

**Addressing imbalance in park distribution and accessibility
in disadvantaged neighborhoods**

A Thesis Presented for the
Master of Landscape Architecture
Degree
The University of Tennessee, Knoxville

Erin Michelle Tharp

August 2012

Copyright © 2012 by Erin Michelle Tharp

All rights reserved.

Dedication

This thesis is dedicated to my daughter and was written in her honor. Lorelei, I hope you never question your abilities and I hope you never lose your innocent wonder of the world around you. You are strong. You are beautiful. And you can be whatever you want to be when you grow up (just please, don't grow up.)

Acknowledgements

Thank you to my committee, Dr Sharma and Dr Jones (Bobby), your input on all the non-LA research was critical, and thank you for being so flexible with the crazy LA process. Thank you to Ken McCown for constantly pushing me and helping me to create a project that I am truly passionate about and proud to present to the University. Finally, thank you Curtis Stewart for stepping in at the last minute and helping me to graduate. I will never be able to repay you.

Abstract:

This thesis will critically study the issue of socio-economic class based inequitable distribution of landscape / recreational resources and the ways in which the principles of environmental justice can be used as a tool by landscape architects in the planning process to amend this.

A preliminary study indicates that the zip code of 37915, located in Knox County, Tennessee proves to be a suitable case study. High levels of poverty and a greater percentage of minorities as shown by the U.S. Census, add to the undesirability of this neighborhood. The city has located pocket parks with playgrounds and basketball courts in this neighborhood but they still lack access to large tracts of open space with multiple recreational facilities. Finally, this neighborhood falls short of the recommended 6 acres of close-to-home parks for every 1000 residents.

Based on the principles of environmental justice, this thesis critically reviews the underlying causes of this inequitable distribution and aims to address it by using these principles as guiding principles for the planning process involved in locating and designing a park for 37915.

Table of Contents

Chapter 1 Literature Review

Chapter 2 Introduction to Environmental Justice and Landscape Architecture

2.1 Introduction.....	4
2.2 Environmental Justice.....	4
2.2.1 History.....	4
2.2.2 The Six Environmental Justice Principles and Landscape Architecture.....	10
2.2.3 Modern Day Movement.....	11
2.3 Parks.....	12
2.3.1 History.....	12
2.3.2 Parks and Social Reform.....	16

Chapter 3 Precedent Study

3.1 East Bay Parks, San Francisco, CA.....	23
3.2 Baltimore, MD.....	26
3.3 Chicago, IL.....	30

Chapter 4 Environmental Justice and Landscape Architecture

4.1 The Principles of Environmental Justice for Landscape Architecture.....	37
4.2 Site Selection.....	37
4.2.1 Selection of a Study Area.....	37
4.2.2 Site Selection.....	44
4.2.3 Community Survey.....	45

Chapter 5 Planning for Environmental Justice

5.1 Location.....	49
5.2 History of General Shale Site.....	49
5.3 General Shale and its Effect on 37915.....	50
5.4 Environmental Analysis.....	50

Chapter 6 Designing for Environmental Justice

6.1 Design.....	53
6.2 Design Recommendations.....	58

Chapter 7 Conclusion

Conclusion.....	59
-----------------	----

List of References.....	61
-------------------------	----

Appendix 1	64
Vita	66

List of Tables

Table 3.1 Park acreage per population/race.....	28
Table 3.2 Park acreage/Income.....	29
Table 3.3 Chicago Park Acres, 1840-1990.....	32
Table 3.4 Chicago Park District Service Area Standards.....	34

List of Figures

Fig 4.1 Environmental Justice and Landscape Architecture.....	37
Fig 4.2 Demographic Study.....	38
Fig 4.3 Income and Home Value by Zip Code.....	39
Fig 4.4 Demographics by Zip Code.....	40
Fig 4.5 Location of 37915.....	40
Fig 4.6 Parks in 37915.....	41
Fig 4.7 Morningside Park.....	42
Fig 4.8 Governor Ned McWherter Park.....	42
Fig 4.9 Babe Ruth Park.....	42
Fig 4.10 Map of grocery stores near 37915.....	43
Fig 4.11 Map of KAT line servicing 37915.....	43
Fig 4.12 Wilder Missionary Baptist Church.....	44
Fig 4.13 Map of half-mile radius from Morningside Park and General Shale showing land use.....	45
Fig 4.14 Section starting in Riverview Terrace with Morningside Park to Right and General Shale to left.....	45
Fig 4.15 Map showing General Shale site to the left and KUB Water Treatment facility to the right.....	48
Fig 5.1 Map showing location of General Shale site.....	49
Fig 5.2 Suitability Analysis.....	50
Fig 6.1 Master Plan of Riverview Park.....	53
Fig 6.2 Community garden and farmer's market in Riverview Park.....	54
Fig 6.3 James White Greenway along Riverside Drive.....	55
Fig 6.4 Bubble diagrams illustrating potential partners and their roles.....	55
Fig 6.5 View of retention pond.....	56
Fig 6.6 View of sheet water fountains and wetlands in new water treatment area.....	57
Fig 6.7 View of community center in the year 2050.....	57
Fig 6.8 Section illustrating CPTED.....	58

Chapter 1

Literature Review

Many of the readings looked at for this thesis address the issue of environmental justice. In his book, *Sustainable Communities and the Challenge of Environmental Justice*, Julian Agyeman gives a thorough history of the movement, which in modern times has come to include the lack of access to green/natural spaces by minorities and economically challenged residents. He speaks to the efforts of community organizers, policymakers, and anyone interested in a better environment and community health and shows how creating sustainable communities and correcting environmental injustices go hand in hand.

In *The Environment and the People in American Cities*, Dorceta E. Taylor looks at the development of urban environments, and urban environmentalism, in the United States. By focusing on the evolution of the city within the context of environmental problems she shows how social inequalities repeatedly informed the adjudication of questions related to health, safety, and land access and use. Taylor describes the social and environmental conflicts of the past and present, as well as the displacement of people of color for the production of natural open space for the white and wealthy. She also discusses citizens' resistance to speak out against environmental inequalities befalling marginal communities.

In *The Politics of Park Design: A History of Urban Parks in America*, Galen Cranz describes the rise of the park system from 1850 to the present. Then in, *Security and Site Design: A Landscape Architectural Approach to Analysis, Assessment, and Design Implementation*, Leonard Hopper details the steps and processes involved in creating parks and open spaces that follow the rules of Crime Prevention Through Environmental Design (CPTED). CPTED is discussed further in "A Walk in the Park with CPTED – Case Studies: Recreation Centers;

Undeveloped Areas: Trails.” Written by Dean Smith for the 3rd International CPTED Conference, he gives examples of CPTED at work.

Finally, previous studies and reports from East Bay, CA; Baltimore, MD; and Chicago, IL were reviewed because these cities have taken active roles in addressing the issue of environmental justice in regards to their park systems.

Paul Kibel addresses the issue of park accessibility in his essay, *The People Down the Hill: Parks Equity in San Francisco's East Bay*. Issues of race and class are discussed in relationship to the location of existing parks and to the accessibility of the parks and greenways to minority communities. According to Kibel, his essay, “examines questions of equity for low-income minority residents related to the parkland holdings of the East Bay Regional Park District, the agency that manages close to 100,000 park acres in Alameda and Contra Costa counties east of San Francisco Bay” (iii).

Christopher Boone discusses Baltimore, Maryland in *Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland*. By looking at park distribution and acreage of existing parks Baltimore developed a plan to retrofit the parks into their existing urban landscape and create a more just and equal system for their residents.

The final study, *CitySpace: an Open Space Plan for Chicago*, was produced for the city in 1998 as a response to allegations that the current park system was unevenly and unfairly distributed throughout the city. It addresses the issues that the system faced at the time and goes into detail about the steps Chicago took and is taking to correct them.

Focusing in on the project element of this thesis, readings on Knoxville, Tennessee were included so as to get a proper historical and cultural basis for the actual park design. *A Standard History of Knoxville, Tennessee*, by William Rule provides a detailed history of Knoxville. Then,

A geographic perspective on intra-urban racial/ethnic diversity, segregation, and clustering in Knoxville, Tennessee: 1990-2000, by Madhuri Sharma shows that racial clustering in neighborhoods is present in Knoxville and can help to explain the distribution of goods and services across the county.

Chapter 2

Introduction to Environmental Justice and Parks

2.1 Introduction:

According to Paul M. Sherer in his essay, *The Benefits of Parks: Why America Needs More City Parks and Open Space*,

“The emergence of America as an urban nation was anticipated by Frederick Law Olmsted and other 19th-century park visionaries, who gave us New York’s Central Park, San Francisco’s Golden Gate Park, and similar grand parks in cities across the nation. They were gardeners and designers-but also preachers for the power of parks, fired from within by the understanding that they were shaping the quality of American lives for generations to come” (Sherer,5).

In the view of these park visionaries, parks were not “amenities.” They were necessities, providing recreation, inspiration, and essential respite from the city’s blare and bustle. And the visionaries were particularly concerned that parks be available to all of a city’s residents-especially those who did not have the resources to escape to the countryside” (Sherer, 5).

Sherer wrote this article for the Trust for Public Land with the purpose of educating Americans on the importance of building more parks in inner-city neighborhoods. He believes that “parks are essential to the health and well-being of all Americans” (Sherer, 5).

2.2 Environmental Justice:

2.2.1 History: The environmental justice movement came about in response to a

noticeable trend of locating toxin-releasing industry and harmful dumping sites in disadvantaged neighborhoods. Supporters sought a way to amend these injustices and looked for ways to not only clean up these areas but to also turn them into amenities for communities that were oftentimes lacking essential goods, such as groceries, transportation and open-spaces.

Essentially, this idea of “health and well-being for all Americans” is at the heart of the environmental justice movement. In his book, *Sustainable Communities and the Challenge of Environmental Justice*, Julian Agyeman briefly defines environmental justice as “a local, grassroots, or ‘bottom-up’ community reaction to external threats to the health of the community, which have been shown to disproportionately affect people of color and low-income neighborhoods.”

To start, a distinction must be made between the terms environmental justice, environmental racism, and environmental inequity, which Paul Kibel provides in his essay *Access to Parkland*. “Environmental racism” implies that policymakers are deliberately discriminating against specified racial groups in regards to environmental policy. “Environmental inequity” refers to the data showing that the quality of the environment for low-income minorities is lower in their neighborhoods than that found in neighborhoods with other income and racial demographics. “Environmental justice” refers to the movement to “restore environmental equity by raising the quality of the environment in low-income, high minority communities without necessarily making a determination that overt environmental racism is or was involved” (3).

The environmental justice movement began to garner support during the Civil Rights Movement in the 1960s and has continued to gain supporters as environmental stewardship has gained in popularity with the general public. However, the fall of 1982 is when most believe the

movement actually began and has its roots in Warren County, North Carolina.

