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CREATING AN ENVIRONMENTALLY JUST PARK SYSTEM IN LOUISVILLE, KENTUCKY

ABSTRACT

Louisville, Kentucky, is undergoing one of the nation's largest park expansion initiatives. The City of Parks Plan will add 8,000 acres of parkland to the city by the time it is completed. Principles of environmental justice suggest that new policy should consider issues of access and balance with nature as it relates to all people. A sustainable park system brings additional environmental, economic, social and health benefits to communities near them, helping to stabilize communities and build sustainable neighborhoods. This study examines park access for minorities in the current Metro Parks system, evaluates the City of Parks policy as it relates to access and makes recommendations as to how the municipality might alter the City of Parks initiative to improve park access for its minority population.

INTRODUCTION

Urban parks serve as community backyards, business catalysts and tools for a healthy population while adding nature to unnaturally paved environments. A just city should consider equal access to such municipal benefits as integral to policy (Fainstein, 1999). Parks serve an important social role in low-income communities. They offer recreational opportunities, serve as meeting places, and contribute to public health by offering sites for exercise. They have been associated with crime reduction. They are amenities which contribute to the attractiveness of an area for businesses. Parks also serve a variety of environmental goals by reducing pollution and absorbing carbon.

Louisville, Ky. is expanding park acreage and promoting healthy living under its City of Parks expansion policy. This study examines access to parkland by race and evaluates expansion policy to determine if it improves access or exacerbates inequity. This paper outlines the benefits of parks and addresses the implications of environmental justice in minority access to public space. Louisville's park expansion plan then will be discussed and evaluated through the lens of environmental justice. The final section will highlight areas of opportunity for the city to improve park equity. Through planning these places to improve environmental, transportation and social needs, parks can create more stable, sustainable and environmentally just neighborhoods.

The Benefits of Parks

With health, social, economic and environmental benefits, a park can be an anchor for an active, connected neighborhood that supports small locally owned businesses. Parks promote health by serving as green oases and outlets for recreation. They help reduce the effects of the urban heat island, hold stormwater, and serve as community gathering spaces. Together these aspects help create neighborhoods that are more sustainable, that mitigate their environmental problems, and support their own economies. Resident's needs for nature, interaction and recreation are met in a sustainable neighborhood. Well-planned community parks can connect residents to employment sites, and decrease the number of car trips made by residents. Community parks contribute to sustainable neighborhoods, where residents can meet their needs without leaving, and where environmental and social problems can be mitigated within the neighborhood.

Parks are essential to low-income and minority neighborhoods. Bogota, Colombia recently expanded its parks system with that in mind. As Bogota Mayor Enrique Penalosa said, "At first it may seem that in Third World cities, with so many unmet needs, parks would be a frivolity. But in practice, where citizens lack so much in terms of amenities and consumption, it is quicker and more effective to elevate the quality of life through public goods, such as parks, than by increasing people's incomes" (Penalosa, 2003, p.31). A 2006 London study showed that parks were essential for social cohesion because of their impact on an individual's sense of belonging and, because they encourage social interaction (Dines and Cattell, 2006). Sociological studies have demonstrated that parks help create stable neighborhoods with strong social ties (Gies, 2006). A study that examined minority use patterns in Chicago's Lincoln Park in the 1990s determined that minority users were more likely to visit in large groups (Gobster, 2002). Hispanics tend to visit in large family groups averaging 4 people and prefer picnicking, while black park visitors tend to come in peer groups averaging 3.7 people and participate in athletic activities (Forsyth, 2005). Studies have found that minorities tend to visit parks for more social reasons, so structures such as community centers, bandshells, bleachers near sports grounds, plazas, game tables and benches and picnic tables of various sizes will see higher traffic in minority areas (Forsyth, 2005). The Chicago study found that socializing, festivals, and spectator sports were

popular among minorities and that individual sports, such as biking and walking were less popular. Basketball, soccer, swimming, volleyball and baseball were the most popular sports for minorities. Fishing was more popular among minorities than whites. Furthermore, the social atmosphere of the park, with activities and engaging spaces was much more important to minorities than was the natural beauty of the area.

Parks contribute to public health. Lack of exercise and poor diet have been cited as the second-leading cause of preventable death in the United States, and it was found that low-income Americans are more likely to be sedentary and eat poorly (Kuo and Sullivan, 2001). The U.S. Office for Minority Health claims that while national health improves, American minorities continue to have higher rates of diabetes, cancer, cardiovascular disease, cancer, infant mortality, low birth rate and have a shorter life expectancy; these health disparities exist for a number of reasons, including environmental reasons (CDC, 2008). Black children are 60 percent more likely to suffer from asthma than white children, but are more than three times as likely to visit the emergency room and 7 times more likely to die as a result of asthma (CDC, 2007). Minorities are 79 percent more likely to live in areas with heavy industrial pollution (Pace, 2008).

Minority areas and areas with higher poverty rates are nationally less likely to offer parks and trails to residents (Gies, 2006). Physical activity is essential to a healthy population. Many Americans are sedentary, and this lifestyle leads to an increase in obesity, high blood pressure, heart failure, stroke, diabetes and depression. Medical studies have shown that access to nearby recreational areas leads to an increase in frequency of physical activity by about 48 percent (Gies, 2006). Simply, having an enjoyable and close place to exercise encourages people to take advantage of the resource. Additional studies have demonstrated that access to nature may lower stress levels, decrease healing time and improve Attention Deficit Disorder. Parks and playgrounds also develop muscles, coordination, language and reason in children.

Crime reduction is another benefit of parks. The presence of parks and recreation facilities have been tied to decreased levels of juvenile delinquency and violent crime in Florida, Texas and Chicago (Sherer, 2003). Add youth programming to a parks, and further reductions in crime were witnessed in cities as different as Los Angeles, Forth Worth, Texas, and Cincinnati, Ohio (Witt and Crompton, 1996).

