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ABSTRACT

THE RATIONALE FOR PRESERVING NEIGHBORHOOD OPEN SPACE IN NEWARK, NEW JERSEY'S NORTH WARD

by
Stephen M. Wiessner

A study was conducted to determine the shifts in open space availability between 1950 and 2003 in four neighborhoods in the North Ward of Newark, New Jersey. Total open space in square feet and open spaces ten thousand square feet and less were quantified to determine the extent of usable open space for the creation of community gardens or vest pocket parks.

The study identified large reductions of open space recently in the two least affluent study areas. The two more affluent study areas have also lost open space recently, but not at the magnitude of the poorer study areas. The lot sizes in the more affluent study areas tend to be larger, and access to traditional open spaces (parks) is better. In contrast, the two less affluent study areas only have vacant lots as open space, and this resource is shrinking due to new construction. Without a new framework regarding open space policy being put into effect soon, open space in the four study areas investigated for this study may be difficult to find.
THE RATIONALE FOR PRESERVING
NEIGHBORHOOD OPEN SPACE
IN NEWARK, NEW JERSEY'S NORTH WARD

by
Stephen M. Wiessner

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Statement of Objectives</td>
<td>1</td>
</tr>
<tr>
<td><strong>2</strong> OVERVIEW</td>
<td>5</td>
</tr>
<tr>
<td>2.1 Literature Review</td>
<td>5</td>
</tr>
<tr>
<td>2.2 Definitions of Open Space</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Brief Overview of Newark’s Recent History</td>
<td>11</td>
</tr>
<tr>
<td>2.4 Newark’s Recent Development “Renaissance”</td>
<td>14</td>
</tr>
<tr>
<td>2.5 Open Space in a Time of Development</td>
<td>16</td>
</tr>
<tr>
<td>2.6 The Open Space Problem</td>
<td>21</td>
</tr>
<tr>
<td>2.7 Vacant Space as an Asset?</td>
<td>22</td>
</tr>
<tr>
<td>2.8 City of Newark’s Open Space Policies</td>
<td>25</td>
</tr>
<tr>
<td>2.9 Benefits of Community Greening</td>
<td>27</td>
</tr>
<tr>
<td>2.10 Development Pressure and the Adopt-A-Lot Program</td>
<td>29</td>
</tr>
<tr>
<td>2.11 Purpose of the Study</td>
<td>30</td>
</tr>
<tr>
<td><strong>3</strong> METHODOLOGY</td>
<td>31</td>
</tr>
<tr>
<td>3.1 Background</td>
<td>31</td>
</tr>
<tr>
<td>3.2 Study Areas</td>
<td>31</td>
</tr>
<tr>
<td>3.2.1 Stable Area with Little Remaining Vacant Space (Forest Hills)</td>
<td>33</td>
</tr>
<tr>
<td>3.2.2 Area with Some Vacant Space but Redeveloping (Upper Roseville)</td>
<td>34</td>
</tr>
<tr>
<td>3.2.3 Area 1 with Large Amounts of Vacant Space (Mt. Pleasant)</td>
<td>35</td>
</tr>
<tr>
<td>3.2.4 Area 2 with Large Amounts of Vacant Space (Middle Broadway)</td>
<td>36</td>
</tr>
<tr>
<td>3.3 Defining the Four Study Areas</td>
<td>37</td>
</tr>
<tr>
<td>3.4 Demographic Variables</td>
<td>38</td>
</tr>
<tr>
<td>3.4.1 Total Population</td>
<td>39</td>
</tr>
<tr>
<td>3.4.2 Racial Composition</td>
<td>40</td>
</tr>
<tr>
<td>3.4.3 Median Family Income</td>
<td>41</td>
</tr>
<tr>
<td>3.4.4 Housing Occupancy</td>
<td>42</td>
</tr>
<tr>
<td>3.5 Determining Open Space</td>
<td>43</td>
</tr>
<tr>
<td>3.6 Determining Open Space Values</td>
<td>45</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

## (Continued)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 RESULTS</td>
<td>47</td>
</tr>
<tr>
<td>4.1 Total Population</td>
<td>47</td>
</tr>
<tr>
<td>4.2 Racial Composition</td>
<td>49</td>
</tr>
<tr>
<td>4.3 Median Family Income</td>
<td>54</td>
</tr>
<tr>
<td>4.4 Housing Occupancy</td>
<td>56</td>
</tr>
<tr>
<td>4.5 Open Space Results</td>
<td>59</td>
</tr>
<tr>
<td>4.6 Analysis of Demographic Results</td>
<td>64</td>
</tr>
<tr>
<td>4.7 Analysis of Open Space Results</td>
<td>68</td>
</tr>
<tr>
<td>5 DISCUSSION</td>
<td>73</td>
</tr>
<tr>
<td>5.1 Implications of Inaction Regarding Open Space</td>
<td>73</td>
</tr>
<tr>
<td>5.2 Alternatives</td>
<td>75</td>
</tr>
<tr>
<td>5.3 Policy Alternatives at the City Level</td>
<td>78</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>83</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>4.1</td>
<td>57</td>
</tr>
</tbody>
</table>

Housing occupancy percentage for four study areas for the four time periods
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>North Ward 1954</td>
<td>17</td>
</tr>
<tr>
<td>2.2</td>
<td>North Ward 2001</td>
<td>18</td>
</tr>
<tr>
<td>2.3</td>
<td>North Ward blocks lost 1954-2001</td>
<td>19</td>
</tr>
<tr>
<td>3.1</td>
<td>Four study areas</td>
<td>32</td>
</tr>
<tr>
<td>3.2</td>
<td>Forest Hills study area</td>
<td>33</td>
</tr>
<tr>
<td>3.3</td>
<td>Upper Roseville study area</td>
<td>34</td>
</tr>
<tr>
<td>3.4</td>
<td>Mt. Pleasant study area</td>
<td>35</td>
</tr>
<tr>
<td>3.5</td>
<td>Middle Broadway study area</td>
<td>36</td>
</tr>
<tr>
<td>4.1</td>
<td>Total Population 1950-2000 for the four study areas</td>
<td>48</td>
</tr>
<tr>
<td>4.2</td>
<td>Racial Composition for the Forest Hills study area 1970-2000</td>
<td>50</td>
</tr>
<tr>
<td>4.3</td>
<td>Racial Composition for the Upper Roseville study area 1950-2000</td>
<td>51</td>
</tr>
<tr>
<td>4.4</td>
<td>Racial Composition for the Mt. Pleasant study area 1950-2000</td>
<td>53</td>
</tr>
<tr>
<td>4.5</td>
<td>Racial Composition for the Middle Broadway study area 1970-2000</td>
<td>54</td>
</tr>
<tr>
<td>4.6</td>
<td>Median Family Income for the four study areas adjusted to 2000 dollars 1950-2000</td>
<td>55</td>
</tr>
<tr>
<td>4.7</td>
<td>Total open space (in square feet) for the four study areas and four time periods</td>
<td>61</td>
</tr>
<tr>
<td>4.8</td>
<td>Open space (10,000 square feet or less) for the four study areas in the four time periods</td>
<td>64</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

1.1 Statement of Objectives

Open space in urban areas includes more than the existence of traditional neighborhood parks and playgrounds. Open space in many United States’ inner city neighborhoods includes innovative urban open spaces such as schoolyards, waterfronts, farmer’s markets and other types of ‘found spaces’ (Francis 1987). Also included in the inner city “open space” list are streets that many urban children use for their primary recreation source. Abandoned lots would constitute another form of metropolitan open space. Depending on the city, vacant space may be very limited because of high development demand on remaining open space. The elected officials of cities that have a dearth of vacant space tend to create and maintain traditional parks. Cities that have endured a post World War II exodus of the middle class such as Newark, New Jersey (City of Newark, Department of Economic and Housing Development 2001, Marshall 1979) tend to have more vacant space left after large segments of the tax base had moved to the suburbs. Residential neighborhoods, commercial districts, and industrial areas were abandoned in favor of areas with greener pastures in suburban areas.

The tax base depletion put park creation funding and maintenance on the back burner (State of New Jersey, Green Acres Program 1994) in deference to funding for urban crime, economic development, and schools. The failure of traditional parks to meet the needs of urban residents (Francis 1987), along with the large influx of vacant space have degraded many urban residents’ view of open space usefulness in their cities.
The relevant literature suggests that urban resident's support quality open space (Burgess et al. 1988, Little 1974). In many cities, community groups, block associations, local nonprofit organizations, and individual residents and their families have exerted their own energy in vacant space conversion into community gardens, playgardens, tot lots and vest pocket parks (miniparks ranging in size from 1-4 lots) (Cooper-Marcus and Greene 1990). The failure of their city governments to address the lack of usable open space (Francis 1987) has forced residents to act on their own behalf to create positive viable spaces in their immediate environment.

Community-run spaces provide significant benefits to those who actively participate in the transformation of negative space. More importantly, non-participants also see the value of community-run open space (Francis (2) 1987). Studies have verified the psychological, social, medicinal and economic benefits of urban open space (Francis 1987, Malakoff 1995). Community spaces like community gardens and vest pocket parks are central meeting points for neighborhoods, serving as anchors to the neighborhoods. Community spaces encourage social interaction amongst residents who would not normally interact in mutual projects. Community spaces become integral parts of the fabric that make neighborhoods more livable.

New construction is often the demise of various community-run open spaces. Builders enjoy a large amount of financial support and often have the attention of political leaders at the state and local levels. Developers often produce a portfolio of impressive statistics on how their projects have benefited urban neighborhoods (Malakoff 1995). Such tangible statistics are hard to argue against. Developers inevitably proclaim the predictable "win-win for the city"; an increase in property tax ratables to the city, and
the simultaneous removal of another ‘blighted’ vacant space. Gardeners have at their
disposal less tangible means to quantify their efforts largely to no avail (Malakoff 1995,
Scmelzkopf 1995). The economic gain created by increased social interaction is hard to
identify in a dollar figure, and psychological benefits to productive open space are often
dismissed.