A protest over dumping of PCB contaminated soil into a landfill sparked an investigation of the location of other hazardous-waste landfills in relationship to neighborhoods where minorities averaged more than 40 percent of the population. This study, the 1987 United Church of Christ study “Toxic Wastes and Race in the United States” revealed that “certain communities, predominantly communities of color, are at disproportionate risk from commercial toxic waste” (Agyeman, 2005, 15). These findings helped to coin the term environmental racism, which combined with other studies regarding unequal protection and enforcement of environmental laws by the EPA has led to a “full- fledged environmental justice movement made up of tenants associations, religious groups, civil rights groups, farm workers, professional not-for-profits, university centers and academics, and labor unions, among others” (Agyeman, 2005, 15).

In regards to race, there are varying views among activists as to what constitutes a race of people. Originally, the movement was aimed at correcting injustices directed at people of color, however in recent years it has come to include “poor and disadvantaged white groups as well as people of color... who are deprived of their environmental rights” (Agyeman, 2005, 17).

In October 1991, the First People of Color Environmental Leadership Summit gathered to write the Principles of Environmental Justice, seventeen principles that help to develop policy for environmental and social justice. The principles highlighted in red will be the ones addressed in this thesis. The principles are:

1) **Environmental Justice** affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.

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

3) **Environmental Justice** mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.

4) **Environmental Justice** calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.

5) **Environmental Justice** affirms the fundamental right to political, economic, cultural and environmental self- determination of all peoples.

6) **Environmental Justice** demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.

7) **Environmental Justice** demands the right to participate as equal partners at every level of decision- making, including needs assessment, planning, implementation, enforcement and evaluation.

8) **Environmental Justice** affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.

9) **Environmental Justice** protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.

10) **Environmental Justice** considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide.

11) **Environmental Justice** must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.

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 all our communities, and provided fair access for all to the full range of resources.

13) **Environmental Justice** calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.

14) **Environmental Justice** opposes the destructive operations of multinational corporations.

15) **Environmental Justice** opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.

16) **Environmental Justice** calls for the education of present and future generations which emphasizes social and environmental issues, based on

our experience and an appreciation of our diverse cultural perspectives.

17) **Environmental Justice** requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.

(www.ejnet.org/ej/)

Shortly after, the EPA established the Office of Environmental Justice and a National Environmental Justice Advisory Council (NEJAC).

In 1994, President Clinton issued an executive order reinforcing the 1964 Civil Rights Act Title VI, "which prohibits discriminatory practices in programs receiving federal funds, and directed all federal agencies to develop policies to reduce environmental inequity" (Agyeman, 2005, 18). These policies add to the original brief definition to include that "at a government level, it (environmental justice) is a *policy principle* that no public action will disproportionately disadvantage any particular social group" (Agyeman, 2005, 19).

Originally, the EJ movement was centered around acts by public agencies which could bring negative health effects to communities, such as the dumping of toxic waste. This explains why many of the early policies are designed to protect public health and safety in regards to the environment.

One of these policies is the "The Toxic Releases Inventory (TRI) which requires "users of chemicals including electrical utilities, metallic and coal mining operators, commercial hazardous-waste treatment facilities, chemical and allied products manufacturers, solvent recovery services, and petroleum bulk terminals to report to the EPA the levels of listed

chemicals that are released to air, water, or land” (Agyeman, 2005, 20).

Another is the Good Neighbor Agreement, which is a “voluntary, legally binding agreement between an industry and the community, which is used to improve accountability” and typically includes “access to information, negotiated improvements in pollution prevention, local job guarantees, and other local economic benefits” (Agyeman, 2005, 20). This is a tool used by industries to gain community support for projects.

Finally, the Precautionary Principle “states that when an activity raises the threat of harm to human health or to the environment, precautionary measures should be taken even if cause and effect relationships are not fully established scientifically” (Agyeman, 2005, 20).

This is perhaps the most important of the policies as it has the most hope of bringing change to production practices in the United States and leading to more “green” industrial practices.

2.2.2 The six EJ principles and landscape architecture Starting with principle one, “Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction” (www.ejnet.org/ej/). This speaks to landscape architecture by stating a guideline for practitioners to follow so as to keep nature at the heart of design and to not destroy ecological habitats for the sake of design.

Principle two states, “Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias” (www.ejnet.org/ej/). For landscape architects, this could be used as a reminder to distribute open spaces equitably throughout communities, and to not disregard an available tract of land based

on the neighborhood in which it is found.

Principle three states, “Environmental Justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things” (www.ejnet.org/ej/). In other words, for landscape architects this means using sustainable design and renewable resources whenever possible.

Principle seven, “Environmental Justice demands the right to participate as equal partners at every level of decision- making, including needs assessment, planning, implementation, enforcement and evaluation,” (www.ejnet.org/ej/) serves as a reminder to include the community in the planning process.

Principle twelve, “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 all our communities, and provided fair access for all to the full range of resources,” (www.ejnet.org/ej/) goes back to the heart of the EJ movement. This principle could be applied to brownfield reclamation, or turning former industrial sites into open-space areas, that would not only benefit man-kind but would also serve as habitat restoration and sustainable natural areas.

Finally, principle sixteen states, “Environmental Justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives” (www.ejnet.org/ej/). This can also be used by landscape architects as a reminder to not only take community culture into account when designing but to also incorporate educational opportunities into landscapes.

This leads to environmental justice and its evolution to the inclusion of open space.

2.2.3 Modern day movement: This movement has experienced rapid growth since 1982 and with that it has evolved to include more than just stopping the dumping of toxic waste in disadvantaged neighborhoods. Today the movement has come to include more every-day issues that affect communities, such as “being disenfranchised from major societal institutions” (Agyeman, 2005, 25). Keeping this in mind, Agyeman refers to the Commonwealth of Massachusetts (2002) to provide a more thorough definition:

Environmental justice is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. Environmental Justice is the equal protection and meaningful involvement of all people with respect to the development, implementation and enforcement of environmental laws, regulations and policies and the equitable distribution of environmental benefits (Agyeman, 2005, 26).

To understand why environmental justice began to include open-space a brief historical description of parks and the importance of parks is given. This will illustrate why open-space should be viewed as an essential element in a healthy and just community.

2.3 Parks:

2.3.1 History: Following the industrial revolution, officials in American cities felt the need to improve the life of urban residents. They recognized the lack of available public outdoor green space and set about building great city parks to improve their residents’ quality of life. These parks are also known as pleasure grounds by park historians. Central Park in New York

City is the most famous of these parks built at this time. Central Park originally opened to the public in December 1858 when three hundred people ice skated on the frozen Central Park Lake at West 73rd Street. Just 2 years later the park hosted 2.5 million people, and attendance continued to grow over the next decade with visitation growing fifteen times faster than the city's population. A local newspaper, the Herald, reviewed the parks first year and noted that "there was never perhaps an institution established for public enjoyment which has grown popular and available so rapidly" (Rosenzweig, 1992, 211).

These parks were a refuge from the crowded, polluted, stressful cities where the average person lived and worked with little to no access to the surrounding countryside. These parks became places where citizens could experience fresh air, sunshine, and nature; were places for recreation, and did not discriminate between the rich and the poor. They were shared and enjoyed by all (Sherer, 2006, 10).

In his book, *The Politics of Park Design: A History of Urban Parks and Open Space*, Galen Cranz describes these new parks as being inspired by "an anti-urban ideal that dwelt on the traditional prescription for relief from the evils of the city-to escape to the country" (Cranz, 1982, 3). "The new American parks thus were conceived as great pleasure grounds meant to be pieces of the country, with fresh air, meadows, lakes, and sunshine right in the city" (Cranz, 1982, 5).

In the early 1900s civic leaders saw a need to supplement the "pleasure grounds" with smaller, neighborhood parks as a way to get children off the streets. For many urban children, the street, with all of its activity, had become their playgrounds. Teddy Roosevelt spoke out against street play saying, "City streets are unsatisfactory playgrounds for children, because of the danger, because most good games are against the law, because they are too hot in summer, and

because in crowded sections of the city, they are apt to be schools of crime” (Cranz 1982, 80). It was believed that new, safe parks would get the children off the streets. Lack of available space created problems in some urban areas and so places like the Mission district in San Francisco and North Harlem in New York created play streets. These were quiet streets that were closed off to create playgrounds (Cranz 1982, 81). Whether these new parks were placed on closed streets or in schoolyards one theme remained constant; place them in the densest neighborhoods in order to serve the largest segment of the population. Even then, this practice began to speak of injustice due to issues of inaccessibility.

One early example of this occurred in San Francisco in the working-class area south of Market Street. After demands for a new high school were met, residents began to campaign for a park to go with it. After much debate a city supervisor sponsored a new park scheme for the area, but residents disagreed with the plan because of its inaccessibility. In other words, it was too far away for many residents to be able to reach within thirty minutes. Residents argued that one large park system south of Market would not adequately serve the people, rather “there should be small playgrounds within easy reach of every part of the densely populated district where the mass of the city’s people live” (Cranz 1982, 82). City officials listened and in the 1902 annual park report restated their goal: “we deem it the duty of those in authority to provide recreation grounds of sufficient size, within walking distance, for every child of the city” (Cranz 1982, 82).

Park usage began to decline during the Great Depression as wealthy residents began moving out of the overcrowded cities to the newly developed suburbs. Cities cut park budgets or in some cases, stopped funding the parks altogether and they fell into ruin. With this deterioration crime rates in parks rose and attendance fell even more because residents felt they were too dangerous and unclean.

Parks were not better in the new suburbs, most new towns lacked parks. The movement to build parks in suburbs and non-urban neighborhoods is relatively young, as open space only became a priority to city planners in the late 1980s and early 90s. According to Sherer in his report, “The Benefits of Parks: Why America Needs More City Parks and Open Space,” “beginning around 1990, many city and town councils began forcing developers to add open space to their projects. Still these open spaces are often effectively off-limits to the general public; in the vast sprawl around Las Vegas, for example, the newer subdivisions often have open space at their centers, but these spaces are hidden inside a labyrinth of winding streets” (pg 11). This means that residents without these open spaces are forced to get in their cars and drive to them, or rely on public transportation.

Discrepancies in usage between whites and non-whites adds to the questions raised by park advocates in their quest to balance park systems.

“In academic literature on park usage, two primary explanations have been advanced to explain discrepancies in usage levels between Whites and non-Whites: marginality and ethnicity. The marginality explanation for racial discrepancies in park usage focuses on poverty and socioeconomic discrimination. It posits that lower park usage levels among non-Whites are due primarily to their reduced ability to access parks due to such considerations as lack of proximity, lower car ownership rates and longer working hours” (Low, 2005, 41)

In so far as ethnicity goes, this explanation refers to ethnic preferences and the tendency of Whites to use more naturalistic areas while non-Whites prefer less natural areas that offer opportunities for large social gatherings (Low, 2005, 42-43).