Parks also serve as catalysts to the business community. Parks are mentioned as the most important element of quality of life in numerous studies (Crompton, 2007). Quality of life is considered the main draw for small businesses and creative industries when choosing where to relocate or expand. Chicago Mayor Richard M. Daley understood the importance of quality of life when he invested heavily in the park system, saying, "Trees, owers, parks, attractive open spaces: these things are contagious. When people experience them, they want more of them. And they are willing to pay for these places, because they know they are getting something for their money. I believe that cities that pay real attention to quality of life will be those that thrive" (Daley, 2003, 26).

Crompton (2007) evaluated the proximate principle as it relates to parks and other urban open space. This principle, that properties near parks are more desirable, and therefore have higher property values, was popular during early park development around the turn of the 20th Century. The increase in property values leads to an increase in property tax revenue of about 20 percent (Crompton, 2007). This increase in property values allows parks to quickly pay for themselves while benefiting the city in

the tax rolls and enhancing the wealth of homeowners near parks for years after the parks break even (Crompton, 2007). This has occurred in Louisville with prior park development, and can be witnessed in the Highlands neighborhood and more recently in Butchertown.

Parks also serve a variety of environmental benefits. Green areas serve as carbon sinks to counteract industry and fossil-fuel consumption from cars. Connected greenways also can encourage alternatives to vehicle use, and decrease miles driven and fossil fuels burned. Natural areas also counteract urban heat islands, filter water and control erosion. They absorb stormwater runoff, improving conditions of urban streets during periods of excessive rain (Sherer, 2003).

Defining access is complicated. No one is shut out of parks; however, there must be some consideration of willingness to travel. Past studies have concluded that white residents are more willing and able to travel, and to travel farther to visit parks. Urban white residents are more likely to own a car, giving them the luxury or ease of travel to parks. In the Lincoln Park study, Hispanic residents were the only minority to choose mass transit to get to the park. Other minorities simply did not visit a park if it was too far to access by foot. Residents living further from parks tend to use them less frequently, and therefore, underserved and minority areas will not experience the same benefits (Gobster, 2002).

A well-tailored neighborhood park adds to the community by producing healthy, active residents. Parks help reduce the environmental problems associated with urbanization, and stimulate the local economy creating a natural mix of uses that reduce dependency on gasoline to meet individual needs. The result is a sustainable neighborhood anchored by a common community front yard – the local park.

Parks and Their Role in Improving Environmental Justice

The Principles of Environmental Justice, adopted at The First People of Color Environmental Leadership Summit, are divided into 17 guiding statements. Two of these principles ask that new policy be evaluated on the basis of racial equity as it relates to nature. They are:

> • 2) Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from discrimination or bias. ...

> • 12) Environmental Justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of the communities and providing fair access for all to the full range of resources. (First National People of Color Environmental Leadership Summit, 1991, p. 1)

Although many urban park systems in the United States were developed in the early part of the 20th Century, when segregation and overt government racism were common, the expansion of a park system gives public servants the opportunity to evaluate the justice of its park system and improve upon past municipal biases. Concepts of mutual respect and justice for all residents may have been excluded in city park systems in the past, however the second principle of environmental justice requests that governments uncover bias and previous discrimination and direct current policy to improve the situation. Comprehensive plan updates offer cities the opportunity to set goals and objectives to improve access for all residents.

The second principle implies that environmental burdens and benefits be shared among neighborhoods of all races. By this standard, the areas of cities that have the largest burden due to heavy

concentration of dirty industry and energy production should be entitled to at least a proportionate share of environmental benefits, and possibly more in compensation for the uneven burden shouldered by these communities.

The 12th principle calls on public policy to improve access to nature in our most urbanized and most densely settled areas and to provide a full range of resources. An environmentally just park policy would add green space to the most urbanized areas of the city to counteract the removal of nature due to paving. Such a policy would strive to offer a variety of activities to all people in all neighborhoods and would seek an equitable distribution of nature.

The 12th principle addresses the responsibility of policymakers to clean up and rebuild in balance with nature. Such policies should direct us to consider the greening of toxic urbanized land as a primary objective because it decreases burdens to minority and low-income communities while adding benefits. Not only would this add to the overall greenscape, but it could clean areas that continue to spread toxins into the air and water. As toxic industries, such as chemical companies and heavy manufacturing vacates urban areas, this land should be rebuilt both clean the environment and to incorporate nature. This practice of redeveloping industrial land into parks is not new. Excellent examples include the conversion of a former gas factory to a culture and recreational park in western Amsterdam. Westergasfabriek Cultuurpark maintained many of the clean structures in the large brownfield, converting them into a large showcase area, housing, offices for artists and civic groups and restaurants. Polluted areas were cleaned and turned into expansive lawns, recreational grounds, pathways and waterways. It became a place of interest for residents and visitors. It began attracting festivals, theater, and fashion shows, even hosting a performance by the local opera troupe (Koekebakker, 2003).

In Louisville, the Waterfront Development Corporation acquired former scrap yards along the Ohio River just east of downtown to develop the current Louisville Waterfront Park to stimulate development and improve the waterfront. The 85-acre park is being developed in three phases (Phase III opens in 2010) as land is acquired and redeveloped. The park has served as a catalyst for events and development in the east waterfront and adjacent downtown areas. Since the announcement of the plan to develop the area into a park, almost 5,000 jobs have been created nearby with the jobs shifting from low-skilled manufacturing sector to high-tech and creative businesses and the services that cater to them, mirroring a shift in the local economy away from manufacturing. The Community@emain, a technological workforce-training center, opened two blocks from Waterfront Park. Current and completed investment along the waterfront tops $1 billion, and the waterfront is now home to the Muhammad Ali Center, Louisville Slugger Field, and a growing community of high-end condominiums and lofts near the baseball stadium, where industry and scrap yards were once typical. However, redevelopment projects such as this do not have to necessarily mean gentrification. Near Waterfront Park, housing tends to be small, with shotgun housing and small apartments in older buildings. Neighboring Butchertown and Phoenix Hill, once run-down, have seen increased commercial development and the emergence of a gallery district (Bartlestein, 2007). This was all done without significant displacement of existing residents. Newer developments drew new residents, but the older shotgun-style houses and their residents were relatively undisturbed.