A better solution is to incorporate sound open space planning to merge
appropriate development with the preservation of usable open space. In many urban
neighborhoods, adequate vacant space still remains to encourage both new construction
and community gardening. New construction does not need to squash the community
gardening movement to be effective. On the contrary, it is in the developer’s best interest
to encourage neighborhood open space because studies have demonstrated that open
spaces cause an increase in property values to nearby homeowners and an increased

New York City went through a round of battles between community gardening
groups and former Mayor Rudolph Giuliani’s administration. The mayor wanted to
auction these sites to make way for low to middle-income housing (Mansnerus 2001).
After years of debate and eventual intervention from New York State’s Attorney General
Eliot Spitzer, current Mayor Michael Bloomberg announced a compromise preserving
over five-hundred community gardens, while allowing the construction of two-thousand
apartments on another hundred-plus community gardens. (Steinhauer 2002). The saving
of the five-hundred community gardens was seen as a victory for the community
gardeners over the departed Giuliani administration.
Newark, New Jersey has undergone significant land use shifts over the past fifty years. Newark has experienced prosperity, decline, decay, and subsequent revitalization over this fifty year time period. This recent revitalization, if not planned for correctly, could lead Newark to a situation similar to New York City's difficulties where neighborhood open spaces such as community gardens will be sacrificed in the wake of new construction. This particular study will assess how the availability of open space in four study areas of Newark's North Ward has changed over the last fifty years, how open space is connected to the city's vitality, and how sufficient open space can be secured to promote a more livable Newark into the future.
CHAPTER 2
OVERVIEW

2.1 Literature Review

The conditions of Newark’s parks are not dissimilar to those of other cities that have undergone decline during the post World War II era. Of key importance are the budget reductions for parks that accompanied the decline of many cities (Francis 1987, Katz 1995) including Newark (Essex County Department of Parks, Recreation and Cultural Affairs 2002, State of New Jersey, Green Acres Program 1994).

Urban parks in cities such as Newark have undergone a significant decline since the end of World War II. The reasons responsible for the decline include the already mentioned shrinking budgets, lack of use (Francis 1987, The Pennsylvania Horticultural Society 1998, Whyte 1980), crime and the lack of safety (Burgess et al. 1988, Francis (2) 1987, Jacobs 1969, Pennsylvania Horticultural Society 1998). Many of the larger city-run neighborhood parks have lost their connection to the urban environment entirely (Burgess et. al 1988). This is especially true of the Olmsted Parks (parks designed by Frederick Law Olmsted or his family firm), which Newark has seven, that were designed so that residents could escape the negative aspects of city life (Heckscher 1977).

Smaller community-run urban gardens provide several advantages over the traditional public park including a unique support by non-users of these spaces (Francis (2) 1987), lower maintenance and construction costs (Francis 1987), and the ability for additional smaller neighborhood gardens to attract residents that prefer the convenience

Urban gardening provides a wide array of benefits to those who engage in the practice of beautification. Malakoff (1995) describes studies in the fields of economics, medicine, psychology, and sociology regarding the benefits of urban gardening. Increases in property values adjacent to urban parks (Bates 2001, Bolitzer and Netusil 2000, Crompton 2001) and the social interactions that are created at community-run spaces (The Pennsylvania Horticultural Society 1998 and Trust for Public Land 1994).

Urban gardens are an excellent example of a neighborhood open space. Community gardens can be as important to an urban resident compared to the neighborhood park for the suburbanite, or a large tract of open space for someone living in the country. The available literature reveals that urban residents, like suburban and rural residents appreciate open space (Burgess et al. 1988, Foresta 1980, Little 1974). This contradicts many developers' theory that urban people, especially poor urban people, do not want open space and prefer being surrounded by concrete and buildings. In a Newark Star-Ledger article, one developer postulated that urban residents prefer concrete over greenery. This developer who has built over seven hundred units in Newark's crowded Ironbound district stated: "Why should someone be telling us to make a wider side yard? The people here, they like concrete. They don't like grass. Newark is not a green city. It was not designed for that. The perception of big lots and grass, that's the '80s," he said. "I have four acres in Warren. Nobody wants that any more" (Patterson 2000). This false perception extends beyond the opinions of that developer. Therefore,
residents need to organize their collective energies to fight to both preserve and to create new open space in Newark.

Resident input at the community level is a key element that should occur before any open space projects are initiated (Francis 1987, Rosen 1997). Failure to engage the potential end-users of open space could spell the demise of the grandest city park or the smallest community garden. Bradley and Millward (1986) and Katz (1995) argue against over-design of open spaces, which tends to complicate and clutter people’s enjoyment of open space.

The city of Newark’s Draft Master Plan 2001 indicates a lack of small neighborhood parks and pocket-parks within Newark (City of Newark, Department of Housing and Economic Development 2001). Several policy alternatives could be implemented to encourage the preservation of open space. Some of these alternatives include development taxes, impact fees (The Global Cities Project 1991), and congestion fees (Bates and Santerre 2001). The merging of new construction and open space preservation by local nonprofit organizations typifies what can be done if planning is pursued instead of complete build-out development (La Casa de Don Pedro and St. James Community Development Corporation 1999).

2.2 Definitions of Open Space

What is open space? Ask two people this question and the inquirer is likely to get two very different answers. A person from rural New Jersey may say that open space is a trail system on the side of a mountain in the New Jersey Highlands. A resident of Newark may say that open space is a neighborhood park or piece of vacant land. How are these
two assessments similar and different? The most logical answer is to state that both assessments refer to land with no structures, and therefore both examples are undeveloped in the current sense of the term. Many observers that attempt defining open space feel that spaces that do not have structures on them are open spaces.

By ‘open space’ is meant any unbuilt-upon land in the city usable for recreation, regardless of whether it is publicly or privately owned (San Francisco Department of City Planning 1970).

Open space is a term used by landscape planners and landscape architects for land areas that are intentionally left unbuilt as fields and forests while the land around them is developed into buildings and pavement (Ahern 1991).

[Urban open space] refers to all areas in a city that are not occupied by a building or other construction (City of Toronto, Bureau of Municipal Research, 1971).

[Open space is] an area of natural landscape essentially undeveloped such as ridges, streams, natural shorelines, scenic buffer areas, and agricultural lands (Marin County Open Space Preservation Program 1983)

Defining open space as any “unbuilt-upon land” is rather straightforward, but the explanation leaves some ambiguities in regard to the exact meaning of the term. For instance, is a person’s backyard considered open space? The above definitions seem to indicate that somebody’s backyard should be included as part of an open-space system. The third definition would seem to include waterways and possibly streets, along with sideyards, backyards and front yards. These definitions may be sufficient in some circles, but for this study more specific terms will be considered. Others give an even broader definition of “open space” to include places where one can be outside and beyond perimeters already discussed.
Open space, quite simply, is a land or water surface open to the sky... The spaces around buildings--- the landscape--- the bodies of water and the waterfronts of lake and stream--- the plazas and streets--- the farmlands--- are all open spaces and have functional uses as open space (United States Department of Interior, Bureau of Land Management 1968).

Open space is understood as the entire public domain, and includes as a continuum, the entirely man-made and the entirely natural (Cregan 1990).

The out-of-doors, the world outside, is all open space... A better definition [of open space] includes all aspects of the public and private landscape, including streets, sidewalks, yards, and driveways, as well as vacant and natural lands (Girling and Helphand 1994).

These definitions, although interesting at a metaphysical level, do not help in the researcher’s pursuit of narrowing a term for effective use in this study. Other researchers suggest that the term open space is too broad and therefore no exact definition should be given. They suggest that the term should be used in varying ways depending on the specific circumstances of each entity analyzing their own specific open-space possibilities.

Open space may be as expansive as a wilderness area, or as intimate as a neighborhood park. Open space in the Great Plains might be in the form of a prairie, while ocean cliffs provide open landscape along the coasts. A community garden in New York City offers some of the same benefits as a family farm in the Midwest. But the inevitable conflicts over a common resource beset open space as it appears in different forms across the country (Global Cities Project 1991).

The perception that open space is just land in an undeveloped state is deceiving and antiquated. While open space itself is a simple concept, the factors that affect it, and that it affects, are quite complex. Open space is an intricate system serving a variety of functions, often concurrently, which are essential in sustaining and enhancing New Jersey as a desirable place to live and work (State of New Jersey, Green Acres Program 1994).

Clearly there are a multiplicity of possible meanings of open space. Meanings of open space vary in whether they describe the physical nature of open space or the function of open space (Tuttle 1997).
Few concepts in the field of urban and regional planning are at once so pervasive and so perplexing as that of “open space”. On the one hand, as an environmental cliché, the term smacks of noble virtue, the natural prey of that scourge, “urban sprawl.” On the other hand, to many a land use planner open space is what is left over after all the “higher” uses have been accommodated. To the landscape architect, open space is “good” by definition; non-developed land which is not “good” is referred to as a “void” or “vacant land.” Exclusive suburban municipalities defend large lot zoning in terms of “preserving open space and the natural ecology.” Officials of less fortunate communities view open space as a waste of potential tax revenue. In the face of this bewildering array of attitudes towards open space, whatever it is, the face of the American landscape is being changed with unremitting haste (Platt 1972).

Open space as a concept could include some innovative spaces, which many people would not consider traditional open space. Locations such as waterfronts, piers and vacant areas can be considered open spaces.

We have begun to define open space in a less categorical and more behavioral way. If open means free to be used, unobstructed, available, unrestricted, accessible, then open space can mean not only a park but the unfenced vacant lot, the abandoned waterfront, the cleared meadow. This definition, which is unrelated to restrictions of public ownership, minimum size, type of use or landscape character, makes it possible to expand in an almost unlimited way the potential open spaces in an urban area. Under this definition, it is possible to include the bits and pieces of waste land that are created where two streets meet, to incorporate the many vacant lots found in our urban areas and to consider the spaces between buildings as sources of raw land (Marcou 1970).

Development of new land use policies for Seattle’s open space system is a complex task due to the breadth of the term ‘open space.’ ... Open space ranges from developed parks and recreational facilities to undeveloped hillsides and ravines; from major regional attractions such as Woodland Park to small neighborhood street end parks; from active recreational areas to passive wooded areas which separate conflicting land uses; from lush green areas to wooden fishing piers; from p-patches [Seattle Community Gardens] to zoos. The list could go on and on (City of Seattle 1985).

For the purposes of this study, open space will include: 1) Designated city and county parks (Essex County Department of Parks, Recreation and Cultural Affairs 2002)
2) Privately and publicly owned vacant lots and 3) Community gardens. These types of open spaces are compared over four time periods using Sanborn fire insurance maps for the four study areas from 1951, 1974, 1990 (Sanborn Map Company 1951, 1974, 1990) and a visual inventory completed in April 2003. The method for determining what constitutes privately and publicly owned vacant lots is detailed in the Methodology. Community gardens (for the purposes of this study) are “neighborhood open spaces managed by and for the members of the community” (Patel 1992).