These issues of ethnicity and poverty coupled with inaccessibility and the unequal

distribution of parks in many cities have led park activists to join forces with groups who have long been addressing issues of social inequity.

2.3.2 Parks and Social Reform: Since the late 1800s park advocates and reformers have claimed that parks could help ease societal problems by providing urban residents with necessary green space. In, *Building San Francisco's Parks, 1850 – 1930*, Terence Young writes, “Park advocates struggled for greenspace because they believed parks could eliminate many social ills, particularly disease, poverty crime, and social division, since these evils were thought to be caused by the negative impact of urban surroundings” (pg 2). He goes on to quote Charles Mulford Robinson, a City Beautiful leader, who said “create parks where children can be energetic, he claimed, where adults can find brightness, entertainment, and fellowship without throwing them into temptation ... and many of sociology's hardest problems will be solved” (pg 2).

Advocates began to categorize the ways in which parks could improve public life. “Public health, prosperity, democratic equality, and social coherence” (Young, 2004, 3) emerged as the leading virtues to aspire to when building new parks. While public health and prosperity are more material virtues, democratic equality and social coherence can be seen as more behavioral virtues. “Park advocates frequently expressed a concern that rising class divisions heightened class awareness, distinctiveness, and a sense of social rank, threatening the municipality and larger republic. Parks would ‘naturally’ close social gaps when visitors left their class-sensitive employments and residences to meet in the leveling openness of public greenspace” (Young, 2004, 4). With this need to adhere to the virtues of park making came the question of where to locate the parks within the city fabric so as to benefit the most people.

“Both romantic and rationalistic advocates believed parks fostered the virtues but they disagreed about the optimal location for parks” (Young, 2004, 12). Many believed that large, romantic landscapes belonged on the edges of cities where green space was abundant. However, the practice of locating parks outside the city also limited access to residents in the inner slums. “A romantic era city, like the period’s parks, was a relatively homogenous entity in which poverty, disease, crime, and class conflicts were diffused. Park champions made little of areal distinctions, because they felt that every urban district equally needed the virtues; a new park improved users no matter where they resided, as long as it was nearby” (Young, 2004, 12).

Today, park advocates have become more focused on the vast scale of benefits that parks and open spaces bring to a community. In recent years these have come to include far more than just social and personal benefits. The Chicago Park District (CPD) released a 1998 report on their own park system titled *City Space*, in which they detailed what they believe these benefits to be in order to justify the expense behind a system expansion.

The first on their list is “recreational value.” This is based on the opportunities for outdoor activities that open space provides to people of all ages. The CPD believes that the size of the open space is irrelevant to the amount of recreational benefits it can provide. This could relate back to EJ principle two which states, “Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias” (www.ejnet.org/ej/) principle twelve, equitable public policy leads to equitable benefits.

Second, is “social value,” which simply put, implies that open space brings people together, fosters personal relationships and creates bonds that strengthen a community’s identity. This also relates back EJ twelve with the reference to “cultural integrity,” “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 all our communities, and provided fair access for all to the full range of resources,” (www.ejnet.org/ej/),

Next, is “aesthetic value,” or the beauty that designed green space offers in contrast to the built environment. This would include trees, flowers, and all green vegetation. Closely related to this is “restorative value,” or the ability of natural open spaces to “restore” people physically and psychologically due to the contrast from everyday life they provide. This speaks to EJ principle one, “ Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction” (www.ejnet.org/ej/), and the importance of preserving and restoring natural areas instead of destroying them.

The next two on the list are also closely related. “Environmental value” and “ecological value” both speak to the impacts that open space and natural corridors have on air and water quality and habitats for wildlife and vegetation. These areas not only protect vital resources and cleanse the environment but they also “enhance city dwellers’ understanding of and relationship with nature” (*City Space*, 1998, 17). Again, these last two also speak of the “sacredness of Mother Earth” as found in EJ principle one.

So, how much open space is enough to maximize the benefit of the previously stated benefits? According to the National Recreation and Parks Association (NRPA), 6 to 10 acres of local parkland is recommended for every 1,000 residents. However, they do say this number should be adjusted with regards to the “unique geographic, demographic and historic development patterns of each city” (*City Space*, 1998, 18).

The NRPA is not the only group to have researched the benefits of parks. In “Access to Parkland,” Kibel refers to a short list of studies that have looked into the varied benefits of parks

including:

A 2004 article in *Ecology law Quarterly*, published by the University of California at Berkeley's Boalt Hall Law School, noted:

The criticism of the wilderness establishment as reserving beautiful areas for the few wealthy, well-educated users that have the time, resources and inclination to appreciate them provides the basis for calling wilderness designation an injustice. The concern is that the use of public land set-aside as wilderness is not reflective of the composition of the United States, based on either race or class. Thus, the distribution of benefits is inequitable...Wilderness preservationists are using their substantial resources to shape the national concept of 'environment' as islands of pristine habitat. In the shadow of these "Gardens of Eden," the urban environment and the types of problems that urban neighborhoods face are wholly separate; not sublime and worthy of protection, but mundane and less important. Because the majority of wilderness advocates live relatively privileged lives, removed from the polluted communities where environmental justice has its roots,

The focus of a 2004 article in the American Planning Association's *Planning* magazine highlighted:

Distance from a park is an important measure. It may be more significant even than counting up the absolute amount of parkland in a city. Los Angeles is a case in point. L.A. ranks fifth among big cities with more than 30,000 acres of parkland, but more than half of that land is

located in the mountainous – and relatively inaccessible – central section of the city. Meanwhile, poorer neighborhoods often lack any significant parks at all. Large segments of L.A.'s 3.7 million residents are too far from a park to use it easily, conveniently, or frequently.

A 2005 publication by the Trust for Public Land's City Parks Program observed:

While more affluent neighborhoods tend to have access to quality, outdoor recreational opportunities, low-income neighborhoods typically lack even small neighborhood parks.

A 2005 article in the *Hastings West-Northwest Journal of Environmental Law & Policy*, titled *An Environmental Justice Perspective on African-American Visitation to Grand Canyon and Yosemite National Parks*, found:

While the environmental justice movement initially focused on the inequitable distribution of environmental burdens, the focus has recently been extended to include the inequitable distribution of environmental benefits, especially in the natural resources context. Low African-American visitation to the national parks qualifies as an environmental injustice within this broader focus. When considered from an environmental justice perspective, it is clear that there is more at stake than how one African-American family chooses to spend its vacation. What is at stake is that a historically under-privileged group is not experiencing one of the most important communal benefits in this country, a benefit that their tax dollars are helping to fund and that is supposed to be available to all.

A 2006 report by the California-based City Project, subtitled *Mapping Green Access and Equity for the Los Angeles Region*, explained:

The communities with the worst access to parks lie in Central and South Los Angeles, which have the lowest income levels and the highest concentrations of people of color. Fully 93% of households with children in Central Los Angeles and 85% in South Los Angeles fall below 300% of the federal poverty level.

In 2006, Portland State University's Population Research Center and the Coalition for a Livable Future (both based in Portland, Oregon) co-published the results of their *Regional Equity Atlas Project*, in which they reported:

Based on our analysis of the three-county [Portland] region, 48% of neighborhoods with below average public park access have above average poverty. If public parks access was distributed equitably in the region, then all neighborhoods would have comparable access regardless of their poverty levels.

...

Inequities in access to nature also correspond to... percentages of people of color. For example, 66% of neighborhoods with the worst access to nature have more than average percentage of people of color. Only 8% of neighborhoods with the best access to nature have above average percentage of people of color.

In his 2007 book *the Country in the City: the Greening of the San Francisco Bay Area*, Professor Richard A. Walker of the University of California at Berkeley commented:

Limited access to open-space reserves may be justified by wildlife ecology, but it can also smack of elitism. It is not surprising that the chief proponents of open-space districts have been in the West Bay, with their more upper- class constituencies... Moreover, the open space reserves are far away from the poor and people of color.

Chapter 3

Precedent Study

3.1 East Bay Parks, San Francisco, California:

Located in Alameda County and Contra Costa County, California (San Francisco) the East Bay Parks System was established in 1928 when 10,000 acres of former watershed lands were declared public by the East Bay Metropolitan Utility District. This area is surrounded by open space but civic leaders felt it necessary to set the land aside for public recreational use so that it could never be developed. Today, the East Bay Regional Park District (EBRPD) consists of nearly 100,000 acres comprised of 14 regional parks, 19 regional preserves, 9 regional recreation areas and 13 regional shorelines, making it the largest regional park system in the United States (Kibel, 2007, 1).

According to the EBRPD *Master Plan 2011*, there is a park located within thirty minutes of every East Bay resident's home, and the park system claims that they encourage usage by providing parking facilities at every park and trail head and by encouraging and supporting public transportation. However, when surveyed, close to twenty percent of residents disagreed with the statement that "social equity is a core value to the EBRPD; clearly the District is well known for making a concerted effort to accommodate the needs and desires of ALL levels of income and ALL ethnic groups who reside in Alameda and Contra Costa counties" (*Master Plan*, 2011, 5).

Most of the regional parks and preserves are located in the East Bay hillsides, which comprises more than 75% of the agency's parks. This is important to note because of the demographics of East Bay in regards to race and income levels.

When looking at both counties, Alameda is 41% white with an overall population of 1.5 million people. Contra Costa County is slightly smaller with 1 million people and is 58% white. Both of these counties are similar though in that the hillside communities are more like the county averages while the flatland communities tend to have more minorities than average. For example, the city of Richmond lies in the flatlands near the San Francisco Bay. In 2000 it was 44% African American and 15% Latino with more than 13% of its population living below the poverty level. It also has the highest percentage of youth living below the poverty level in Contra Costa County (Kibel, 2007, 23). These numbers are important when looking at park distribution on the two counties.

The Trust for Public Land conducted studies for their *Park Equity Needs Analysis*. These studies indicate that the East Bay flatland neighborhoods with the greatest density and lowest income tend to be the same neighborhoods with the greatest unmet park needs (Kibel, 2007, 26).

Finally, park usage is also consistent with these demographics. In the 2004 report *Parks, People and Change: Ethnic Diversity and Its Significance for Parks, Recreation and Open Space Conservation in the San Francisco Bay Area (2004 Parks People and Change Report)*, the Bay Area Open Space Council looked at the racial mix of weekend users at Redwood Regional Park (Alameda hillsides), Briones Regional Park (Contra Costa hillsides), and Point Pinole Regional Shoreline (near the city of Richmond).

In the case of Point Pinole, despite the close location to the impoverished minority neighborhood of Richmond, trends still show that whites are the primary users. This is due to the physical barriers that block Richmond residents from access to the park without the use of a car. Old industry, rail lines and the highway stand between Richmond residents and the park and unfortunately, most in the community cannot afford the use of a car and public transportation

adds the element of time to get there which is a detractor for most.