Waterfront Park now serves as home to some of the city's signature events. It's the front yard for Thunder over Louisville, the fireworks kickoff event of the Kentucky Derby Festival, which brings tourists from around the country. Musicians get Independence Day crowds ready for the city's annual

July 4th fireworks. Its amphitheater is the main stage for the locally conceived Lebowski Fest, a quirky music-and-bowling weekend inspired by the movie, *The Big Lebowski*. Sporting events launch from the site. Summer concert series bring in the after-work crowd. Cultural events such as the Irish Fest, Reggae Festival, the activist Forecastle Festival, the Soul Festival and the Bluegrass Music Festival are just some of the regular attractions to the site. The development of Waterfront Park turned a scrap-yard waterfront into a bustling front door to the community by turning an environmentally degrading industrial land use into a mix of open space, commercial and residential space that improves nearby neighborhoods and brings people to the river. It demonstrates what is possible throughout Louisville.

City of Parks Initiative

The City of Parks initiative in Louisville is a multimillion-dollar park expansion plan that includes a Floyds Fork Greenway in the east; an expansion of Jefferson Memorial Forest in the southwest; an expansion of park lands along the river in the south; the creation of the Portland Wharf Park; acquisition and development of parkland for the River Road Recreation Corridor along the river east of downtown to the county line; and a 100-mile paved Metro Loop Trail that more or less encircles the city along the periphery. Included in the plan are also upgrades to existing parks. This expansion is the result of the Cornerstone 2020 plan developed in 2000, which called for an increase of 8,800 park acres to meet the needs of community growth. Funding and cooperation for the plan have come from partner agencies, which raise funds or acquire land. Additional funding has come from $38 million in federal and state grants. Private donations to the Floyds Fork Greenway alone total $20 million. It is, however, a city initiative with significant city money invested (Metro Parks, 2005).

The City of Parks Plan (Figure 1) highlights some of the expansion efforts. As the city expands its park system, it should evaluate issues of environmental justice and incorporate needed changes. Louisville has the opportunity to set an example for other cities by not just expanding its park system, but by making it a more just park system in a manner that stimulates the economy sustainably by encouraging small local businesses and improving neighborhoods and by addressing critical issues of equitable access to parks and open space for all residents.

Louisville Metro Government has created a public-private partnership to raise money for new parklands and it advertises the economic benefits that it expects to receive. The City of Parks Plan cites the Trust for Public Land's Economic Benefits of Parks on its main Web page. This document states the following benefits: the increase in property value and tax revenues from nearby properties; interest from businesses and employees who seek a high quality of life; tourism and recreation spending; reduction in health care costs by residents who live healthier lives; income from working park lands; the protection of water and land; and ood mitigation properties gained by open space (Louisville Metro Government, 2007).

In unveiling the plan, Louisville Metro Mayor Jerry Abramson justified not just the creation of parks but the use of parks as a unifying social agent and a business catalyst. He said: "Parks draw people together who might not otherwise encounter one another, bridging the gaps between city and suburb, between rich and poor, between white and black. Parks raise property values and make our community more attractive to new residents, businesses and visitors. Parks preserve irreplaceable landscapes. Parks give our kids a place to play, and they allow each of us to take a break from the daily hustle and bustle" (Metro Parks, 2005).

Humana, Inc. CEO David Jones donated $5 million to kick the program off and called the parks plan, "the most exciting and significant civic project of my lifetime." His son, a developer, and one of the initiator's of the project cited the effects that Cherokee Park had on the business and social community of the nearby Highlands neighborhood, as well as the increase in property values and vibrancy of local small businesses in the walkable neighborhood anchored by the 400-acre Olmsted Park (Northern, 2006).

As part of the plan, the Floyds Fork Greenway adds 2,000 acres of parkland in east Louisville, which is white. Planning is under way on the project as of November 2007. The concept includes a number of connected parks with a canoe and kayak "water trail" and a mix of recreational and conservation uses. Included in the Floyds Fork corridor is a sports complex for disabled residents. In all, a large complex of new parks will span a number of areas, all in the east and south ends, which are white areas.

More than 600 acres have been acquired from neighbors to Jefferson Memorial Forest in southwest Louisville, which is white, boosting the forest to more than 6,000 acres under the plan. Riverside, the Farnsley-Moremen Landing is a historic property located in Southwest Louisville on the river in a white area. Anchored by the 1830s Riverside estate, the property was acquired by the city in 1999, and will be doubled to 200 acres under the City of Parks Plan. Riverview Park, has been increased from 16 acres to 87 acres and will add athletic fields and landmarks as well as landscaping to its white neighborhood. The River Road Recreational Corridor, created by the plan, runs along River Road. The corridor will include 34 game fields for sports and other amenities in more than 400 acres of parks. Included will by a new Cyclocross track and bike lanes that cut through the parks along the river. An off-leash dog park is also included. The only new park in Louisville's diverse West End is a riverfront park in Portland, a white area. Portland Wharf Park is located on the river northwest of downtown. It will be a 56-acre passive and historical park connected to the Riverwalk.

The Metro Loop Trail is a 100-mile path around the city that incorporates parkland and trails. Where available, the Metro Loop takes advantage of existing parkland (Figure 1). Expansion in minority areas includes the Ohio River Levee Trail, which will follow the levee easement and existing parks in the West End of Louisville, a largely minority area. Parks along the Loop will be upgraded. Improvements to the Olmsted Parkway system will upgrade existing pedestrian and bike paths along Algonquin and Southwestern Parkways in the West End. However, no new parks are proposed for the area.

Cornerstone 2020 lists goals and objectives for public open space and parks. Among those objectives are:

- Provide a network of parks of varying sizes and functions equitably distributed throughout Jefferson County.
- Ensure that people of all interests, age groups and abilities have ready access to the recreational, cultural and leisure facilities and programs of their choice (Louisville Metro Government Planning & Design, 2000, 58).