The historical method for analyzing changes in land uses over the past half century in Newark presents several potential problems for data analysis. For instance, Sanborn maps do not identify privately owned playground spaces that may be part of housing complexes or church properties. Playground areas are usually considered recreational open space, but those facilities are not part of this study. Lands surrounding privately or publicly owned structures are also not considered open space. These properties include backyards, front yards, side yards, and areas surrounding commercial, industrial, or religious structures. Streets, bodies of water, and areas surrounding publicly owned facilities such as public schools will not be included unless they are within the boundaries of an established city or county Park. The Methodology chapter gives more detail on how open space allocations had been derived.

2.3 Brief Overview of Newark’s Recent History
The city of Newark has undergone vast changes over the past fifty years. Newark was once a thriving urban center that attracted people from throughout the region. The city offered the public great shopping in the Downtown area, in addition to a prosperous
industrial base. Newark was also home to a fine park system designed by Frederick Law Olmsted’s family firm in the late nineteenth and early twentieth century. The Olmsted family firm was involved in the design of all seven county parks in the city (National Association for Olmsted Parks and Historic Massachusetts Inc. 1987).

The post *World War II* years saw significant changes in many of the nation’s urban centers including Newark. The city’s population peaked in 1930, with 438,776 and decreased by over 160,000 people from 1950 to 1990 (City of Newark, Department of Economic and Housing Development 2001) with the relocation of many families and businesses to the suburbs (Cunningham 1988). The causes of this population decrease are analogous to those of many of large industrial cities at that time: flight of the wealthier residents to avoid some of the more unpleasant aspects of urban life, including high crime and high density of population (Ford 1995, Marshall 1979). These negative aspects of urban life post *World War II*, were coupled with the spread of highways into areas surrounding central cities, and a trend leading to universal ownership of automobiles by most American families (Marshall 1979, Van Dyne 2000). These mobility improvements made it easier for Newark’s wealthy residents to eventually settle in the suburbs.

Additionally, a substantial increase in real incomes occurred during the 1950’s and more flexibility in Federal Housing Administration and Veterans Administration loans made home ownership a viable option for many Americans (Marshall 1979, Van Dyne 2000). The GI Bill of Rights gave veterans long-term mortgages that made it easier for many families to purchase new suburban and rural area homes (Cunningham 1988).
Additional factors specific to Newark including the riots of 1967, a high degree of racial tension, and well-documented political corruption, hastened Newark’s population decline. The construction of three highways (Route 78, Route 280, and the Garden State Parkway) in the 1950’s to 1970’s sliced through portions of Newark and disrupted the continuity of established neighborhoods (Cunningham 1988). Additionally, modern highways hastened the exodus of middle and upper classes that took advantage of the opportunity of living in the suburbs while retaining their employment in Newark’s downtown district. Suburban malls and shopping centers took retail dollars away from downtown Newark (City of Newark, Department of Economic and Housing Development 2001). The recent phenomenon of suburban office parks has made it easier for people to avoid urban centers like Newark completely (City of Newark, Department of Economic and Housing Development 2001).

The migration of residents out of Newark caused significant land use shifts from 1950 to 2003. In 1950, Newark’s population was 438,776 (City of Newark, Central Planning Board 1950), while the most recent population statistics show Newark’s population at 273,546 (United States Census Bureau 2000), a thirty eight percent population loss over that time span. Many houses were abandoned and subsequently demolished leaving a significant amount of vacant space in Newark.

Some of the poorer neighborhood sections of Newark were deemed “urban renewal” areas in the 1960s. The existing housing in urban renewal areas (occupied or vacant) was leveled to pave the way for new and improved construction which might have happened in some areas, but might not have occurred in other sections. Many renewal areas remained vacant for decades after program initiation (Cunningham 1988).
It is widely believed that a planned urban renewal project to relocate the New Jersey College of Medicine and Dentistry (now named the University of Medicine and Dentistry of New Jersey) onto land occupied by approximately five thousand people was one of the major issues that had sparked the 1967 Newark riots (Cunningham 1988).

The proliferation of vacant space and buildings compounded many of the negative aspects of living in poor neighborhoods. Those spaces attracted a wide variety of negative uses becoming areas for drug dealing and usage, havens for rats, and neighborhood junkyards for people from within and without the neighborhood (Scmelzkopf 1995).

2.4 Newark’s Recent Development “Renaissance”

The city of Newark has been undergoing a new wave of new construction in the past decade. This reversal of fortune is considered by many to be a “Renaissance”, hence Newark’s newest nickname the Renaissance City. The 1997 opening of the New Jersey Performing Arts Center gave the city a much-needed boost, and many new development projects have been completed in the last five years. Some of the vast tracts of vacant space are now being converted to new residential, commercial, and industrial uses, which are filling a void caused by post World War II out-migration.

From 1997 to 2001, 3,829 building permits had been issued for new private residential construction (Guide2Newark 2003). Newark’s population has stabilized during the mid 1990s, and it is expected to be over 300,000 by 2020 (City of Newark, Department of Economic and Housing Development 2001). Much of the outmoded government-sponsored “project housing” has been torn down in recent years, being
replaced by lower density townhouse complexes and infill housing throughout the city (City of Newark, Department of Economic and Housing Development 2001). Some indicators of Newark's "Renaissance" include a per capita income increase from $12,421 in 1990 to $13,009 in 2000 (a five percent increase) adjusted for inflation to the year 2000, and Newark's occupancy rate has also increased from eighty nine percent in 1990 to ninety one percent in 2000 (United States Census Bureau 2000).

The city of Newark is divided into five wards. They are: North, South, East, West, and Central. Currently, each ward has approximately 55,000 residents (twenty percent of the current total population) and the divisions relate to political representation for elections (Each ward has one councilperson, and there are four at-large councilpersons). The geographic boundaries of the city shift for political purposes to ensure equal popular representation for residents of each ward. Newark's Central Ward, where many of the federal housing developments have recently been eliminated, has not recovered that lost population and consequently has been expanded geographically to reach its twenty percent population threshold. Other parts of the city, including Newark's North Ward, have received many residents displaced by the removal of the government "project housing" and also some have migrated into the wards from outside Newark. Therefore, the North Ward has been shrinking during the fifty years of this study. In fact, the ward has lost ninety seven tax blocks (twenty two percent) from 1954-2001 (Figures 2.1, 2.2 and 2.3). Infill housing is replacing vacant lots throughout the city, and new construction is observable on a drive through Newark's North Ward.
2.5 Open Space in a Time of Development

The shifts in residential and commercial development have been dramatic during the past fifty years, and the trend has been generated because of economic and social issues confronting the city. Vacant space in an urban city like Newark would expect to shift simultaneous to economic and demographic changes, with less vacant space being available during periods of economic and social strength. A higher demand for new construction is occurring now, and house prices are concurrently rising at rates on average of about 4-8 percent annually, with Newark’s North Ward rising at 8-12 percent annually (Hevesi 2000, 2001).

Vacant space is being converted mainly to new residential uses by developers in an attempt to take advantage of Newark’s recent prosperity. Many critics view vacant space as a blight to the community, but it has the potential for becoming usable open space. Community gardening groups, nonprofit organizations and block associations have taken the lead in converting many city-owned vacant lots into positive open spaces including dozens of community and school gardens scattered throughout the city. Legal clashes over future land use may occur as the remaining vacant space shrinks, and leaves a reduced number of future open spaces.

Development is a function of economic and social prosperity with new construction increasing in good economic times and decreasing during bad economic intervals. Vacant space tends to follow this trend since less vacant space is available in good times and more is obtainable in bad times. Municipalities can repel or allow new construction by instituting policies that either encourage or discourage construction. Many suburban communities are fighting a battle to stifle new construction under the banner of
preserving open space. Some communities use exclusive large lot zoning as a means to "preserve open space" as a dubious pretense to discourage less affluent people from gaining access (Pendall 2000, Platt 1972). On the other end of the social spectrum, large urban centers such as Newark provide economic incentives for developers to buy land in
the city for new construction. Tax abatement and payment in lieu of tax (PILOT) programs are commonplace in New Jersey to spur new construction in the state's urban areas (New Jersey Redevelopment Authority 2003). Disinvestment over the years has left some cities desperate to attract new development. Federal programs like Urban
Enterprise Zones and Enterprise Communities encourage investment in urban business districts and provide lower sales tax zones in these areas (Rubin 1990). Tax dollars are also available to entrepreneurs who wish to gamble on the redevelopment of contaminated properties under New Jersey's Brownfield and Contaminated Site Remediation Act passed in 1998 (Franzini 1998).
While many programs are available for those who wish to build in cities such as Newark, there are not many dollars available to preserve open space. The Green Acres Program is the main component that is utilized by New Jersey residents and organizations to preserve open space. New Jersey voters have on ten separate occasions since 1961 endorsed and approved bond acts for the purpose of preserving open space in the State (State of New Jersey, Green Acres Program 1995). Voters approved the most recent Bond Act, the Garden State Preservation Trust Act, in 1998. The Bond Act secured over $1 billion to preserve over 1 million acres in the State (Kocieniewski 1999).

The Garden State Trust Fund, created in 1999 after the passage of the Bond Act, has allocated nearly $250 million to open space preservation and to park creation. Only one half of one percent of this money has filtered down to Newark, and no funding has been allocated to create new Newark open space. Consequently no open space has been preserved (State of New Jersey, Green Acres Program 2003). West Side Park was the only Newark project funded as the most recent statistics detailed (ending June 30, 2002). The lack of funding for Newark projects could involve the lofty State of New Jersey goal of attaining preservation of one million acres. Land values in urban areas tend to be higher than those outside urban areas considering the relative lot sizes. The typical Newark lot is twenty five feet by one hundred feet, meaning that you can get over seventeen lots on one acre of land in Newark. Compare this to lots in many suburban or rural areas which are zoned to a much lesser density, and you get higher relative land costs even in a less affluent city such as Newark. This is especially true in comparison to rural areas, where the vast majority of preservation has occurred (State of New Jersey,
Green Acres Program 2003). The perception is that you get more bang for your buck by preserving large tracts of rural land versus the urban alternative.