The agency is aware of these access problems and has taken steps to remedy them. One initiative is the Parks Express program. Funded by the Regional Parks Foundation, a local nonprofit in Oakland, the program provides transportation for children in under-privileged neighborhoods so they can participate in youth programs offered by East Bay Parks (Kibel, 2007, 30).

In addition to this there are also numerous references to equity in agency documents. Both East Bay Park's 1997 Master Plan and East Bay Parks' 2006 Budget state: "The East Bay Regional Park District will achieve its vision in the following ways...Improve access to and use of the parks by members of groups that have been underrepresented, such as disabled, economically disadvantaged, and elderly visitors" (10; 1).

Today, because of continued urbanization, the need for a regional system of publicly owned open space areas, recreational facilities and trails is even greater than it was when the District was originally established. And times are still uncertain. Like other public agencies, the District continually faces the potential loss of essential revenues, while the demand for recreational areas, facilities, programs and services continues to grow. Economic uncertainty, population growth, the increased ethnic and cultural diversity of the East Bay, improved scientific knowledge in natural and cultural resource management, and land use changes that could create new Regional Parks in urban areas are among the key challenges that will shape the East Bay Regional Park District of the future.

EBRPD serves as an example of how EJ principle seven, "Environmental Justice demands the right to participate as equal partners at every level of decision- making, including needs assessment, planning, implementation, enforcement and evaluation" (www.ejnet.org/ej/),

can be used in real world planning. The survey performed not only pointed out inequalities in the park system but it also sought solutions to these inequalities.

3.2 Baltimore, Maryland:

Baltimore's park system began around the same time as the establishment of New York's Central Park during the mid-nineteenth century. In 1827, William Patterson donated six acres of his property to the city of Baltimore with the intent that it be made into public recreational space and in 1853 this land became known as Patterson Park and is the oldest park in Baltimore (Maryland State Archives, 2001).

The park system continued to grow as the city expanded, enveloping country estates which it then turned into parks. These former estates now form the core of the Baltimore park system (Boone, 2009, 778). These natural areas on the outskirts did not however meet the needs of inner city residents. As early as 1897 references can be found in the *Baltimore News* which wrote: "The parks of our city should be for the people – all the people – not for a particular class, or for those living in a particular district." The writer went on to acknowledge the beauty of Druid Hill Park (the city's most prominent park) but declared that "in a city the size of Baltimore, one park will not do for all" (Boone, 2009, 778).

At the time, the Municipal Art Society (MAS), a group of the city's elite class with a focus on city beautification, took on the task of correcting problems with the park system. In 1902 they enlisted the help of the landscape architecture firm, Olmsted Brothers, to help find solutions and offer recommendations for expansion. The initial report was submitted in 1903 and "gave substance to the Municipal Art Society's ambitious vision: to create numerous small parks and playgrounds, expand the larger city parks, develop parkways and stream valley parks in the

suburbs, and select and set aside large reservations beyond the metropolitan area for future use” (Zucker, 1995, 82).

The Olmsted plan led to an extensive park plan, but many residents still felt there was a lack of park space for Baltimore’s black residents. An Urban League Report from the mid 1930s noted the lack of “recreation space for Negroes near their zones of residence” at a time when “the peculiar economic and social precursors of the depression...gave Negroes more leisure and few organized facilities for using it” (Reid, 1935, 28). “Noting that the Playground Athletic League operated numerous playgrounds in South Baltimore to which ‘thousands of children flock’ each year, a report issued in 1938 by the South Baltimore Improvement Association ‘regretted that many of them have great distances to walk before reaching an area that is safe to play’” (Boone, 2009, 779).

The Baltimore metropolitan region has a total of 56,397 acres of parks. This equates to 22.5 acres per thousand population, which is well above the national average of 6.25 to 10 acres of parkland per thousand persons (Boone, 2009, 772).

In his article, “Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland,” Christopher Boone sets out to “examine the distribution of parks in Baltimore as an environmental justice issue.” The following table, taken from this article breaks down the acres of accessible parks per thousand population for census block groups broken down by percentage white and black (Table 3.1).

Table 3.1 Park acreage per population/race (Source: Boone, 2009, 773)

Percentage of census block group population	White (acres/1,000 population)	Black (acres/1,000 population)
25-50	31.32	22.80
50-75	30.16	24.94
>75	53.02	12.75

This shows that in areas that are mostly white there is also a greater acreage of parks, which could be due to the fact that whites live in less densely populated areas of Baltimore. However, “The reality for most blacks in metropolitan Baltimore is that they live in more densely populated neighborhoods than whites. Another equality measure is access to acreage of parks, which measures quantity of park space. This tells a different story. In general, those parks that are within a quarter mile of predominantly white neighborhoods tend to be larger than parks close to predominantly black neighborhoods. Income also shows a strong association with accessible park acreage,” (Boone, 2009, 773) which can be seen in table (Table 3.2).

This information shows the correlation between race and income but it also shows that the largest concentration of blacks in Baltimore is in areas where most of the parks are relatively small.

Table 3.2 Park acreage/Income (Source: Boone, 2009, 773)

Income Class (\$)	Accessible acres	Population	Acres/1,000 population	Mean % white	Mean % black
0-11,739	815	28,500	28.60	5.95	90.33
11,740- 36,704	6,208	429,047	14.47	26.11	70.05
36,705- 61,669	9,242	513,242	18.01	63.25	31.80
61,670- 86,633	20,056	258,634	77.55	80.70	13.39
86,634- 200,000	13,281	119,562	111.08	85.76	6.26

From his research, Boone concludes that the residents of Baltimore have relatively good access to parks when compared to most cities in the U.S. West, however it does not fare as well when compared to Northeastern cities, such as Boston and New York. Many factors can be used to explain this, including the timing of growth for the cities. Cities which “developed before the mass use of automobiles tend to have in their historical cores higher densities, more mixed land use, narrower streets, and more extensive pedestrian infrastructure. These characteristics tend to increase walkability and lead to small park spaces closer together than in sprawling, car-dominated suburbs” (Boone, 2009, 777). Because of this need for walkability it was rare for a city like Baltimore to set aside land for parks. So, the park system was developed by weaving together small parcels of private land and later from the expansion of the city outward into the

countryside. “As the city expanded, it enveloped the country estates of some of the region’s most prominent citizens. Today, these former estates constitute the core of Baltimore’s park system” (Boone, 2009, 778).

As early as 1897 people in Baltimore began noticing the imbalance in their park system. “An editorial published in the *Baltimore News* in 1897 put it bluntly: ‘The parks of our city should be for the people – all the people – not for a particular class, or for those living in a particular district.’ Although acknowledging the beauty and splendor of Druid Hill Park, the editorialist declared that ‘park pleasures and benefits should be available to all’ and in a city the size of Baltimore, ‘one park will not do for all’” (Boone, 2009, 778).

Baltimore’s park system could serve as a template on which demographic studies in relation to park accessibility and acreage are performed. Principle two states, “Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias” (www.ejnet.org/ej/). This is the standpoint that Baltimore has taken in correcting the injustices faced by their park system.

3.3 Chicago, Illinois:

The Chicago park system dates back to 1835 when residents began holding public meetings to discuss saving federally owned open parcels as open space to “accessible as all times for the people” (*CitySpace*, Wille, 1991, 22). The first park created from these parcels was dedicated as Dearborn Park in 1839 and the second, Lake Park, in 1847 with the notation that it was to be “public ground – forever to remain free of buildings” (*CitySpace*, Wille, 1991, 22).

By the 1890s Chicago’s population had grown to 1.7 million people because of influx of new industry to the city. During this time only 100 acres were added to the park system, most

along the city's edges, and almost 750,000 people lived in the central city which was more than a mile away from the parks (*CitySpace*, 1998, 3).

With a growing population, Chicago was forced to expand its borders and in 1889 residents within 120 square miles of the city voted in favor of annexation. Since they were too far out to fall within the jurisdictions of the existing park commissions a law was passed that added 19 new park districts. These new areas were pastoral in nature and provided beautiful vistas of rivers, bluffs, and forested ravines along the shores of Lake Michigan (*CitySpace*, 1998, 3).

Within a few years it became obvious that this fragmented park system was not working and a more cohesive plan was sought after. On November 6, 1899, the City Council formally established the Special Park Commission as a way to unite all of the existing parks, playgrounds, and open space in the region. Immediately, the Commission decided to build fifteen playgrounds in the city's most densely populated neighborhoods after citizens' demands for clean and healthy play areas for their children (*CitySpace*, 1998, 3).

The playgrounds were placed using information the Commission had gathered on population density and residents' proximity to parks (Table 3.3).

Table 3.3 Chicago Park Acres, 1840 – 1990 (Source: Chicago Park District, Research and Planning Division, 1996 (*CitySpace*, 1998, 7))

Year	Population	Park Acres	Acres/1000 Residents
1840	4,470	2	0.4
1860	112,172	37	0.3
1890	1,099,850	2,006	1.8
1910	2,185,283	3,242	1.5
1930	3,376,438	5,713	1.7
1950	3,620,962	7,480	2.1
1970	3,366,957	6,974	2.1
1990	2,783,726	7,423	2.6

Today, the Chicago Park District is the largest owner of public open space in Chicago, with 551 properties covering 7,341 acres. Sizes of parks range from less than an acre to the largest park, Lincoln Park, which is 1,212 acres. Most of these parks have playgrounds and some have museums, planetariums, aquariums, harbors, and ball fields. Chicago’s 40 lakefront parks encompass 2,520 acres, or 38 percent of the total acreage. The majority of parkland, or 4,177 acres, is distributed within 511 parks located in the Chicago Park District’s five neighborhood regions (*CitySpace*, 1998, 8).

“The city’s open lakefront, large regional parks, outlying forest preserves, boulevards and other classic open spaces have served Chicago well for many decades. But splendid as they are, these assets are insufficient to meet the needs of all Chicagoans today. To remain

competitive, Chicago must provide the quality of life factors that attract businesses and residents, including open space amenities comparable to or better than what other metropolitan areas offer” (*CitySpace*, 1998, 15).

The Chicago Park District is aware of the accessibility problems facing the city and in their 1998 *CitySpace Plan* report say, “One of the most pressing problem’s with Chicago’s open space system is that over half of the people in Chicago live in neighborhoods where the parks are either too crowded or too far away” (pg 16). Officials realize the need to expand the park system and are seeking ways to do so.

They hope to use newly available lakefront property and inland waterways to create a “new open space legacy for future generations” (*CitySpace*, 1998, 16). In addition to these large tracts of land they are seeking out vacant lots and neglected school grounds as places for small scale or pocket parks in the inner city.