These goals are similar and congruous with the environmental justice principles cited earlier, that acts of public policy should consider the needs of a wide range of residents and that urban areas grow in balance with nature with fair access to a full range of resources. Since Cornerstone 2020 is the document that mandated park expansion, it should and does seek environmental justice within its language. The expansion plans that evolve from it should meet these objectives in practice. The City
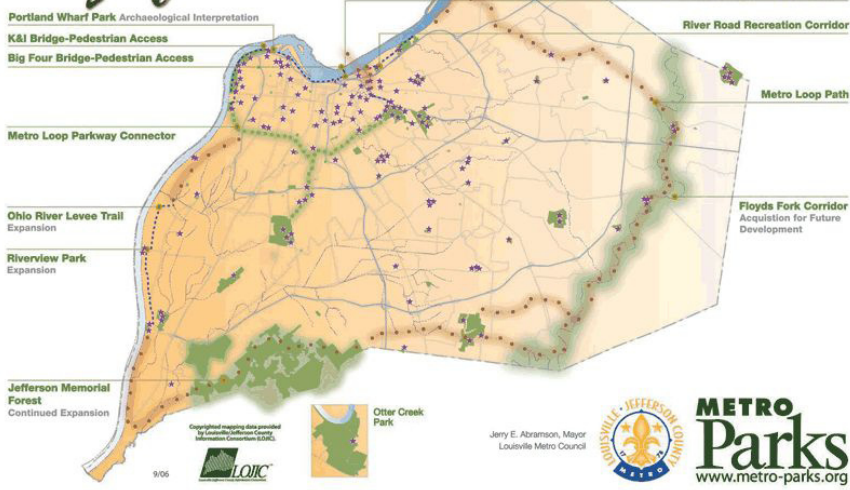
FIGURE 1. City of Parks Plan. *Source: Louisville/Jefferson County Information Consortium and Louisville Metro Parks*

of Parks Plan adds parks, bike paths, trails, a recreation corridor, historical offerings and amenities new to Metro Parks in white areas. In minority areas, bike paths and trail improvements on existing easements are the only additions.

Findings

In Louisville, some of the most economically and environmentally depressed areas are those in which the majority of the population is minority. Three zip codes contain only minority-area census block groups. Figure 2 shows Louisville's minority neighborhoods have fewer college graduates, earn less money, have higher rates of poverty and typically have lower housing values than Louisville as a whole. The exception is the Old Louisville Neighborhood, which has higher property values, but a largely tenant-occupied. Louisville is also a highly segregated city. Three-quarters of the 2000 census block groups were 90 percent white or equally non-white; few areas are highly racially mixed. Due to the high segregation, this study focuses on the more specific Census block groups rather than aggregated

FIGURE 1. Indicators in Minority Zip Codes				
	Louisville	**40211**	**40202**	**40210**
Bachelor's Degree	21.3%	8.0%	14.5%	6.6%
Median Household Income	$28,843	$21,906	$8,495	$20,722
Percent Below Poverty Line	21.6%	31.8%	59.7%	33.4%
Median Property Value	$82,300	$56,300	$120,500	$56,600

Source: U.S. Census 2000

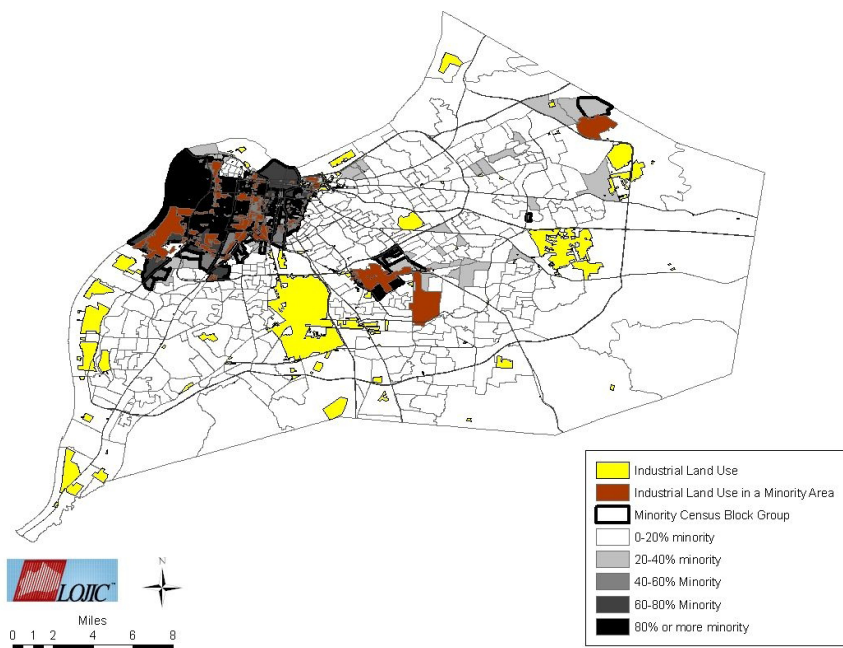**FIGURE 3.** Industrial Land Use by Race and Census Block Group. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

zip codes or Census tracts, which would allow for parks in abutting white areas to be classified as minority parks. Louisville is divided into 557 Census block groups. For each of these block groups, population data about race from the 2000 Census were used to determine percent minority.[1]

Minority areas also shoulder the majority of industrial development. Figure 3 shows industrial development and areas with a higher minority population. Nearly a third (32 percent) of the industrial land use in Louisville is within a minority census block group.

Metro Louisville's borders coincide with Jefferson County. However, this was not the case until 2003 when city and county governments merged. Some facets of the two governments were combined much earlier, including the park system. The combined park service, Metro Parks, united county and city parks in 1968. The 123 parks in the Metro Parks system were considered in this study.[2]

According to the 2000 Census, Jefferson County had a population of 693,604. Of that, 23 percent were minority. The largest minority was black at 19 percent, followed by Hispanic (2 percent) and Asian (1 percent). Non-Hispanic whites make up 77 percent of the population. There is reason to expect that Louisville is becoming larger and more diverse. The 2006 American Community Survey did not track the Hispanic population in Louisville, but showed the total population likely surpassed 700,000, with a 2 percent decrease in non-Hispanic whites.

