics and image enhancements to make itself more attractive for the population gains and economic investment it seeks to fulfill its growth objectives.
- We will recognize the long-term value of our public infrastructure investments and our ability to use these essential facilities and services as a tool for influencing the appropriate location and intensity of development in and around the City.
 - We will act on local government’s core responsibility to protect the public health and safety by continually prioritizing adequate support of our police and fire services in the form of staffing, vehicles, equipment, facilities, and training/certification.
 - We will use our public infrastructure upgrades and investments to strengthen our support for and ties to key drivers of Belleville’s economy, including Scott Air Force Base, local higher education campuses, and medical facilities, as well as other major employers and concentrations of retail, office, and industrial activity.
 - We will continue to evaluate opportunities to bring strategic properties and facilities into the Belleville City limits, where it makes financial sense, where the City’s zoning and other development standards will help to protect private and institutional investments, and where access to municipal infrastructure can spur activity in targeted economic development sectors, such as hotels, restaurants, and other hospitality offerings.
 - We will continue to treat our local schools and higher education assets as part of our vital community “infrastructure,” which also factor into Belleville’s capacity to achieve its long-term growth objectives.

Strategic Recommendations

- **Priority 1** | Continue to expand Belleville’s municipal jurisdiction based on strategic considerations.
 - **Priority 2** | Increase Belleville’s capacity for desired growth across key public service functions.
- We will be vigilant in monitoring opportunities to weave green spaces and elements into both our growing and redeveloping areas to meet the need for more parks, trails and preserved open spaces as identified in the *City’s 2008 Parks, Recreation and Greenways Master Plan*.

- **Priority 3** | Pursue strategies that make it more realistic for more of Belleville’s projected growth to be absorbed within the interior of and contiguous to the existing developed City.

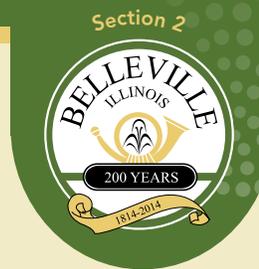
Priority 1 | Continue to expand Belleville’s municipal jurisdiction based on strategic considerations.

ACTION STEPS

- **Plan for Strategic Annexations that Make Fiscal Sense for Belleville.** Continue to identify in advance and prepare for eventual annexation of additional territory where the City should rightly take the lead in guiding development patterns and extending municipal utility infrastructure and public services. Areas where new development activity is already emerging are obvious annexation candidates. Other possibilities should be preferred growth areas for the City given favorable physical conditions (e.g., topography, drainage, soils, proximity to mines) and appropriate location relative to existing developed areas, suitable roads, and established service areas for water and wastewater service, police and fire response, schools, parks, and other basic public services. Such areas were generally identified through planning exercises that led to *Map 6.1, Development Patterns*, in *Section 6, Land Use and Character*. Then, as a next step, *Map 6.2, Future Land Use Plan*, provides land use guidance for various areas beyond the current City limits in consideration of potential annexation activity in such areas at some future point. These areas are generally to the south, southeast, and southwest of the core areas of Belleville, which is consistent with anticipated growth patterns dating back to the *2000-2020 Comprehensive Plan*. At the end of the day, most potential annexations must pass a fiscal “litmus test” of providing more benefit to the City, in terms of projected new tax revenue, than the new costs the City will take on in extending its services. This calculation may not be a net positive for the City in the initial years immediately following annexation, but in most cases it needs to trend positive over the longer term.
- **Consider Annexations That May Have Benefits Other than Financial.** As stated in the previous action item, in most cases cities should consider taking in additional territory only when the fiscal calculation is in the City’s favor, with the

cost of public service provision falling below the projected new tax revenue. However, the City of Belleville should be open to considering targeted annexations that yield other meaningful benefits, such as protection of key gateways into the community, or extension of the City’s *Zoning Code* to influence outcomes on the ground in areas that have not yet seen extensive land development activity. In some locations it may be in the City’s best interest to use its zoning to limit possible development intensities in areas that are not conducive for significant development, and where inappropriate development could lead to unwelcome side effects such as downstream drainage issues within the established City.