As stated earlier, the NRPA recommends 6 to 10 acres of local parkland for every 1,000 residents and overall Chicago does not meet these standards with approximately 4.13 acres for every 1,000 residents. However, the NRPA also recommends 15 to 20 acres of outlying regional open space for every 1,000 residents and Chicago does meet these standards with their 35 acres of open space per 1,000 residents. The CPD counters this by saying that “parks and open space cannot have only one set of standards based solely on acres of land per unit of population” (*CitySpace*, 1998, 20). Issues, like accessibility and distribution also come into play.

These issues came to the forefront in 1982 “when the U.S. Justice Department sued the CPD for racial discrimination for failing to provide recreation resources – field houses, programs and personnel – equally to all residents” (*CitySpace*, 1998, 21). In 1983, the Consent Decree Task Force was created to address these issues and in 1987 they released the *Consent Decree*

Task Force Report to the CPD Board of Commissioners. The report stated that deficient communities should be given high priority for future development and staffing and allocated \$10 million per year for five years to meet development goals (*CitySpace*, 1998, 21).

This forced the CPD to look for available land on which to erect new parks, which led to two reports. The 1990 *Land Policies Plan* was followed by the 1993 *Parkland Needs Analysis*, “which set parkland goals and standards for open space to serve all Chicago communities” (*CitySpace*, 1998, 21). Standards for park allocation and distribution were clarified by stating that all community areas should have a minimum of 2 acres of parkland per 1,000 residents and that every neighborhood should be located within one-half mile of a park of at least three acres. The *PNA* report reinforced this goal and further defined the criteria by setting “service area” standards for five principal categories of parks (Table 3.4).

Table 3.4 Chicago Park District Service Area Standards (Source: *CitySpace*, 1998, 22)

Park Type	Size of Park	Service Area (Distance)
Magnet and Citywide Parks	50.0 acres plus	1.00 mile
Regional Park	15.0 acres to 50.0 acres	0.75 mile
Community Park	5.0 acres to 15.0 acres	0.50 mile
Neighborhood Park	0.5 acres to 5.0 acres	0.25 mile
Mini-Park	0.1 acres to 0.5 acres	0.10 mile

Even with all of this new criteria in place the CPD still falls short when individual neighborhoods are considered. According to the most recent open-space inventory by city

officials, thirty-two of Chicago's 77 official communities don't meet the city's 2-acres-per-1,000 people standard. The affected population is nearly 1.35 million people, or half of the city. This inequality can be seen further by looking at two communities. Brighton Park, an industrial immigrant neighborhood, is home to 45,368 people who share 10.6 acres of open space. In contrast, the affluent suburb of Buffalo Grove, population 41,496, has more than 400 acres of parks, playgrounds, sports fields, bicycle trails and picnic areas. (Kamin, 2011, 1).

In the case of Brighton Park an issue of accessibility also comes into play. McKinley Park, a 70-acre natural area, sits directly across Western Avenue, a short distance from the neighborhood. However, residents would have to cross the avenue to reach it, which is a 40mph 4-lane highway buttressed between two rail lines and the CTA Orange Line tracks.

Other parks are rampant with gang violence and crime which discourages residents from using open space (Kamin, 2011, 5).

Chicago is trying to correct these issues and the CPD's 2011-15 capital improvement plan has allocated more than \$306 million for future projects. This amount pales in comparison to the \$1 billion Chicago spent on their two mega-lake front projects at the beginning of the 21st century, or the \$600 million spent on renovating Soldier Field and \$500 million on Millennium Park, but it is a start.

A lot of this money comes from TIFs – tax-increment financing districts, which are supposed to use anticipated gains in tax revenue to fund improvements in parks and other infrastructure. This has funded more than \$75 million in CPD improvement projects, but the money can't go to create new open space (Kamin, 2011, 4).

In Chicago, principle twelve, "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 all our communities, and provided fair access for all to the full range of resources,” and principle sixteen, “Environmental Justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives” (www.ejnet.org/ej/) are the best represented. Chicago’s use of vacant lots and the incorporation of educational aspects into their neighborhood parks proved to be sustainable solutions to the problems of injustice this park system faced.

Chapter 4

Environmental Justice and Landscape Architecture

4.1 The principles of Environmental Justice for Landscape Architecture

The before mentioned six principles of environmental justice were used as a planning tool for this project (Fig 4.1)

Environmental Justice and Landscape Architecture

- 1) *Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.*
- 2) *Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.*
- 3) *Environmental Justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.*
- 7) *Environmental Justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.*
- 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 all our communities, and provided fair access for all to the full range of resources.*
- 16) *Environmental Justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.*
www.ejnet.org/ej/



Fig 4.1 Environmental Justice and Landscape Architecture (Source: created by author)

As reviewed in 2.2.2, these principles became a manifesto on which the projects planning and design were based.

4.2 Site Selection:

4.2.1 Selection of a Study Area: In order to begin looking at how the principles of

environmental justice can be used in real world design and planning situations for landscape architects an appropriate site had to be chosen. The studies performed by EBRPD were used as guidelines and helped to identify the important demographic information necessary for choosing an appropriate study area.

A demographic study starting at the national level was performed which looked at household income, poverty levels, median home values, age, sex, and race. In 2010, the US Census showed a total population of over 308 million people with almost 75 percent of that population being white. The national median household income was \$51,914 and the national median home value was \$188,400 (Fig 4.2).

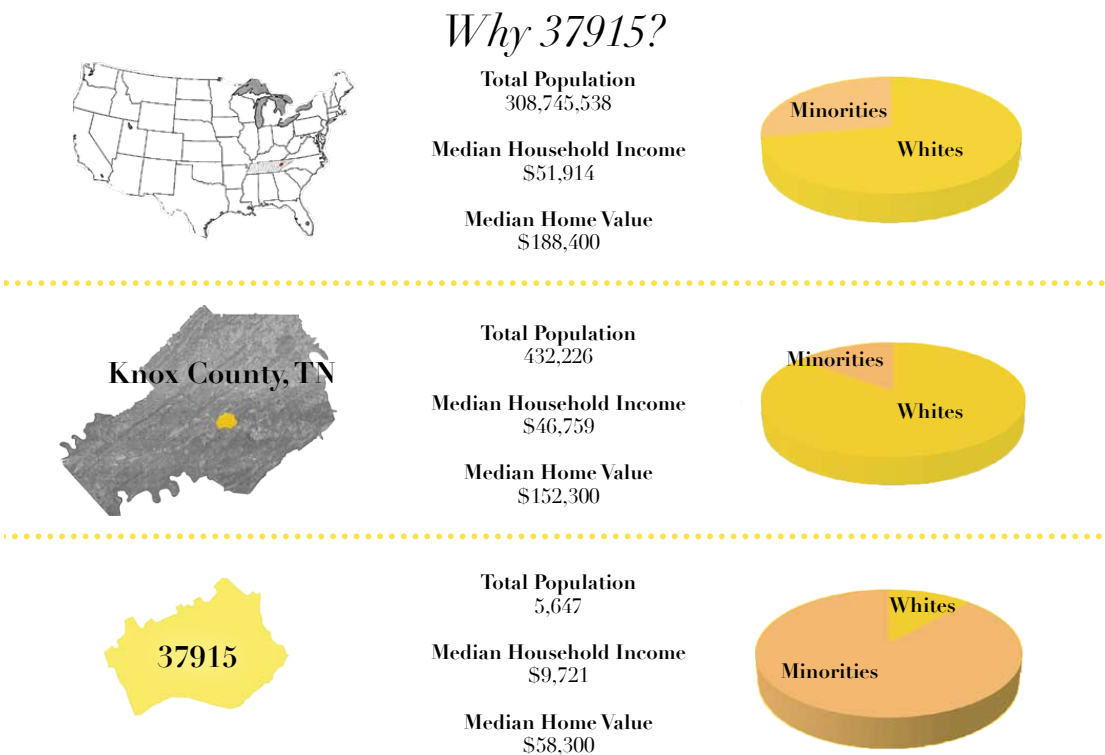


Fig 4.2 Demographic Study (Source: created by author using 2010 US Census data)

Next, the study moved down to the Knox County level. The 2010 US Census showed a

total population of 432,226. The median household income for Knox County was \$46,759 and the median home value was \$152,300.

Finally, this study was broken down even further by investigating the individual Zip Codes in Knox County. The following chart shows the breakdown by zip code and reveals that 37915 is the most impoverished Zip code in Knox county (Fig 4.3).

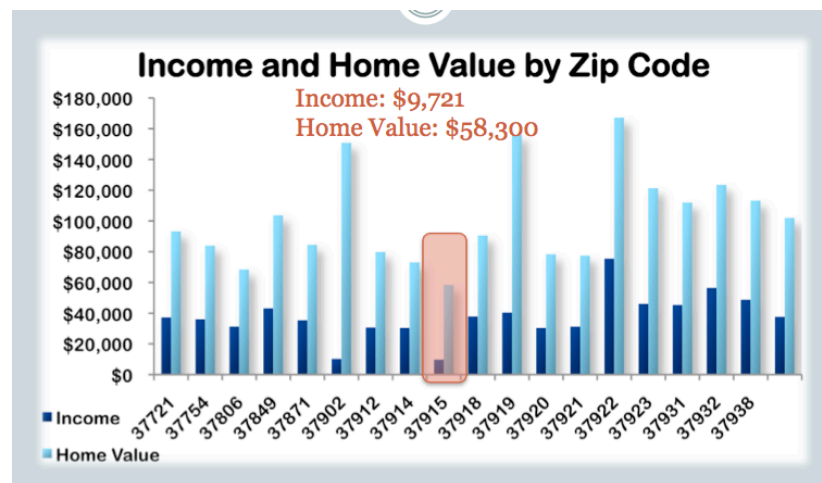


Fig 4.3 Income and Home Value by Zip Code (Source: US Census 2010)

Once 37915 was identified as the most impoverished, demographics in regards to race were investigated. The following chart shows the demographics of 37915 compared to the demographics of the other Zip codes in Knox County (Fig 4.4)

The 2010 US Census showed 37915 had a total population of 5,647 people with over 90 percent minorities. The median household income was \$9,721 and the median home value was \$58,300. This zip code was the most impoverished zip code in Knox County with a poverty rate of 49.8 percent making it the 8th highest poverty rate for zip codes in Tennessee (DataPlace).