Minority census block groups in Louisville comprise 7.3 percent of the land acreage and 16.2 percent of the population. Louisville's geographic information systems portal, LOJIC, identifies 168 Metro

FIGURE 4. City of Parks Evaluation

	Park Acres	Pct of Park Acres	Pct of Land Acres	Pct of Population	COP Acres Added	Total Park Acres	Total Park Pct.
Non-Minority Block Group	11,383	94.3	92.7	83.8	2,890	14,273	95.4
Minority Block Group	694	5.7	7.3	16.2	0	694	4.6
Total	**12,077**	**100**	**100**	**100**	**2,890**	**14,967**	**100**

Source: Louisville Metro Parks

Park polygons. Although Metro Parks identifies 123 parks, the data separates some features, such as golf courses and community centers. A Metro Park is considered to be serving a minority population if it is in or abuts a minority census block group.

By number of parks, access is fairly just. With 32 park polygons, minority census block groups are home to 19 percent of parks. However, parks in Louisville vary widely in size and amenity, from the two benches that make tiny Gnadinger Park a place to rest tired feet to the 6,191-acre Jefferson
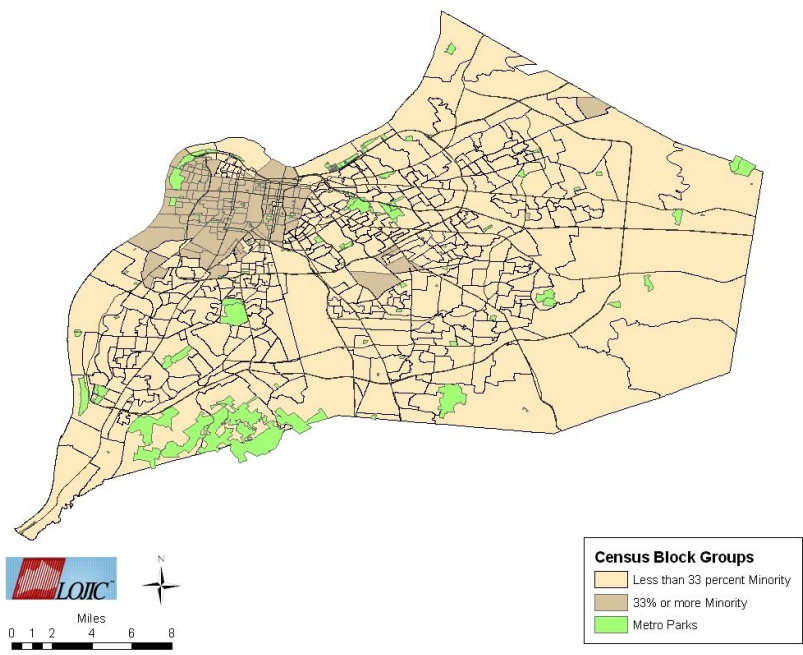
FIGURE 5. Existing Parks by Census Block Groups. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

Memorial Forest which offers an educational center, a Boy Scout camp and a variety of trails and programming (see Figure 4). Clearly, the recreational and environmental value of the two parks differs greatly. Simply counting parks does little to demonstrate true access or equitable distribution. Louisville's 123 parks comprise 12,077 acres. White area parks account for 10,689 of park acres, or 94.3 percent of the city's parks. The remaining 694 acres are located in minority areas, 5.7 percent of the city's parks.

Louisville's suburban developments are largely white. In the less densely settled suburbs, larger parks can be built before development can shape the space. Development of the largest urban forest in the United States, Jefferson Memorial, is an initiative that began in 1946, well after most of the city's current minority areas had been developed. The site chosen was on the Jefferson-Bullitt county line in southwest Metro Louisville. In minority block groups, the median park size is 3.61 acres whereas white parks have a median of 24, more than six times the size of the median park size in minority areas (see Figure 5).[3]

Master-planned renovations are underway as part of the City of Parks Plan. Figure 6 shows the breakdown of completed and scheduled renovations by area type. If compared against available parkland, the City of Parks Plan does improve a proportional share of minority-area parks. Minority areas are set to receive 15 percent of upgrades completed or scheduled in area parks. These upgrades include improvements to basketball and tennis facilities in Black Mudd Park near Buechel, restoration to tennis facilities and a pavillion at Shawnee Park, and complete renovations to Shelby and Algonquin Parks.

FIGURE 6. Renovations to Existing Parks			
	Completed	Scheduled	Total Renovations
Non-Minority Area	25	8	33
Minority Area	3	3	6
Percent Minority	11	27	15

Source: Louisville Metro Parks, U.S. Census Bureau

In 2008, as the city celebrated the opening of part of the Metro Loop and the Floyds Fork as part of the City of Parks public-private partnership, budget cuts kept five of the nine city pools closed, three with no plans to reopen. Two of these pools were in minority census block groups (Klepal, 2008). The result were packed pools, with Algonquin in the West End more than doubling in attendance (Leonard, 2008). Poor children are hit especially hard by the closing of public pools. Poor families cannot provide the money needed for membership to semi-public pools (Klepal, 2008).

However, no new pools or parks are planned for minority areas under the City of Parks Plan. A trail to connect minority-area parks to parks in white neighborhoods across an existing levee easement is being constructed, but this adds no new open-space acreage. The City of Parks initiative adds 2,890 acres to the park system, all in white areas. This would drop the minority stake in parks more than a full percent, from 5.7 to 4.6 percent of the acreage in the new parks system after City of Parks.

A More Just Parks Plan
In undergoing one of the largest park system expansion efforts in the United States, politicians and others involved have expressed a great deal of pride. While the greening of a city is noteworthy,

Louisville could set an example for other cities by expanding the park system in a manner that improves the lives of all residents, attends to historical injustice and inequity, and promotes environmental and economic sustainability. It is this desire to set an example of justice that inspires this study. The City of Parks Plan, in its current form, does little to improve accessibility to parks for minority residents.

How might a more just plan be accomplished? Minority areas are some of the older, more developed areas of the city, areas that do not include vast amounts of open space ready to be developed. However, at this time in the city's history, many large plots of industrial land have been vacated. Companies such as Phillip-Morris and Rhodia have left the city with industrial brownfields. A just city (Fainstein, 1999) should aspire to clean these properties quickly so that the toxins on site do not travel by air, water, or curious child into neighboring minority communities. A park expansion plan that turns brown into green in a way that brings green into the heart of the minority community and connects it to areas of interest would demonstrate to the minority community that the City of Parks includes all areas of the city. Vacant properties offer opportunities for redevelopment that minimize disturbance and reduce opportunities for vandalism and other crimes. These actions also demonstrate that the government is willing to make efforts to counteract the effects of institutional and environmental racism that predate current officials.