### 2.6 The Open Space Problem

An uncommitted city government apparatus regarding open space, a lack of coordination amongst the city’s nonprofit organizations, and a lack of vigilance by Newark residents has led to very modest increases in dedicated open space over the years. The only park currently being considered for creation is the .575 acre Minish Park on Newark’s waterfront (Essex County Department of Parks, Recreation and Cultural Affairs 2002).

For the purpose of this study, the researcher defined open space to include “dedicated open space” meaning parks, playgrounds, community gardens and pocket parks; and privately or city-owned vacant space. The vast amount of vacant space has led many to think that open space in Newark is not a priority. Indeed many Newark residents consider their “open space” a liability. Vacant space is rampant in some parts of the city and it invites the practice of illicit activities.

City and county parks are under-funded and not well maintained (Essex County Department of Parks, Recreation and Cultural Affairs 2002, State of New Jersey Green Acres Program 1994). Many downtown parks do not even have park benches for people to sit on. A local artist has capitalized on the lack of downtown park benches. She had obtained a permit in 2000 to display an outdoor exhibit entitled “No Seat in the Park”. The artist managed to put seating apparatus in the upper branches of several trees in Newark’s Military Park to highlight the remarkable lack of seating in Newark’s downtown parks (Kukla 2001). City officials explained that the benches had been
removed from downtown parks to deter homeless people from congregating (Kukla 2001). The lack of seating in these parks reinforces the public’s perception that parks are not inviting places. Therefore city parks do not achieve their primary objective of being friendly places that are inviting to the public to relax or recreate (Leinberger and Berens 1997).

Another factor affecting people’s negative perception of Newark open space is the lack of safety within the park system. Many Newark residents feel that parks, especially at night, are the dominion of gangs. Many people that the researcher has spoken to at block association meetings have never set foot inside a Newark park in all the years they have lived in the city. This fact clearly explains why there is not a huge outpouring of support for open space issues in Newark. Open space is seen as a liability and not as a benefit by many people in Newark.

There are exceptions to this perception. For instance each year, large public celebrations occur in the parks including the Cherry Blossom Festival in Branch Brook Park. Weequahic Park is also a host site for several annual events. Activity abounds at several of the other city and county parks on nice days. Yet the perception is that many of the parks are not user-friendly and definitely should be avoided at night.

2.7 Vacant Space as an Asset?

New York City has recently undergone a fierce political battle involving the fate of several hundred of its community gardens. The vast majority of New York City’s community gardens were situated on city-owned vacant property that neighborhood residents had cleaned up and planted when vacant space abounded and development
pressure was low (Sckelzkopf 1995). The recent economic boom has raised the demand for new construction in New York City, and community gardens became obvious targets for construction. The Giuliani administration placed over six hundred community gardens up for auction, and that action was met with lawsuits to halt the sales (Mansnerus 2001). After a highly publicized battle (relative to community gardens), it was decided in 2002 in an agreement between current Mayor Michael Bloomberg and New York State Attorney General Elliot Spitzer that over five hundred community gardens would be preserved and about a hundred and fifty gardens could be converted to residential use (Steinauer 2002).

The negotiated decision was publicly understood as a monumental victory for the community gardening movement in New York City because the economic pressures that had been spurring construction were great. In the end, open space advocates won the public-relations-war by promoting the preservation of open space as a necessary means to improve the quality of life in New York City. As development pressure increases as a result of economic factors, vacant space becomes inviting to developers (Schmelkopf 1995). Newark still has vast amounts of vacant space, but as these spaces are replaced piece by piece by housing as part of the city’s “Renaissance”, a looming battle for Newark open space may be inevitable.

In some Newark neighborhoods where vacant space is shrinking because of recent infill housing, residents see the remaining vacant space as a potential opportunity. These vacant spaces can become a source of valuable usable open space in residents’ immediate neighborhoods. The paradox of open space in Newark is that the city has vast amounts of vacant space, but at the same time it also has a dearth of dedicated open space. Essex
County’s recently completed Open Space Master Plan (Essex County Department of Parks, Recreation and Cultural Affairs 2002) explains that Newark only has thirty nine percent of the requisite open space acreage to serve its current population. Using the National Recreation and Park Association’s Core System Minimum Requirements open space formula (8.375 acres per thousand people), another 1,406 acres of open space is needed to reach the open space standard of 2,291 acres for Newark’s current population (Essex County Department of Parks, Recreation and Cultural Affairs 2002). Out of the eight hundred eighty five acres of dedicated open space, Branch Brook Park and Weequahic Park account for six hundred twenty eight acres (City of Newark, Department of Housing and Economic Development 2001), or seventy one percent. This means that the majority of open space in Newark are included in these two “destination parks” rather than smaller neighborhood parks or gardens.

The future use of vacant space sets up some potentially contradictory options for those individuals involved in the decision-making process. One option includes the development of all or at least most of the current vacant space for residential or commercial use. New construction would generate property tax revenues for the city, while also relieving some of the urban blight conditions by limiting the areas where negative activities occur. Many believe that any development that occurs is better than the vacant lot condition that is currently there, and therefore the construction initiative should be pursued.

Another option is that vacant space should be developed in a more deliberate manner using urban planning techniques that emphasize neighborhood based planning (La Casa de Don Pedro 1999). This option tends to take a longer view of circumstances,
accentuating neighborhood collaboration, adequate usable open space for the future, and appropriate development fitting into an overlapping neighborhood plan.

2.8 City of Newark’s Open Space Policies

The city of Newark has conducted master plan revisions several times during the fifty-year study period, but the municipal zoning ordinance has not been updated since the 1950’s and is presently in dire need of revision to meet the needs of today’s Newark residents. The city of Newark does not have an open space master plan which could help guide its decisions regarding open space and new construction. Even Newark’s municipal parks are not protected from development “fall[ing] into zoning designations where other uses such as residential may be permitted” (City of Newark, Department of Housing and Economic Development 2001). Additionally, there is a lack of small pocket parks and neighborhood open spaces throughout the city (City of Newark, Department of Housing and Economic Development 2001). The most distressing factor is that under current zoning, no provisions are in place protecting Newark neighborhoods from a complete build-out scenario, where open space will be unavailable in the future if new construction continues unchecked.

The city of Newark has set up a program that allows residents and/or community groups to lease vacant city-owned property for $1 per lot, per year for the purpose of community gardening. This program, called Adopt-A-Lot is administered through the city’s Department of Neighborhood Services’ Division of Property Management.

The basic procedure of the Adopt-A-Lot program is that residents or community groups identify a property on which they wish to garden and then contact the city to lease
the ground. The city will review paperwork to determine if any development plans for that parcel currently exist, and if not local city officials will order an inspection of the property before issuing a lease. The inspection involves a visual survey to ensure that the garden is in compliance with all aspects of the lease agreement. After successful completion of the inspection, residents need to go to City Hall to sign the lease for $1 per lot.

Some details regarding the lease include that the property can only be used for gardening purposes, children under age eighteen are not allowed on the site, water connections are not permitted, and long-term plantings like shrubs and trees are also not allowed. All persons that step onto the premises are supposed to sign the lease before entering, and when a lease is drafted, the signee releases the city of Newark from liability if harm occurs to him or her or visitors to that property. These restrictions eliminate legal liability for the city in case of injury on their property. The explanation for the disallowance of trees and shrubs is mostly because mature plants have more of an affinity with the gardeners’ usage preferences in case the one-year lease is not renewed. Gardeners may get more emotionally attached to perennial shrubs and trees as compared to annual flowers and vegetables. This attachment could be problematic to city officials who decide to auction the property, if gardeners chose to fight to save their garden.

Two nonprofit community gardening organizations have emerged to work with residents in converting vacant land into open space. The first organization is the Rutgers Cooperative Extension of Essex County which is based on Washington Street in downtown Newark. The other is the Greater Newark Conservancy also based downtown on Washington Street. Both organizations have been in the community gardening arena
for over fifteen years, and between them over thirty community and school gardens have been managed by hundreds of Newark residents, teachers and students. The gardens and pocket parks range in size from about 2,500 to 10,000 square feet. Vacant spaces larger than 10,000 square feet are deemed too large to manage by groups like the Greater Newark Conservancy. These thirty plus gardens encompass approximately three city acres, and the vast majority of these spaces are owned by the city of Newark. This past year, Rutgers Cooperative Extension officials have decided to strengthen its urban Master Gardeners program. Addressing the reality of reduced funding of their program due to current economic conditions, Rutgers Cooperative Extension needed to relinquish their remaining gardens to the Greater Newark Conservancy in an effort to continue to provide quality academic training to urban gardeners (Dougherty 2003).

2.9 Benefits of Community Greening

The benefits of community greening extend well past the obvious improvement of the aesthetic nature of communities. Indeed, the recognition that community greening provides benefits to gardeners and to non-gardeners alike has accrued from several academic disciplines including psychology, economics, and sociology (Malakoff 1995). Greening has been linked to psychological and social well-being (Armstrong 2000). Conversion of a vacant lot into an active community garden or pocket park promotes self-reliance (Francis 1987) for many that live in less affluent communities. Ordinary citizens with no experience in leadership or community organizing can become proactive in initiating positive change in neighborhoods by using gardening as the vehicle to affect change.
This proactive stance by gardeners provides a certain amount of local control over activities within that piece of real property. This can be an empowering experience, where ordinary residents control a portion of their immediate environment. The individuals do not have to wait for outside suburban developers or for city officials to decide when their block is “ready” for some positive changes.

An obvious benefit to urban gardening involves the growing of fresh produce in urban gardens (Armstrong 2000). Many urban areas do not have access to fresh fruits and vegetables in food markets as compared to those who living in suburbs or in rural areas (Brown et al. 2002). An economic benefit from community greening comes in the form of higher property values for those who have open space in their immediate neighborhood (Bates 2001, Bolitzer and Netusil 2000; Crompton 2001). Crompton’s study (2001) reviewed dozens of studies regarding increasing property values and found that “capitalization of benefits ceased at a selected distance, usually somewhere between 500 feet and 3000 from the park perimeter in urban contexts”. Additionally, urban parks provide aesthetic benefits separate from the economic benefits for a larger population than those living within 3000 feet from an urban park (Crompton 2001).