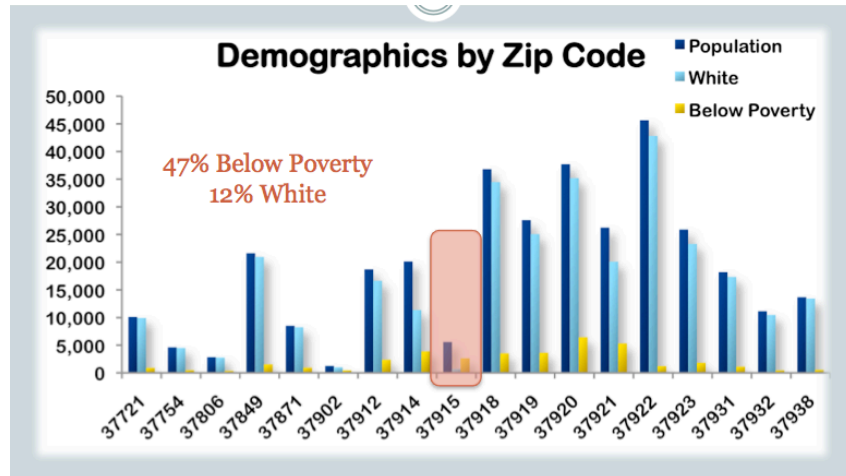


Fig 4.4 Demographics by Zip Code (Source: US Census 2010)

The zip code of 37915 is comprised of neighborhoods that fall under public housing, including Riverview Terrace and GreenHill Apartments. It is located in east Knoxville between Dandridge Avenue to the north and the Tennessee River/Fort Loudon Lake the south. James White Parkway is the westernmost road (Fig 4.5).



Fig 4.5 Location of 37915 (Source: aerial: *GoogleMaps*, created by author)

Once the Zip code was selected based on poverty levels, a study of existing parks was performed to determine if there was in fact a need for more park space. This relates back to EJ

principle twelve, “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 all our communities, and provided fair access for all to the full range of resources,” (www.ejnet.org/ej/) which would mandate that people in every zip code would have equal access to open space. Three parks were identified in 37915 (Fig 4.6).

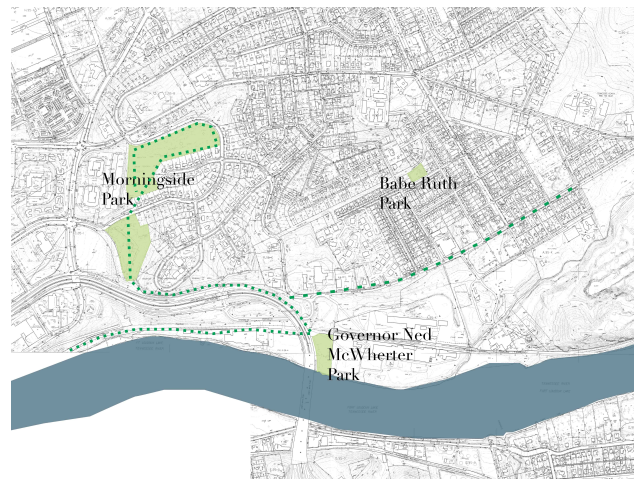


Fig 4.6 Parks in 37915 (Source: KGIS, created by author)

After identifying the location of the parks, an inventory was performed on each to determine lacking programming elements in the community. The largest park is Morningside Park at 23 acres (Fig 4.7). It has 2 shelters, picnic tables, playgrounds, paved trails with fitness equipment, and a 16-hole disc golf course. The next largest is Governor Ned McWherter Park which is located on the river and is two acres (Fig 4.8). It has picnic tables, a playground, a boat ramp, and access to James White Greenway. Finally, Babe Ruth Park is one acre (Fig 4.9). It has a basketball court, playground and one picnic table.



Fig 4.7 Morningside Park (Source: Erin Tharp)



Fig 4.8 Governor Ned McWherter Park (Source: Erin Tharp)



Fig 4.9 Babe Ruth Park (Source: Erin Tharp)

Even with three parks, 37915 falls short of the National Recreational Parks Associations guidelines of 6 to 10 acres of close-to-home parks for every 1,000 residents, coming in at 4.82 acres of close-to-home parks for every 1,000 residents.

After the study of parks was completed a community survey was performed in order to find out what other amenities 37915 was lacking. Before interviewing residents it was discovered that 37915 did not have a large grocery store located within a 30-minute walk (Fig 4.10) or on a direct KAT bus route to a grocery store or park(Fig 4.11).

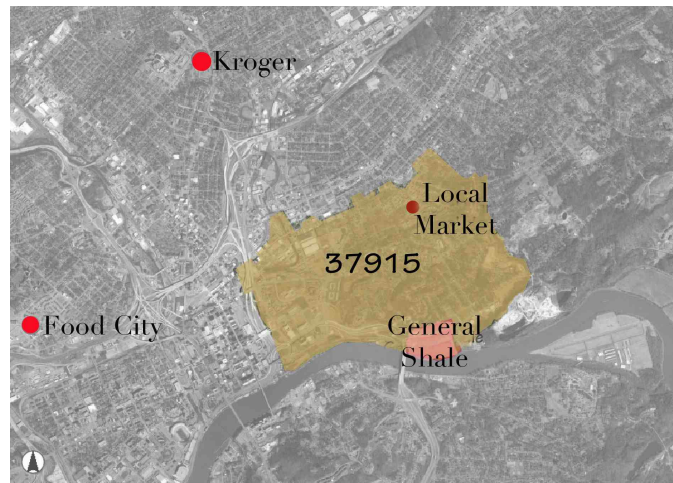


Fig 4.10 Map of grocery stores near 37915 (Source: Aerial map, *GoogleEarth*)

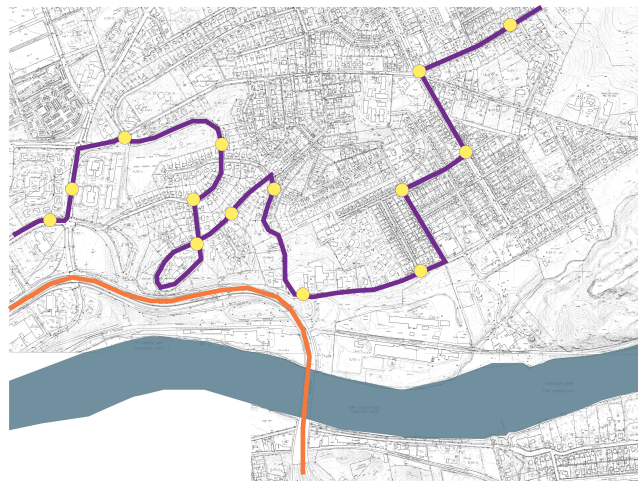


Fig 4.11 Map of KAT line servicing 37915 (Source: Knox GIS and KAT)

It was also found that there was a lack of civic spaces in 37915. Wilder Missionary Baptist church is the only civic space that has a gathering space open to the public (Fig 4.12).



Fig 4.12 Wilder Missionary Baptist Church (Source: Erin Tharp)

Finally, education, or lack thereof, was taken into account. Children in 37915 are bused to schools all located outside of 37915.

Test scores at Austin East High School show that there is a lack of educational opportunities. In 2010 Austin East High School scored a 2 out of 10 for the Great Schools Rating and 82.5 percent of their students qualified for a free lunch (DataPlace). This information was later used for the initial park programming.

4.2.2 Site Selection: Five elements were looked at to determine suitability requirements for a new park site: acreage, distance, greenway access, water access, and topography.

First, vacant lots were identified that could be converted into a new park. It was found that most lots in 37915 are between one and two acres, except for the former General Shale brick manufacturing site which is no longer in use and is 37 acres. It was also noted that this site sits adjacent to the Tennessee River and to the proposed extension of the James White Greenway which will follow Riverside Drive.

After this site was located a map was generated that showed the land uses of 37915 and identified the location of residential lots in relation to the General Shale site and Morningside Park (Fig 4.13). The map reveals the half-mile radius that, according to a survey conveyed by the National Bicycle Association, people are willing to walk to reach a park.

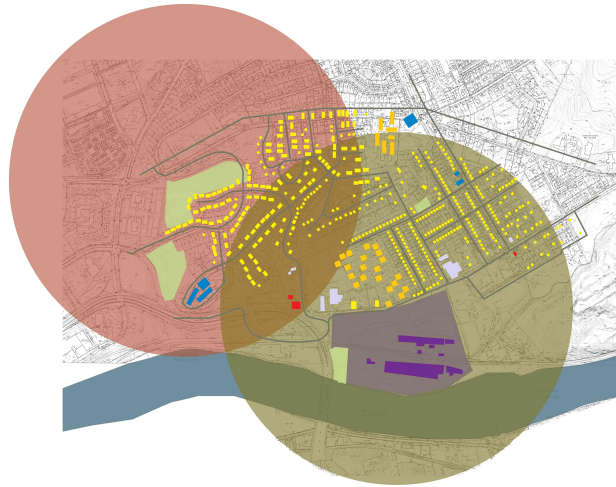


Fig 4.13 Map of half-mile radius from Morningside Park and General Shale showing land use (Source: KnoxGIS).

Finally, the topography of 37915 was explored to determine walkability to a park located on the General Shale site versus the walkability to Morningside Park (Fig 4.14). It was determined that the steepness of the land and the cultural encounters along both paths made the walk to General Shale more desirable.



Fig 4.14 Section starting in Riverview Terrace with Morningside Park to Right and General Shale to left. (Source: created by author using *GoogleEarth* and photos taken by author)

4.2.3 Community Survey: Finally, in keeping with planning for environmental justice

and principle seven, “Environmental Justice demands the right to participate as equal partners at every level of decision- making, including needs assessment, planning, implementation, enforcement and evaluation,” (www.ejnet.org/ej/), the community became a meaningful participant by answering a short survey that revealed the preferred location of a new park, a 37-acre vacant industrial lot situated between the Tennessee River and a proposed greenway along Riverside Drive.

The community survey was performed in February of 2012 to determine the wants and needs of the community in regards to park space and the preferred location of a new park (See Appendix 1).

With the help of a Knoxville Police Department Officer, the author surveyed twenty households on current usage of Morningside Park and on potential usage of a park located on the former General Shale site.

When asked, “Do you use Morningside Park,” 93 percent responded “No.” To the question, “How likely would you be to use a new park on former General Shale site,” 86 percent responded, “very likely.” When asked, “What would you like to see in a new park,” the most prevalent answer was “basketball courts,” with “playgrounds,” coming in second, and “community garden” and “community center” in third.

This information, combined with the information gathered from the neighborhood inventory was then used to generate a park program that would not only meet community needs but would also fulfill the principles of environmental justice.

For example, the program includes recreational areas in the form of basketball courts and playgrounds, which relates to EJ principle seven, “Environmental Justice demands the right to participate as equal partners at every level of decision- making, including needs assessment,

planning, implementation, enforcement and evaluation,” (www.ejnet.org/ej/), because they came about as a result of the survey. It also relates to EJ principle twelve, “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 all our communities, and provided fair access for all to the full range of resources,” (www.ejnet.org/ej/) because the addition of these elements would provide equal access for 37915 to these elements.

The addition of a community center and community garden would also fulfill principle twelve by providing additional access to food and gathering spaces. It would also fulfill EJ principle sixteen, “Environmental Justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives” (www.ejnet.org/ej/) by providing educational opportunities in the form of urban gardening techniques and places for outside educators to hold seminars.