- **Explore Becoming the Wastewater Service Provider for Scott AFB.** Belleville has a long history of embracing and benefiting from a close relationship with Scott AFB to the east of the City, most notably through the Belle-Scott Committee. A strategic consideration discussed during this comprehensive planning process involved the potential for the City of Belleville to provide wastewater treatment service to Scott AFB eventually. Belleville will have available capacity well into the future after completing essential upgrades to its wastewater treatment facility. And anticipated growth on the east side should bring the City’s wastewater collection system even closer to the base vicinity, making a strategic connection a more viable scenario.
- **Extend Utility Infrastructure only with Annexation.** Aside from the Scott AFB example above, and possibly some rare others where strategic utility extensions may support broader growth and economic development objectives, Belleville should generally avoid any lengthy extension of utility infrastructure outside its current City limits unless the areas to be served will immediately or shortly be annexed into the City. Given that municipal infrastructure is a key driver of land development activity, such extensions can lead to scattered and “leap frog” development patterns in fringe areas that cause service provision headaches for multiple public agencies and private service providers. The boundaries of the Belleville FPA were established to identify the area where the cost to extend and maintain sanitary sewer service are optimized. FPA boundaries can be extended as development occurs or to include areas where development is expected. Once the upgrades to the wastewater treatment plant are completed,



the current FPA boundaries may be expanded without impacting service. Any change of the FPA boundary must be approved by the Southwestern Illinois Metropolitan and Regional Planning Commission which evaluates the cost-effectiveness and water quality impacts of amending the current FPA boundary and subsequently makes a recommendation to the Illinois EPA.

- **Annexation Agreements.** Continue to negotiate annexation agreements in cases where both the City and private land owners would benefit from mutual understanding and predictability of when and under what circumstances incorporation into the City may make best sense for both sides. In some cases this may be driven purely by the City's infrastructure and/or public service capacities in the near term. In other locations it may be because no significant development activity is contemplated for some years, but well-planned service extensions and a general timeframe for eventual annexation will support forward-looking private development planning and financial backing. Annexation agreements can also formalize public/private cost-sharing arrangements, or sometimes involve a private owner agreeing to observe typical standards in the City's development regulations even before his or her property is incorporated and actually subject to such regulations.

Priority 2 | Increase Belleville's capacity for desired growth across key public service functions.

ACTION STEPS

- **Predictable Increases in Public Safety Staffing.** Continue annual review of public safety staffing needs through the City's budget process, and look ahead to longer-range staffing needs in conjunction with the multi-year Capital Improvements Program (CIP) process and ongoing annexation planning. Both the City's elected officials and its Police and Fire departments should have predictability as to the pace of potential staffing increases, based on indicators highlighted earlier in this section for evaluating changing service demands, and given the financial implications of each new hire in terms of added salary and benefits, training/certification, and vehicles and other equipment. Related to the next action item, multi-year personnel planning is especially important where a pending facility upgrade will require a substantial new staffing commitment, as is the case with fire stations.
- **Fire Station Upgrades.** With Belleville Police Department space needs well addressed for the years ahead, focus on planning for new or upgraded engine houses for the Belleville Fire Department. As described earlier in this plan section, this need could come to the forefront sooner than later for several reasons, ranging from the basic age and obsolescence of several existing fire stations (#2 and #3) for their current or potential future missions, to station location considerations to maintain good service area coverage and response times on both the east and west sides depending on the pace of growth and potential annexation activity. BFD is already looking ahead to the potential need for a fifth engine house on the far east side, which would also require 12 additional personnel to staff an entirely new station. This clearly would be a significant investment for the City but also reflects the success of SWIC and other key drivers of the local Belleville economy that are creating additional public service needs. The City must also continue its ongoing and close coordination with Belleville's higher

education institutions, regarding their campus and facilities planning, as these plans have implications for public service needs and will influence the design, planning, and construction of infrastructure projects.

- **Vehicle, Equipment, and Technology Upgrades.** Continue steady investment in other support areas, beyond police and fire staffing and facilities, that can have a direct and immediate impact on the effectiveness of existing personnel. As described earlier in this plan section, more dependable service area coverage and improved response times could come about through upgraded dispatch and communications systems, plus incorporation of additional technology into even more areas of daily operations. An ongoing commitment to periodic and timely vehicle purchases is also necessary to maintain sound and dependable public safety vehicle fleets. This also avoids future spikes in such spending, and costly emergency repairs along the way, when such purchase schedules are allowed to lag.
- **Fire Training Emphasis.** Pursue the Belleville Fire Department recommendation that it establish a dedicated training officer position so this essential function has a champion on staff who is able to focus on this activity daily. This will improve the overall effectiveness of BFD while also contributing to the safety of its personnel.
- **Regionalized Storm Water Management.** Seek additional opportunities to serve multiple public purposes at once by addressing Belleville’s need for greater parkland acreage in areas that also provide storm water management benefits, following the model of Bicentennial Park. Regionalized storm water detention and conveyance also benefits economic development by relieving some of the

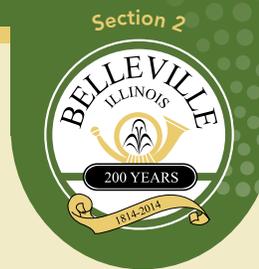
cost and burden for drainage improvements that would otherwise fall on individual properties and private developments.