A dynamic to consider is the possibility that the creation of many new urban parks may increase property values leading to gentrification. Gentrification is the process of renewal and rebuilding in deteriorating areas that often displaces the original people who lived in these neighborhoods with a more affluent population. Incorporating beneficial open spaces may lead to gentrification, and this topic can itself be the subject of further study.
Studies have indicated that the creation of parks and recreational opportunities are an effective and inexpensive method of reducing crime in urban neighborhoods (Malakoff 1995, Trust for Public Land 1994). Newark's current mayor, Sharpe James, in a 1993 speech to the National Recreation and Park Association stated: "We are going to recreate or we are going to incarcerate, the choice is ours. We cannot afford to put a cop on every corner and we can't build a jail cell for every youthful offender, so why do we continue to believe that the answer is strictly in law enforcement?" (James 1993). Studies have shown that gardening provides psychological benefits to those involved (Armstrong 2000, Malakoff 1995). Most importantly community greening provides the basis for building successful communities (Francis 1987, Schmelzkopf 1995).

2.10 Development Pressure and the Adopt-A-Lot Program

Since 1999, the city has suspended the Adopt-A-Lot program in Newark's North and South wards. The reason was bluntly stated to me by a city official that these two wards have high development potential and the Adopt-A-Lot program is an encumbrance for prospective developers to acquire vacant space for new construction projects. For all intents and purposes, community gardening in the North and South wards has ceased. The only gardens remaining are Greater Newark Conservancy school gardens that are located on Board of Education-owned properties and therefore not under the supervision of the city's Division of Property Management.

The city's Division of Property Management administers the Adopt-A-Lot program. The program was not created through an ordinance and therefore the city can revoke the entire program at any time without repercussions except for potential pressure
from neighborhood residents and organizations to reinstate it. Conversely, the city administration can easily reinstate the program in all five wards with the endorsement of the mayor and/or his top officials. Many of these neighborhood-operated gardens are under threat by increasing development pressure and their contribution to the city's beauty could be lost either with or without the Adopt-A-Lot program.

2.11 Purpose of the Study

The purpose of this research is to assess the amount of open space remaining in four study areas in Newark's North Ward to evaluate socio-economic conditions and available open space. The amount of open space in the four study areas was compared over four separate time periods (1951, 1974, 1990, and 2003) to quantify the shifts in development and the creation or loss of open space that have occurred over these years. Open space for this study includes vacant space, dedicated park land, playgrounds and any community and school gardens.

Total open space has been calculated for each of the four study areas over the four study periods. In addition to total open space, open spaces 10,000 square feet and under were quantified to determine the extent of usable open space that could be managed by local residents and/or organizations.
CHAPTER 3
METHODOLOGY

3.1 Background

Four neighborhoods in Newark’s North Ward (Figure 3.1) were analyzed to assess availability of open space for the time periods of 1950, 1970, 1990, and 2003. Population, racial composition, median family income and housing occupancy status for the four study areas were analyzed using United States census data. Sanborn fire insurance maps were utilized to identify and quantify the extent of open space for the four time periods. The North Ward had been selected for study because pronounced land use shifts have occurred throughout the time period of investigation.

3.2 Study Areas

Four areas in the North Ward were delineated to provide an assessment of open space that has occurred from the early 1950s until 2003. Areas representative of the different types of development in the ward were chosen. Areas with vast amounts of city-owned vacant space were selected, along with areas that had less abundant open space. These areas all have the potential of incorporating community gardens, but demand on space is a significant variable among these areas. A driving tour of the North Ward was conducted by the researcher in October 2002 to help identify the study areas.

A wealthier area was chosen to represent a neighborhood that in its current state is fairly stable with little vacant space. A second study area was chosen that has some vacant space, but new construction has reduced the amount of remaining open space.
Two other areas were studied that represent neighborhoods with relatively large vacant spaces and a fair amount of new construction. These two neighborhoods were heavily affected by the economic troubles in the city during the late twentieth century, but now...
are being redeveloped and revitalized. The redevelopment process has reduced the amount of potential usable open space for the future.

3.2.1 Stable Area with Little Remaining Vacant Space (Forest Hills)

A visual tour of the North Ward led this researcher to choose portions of the Forest Hills district as the highly developed stable area for this study. Currently, Forest Hills has very little vacant space because of the area's development level. The Forest Hills' study area is bounded on the west side by Branch Brook Park (Figure 3.2 for map of the Forest Hills study area), and the area is considered one of Newark's wealthiest sections (United States Census Bureau 2000). Census statistics for population, income, and housing occupancy verify this study area's stability, and these statistics will be expanded upon in the Results.
3.2.2. Area with Some Vacant Space but Redeveloping (Upper Roseville)

The Upper Roseville District is considered a stable neighborhood with a mix of residential, commercial, and industrial uses. Portions of the Upper Roseville neighborhood, which is west of Branch Brook Park (Figure 3.3 for map of the Upper Roseville study area), were chosen as a quickly redeveloping area. This study area was chosen because some vacant space remains, but development pressure on the remaining space seemed to be high based on a thorough visual tour of the neighborhood. The tour revealed an increase in new construction and little remaining open space. This study area is also home to the only dedicated open spaces in the study (St. Benedict’s Park, formerly Kasberger Field, and Thomas Silk Park).
3.2.3 Area 1 with Large Amounts of Vacant Space (Mt. Pleasant)

The Mt. Pleasant study area, south of the Mt. Pleasant Cemetery (Figure 3.4 for map of Mt. Pleasant study area) contains some vast areas of vacant space, but also has recently undergone some new construction. Visual observation revealed a mixture of blocks containing large areas of vacant space and boarded-up buildings along with evidence of

Figure 3.4 Mt. Pleasant study area.
new construction. The 185-unit Broadway Village townhouses were built in the mid 1980s on large expanses of vacant space created by demolition. More recently, newer 'cookie cutter' three-family houses scattered throughout the study area have been built on previous vacant space.

3.2.4 Area 2 with Large Amounts of Vacant Space (Middle Broadway)

On the north side of the Mt. Pleasant Cemetery another low-middle income neighborhood was observed during the researcher's tour in October 2002. This neighborhood, which I call Middle Broadway, (Figure 3.5 for Map of Middle Broadway study area) has vast amounts of vacant space approaching McCarter Highway on the eastern edge of the study area and new construction on the western edge of the area approaching Broadway was observable. The map of the Middle Broadway study area shows Phillips Park as open space in this study area, but Phillips Park actually is on the north side of Elwood Avenue and therefore not included in this study area.
3.3 Defining the Four Study Areas

The visual tour conducted in October of 2002 helped the researcher determine the general areas of the four neighborhoods that will be analyzed in this study, but at that point he had not definitively indicated the exact boundaries of the study areas. To develop discrete study areas, the researcher used United States census maps from 2002 to determine exact boundaries of the study. To make the study workable, the researcher limited the study areas to roughly twenty census blocks, containing 2-3 census block groups for each study area. The census block groups chosen were closely related to the areas the researcher had determined in his visual study conducted October of 2002, and the boundaries did not shift significantly by incorporating the census delineations.

After defining the four study areas using 2000 census boundaries, some difficulties were encountered because of the lack of correlation between the 2000 census boundaries and those of 1950 and 1970. Open space availability for the four study areas was analyzed utilizing Sanborn fire insurance maps (Sanborn Map Company 1951, 1974, 1990), and that standard is not compromised by the census boundaries. Sanborn maps are fire insurance maps detailing structures and materials used to build the structures on a given lot. Sanborn maps show dwellings, garages, sheds and parking areas on a given lot, and also show the type of use for each structure, i.e. commercial, residential, etc. A lot with no structures on it would be left blank.

The 1950 and 1970 census data were compiled only to the Census Tract level with some exceptions relating to housing statistics. The 1990 and 2000 census boundaries were compatible, but demographic data was not accessible for two of the four study areas
for the 1950 and 1970 Census years because of incompatibility of geographic boundaries. This factor occurred because the Forest Hills and Middle Broadway study areas contained portions of two Census Tracts. Block Groups were not utilized by the Census in the 1950 and 1970 Census years, creating an incompatibility of demographic data for these two study areas which were not complete Census Tracts. Visits to the Newark Public Library and to the New Jersey State Library in Trenton did not provide the necessary census data at the block or block group level to have complete demographic data for all four time periods. Calls to several librarians and e-mail communications with personnel at the Census Bureau verified that this specific data was not compiled for the 1950 and 1970 Census periods.

Shifting the geographic boundaries by making all study area boundaries accurate to the Census Tract level was not pursued because the integrity of the study areas would have been compromised in deference to the demographic data. The more important land use data gathered from the Sanborn fire insurance maps (which will be detailed later in this section of the document) is not compromised by the census boundaries, so it was decided that the four study areas chosen at the block group level using 2000 census boundaries would prevail.

3.4 Demographic Variables

Demographic information about population and housing stock in the four study areas was gathered to determine the makeup of these communities. The four demographic variables analyzed in this study are as follows: Total Population, Racial Composition, Median Family Income, and Housing Occupancy.
For each of the four study periods, one hundred percent data was utilized for the Total Population, Racial Composition, and Housing Occupancy variables. The Median Family Income variable is based on a sample derived from approximately twenty percent of the population. (United States Census Bureau 2000) Obviously, there is greater accuracy with a one hundred percent sample as compared to a twenty percent sample. This fact has led to some minor inconsistencies regarding the accuracy of the Median Family Income variable for all four time periods. A slightly greater degree of error will be present when dealing with a sample population, but no means of rectifying this situation for this study exists.

3.4.1 Total Population

The number of people living in the four study neighborhoods provides an indication of the area’s stability. It would be expected that stable neighborhoods would not exhibit vast shifts in population, while a growth neighborhood would exhibit an increase in population. Conversely, marginal neighborhoods would tend to be hit harder by economic downturns, leading to more abandoned houses and vacant land accompanied by concurrent decreases in population. Great variations in population could occur in those neighborhoods depending on the quality of the economic or social conditions in the city or region.

Total Population figures were obtained for this study for the years 2000, 1990, 1970, and 1950. Census data for 2000 and 1990 were complete and compatible for all four study areas. The 1970 census data has population statistics for Newark at the Census
Tract and Block levels. For 1970, the Upper Roseville and Mt. Pleasant study areas were at the census tract level and therefore easily retrievable, while Forest Hills and Middle Broadway data was gathered by tallying population at the block level in order for compatible geographic boundaries to be consistent. The 1950 census had population data available only at the Census Tract level that adequately provided data for the Upper Roseville and Mt. Pleasant study areas, which are complete Census Tracts. Forest Hills and Middle Broadway contain blocks from portions of two Census Tracts; therefore accurate population data were not retrievable for those two study areas in 1950.