Finally, second educational area in the form of a water treatment area based on the proximity of General Shale to the Knoxville Utility Board Water Treatment Facility (Fig 4.15) , would also fulfill EJ principle sixteen as well as EJ principle one, “ Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction,” principle two, “Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias,” and principle three, “Environmental Justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things” (www.ejnet.org/ej/), all of which speak of the importance of sustainability and preservation of natural assets.



Fig 4.15 Map showing General Shale site to the left and KUB Water Treatment facility to the right.

Chapter 5

Planning for Environmental Justice

5.1 Location: The General Shale site is located at 1740 Riverside Drive in Knoxville, Tennessee (Fig 5.1) It sits adjacent to the Tennessee River and the proposed extension of the James White Greenway will run alongside it to the north on Riverside Drive. To the east is the KUB Water Treatment Plant and to the west is Ned McWherter park which has existing parking and river access.

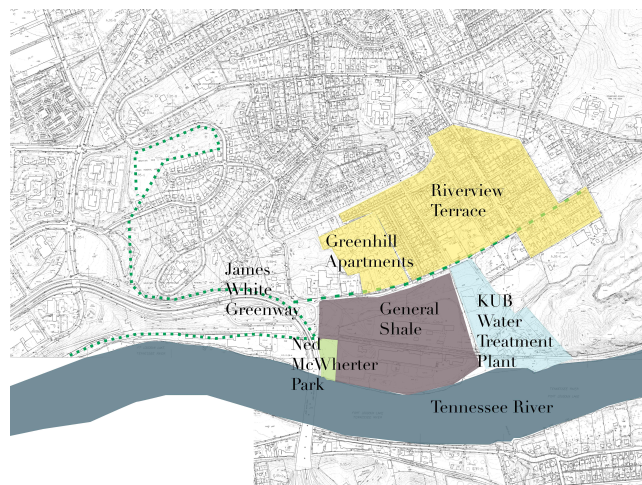


Fig 5.1 Map showing location of General Shale site (Source: created by author using KnoxGIS)

5.2 History of General Shale site: General Shale purchased the site in the late 1930s and built the brick manufacturing plant shortly after. In 2005 the plant produced 85 million bricks. The plant closed in December 2007 and laid off 65 people. In November of 2009, neighboring KUB attempted to buy the site. Today, the site is still owned by General Shale but it sits vacant (Knoxville News Sentinel).

5.3 General Shale and its effect on 37915: In 2000 the population of 37915 was 2247 and the poverty level was 27.1 percent (US Census 2000). Ten years later, after the closing of General Shale the population had doubled, rising to 5647 and the poverty level had almost doubled as well rising to 49.8 percent (US Census 2010). Also, the homeowner vacancy rate in 2010 was the 4th highest for Zip Codes in Tennessee and the unemployment rate was the 7th highest for Zip Codes in Tennessee (DataPlace). In December of 2011, the “Economic Review Journal” listed 37915 in Knoxville as one of the “most miserable cities in America.”

5.4 Environmental Analysis: Once the General Shale site was chosen, an environmental analysis was performed by the author to determine suitability and placement for the selected program elements. The elements that were studied included soil type in regards to agricultural suitability; flood plain areas in regards to agricultural suitability and water treatment suitability; topography in regards to agricultural suitability; and accessibility in regards to residents of 37915 and outside community members (Fig 5.2).

It was found that while fertile soils do lie along the northern and southern edges of the site, these do not prove to be the best suited for agriculture based on topography and the fact that the southern portion of the site is located in a 100-year flood plain. The center portion of the site is relatively flat which makes it desirable for a garden.

Also, based on the location of the 100-year flood plain and its proximity to the Tennessee River and KUB, it was determined that the southern portion of the site would be best suited for a water treatment area.

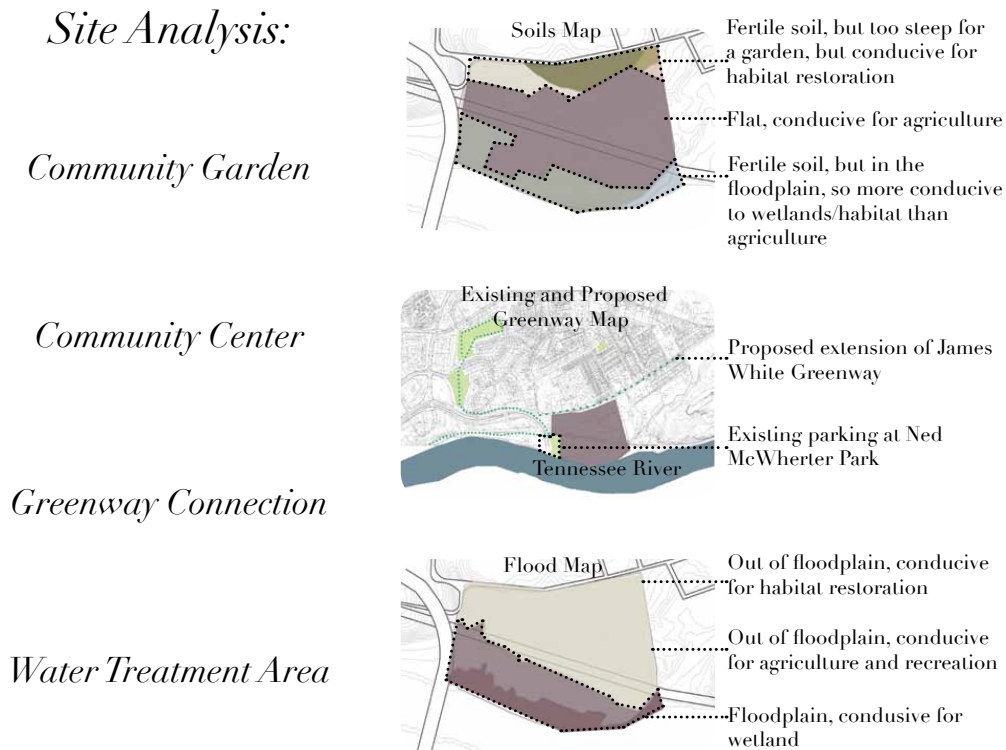


Fig 5.2 Suitability Analysis (Source: created by author using information from USDA and Knoxville Parks and Recreation)

Finally, based on accessibility to existing parking at Ned McWherter Park it was determined that the community center should be placed in the southwest corner of the site. This also provides direct access to the water treatment area. This would allow for additional educational opportunities with in the community center.

In conclusion, historically, while the plant was in operation, the comings and goings of trucks and construction equipment caused the land to become densely compacted on the site. The ground was impenetrable, causing pollution and construction waste to drain into the Tennessee River. Since the closing of the plant, the site has sat vacant, which has allowed invasive species to grow up along the roadside and the riverbank. A visual analysis shows that today the site is still occupied by rundown factory buildings, warehouses and an abandoned railway. These will

all be removed with the construction of a park in order to remediate the compaction and pollution issues.

Chapter 6

Designing for Environmental Justice

6.1 Design: Riverview Park will have basketball courts and playgrounds. These program elements are based on the needs assessment results of the community survey and EJ principle seven, “Environmental Justice demands the right to participate as equal partners at every level of decision- making, including needs assessment, planning, implementation, enforcement and evaluation” (www.ejnet.org/ej/), Furthermore, as discussed earlier, it will be more than just a place to play in that it will also fulfill the remaining before mentioned principles of environmental justice (Fig 6.1).



Fig 6.1 Master Plan of Riverview Park

By partnering with local not-for-profits Riverview Park will contain a community garden. This will not only provide food for the community but will one day serve as a farmer’s market

that will provide income for the community as well, thus fulfilling EJ principle twelve, “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 all our communities, and provided fair access for all to the full range of resources,” (www.ejnet.org/ej/) by providing additional access to food. It would also fulfill EJ principle sixteen, “Environmental Justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives” (www.ejnet.org/ej/) by providing educational opportunities in the form of urban gardening techniques (Fig 6.2)



Fig 6.2 Community garden and farmer’s market in Riverview Park (Source: created by author)

Greenway access will provide reliable transportation and help to bring people from outside the community in, thus bringing further involvement of the city in the life of the community Fig 6.3). Again, this relates back to EJ principle twelve, and equal access.

The new water treatment area will provide additional educational opportunities, so EJ principle sixteen is again important. Neighboring Knoxville Utility Board and the city will partner to fund the south side of the park. It will function as a holding facility for the water used by the local community. Wetlands, a marsh and pond will store and purify water (Fig 6.4).



Fig 6.3 James White Greenway along Riverside Drive (Source: created by author)

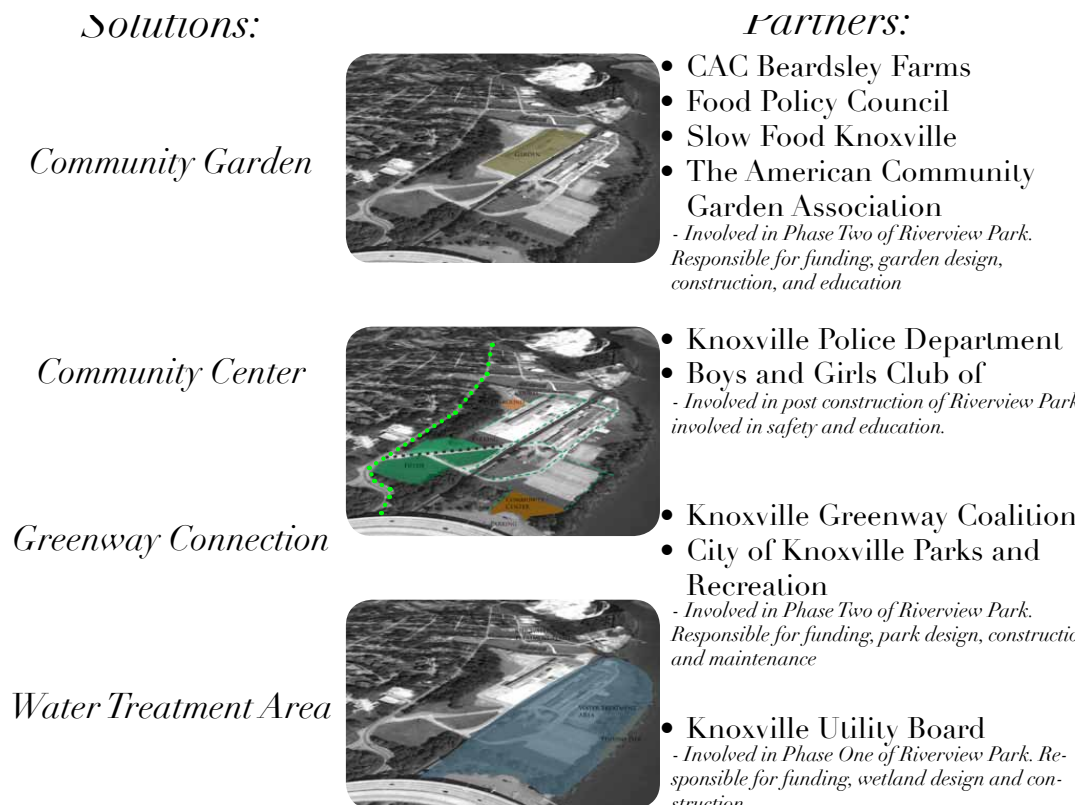


Fig 6.4 Bubble diagrams illustrating potential partners and their roles (Source: aeriels from GoogleEarth)

This area will not only add beauty to the space but it will also provide jobs for community members who will serve as educators on the process of treatment stormwater runoff (Fig 6.5).