Figures 7 through 13 demonstrate the author's suggested park expansion for minority areas. This plan would add up to 863 acres of parkland, a 124 percent increase in minority parks (see Figure 7). The sizable increase is still modest; it fails to offset the additional expansion in white areas under the City of Parks Plan.

FIGURE 7. Proposed Park Plan				
	Current	City of Parks (2008)	Minority Expansion	Expansion Total	Percent Expansion
Minority Parks	694	0	863	863	124.4%
Parks Total	12,077	14,967	15,830	3,754	23.7%

Source: Louisville Metro Parks

Figure 8 shows the targeted park area. Location is important, and this target area would create greenways in the heart of the minority community, while connecting Shawnee and South Central to downtown, and Russell to the University of Louisville. This greenway touches some of the main business thoroughfares in the city's minority neighborhoods by greening the old bourbon warehouses of Seventh Street and passing through the center of Broadway, the main thoroughfare through many minority neighborhoods, near businesses and transit lines. Wherever possible, these target park areas connect residents to other areas without disrupting commercial or residential areas and maintain connectivity through parks, a format from the City of Parks Plan. The northern edge would allow connectivity to the developing Riverwalk through a single bike lane. Additional possible connections exist in the conversion of abandoned rail lines into greened bicycle lanes within these areas. Such a conversion would help further connect the proposed parks to areas of employment since many of these abandoned rail lines abut properties in our target area. Where connectivity was not possible because land is unavailable, in such areas as the minority-serving Buechel neighborhood, parks are placed to anchor subdivisions.

The suggested expansion would redevelop 61.8 acres of vacant industrial vacant land and 146 total acres of vacant land (see Figure 9). In addition to cleaning up brownfields and removing vacant land,
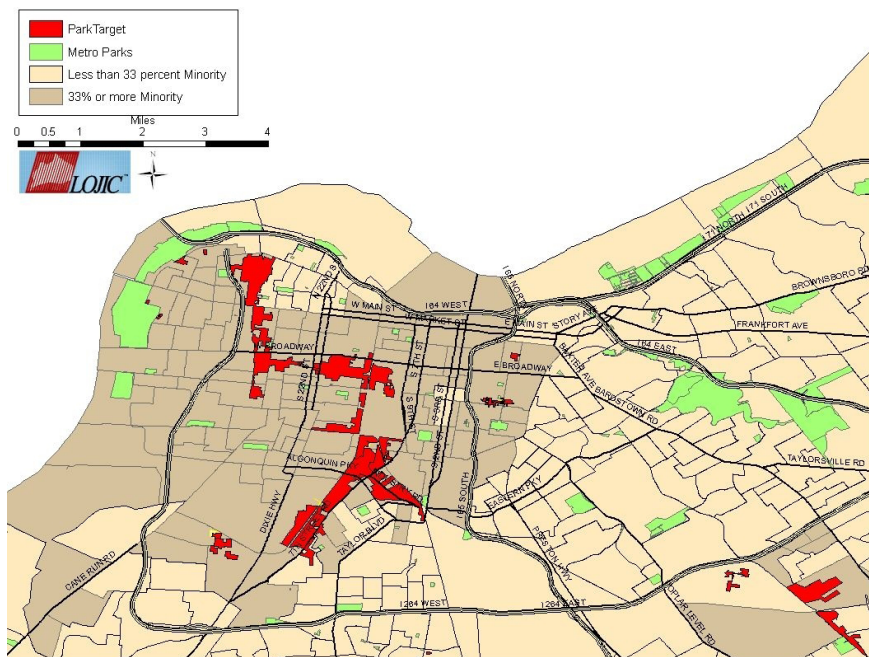
FIGURE 8. Proposed Park Expansion Step 1: Target an Area. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

FIGURE 9. Proposed Park Expansion Step 2: Add Vacant Lands. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

this plan suggests removing warehouses in the area to areas closer to expressways and farther from densely settled neighborhoods. In many cases, this land is available; in cases where it is not, public-private partnerships could be sought to help acquire suitable land as part of the park expansion plan. This should further improve the environment and safety of the neighborhood.

Figure 9 shows the second step. Using parcel land use data, vacant land in the target area is identified and added to the proposed park area. Figure 10 shows the evaluation of this land. Industrial land accounts for 42 percent of the vacant land in the area; this would mean the cleaning of 62 acres of brownfields. Vacant residential land (30 percent), if capable of being purchased, adds another 44 acres and commercial (28 percent) adds another 41 acres for 146 acres of vacant land available in the target area.

FIGURE 10. Vacant Land Opportunities				
	Industrial	**Commercial**	**Residential**	**Total**
Acreage	61.8	40.5	44	146.3

Source: Louisville/Jefferson County Information Consortium

Added to the 146 acres of land, Step 3 (see Figure 11) shows the warehouses in the target area. This area is in the heart of the minority community. This area is largely two- and three-lane streets, uncomfortable trucks, which make wide right turns and often must use sidewalks and driveways to back into loading docks. Better infrastructure and highway opportunities exist within Louisville in

FIGURE 11. Proposed Park Expansion Step 3: Logistics Opportunities. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

less densely settled areas, some with additional connections to airports and rail freight yards. Land transfers would allow these jobs to stay within Louisville, but move their externalities to areas with less development. Current locations require trucks to navigate two-lane roads and stop at numerous lights before reaching highways, further dispersing diesel exhaust in minority neighborhoods. Offering tax incentives or land transfers to relocate to outlying and easily accessible areas would improve local air quality. The diversion of logistics, storage and transport businesses and its accompanying traffic could add up to 286 acres of future parkland, nearly a third of the target area (see Figure 12).