3.4.2 Racial Composition

The racial demographic statistic is an important variable to measure the changes in racial makeup in neighborhoods over the course of time. This study spans over five decades, and the racial composition in the city of Newark has changed greatly over this time period. Measuring the shifts in race for the four study neighborhoods could determine whether 'white flight' had occurred after the Newark riots in 1967 or during the subsequent economic doldrums. Additionally, the shifting or lack of shifting of racial composition can provide insight about stability in neighborhoods.

Complete racial statistics were obtained for this study for the years 2000, 1990, and 1970. Census data for 2000 and 1990 were complete and compatible for all four study areas. 1970 census data has racial statistics for Newark at the Census Tract and Block levels. For 1970, the Upper Roseville and Mt. Pleasant study areas were at the Census Tract level and therefore easily retrievable, while Forest Hills and Middle Broadway were retrievable by tallying racial statistics at the block level to get the
compatible geographic boundaries to be consistent. The 1950 census had racial data available only at the Census Tract level, which adequately provided data for the Upper Roseville and Mt. Pleasant study areas that are complete Census Tracts. Forest Hills and Middle Broadway contain blocks from portions of two Census Tracts; therefore, accurate racial statistics were not retrievable for those two study areas in 1950.

Differences in terminology by the Census Bureau over the four time periods of this study created some inconsistencies in the determination of racial constitution. For the years 2000 and 1990, racial/ethnic categories that are included in this study include White, Black, Hispanic, and Other. However, for the 1970 Census, the only delineations regarding race are for White and Negro, while in 1950 race is only separated by White and Non-White. This changing of racial categories makes it difficult to compare the racial breakdown over the length of this study’s time parameters. Most notably in 1950 and 1970, it is impossible to know what portion of the White or Black population statistics are comprised of Hispanic populations, which currently are a significant population group in Newark’s North Ward.

### 3.4.3 Median Family Income

Measuring the income shifts over time can help determine the level of stability in the study neighborhoods. It would be expected that income levels in the Forest Hills and Upper Roseville study areas would be more resilient to downturns in the local economy as compared to the Mt. Pleasant and Middle Broadway study areas that exhibit more variability in population and land use.
Complete income statistics were obtained for this study for the years 2000 and 1990. Census data for those two time periods were complete and compatible for all four study areas. 1970 census data has income statistics for Newark at the Census Tract level only. For 1970, the Upper Roseville and Mt. Pleasant study areas were at the census tract level and therefore easily retrievable, while Forest Hills and Middle Broadway were not retrievable. The 1950 census had income data available only at the Census Tract level, which adequately provided data for the Upper Roseville and Mt. Pleasant study areas that are complete Census Tracts. Forest Hills and Middle Broadway contain blocks from portions of two Census Tracts; therefore, accurate income data was not retrievable for those two study areas in 1950.

The income variable that was utilized in this study was Median Family Income. This variable was used because it was the only income variable that was available for all four time periods. Per Capita Income and Median Household Income were not available for the 1950 and 1970 time periods. The raw data gathered for the four study periods were adjusted to the year 2000 to account for inflation.

3.4.4 Housing Occupancy

The housing variable could help determine the strength of the housing market in the four study areas, and it also relates the amount of vacant space that could be expected. A study area that has more housing units than evident in previous time periods could mean more new construction or more subdivision of properties. Additionally, some larger houses could contain more units when property owners rent properties to more families as in the example of converting a two-family house into a three-family house. The
housing variable for this study also includes the amount of vacancy which details the strength or weakness of the overall housing market.

Complete housing statistics were obtained for this study for the years 2000 and 1990. Census data for those two time periods were complete and compatible for all four study areas. 1970 census data had housing data for Newark at the Census Tract level only. For 1970, the Upper Roseville and Mt. Pleasant study areas were at the census tract level and therefore easily retrievable, while Forest Hills and Middle Broadway were not retrievable. The 1950 Census had housing data available at the Census Tract and Block level through the availability of data from the United States Census of Housing. The 1950 Census Tract statistics adequately provided data for the Upper Roseville and Mt. Pleasant study areas, which are complete Census Tracts. Forest Hills and Middle Broadway were retrievable by tallying housing statistics at the block level to ascertain that the compatible geographic boundaries were consistent.

3.5 Determining Open Space

To determine the amount of open space available, Sanborn fire insurance maps were utilized to determine land uses over the course of the four study periods. Two categories of open space were determined, total open space and open space for tracts that have 10,000 or less contiguous square feet. The reason for retrieving data for the tracts 10,000 square feet and under involves the ability of these smaller sites to be converted by community groups into community gardens and vest pocket parks.

The Census data utilized was from the years 1950, 1970, 1990 and 2000. Sanborn maps are updated every 10-15 years for Newark, so dates were chosen that were as close
to possible to the census dates to help provide an accurate correlation between land uses and demographics.

Research at the Newark Public Library and the New Jersey State Library detailed that the Sanborn series had been created for several time periods in Newark including 1954, 1973, and 1990, which closely related to the first three Census time periods. The 1990 Sanborn series is the last publication that was available at both public repository libraries. Therefore, the researcher conducted a visual examination in March of 2003 to verify land uses for the most recent time period using city of Newark tax maps that had been completed by the city’s Tax Assessor’s Office on January 1, 2001. Although this implementation creates some inconsistency by using tax maps instead of Sanborn maps, it was conducted nonetheless because the researcher knew no other practical means to obtain an accurate picture of the recent land use allocations other than visual examination of the four study areas. It should be noted that Sanborn maps are generated from information at the lot level which is consistent to the city tax maps.

A hard copy of the 1990 Sanborn map series for Newark’s North Ward was available for examination at the Newark Public Library. The appropriate blocks for the study were reproduced on paper at a consistent scale to secure accuracy and reliability. The Newark Public Library also had microfilm copies of the 1954 and 1973 Sanborn map series’ for Newark’s North Ward, but the source’s printer reproduced at a poor quality which necessitated a trip to the New Jersey State Library in Trenton to reproduce from their microfilm. As with the 1990 series, all blocks needed for the study were reproduced on paper at a consistent scale to secure accuracy and reliability.
3.6 Determining Open Space Values

The years 1990, 1973, and 1954 were then all put onto paper and ready to be analyzed.

Sanborn maps contained the following details which were helpful in my study:

Lot delineations comparable to tax maps
The Block and Lot number of each parcel
House numbers
Dwelling units to scale
Sheds and garages
Determination of parking lots that were contained on properties
Dimensions in feet for streets on map

Those map features made it possible to determine how much open space was available for each study area for the years 1990, 1973, and 1954. First, open space was determined by the researcher to include all lots that had no residential, commercial, or industrial structures on the lot. Spaces of that character on Sanborn maps were left blank within the confines of a determined lot. Structures such as sheds and garages at the rear of lots (that did not have a corresponding residential, commercial, or industrial structure) were considered open space.

No determinations of garage or shed sizes that did not have a corresponding residential, commercial, or industrial structures (that would keep it from being considered open space) are presented in this study. For instance, a garage at the rear of a large lot that did not have a corresponding structure would be considered open space. An exception to that rule involved a structure on park space that provided service for the park. Conversely, a very small residence, commercial, or industrial structure on a large lot would not be considered open space. Examples of this are junk-yards and car sales lots, which have small offices on vast spaces that were mainly paved over.
Open spaces included any lots without structures such as those mentioned above, along with accompanying parks, playgrounds, tennis courts, ball fields, etc. Those spaces were determined by highlighting each designation on the paper maps. After they had been identified and determined, the researcher used an architecture scale to measure the dimensions of each lot to obtain accurate square footage. The maps were reproduced at the same scale for each time period, and each Sanborn map had street width in feet on it too, so the researcher could easily check for shifts in scale. Once the lot dimensions had been determined, they were entered into a paper notebook, and eventually placed into a Microsoft Excel spreadsheet at the Block Level. The dimensions were entered with the exact street address and square footage for the appropriate time period. After all open space lots were entered in the spreadsheet, the areas were added up to create total open space amounts for each of the four time periods and four study areas.

The 2003 data were gathered during a visual tour taken in March of 2003. The researcher had blank tax map sheets for all blocks in the four study areas. When a lot was identified that was consistent to the open space criteria established with the Sanborn maps, it was highlighted on the tax sheet. Many hours were taken to carefully identify sites to ensure data consistency and integrity. Tax maps have the block and lot numbers, street addresses, and importantly the exact dimensions of the lot to the foot. All highlighted vacant lots were then entered into the paper notebook to determine square footage and subsequently transferred into the Microsoft Excel spreadsheet to determine total open space square footage for the four study areas.
CHAPTER 4
RESULTS

4.1 Total Population

Total Population statistics were gathered for the four study areas for the years 1950, 1970, 1990, and 2000 (Figure 4.1). As discussed in the Methodology, the Forest Hills study area is comprised of portions of two Census Tracts and therefore accurate demographic data was not retrievable for the 1950 Census period. The population for the Forest Hills study area ranged from a low point of 1,919 in 1990, to a high point of 2,078 in the year 2000. The percent deviation from the two extremes was less than eight percent over the thirty year time period.

The Upper Roseville study area comprises a complete Census Tract enabling the interpretation of comprehensive population results for the four time periods. The lowest population for this study area occurred in the 1970 Census (3,889 persons) and the highest occurred in 2000 (4,410 persons). There was a less than twelve percent deviation in population over the fifty years analyzed. Like the Forest Hills example above, the study area saw its highest population in the 2000 Census period.

The Mt. Pleasant study area comprises a complete Census Tract. Population in the Mt. Pleasant study area saw significant changes over the course of the fifty year period 1950-2000. In 1950 and 1970, the population level in this study area had remained constant at around 4,500 people. In 1990, a drop in population (2,880 persons) had occurred, followed by a population increase in the year 2000 (5,352 people). This
amounts to a near doubling of the population in this study area over the course of ten years.

Total population statistics were gathered for Middle Broadway for the years 1970, 1990, and 2000. As stated in the Methodology, the Middle Broadway study area is comprised of portions of two Census Tracts and therefore accurate demographic data was not retrievable for the 1950 Census period. Population ranged from a low in 1990 (3,571 persons), to a high in 1970 (4,594 persons). A small population recovery occurred in 2000. At the extremes though, there was a twenty two percent deviation in population between the years of 1970 and 1990 had occurred.