- **Up-to-Date Master Plans.** Ensure that specialized master plans for utility infrastructure (water, wastewater, drainage), public safety services (police, fire, emergency medical services), and parks and recreation (public parks, trails, greenways, open space) are in place and regularly updated. These plans enable much closer consideration of facility, staffing and other strategic factors that ultimately lead to some of the most far-reaching decisions municipal governments must make. Master plan findings and recommendations also are an essential input to a City’s multi-year capital improvements planning and programming, as well as related grant pursuits that can leverage limited local dollars with external funding sources.

Priority 3 | Pursue strategies that make it more realistic for more of Belleville’s projected growth to be absorbed within the interior of and contiguous to the existing developed City.

ACTION STEPS

- **Coordinated Planning and Implementation.** Link a key aspect of this *Growth Capacity and Infrastructure* element – the intent to capture some amount of projected growth within the existing established City - to strategies in other plan sections that also support this direction:
 - » *Mobility*
 1. Neighborhood-focused street improvements.
 2. Enhanced street design to accommodate pedestrians and cyclists more safely.
 3. Revitalization and streetscape enhancements along central-city roadway corridors.



4. Ongoing investments in public transit, and related policies and programs to promote transit-oriented development.
- » *Housing and Neighborhoods*
 1. Focused planning and enhancements at the neighborhood level, including in areas such as code compliance and crime prevention.
 2. Targeting of grant funds and public/private initiatives within older established neighborhoods.
 - » *Economic Development*
 1. Targeted assistance to existing and new emerging small businesses.
 2. Use of special district mechanisms to fund needed capital improvements.
 - » *Land Use and Character*
 1. Opening up more residential options within central Belleville in and around Downtown, near rail transit stations, and in potential new mixed residential/commercial nodes (e.g., in the vicinity of the LU-B campus).
 2. Upgrades to existing City parks and bikeway/trail connections through ongoing implementation of the Parks, Recreation and Greenways Master Plan.
- **Belleville Fire Department Re-Organization to Emphasize Fire Prevention.** Explore the creation of a local Fire Prevention Bureau, as recommended by BFD, given the increasing complexity of fire and building code requirements and the needs of a community with a significant stock of older buildings plus new construction. In accordance with National Fire Protection Association (NFPA) Standard 1730, a Fire Prevention Bureau in Belleville would require three added full-time equivalent (FTE) positions, and restructuring of BFD's senior leadership to change the current civil service position of Assistant Chief to an appointed

Fire Marshal position. Certification for these new positions would be necessary and attainable either through the Illinois Office of the State Fire Marshal or the International Code Council. Among the benefits BFD anticipates from pursuing creation of a Fire Prevention Bureau: (1) it would centralize and enable better coordination of all fire prevention, investigation and public education activities; (2) on-duty personnel and primary response equipment would no longer be utilized to perform functions that could easily be handled by a single inspector in a single vehicle, saving both operational costs and emergency response time; and (3) formalization and certification of all positions would increase the professionalism, timeliness and enforcement accuracy in implementing the *2006 International Fire Code*, as currently adopted by the City of Belleville.

- **Explore and Evaluate Potential Updates to Residential Fire Sprinkler Requirements.** In the interest of reducing the risk of fire deaths and injuries and property destruction in Belleville, explore and evaluate the requirement of fire sprinklers in all new residential construction and significant renovations. The City of Belleville has adopted and currently implements the *2006 International Fire Code* (IFC). Residential fire sprinklers are required by the 2009 and later editions of the IFC, as well as the 2012 and later editions of the National Fire Protection Association's *101 Life Safety Code*. More than 100 Illinois cities and fire protection districts have already adopted codes requiring residential sprinklers. This has not been without substantial pushback, similar to when other public safety mandates first took hold that have prevented many deaths over the years (e.g., residential smoke detectors, and automobile seat belts and airbags).

BFD joins other fire agencies in advocating for adoption of codes that would require sprinklers in new single-family homes and in existing-multi-level residential structures. Statistics tracked under the auspices of the Federal Emergency Management Agency show that each year in the U.S. more than 75 percent of all civilian fire fatalities involved fires in residential buildings, with the percentage at 82 percent for the years 2009-2011.⁶

⁶ Civilian Fire Fatalities in Residential Buildings (2009–2011), Topical Fire Report Series. U.S. Fire Administration - National Fire Data Center. Volume 14, Issue 2. April 2013.