	FIGURE 12. Logistics Opportunities		
	Warehouse	Vacant Lands	Total
Acreage	286.2	146.3	432.5

Source: Louisville/Jefferson County Information Consortium

Figure 13 evaluates the use of the remaining parcels in the target area (see Figure 14). Some of these uses may fit into a new greenway. A school or religious institution can share space with a park. In fact, they may welcome the amenities the park offers to provide such as safe ways for children to travel to school and gathering and recreational spaces. Other properties require a closer look. A large flea market property with two old industrial water towers may offer a unique opportunity to meet resident needs. Within the target area, 8 percent of the land is held by state or local governments
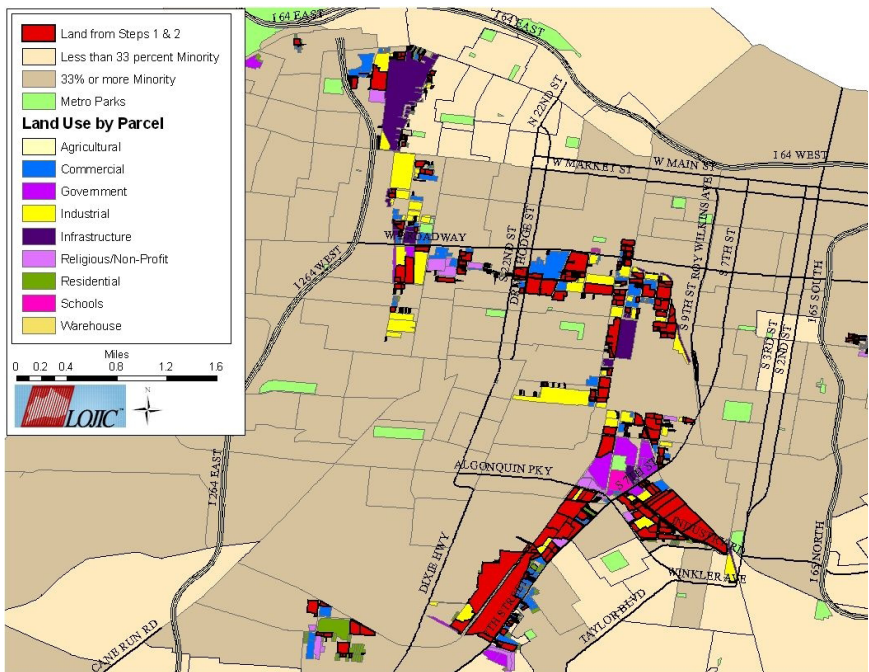
FIGURE 13. Proposed Park Expansion Step 4: Evaluate Target Area. *Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000*

FIGURE 13. Existing Land Use in Target Area	
	Acreage
Agricultural	1.2
Commercial	146.4
Government	33.7
Industrial	122.4
Infrastructure	9.5
Religious/Non-Profit	57.9
Residential	57.1
School	3.8
Total	**432**

Source: Louisville/Jefferson County Information Consortium

and may be made more easily available. Some storefronts may make nice partners within the park. A restaurant or corner store may offer a unique benefit to park visitors. In addition, job growth should be expected nearby as vacant parcels near the parks become more appealing as foot traffic and quality of life increases.

Figure 14 shows the breakdown of the current Metro Parks system, City of Parks Plan, and the proposed minority area expansion plan. The addition proposed, would still fall short of maintaining the ratio of park acreage that existed prior to the City of Parks Plan. This study does not propose scaling back the City of Parks Plan. The plan protects valuable waterways, unique features and virgin lands. However, the established partnership must consider issues of environmental justice and equity as it continues forward. Concurrent expansion in all areas of the community is a proper course. Consideration as to how parks may be best designed to meet the social needs of the likely users and generate additional income can be explored. Renting park facilities, partnerships with caterers, as well as the rental of small shops or kiosks may generate maintenance funds. Usage fees and parking meters are possibilities. The establishment of small-business assistance or programs could help jump-start and support small businesses choosing to locate near the new parks.

FIGURE 14. Park Expansion Addition Adjustment			
	Current	**COP**	**Minority**
Minority Areas	5.7	4.6	5.5
White Areas	94.3	95.4	94.5

Source: Louisville/Jefferson County Information Consortium, U.S. Census 2000

The final product should be a park system that promotes sustainable transportation and environmental mitigation measures. Amenities, recreation options and design are products the residents that use the parks should help determine. However, with a well-developed expansion plan that considers the needs of the residents, as well as improving the health of the environment in which they live, work and play can help improve economic and environmental sustainability and encourage land use equity and environmental justice.

CONCLUSION

Louisville has the opportunity to transform the character of its minority communities by expanding parks in a way that enhances the life of minority residents while recognizing and attending to past environmental injustices. By converting vacated industrial lands and warehouses into parks, minority communities in Louisville should expect to see benefits including health improvements, social cohesion, higher property values, and business startups, while at the same time seeing decreases in crime. This can be done in a manner that does not economically oust residents in favor of gentrification, although this is a problem the city needs to pay special attention to ensure.

A City of Parks Plan that properly considers minority needs has the possibility of developing a green heart in the West End where abandoned industrial land now exists. This would serve to offset the uneven environmental burden placed upon these minority neighborhoods. Proper location would allow minority areas to connect easily by bicycle or walking to jobs in south central, downtown and to the University of Louisville. The City of Parks Plan, in its current form, does little for minority residents, merely adding a trail along the existing levee. Opportunities exist to tailor the plan to consider improved park access for minorities. Establishing a park system that supports sustainable neighborhoods in all communities, regardless of race, would send a powerful message to residents. A well-planned park expansion plan can improve equity by ensuring equal and ease of access to minority residents. Attention to land use and encouraging density-appropriate clean industry, retail and service through creative government incentives can not only improve the environment but improve the economic vitality of residents. Considering the environmental needs of residents and problems accompanying urbanization, including cleaning of polluted land, mitigation of stormwater problems and cooling of the urban heat island allow neighborhoods to be more environmentally sustainable. In addition, by developing parks that help connect people to useful destinations encourages sustainable modes of transportation and improves public health. To create a more environmentally just park system planners must be mindful of the people, land uses, equity issues and environments in question. The results can be much-needed anchors that serve as social hubs, business catalysts and civic centers for more sustainable urban neighborhoods.

AUTHOR'S BIOGRAPHY
Carrie Beth Lasley is finishing her Master of Urban Planning degree at the University of Louisville and plans to pursue her Ph.D. in Urban Studies. The Louisville native is a recovering journalist and a graduate of the University of Missouri-Columbia and the City University of New York-Lehman College.