Figure 4.1  Total population 1950-2000 for the four study areas.
It should be noted that all four study areas reached their peak population in the 2000 study period except Middle Broadway, which had its peak population in 1970. Conversely, 1990 was the population low point for all study areas except Upper Roseville which had a low point in 1970. Census data for Newark supports the fact that the city had reached its low point in population in 1996 (City of Newark, Department of Economic and Housing Development 2001). The city of Newark had lost over 150,000 people from 1950 to 1996 before a slight recovery occurred. (United States Census Bureau 2000). Therefore, 1990s low population numbers would be consistent with that throughout the entire city.

4.2 Racial Composition

Racial demographic statistics were gathered to measure the changes in racial makeup in the four study areas over the course of time. As was presented in the Methodology of this study, some inconsistencies were encountered in analyzing racial composition over the four study periods. The bulk of the inconsistency lies in the 1950 and 1970 Censuses where Hispanics are not specifically identified as a separate racial group (see the Methodology section for further clarification).

An appreciable increase in Black population was apparent in the Forest Hills neighborhood from forty two in 1970 to two hundred ninety one in 2000 (Figure 4.2). This is a nearly seven hundred percent increase in the black population for this time period. The Black population constitutes fourteen percent of the overall population in the Forest Hills study area as reported in the 2000 Census. The Hispanic population has
increased nearly twenty percent from 1990 to 2000 comprising over fifty percent of the 2000 population, and the White population has decreased by four hundred and four people (over forty percent) in the same time period comprising only twenty five percent of the 2000 population. Overall population has not changed much over the three time periods in this study area, so these results seem to indicate a shift in racial demographics and not overall population.

![Figure 4.2](image_url)  
**Figure 4.2** Racial composition for the Forest Hills study area 1970-2000.

For the Upper Roseville study area, the 1950 and 1970 Censuses included only Black and White categories with the overwhelming majority in both time periods in this study area being considered White. Over ninety two percent of the population in 1950,
and over eighty three percent of the population in 1970 were White (Figure 4.3). A large percentage of the White population in these time periods could have consisted of Hispanics, who garnered over sixty three percent of the population in the Upper Roseville study area in 1990 and over seventy one percent in 2000. Black population in this study area doubled between 1950 and 1970 (An increase of three hundred fifty two persons), and it remained relatively flat from the years 1970 to 2000 with only a thirteen percent decrease in those years.

Figure 4.3  Racial composition for the Upper Roseville study area 1950-2000.
As previously stated, White population in 1950 and 1970 does not consider the incorporation of Hispanics, making valid comparison difficult. A fifty six percent reduction in White population had occurred between the years 1990 and 2000. Overall population has not shifted much over the three time periods in this study area, so these shifts evidently indicate a shift in racial demographics and not of overall population.

The Mt. Pleasant study area experienced significant shifts in racial composition from 1950 to 1970 (Figure 4.4). Overall population remained relatively stagnant in those time periods, but the Black population increased nearly nine hundred percent over the twenty year time period. Between 1970 and 1990, a large reduction in population had occurred which included a reduction in Black population of over 1,000 people (a sixty two percent decrease) and Whites comprised less than ten percent of the population in 1990.

The Mt. Pleasant Hispanic population remained steady between 1990 and 2000 at around 1,875, but this number masks an actual percentage reduction in the Hispanic population hidden in the increase in overall population in the study area of nearly 2,500 people between 1990 and 2000. This statistical anomaly could be explained by Mt. Pleasant Whites gaining nearly nine hundred people (an increase of over three hundred fifty percent) and Blacks gaining nearly 1,500 hundred people (an increase of over three hundred percent). This study area has encountered a wide variation in both overall population and racial composition over the four study periods.

As with the Forest Hills study area, 1950 data figures are not available for the Middle Broadway study area because it contains portions of two distinct Census Tracts.
White population in 1970 was nearly 2,800 residents (Figure 4.5), but it is not possible to determine how many of those classified Caucasian people were Hispanics.

Overall population in the Middle Broadway study area was reduced over twenty percent (about 1,000 people) between 1970 and 1990. Black population during that same time period decreased over eight hundred people with the White and Hispanic populations in 1990 being relatively similar to the White population in 1970. Between 1990 and 2000, overall population in this study area recovered somewhat with all populations making slight increases except for Whites, who saw a decrease of forty four people.

Figure 4.4  Racial composition for the Mt. Pleasant study area 1950-2000.
**Figure 4.5** Racial composition for the Middle Broadway study area 1970-2000.

### 4.3 Median Family Income

Median Family Income provides a good indication of the economic conditions for those who live in specific Census areas. Median Family Income was utilized because it was the only income statistic that was consistently used by the United States Census Bureau for all four time periods. The researcher adjusted the income data to the year 2000 for the sake of consistency. Income data was gathered by the Census using an approximate twenty percent sample, as compared to the one hundred percent samples obtained for each of the other demographic variables studied. Median Family Income data information is incomplete for 1950 and 1970 for the Forest Hills and Middle
Broadway study areas because they contain portions of two Census Tracts instead of comprising one complete Census Tract.

Median Family Income for the four study areas are detailed below (Figure 4.6). Income data for the Forest Hills study area was only available for Census years 1990 and 2000. Adjusted Median Family Income rose from $64,759 to $83,821 over this ten year period representing a twenty nine percent increase adjusting for inflation.

Figure 4.6 Median family income for the four study areas adjusted to 2000 dollars 1950-2000.
Adjusted Median Family Income was measured for the Upper Roseville study area for all four time periods. In 1950, Median Family Income was $22,950, while in 1970 it was $39,121, in 1990 $42,062 and in 2000 $36,515. From 1950 to 1970, there was a seventy percent increase in Median Family Income adjusted for inflation. From 1970 to 1990, there was an eight percent increase in income. From 1990 to 2000 there was a thirteen percent decrease in Median Family Income adjusted to the year 2000.

Median Family Income was measured for the Mt. Pleasant study area for all four time periods. In 1950, adjusted Median Family Income was $22,443, while in 1970 it was $24,499, in 1990 $17,211 and in 2000 $19,164. From 1950 to 1970, there was a nine percent increase in adjusted Median Family Income. From 1970 to 1990, there was a thirty percent decrease in adjusted income, and from 1990 to 2000 there was an eleven percent increase in Median Family Income adjusted for inflation.

Income data for the Middle Broadway study area was only available for Census years 1990 and 2000. Median Family Income fell from $33,291 to $29,732 over this ten year period representing an eleven percent total decrease adjusted for inflation.

### 4.4 Housing Occupancy

Researching the amount of occupied versus vacant housing units in a specific Census area can help illuminate the strength or weakness of the housing market for the specific study areas. Also, the amount of units in a structure could increase or decrease through time representing either attraction to or flight from certain neighborhoods.

Housing occupancy data was gathered for all four time periods for the complete Census Tract study areas of Upper Roseville and Mt. Pleasant. Housing data were gathered completely for the years of 1950, 1990, and 2000 (Table 4.1) for the Forest Hills
and Middle Broadway study areas, while the 1970 data was accessible only to the Census Tract level indicating that 1970 housing data was unavailable for the Forest Hills and Middle Broadway study areas.

For the Forest Hills study area, there were four hundred sixty four occupied units versus eight vacant units in 1950 (ninety eight percent occupancy rate), while in 1990 there were five hundred seventy two occupied units and twenty five vacant units (ninety six percent occupancy), and there were five hundred sixty six occupied units in 2000 as compared to twenty two vacant units (ninety six percent occupancy). Note that there was an increase of one hundred twenty five units from 1950 to 1990, and there was a threefold increase in the number of vacant units in that same time period. There was only an increase of seventeen vacant units of this time period though. From 1990 to 2000, there was not much of a shift of housing units, occupancy, or vacancy in the Forest Hills study area.

<table>
<thead>
<tr>
<th></th>
<th>Forest Hills</th>
<th>Upper Roseville</th>
<th>Mt. Pleasant</th>
<th>Middle Broadway</th>
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<tbody>
<tr>
<td></td>
<td>Total Units</td>
<td>Occupied %</td>
<td>Total Units</td>
<td>Occupied %</td>
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<tr>
<td>1950</td>
<td>472</td>
<td>98</td>
<td>1156</td>
<td>100</td>
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<td>1970 No Data</td>
<td>No Data</td>
<td>1267</td>
<td>97</td>
<td>1592</td>
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<td>1990</td>
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<td>2000</td>
<td>588</td>
<td>96</td>
<td>1295</td>
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All four time periods were analyzed for the Upper Roseville study area. In 1950, there were 1,153 occupied units to only three vacant (nearly one hundred percent occupancy rate), while in 1970 there were 1,233 occupied units compared to thirty four vacant units (ninety seven percent occupancy). There were 1,160 occupied units in 1990 versus one hundred seven vacant units (ninety two percent occupancy), and in 2000 there were 1,206 occupied units and eighty nine vacancies (ninety three percent occupancy). There was an increase of one hundred twenty nine units from 1950 to 2000, and a corresponding increase of eight six vacancies over the same time period. The largest increase in occupied housing units occurred between 1950 and 1970 (eighty units), and the time period between 1970 and 1990 saw an increase of seventy three vacant units for the Upper Roseville study area. A slight increase in occupied housing occurred between 1990 and 2000 with a corresponding slight decrease in vacancy over that same time period.

The Mt. Pleasant study area contained a compete Census Tract and therefore led to the availability of complete housing data for all four time periods. In 1950, there were 1,484 occupied units to only twenty one vacant (ninety nine percent occupancy rate), while in 1970 there were 1,494 occupied units compared to ninety eight vacant units (ninety four percent occupancy). There were seven hundred and one occupied units in 1990 versus one hundred and one vacant units (eighty seven percent occupancy), and in 2000 there were seven hundred sixty nine occupied units and ninety six vacancies (eighty nine percent occupancy). There was an overall decrease of six hundred forty units from 1950 to 2000, and a corresponding increase of seventy five vacancies over the same time period. The largest decrease in occupied housing units occurred between 1970 and 1990.
(seven hundred eighty three units), and the time period between 1950 and 1970 saw an increase of seventy seven vacant units for the Mt. Pleasant study area. A ten percent increase in occupied housing occurred between 1990 and 2000 with a corresponding slight decrease in vacancy numbers over the same time period.