Fig 6.5 View of retention pond (Source: created by author)

Groupings of Black Tupelo, Bald Cypress and native wetland forbs, including Cattails, will foster healthy aquatic life. This relates back to EJ principle one, “ Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction” (www.ejnet.org/ej/).

A water treatment system, including sheet water fountains and cleansing bacteria will add oxygen and increase the water quality in the park (Fig 6.6).

The existing entry road will remain without curbs so stormwater can drain into the landscape and infiltrate. Existing service roads throughout the site will operate as paths, with raised wooden boardwalks constructed through the wetlands to minimize wildlife disturbance while still allowing interaction with the water cycle.



Fig 6.6 View of sheet water fountains and wetlands in new water treatment area (Source: view created by author)

Finally, the addition of a community center will provide a place for learning seminars and demonstrations that will also aid the community on its road to improvement (Fig 6.7).



Fig 6.7 View of community center in the year 2050 (Source: created by author)

6.2 Design recommendations: Finally, the issue of crime was taken into considerations because of the high poverty and high unemployment rates found in 37915. The Crime Risk Index rates communities based on the national average of 100. For example, and index score of 200 indicates an area has twice the national average risk for crime while a score of 50 indicates half the national risk. The community of 37915 scored a 250 (37915 Demographics).

The recommendation is that the principles of CPTED be followed when building Riverview Park (Fig 6.8).

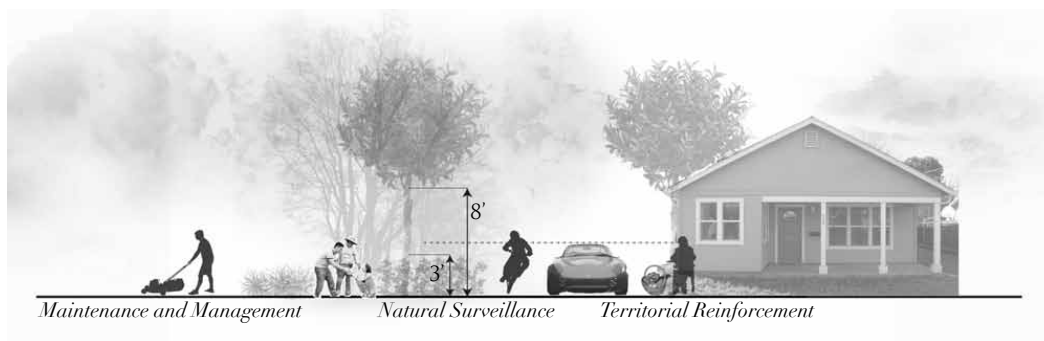


Fig 6.8 Section illustrating CPTED (Source: created by author using CPTED principles)

Natural Surveillance is accomplished by ensuring open-view corridors in and out of the park by trimming up trees to eight feet and keeping shrubbery to lower than three feet.

Territorial Reinforcement will accomplished through the community garden. The people of 37915 will be working in the garden and enjoying the food it provides so they will feel territorial over this area and seek to preserve its integrity.

Finally, maintenance and management is accomplished by providing trash cans to decrease litter and workers to keep landscaping neat and clean.

Chapter 7

Conclusion

After the compilation of research regarding environmental justice and parks it was determined that the principles of environmental justice could be utilized the planning process by landscape architects when designing new outdoor open spaces.

Riverview Park serves as an example of the implementation of the practice of using the principles of environmental justice as guidelines on which design can be based. The principles serve to justify not only the placement of parks in disadvantaged neighborhoods but also the programming of parks and the determination of programming based on community wants and needs.

List of References

List of References

37915 Demographics." *CLR Search.com*. Web. Apr. 2012.
<http://www.clrsearch.com/37915_Demographics/>.

Agyeman, Julian. *Sustainable Communities and the Challenge of Environmental Justice*. New York: New York UP, 2005. Print.

Boone, Christopher, Geoffrey Buckley, J. Morgan Grove, and Chona Sister. "Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland." *Annals of the Association of American Geographers* 99.4 (2009): 767-87. Print.

Byrne, Jason. "Planning for environmental justice in an urban national park." School of Environment, Griffith University. Web.

Byron, Joan. "Greenways: Engines of Equity." Pratt Center for Community Development (2007). Print.

Cityspace: an Open Space Plan for Chicago. [Chicago, Ill.]: City of Chicago, 1998. Print.

Cranz, Galen. *The Politics of Park Design: A History of Urban Parks in America*. Cambridge, MA: MIT, 1982. Print.

Deming, Alison Hawthorne, and Lauret E. Savoy. *The Colors of Nature: Culture, Identity, and the Natural World*. Minneapolis, MN: Milkweed Editions, 2011. Print.

Doble, Cheryl. "Plural Planning at Multiple Scales." Project MUSE. Johns Hopkins UP. Web. 26 May 2011.

Fabos, J. "Greenway Planning in the United States: Its Origins and Recent Case Studies." *Landscape and Urban Planning* 68.2-3 (2004): 321-42. Print.

Girling, C., and K. Helphand. "Retrofitting Suburbia. Open Space in Bellevue, Washington, USA." *Landscape and Urban Planning* 36.4 (1997): 301-13. Print.

"Greenways." Eastern Connecticut Resource Conservation and Development Area (2011). Print.

Hopper, Leonard J., and Martha J. Droge. *Security and Site Design: a Landscape Architectural Approach to Analysis, Assessment, and Design Implementation*. Hoboken, NJ: John Wiley & Sons, 2005. Print.

Kamin, Blair. "Cityscapes: Cramped Chicago: Half of the City's 2.7 Million People Live in Park-poor Areas; Lakefront's Parkland Disguises Severe Shortage in Many Inland Neighborhoods." *The Watcher - All TV, All the Time | Chicago Tribune | Blog*. Chicago Tribune, 09 Oct. 2011. Web. 19 Oct. 2011. <<http://featuresblogs.chicagotribune.com/theskyline/2011/10/cramped-chicago-half-of-the-citys-27-million-people-live-in-park-poor-areas-lakefronts-parkland-disg.html>>.

Kibel, Paul S. "The People Down the Hill: Parks Equity in San Francisco's East Bay." *Golden Gate University Environmental Law Journal*, 2007. Web.

Lasley, Carrie B. "Creating an Environmentally Just Park System in Louisville, Kentucky." *Projections: MIT Journal of Planning* 8 (2008). Print.

Little, Charles E. *Greenways for America*. Baltimore: Johns Hopkins UP, 1990. Print.
Noreen, Barry. "Class Inequality Extends to City Parks." *The Gazette* [Colorado Springs] 17 July 2009. Print.

Low, Setha; Taplin, Dana; and Scheld, Suzanne, *Rethinking Urban Parks: Public Space and Cultural Diversity* (University of Texas Press, 2005), pp. 41-43.

Olson, Jeff. "Patroon Greenway Project: Regional Impact Report." Capital District Transportation Committee. Print.

Rosenzweig, Roy, and Elizabeth Blackmar. *The Park and the People: A History of Central Park*. Ithaca, NY: Cornell UP, 1992. Print.

Reid, I. D. A. 1935. *The negro community of Baltimore: A summary report of a social study conducted for the Baltimore Urban League*. Baltimore: Baltimore Urban League.

Sharma, Madhuri. "A geographic perspective on intra-urban racial/ethnic diversity, segregation, and clustering in Knoxville, Tennessee: 1990-2000." *Applied Geography* 32, 310-323. Web.

Sherer, Paul M. *Benefits of Parks: Why America Needs More City Parks and Open Space*. San Francisco, CA: Trust for Public Land, 2006. Print.

Smith, Dean. "A Walk in the Park With CPTED - Case Studies: Recreation Centers; Undeveloped Areas; Trails." 3rd International CPTED Conference (1998). Print.

Taylor, Dorceta E. *The Environment and the People in American Cities, 1600-1900s: Disorder, Inequality, and Social Change*. Durham: Duke UP, 2009. Print.

Zucker, K. 1995. Falls and stream valleys: Frederick Law Olmsted and the parks of Baltimore. *Maryland Historical Magazine* 90:72-96.

Appendix

Appendix 1

Letter of Introduction

Hi, my name is Erin and I'm a graduate student at the University of Tennessee and I am looking for people to answer a few questions in regards to a project I am working on for school.

The project involves a study of existing community parks and areas where future parks could be placed. The purpose of this survey is to find out this community's overall wants and needs in regards to city parks in the area. Once I complete the survey I will use the information to determine whether a new park would be well suited for this area.

It should only take 10 minutes of your time and all of your comments will be kept confidential and you will remain anonymous. The information will only be available to myself and to my professors and I won't release any information either orally or in writing that could link you to the study. There is no compensation for your participation.

If you have any questions about the study or the results you can contact me, Erin at my email address which is etharp@utk.edu. If you have questions about your rights as a participant, you can contact the Office of Research Compliance Officer at (865)974-3466.

Your participation is voluntary and you may decline to participate without penalty. If you choose to participate you can change your mind at any time without penalty and I will remove your comments from the survey and destroy the information. Completion of the verbally administered survey serves as your consent to participate.

Thank you.

Community Survey Questions

- 1- Age
- 2- # of persons in household
- 3- # of children in household
- 4- Do you use Morningside Park?
- 5- If yes, what do you like about it?
- 6- If no, why don't you use Morningside Park?
- 7- What would you like to see in a new, local park?
 - a. Basketball?
 - b. Baseball?
 - c. Soccer/football?
 - d. Handball?
 - e. Playgrounds?
 - f. Tot lots?
 - g. Walking Trail?
 - h. Pavilions?
 - i. Community Center?
 - j. Other?
- 8- How often do you think you would use a new park?

- a. 1-2 days/week
 - b. 3-4 days/week
 - c. more than 4 days/week
- 9- Which days would you be more likely to use the new park?
- a. Weekdays
 - b. Weekends
 - c. Both
- 10- How likely would you be to use a new park on General Shale site?
- a. very likely
 - b. somewhat likely
 - c. probably not
 - d. not at all likely

Vita

Erin grew up in Tennessee. Before returning to UT for her MLA she received her Bachelor's degree in communication from UT and then went to work as a flight attendant. She left the airlines to return to school and received her Master's in landscape design from Columbia University in the City of New York. She is now pursuing her Master of Landscape Architecture at the University of Tennessee, Knoxville.