[ENDNOTES]

1. For this study, minorities were people who identified themselves as black, Asian or Hispanic. A non-minority was someone who was identified as a non-Hispanic white. People identified as American Indian, Pacific Islander, Hawaiian or of two or more races were considered white for this study. Their combined numbers were less than 1 percent of the total population. A block group was considered a minority area if the population totaled 33 percent or more minority. This threshold was kept low due to the length of time since the last Census (seven years), established trends of an increasingly diverse population and the expectation that diverse areas become more diverse over time. Since block groups are small areas, an assumption of even dispersal was in play.

2. Parks belonging to formerly suburban cities, such as St. Matthews, Shively and Jeffersontown were not included in this study. As sub- cities within Louisville they can tax residents and provide services that may include parks not in the Metro Parks system. E.P. "Tom" Sawyer State Park, in the county's far east end, also was not included. Additional recreational and natural areas offered by private and non-profit agencies were not considered, such as the Americana Center, which offers a community center and recreational facilities in south Louisville at the old Holy Rosary campus, and the Garvin Brown Nature Preserve, a sizable nature preserve located along the river just north of Hays Kennedy Park. These have funding streams not supported by Metro government. There is no reason to believe that inclusion of this data would have dramatically changed the results.

3. A median park size is a better measure than mean to determine the types and character of parks available to our two race groups.

REFERENCES

Abramson, J. (2007, November 6). *Mayor's Healthy Hometown Movement: Letter from Mayor Abramson.* Retrieved December 10, 2007, from Louisville Metro Government: http://www.louisvilleky.gov/Health/MHHM/LetterFromMayor.htm

Bartlestein, P. (2007). *The Impact of Waterfront Park.* Louisville, Ky.: Waterfront Development Corporation.

CDC. (2006). The *State of Childhood Asthma, United States, 1980–2005*.: U.S. Department of Health and Human Services.

CDC. (2008). *Health Disparities-Closing the Gap*.: U.S. Department of Health and Human Services.
Crompton, J. L. (2007). Competitiveness: Parks and Open Space as Factors Shaping a Location's Success in Attracting Companies, Labor Supplies and Retirees. In C. T. Brun, *The Economic Benefits of Land Conservation* (pp. 48-54). San Francisco: The Trust for Public Land.

Crompton, J. L. (2007). The Imapct of Parks and Open Spaces on Property Taxes. In C. T. Brun, *The Economic Benefits of Land Conservation* (pp. 1-12). San Francisco: The Trust for Public Land.

Daley, R.M. (2003) Revitalizing Chicago Through Parks and Public Spaces. *Places*, 26-27.

Dines, N. and Cattell, V. (2006) Public spaces, social relations and well-being in East London. London: The Policy Press.

Fainstein, S. S. (1999) Can We Make the Cities We Want? *The Urban Movement* (pp. 249-72) in Sophie Body-Gendrot and Robert Beauregard, eds. Thousand Oaks: Sage, 1999.

First National People of Color Environmental Leadership Summit. (1991). The Principles of Environmental Justice. *The Principles of Environmental Justice Guiding Principles* (p. 2). Washington, D.C.: Environmental Justice Network.

Forsyth, A. A. (2005). *Designing Small Parks: A Manual Addressing Social and Ecological Concerns.* New York City: Wiley.

Gies, E. (2006). *The Health Benefits of Parks.* San Francisco: The Trust for Public Lands.

Gobster, P. H. (2002). Managing Urban Parks for a Racially Diverse Clientele. *Leisure Sciences* , 143-159.

Horn, D. (2001, December 31). *Cincinnati: 2001 Year of Unrest.* Retrieved December 10, 2007, from Cincinnati Enquirer: http://www.enquirer.com/unrest2001/.

Klepal, D. (2008, May 3). *Louisville pool closings spur complaints*. Retrieved June 23, 2008, from The Courier-Journal: http://www.courier-journal.com/apps/pbcs.dll/article?AID=/20080503/NEWS01/805030562/1008/ARCHIVES.

Koekebakker, O. (2003). *Westergasfabriek Culture Park: Transformation of an Industrial Site in Amsterdam.* Rotterdam: NAI Publishers.

Kuo, F.E., and Sullivan, W.C. (2001) Actual Causes of Death in the United States, 2000. *The Journal of the American Medical Association*. 343-367.

Leonard, C. (2008, June 12). *Closures of some city pools leads to big crowds at others*. Retrieved on June 23, 2008, from WAVE: http://www.wave3.com/global/story.asp?s=8484732.

Louisville Metro Government. (2007, December 10). *City of Parks: Louisville's Greenprint.* Retrieved December 10, 2007, from Louisville Metro Government: http://www.louisvilleky.gov/MetroParks/City of Parks/.

Louisville Metro Government. (2006). *Mayor's Healthy Hometown Movement Resource Guide.* Louisville, Ky.: Louisville Metro Government.

Louisville Metro Government Planning & Design. (2000). *Cornerstone 2020.* Louisville, Ky.: Louisville Metro Government.

Meredith v. Jefferson County Board of Education, 05-915 (U.S. Supreme Court June 28, 2007).

Metro Parks. (2005, February 22). *Abramson unveils 'City of Parks' Vision.* Retrieved December 10, 2007, from Metro Parks: http://www.louisvilleky.gov/MetroParks/News/2005/cityofparks.htm.

Northern, M.L. (Spring 2006) City of Parks: Adding a Green Ring to Olmsted's Emerald Necklace. *U of L Magazine.*

Pace, D. *Minorities suffer most from industrial pollution.* 14 December 2005. Retrieved June 18, 2008 from MSNBC: http://www.msnbc.msn.com/id/10452037/.

Penalosa, E. (2003) Parks for Livable Cities: Lessons from a Radical Mayor. *Places*, 30-33.

Sherer, P. M. (2003). *The Benefits of Parks: Why American Needs More City Parks and Open Space.* San Francisco: Trust for Public Land.

Witt, P.A. and Crompton, J.L. (1996) The at-risk youth recreation project. *Journal of Park and Recreation Administration*, 1-9.