For the Middle Broadway study area, there were 1,364 occupied units versus twenty four vacant units in 1950 (ninety eight percent occupancy rate), while in 1990 there were 1,027 occupied units and sixty eight vacant units (ninety four percent occupancy), and in 2000 there were 1,144 occupied units compared to eighty two vacant units (ninety three percent occupancy). A decrease of two hundred ninety units from 1950 to 1990 had been recorded, and a threefold increase in the amount of vacant units had been researched for the same time period. From 1990 to 2000, there was a ten percent increase in the number of occupied units, and a twenty percent increase in vacant units over the same time period.

4.5 Open Space Results

Quantity of open space (measured to the square foot) was gathered by the researcher for each of the four study areas. Unlike the demographic data, open space allocations had been retrieved for all four study areas for all four study periods. Two sets of data on open space were gathered: total open space in square feet, and open space areas that were 10,000 contiguous square feet and less. Open spaces that were 10,000 square feet and smaller were gathered to identify spaces that are small enough where community groups can create community gardens or vest pocket parks.
Sanborn fire insurance maps had been obtained for the years 1951, 1974, and 1990 which closely related to the first three time periods of the demographic Census data. The Sanborn maps are updated in a series about every fifteen years, and the most current Sanborn maps were from 1990. Therefore, the researcher conducted a comprehensive visual study. The researcher used 2001 Newark tax maps on March of 2003, to assess open space availability for the four study areas. The Sanborn maps, like the city of Newark tax maps use corresponding block and lot numbers, which creates data compatibility.

The 1951 Sanborn maps detailed 337,625 square feet of total open space for Forest Hills, as compared to 56,125 square feet in 1974, 50,125 square feet in 1990, and an open space quantity of 50,000 square feet in 2003. There was an over 280,000 square foot reduction (eighty three percent) of open space between the years 1951 and 1974. Between the years 1974, 1990, and 2003 little change in open space allocations materialized (Figure 4.7).

Open space under 10,000 contiguous square feet for Forest Hills in 1951 was 71,125. This is approximately twenty percent of the overall open space for this time period meaning that much of the open space in the Forest Hills Study area was large tracts of undeveloped space. The under 10,000 square feet results for 1974, 1990 and 2003 for Forest Hills were identical to the total open space values. This indicates that all remaining open space is on lots less than 10,000 square feet.

Total open space allocations for the Upper Roseville study area show a fairly consistent amount of open space throughout the first three study periods. In 1951, there were 357,925 square feet of open space existed compared to 346,675 square feet in 1974.
This is only a three percent decrease for this twenty three year time period. Between 1974 and 1990, open space rose to 375,325 square feet which was an eight percent increase in open space. The 2003 visual study showed that 273,425 square feet were designated open space which was a decrease of 101,900 square feet of open space corresponding to a nearly thirty percent reduction of open space over those thirteen years.

Upper Roseville is the only study area that has dedicated open space within its boundaries. St. Benedict’s Park is a large park with a baseball field on it. This space covered 211,850 square feet in 1951 and 1974. Over 50,000 square feet of St. Benedict’s Park was taken between 1974 and 1990 for the creation of a Day Training Center. Additionally, this study area contains a large triangle lot called Thomas Silk Park which is dedicated open space covering over 35,000 square feet.

![Bar chart showing open space data for different years and study areas.]

**Figure 4.7** Total open space (in square feet) for the four study areas and four time periods.
Open space under 10,000 contiguous square feet in Upper Roseville ranged from a low in 1974 of 69,950 square feet to a high of 115,950 square feet in 1990. For the four study periods, a range of twenty to thirty five percent of total open space was less than 10,000 contiguous square feet indicating that the vast majority of open space are large tracts.

Great variation of total open space allocations was evident for the Mt. Pleasant study area over the four time periods. Only 34,950 square feet of open space was identified from the 1951 Sanborn maps. By 1974, over 128,300 square feet was designated open space for Mt. Pleasant. In 1990, an increase to 457,250 square feet of open space occurred, and the 2003 visual study designated 203,400 square feet. Between 1951 and 1990, over 400,000 square feet (nearly ten acres) of open space had been identified in the Mt. Pleasant study area. This increase amounted to an over 1,300 percent increase in open space over that time period. A large reduction of open space amounting to over 250,000 (fifty six percent decrease) square feet occurred between 1990 and 2003.

The under 10,000 square foot data sets for Mt. Pleasant in 1951 and 1974 were identical to the total open spaces value for those periods signifying that all open spaces available were on smaller tracts. The 1990 under 10,000 square foot amount was 142,475 which was approximately thirty percent of the total open space. In 2003, 124,875 square feet of space 10,000 contiguous feet and under is more than sixty percent of the total open space. This confirms that large tracts are being developed and much of the remaining space is contained on smaller tracts.
Total open space allocations for the Middle Broadway study area show a significant shift in the amount of open space throughout the four study periods. In 1951, there were 190,575 square feet of open space had been documented compared to 232,025 square feet in 1974. This is only an eighteen percent increase for this twenty three year time period. However, between 1974 and 1990, open space rose to 558,175 square feet which was a two hundred forty percent increase in open space. The 2003 visual study recorded that 326,175 square feet had been designated open space which was a decrease of 232,000 square feet of open space corresponding to a forty two percent reduction of open space over those thirteen years.

For under 10,000 square feet, the 1951 and 1974 values were 60,600 and 71,200 square feet respectively (Figure 4.8), each approximately thirty percent of total open space. In 1990, there is a large increase in open space under 10,000 contiguous square feet to 257,575, almost fifty percent of the total space. In 2003, open space in this category was reduced to 113,500 square feet or approximately a third of the total open space allocation for that year.

The trends for total open space are similar for Mt. Pleasant and Middle Broadway study areas with each section having small amounts of open space in 1951 rising in 1974, with a sharp increase in square footage for 1990 and a corresponding sharp decrease in 2003. The Mt. Pleasant and Middle Broadway study areas lost over fifty five percent of their open space in this time period. Upper Roseville lost about thirty five percent of its open space, while Forest Hills had only a negligible loss.

The trend for contiguous tracts under 10,000 followed the total open space trend for 1990 to 2003 with all four study areas losing space. Forest Hills, Upper Roseville,
and Mt. Pleasant had modest reductions in the number of small tracts, while Middle Broadway lost over fifty five percent of its smaller tracts over this same time period.

![Graph showing open space in four study areas from 1951 to 2003.]

**Figure 4.8** Open space (10,000 square feet or less) for the four study areas in the four time periods.

### 4.6 Analysis of Demographic Results

Newark’s Renaissance might lead to unintended negative consequences that might severely reduce the opportunity to create and preserve quality future open space. The researcher’s Results section detailed some significant demographic changes in the four study areas over the past fifty years, and it presented notable changes within the past decade. The four North Ward study areas from 1990 to 2000 had increases in population
across the board, and more occupied housing in three of the four study areas. Occupancy rates for the four study areas remained fairly stagnant between 1990 and 2000, but three of the four study areas had increases in the number of total housing units ranging from two to twelve percent, with the Forest Hills study area having a slight reduction.

Between 1990 and 2000, the more stable areas of Forest Hills and Upper Roseville did not experience much change in occupancy rates. A combined increase of forty occupied units was researched (a two percent increase). Conversely, the two less affluent study areas, Mt. Pleasant and Middle Broadway experienced an increase of one hundred eighty five occupied units (a ten percent increase) over the same time period. The entire city in that same time period had a reduction of 2,162 vacant units (a twenty percent reduction) (United States Census Bureau 1990, 2000).

A drive through Newark's Central Ward will identify vast open spaces where "project housing" once stood. Between 1987 and 2001, the Edward Scudder, Christopher Columbus, Reverend William P. Hayes, and Stella Wright Homes were demolished. These thirty two buildings, all in Newark's Central Ward, contained thousands of units and thousands of people (Carter 1999, Cunningham 1988, Levy 1994). Many of the residents living in those apartments moved to lower density complexes within the city's other wards.

The increase in population for the four study areas combined was over 3,000, with over eighty percent of the increase attributable to the Mt. Pleasant study area. This study area was also the poorest of the four study areas that were researched with Median Family Income under $20,000 in 2000. An interesting factor in Mt. Pleasant was the large increase in population (2,482 people) with only a small increase in housing units.
(sixty eight units). This suggests that the average family size must have increased substantially in this study area over that time period, or that units were subdivided.

The Forest Hills study area is by far the wealthiest of the four zones exhibiting a large increase in income in adjusted dollars from $64,759 in 1990 to $83,821 in 2000 (an increase of $19,062 or twenty nine percent). This increase is by far the largest of the four study areas between 1990 and 2000. Forest Hills also exhibited an extremely stable occupancy rate, and a small increase in population in the same time period. Incomplete data from 1950 and 1970 make demographic comparison difficult for race, income, and housing delineation. All demographic indicators from 1990 and 2000 suggest that the Forest Hills study area is fairly stable, showing little variability in housing and population, with a simultaneous large increase in Median Family Income.

The Mt. Pleasant study area along with Forest Hills were the only study areas that had increases in Median Family Income from 1990 to 2000. The Mt. Pleasant study area increased from $17,211 in 1990 to $19,164 in 2000 (an increase of $1,953 or eleven percent). This eleven percent Median Family Income increase is deceiving though considering the probable growth of family size mentioned above. In fact, forty four percent of the population of the Mt. Pleasant study area in the year 2000 were below the poverty level. This is above the city’s percentage of individuals living below poverty (twenty eight percent) and over five times the State level of 8.5 percent (United States Census Bureau 2000).

The Mt. Pleasant study area in 1950 had 4,742 people living in 1,484 occupied units, approximately a ratio of three persons for each unit. In the year 2000, a similar number of people in this study area (5,352) were living in only seven hundred sixty nine
occupied units, or nearly a seven to one ratio. Between 1970 and 1990, the Mt. Pleasant study area lost 1,550 people (thirty five percent). By the year 2000, Mt. Pleasant’s population jumped to 5,352 resulting in part to the creation of the Newark Housing Authority’s Broadway Village development with one hundred eighty five units of new housing built in the mid 1980s.

The Upper Roseville and Forest Hills study areas are the two most stable zones in regard to total population. In fact, Upper Roseville did not have a population change of more than ten percent for any of the four study periods. Median Family Income in Upper Roseville increased by seventy percent between 1950 and 1970. From 1990 to 2000, a thirteen percent decrease was recorded. Median Family Income in 2000 for Upper Roseville was still about $6,000 above the entire city’s Median Family Income (United States Census Bureau 2000). The number of occupied housing units has hovered around 1,200 units from 1950-2000, but the number of vacancies increased between 1970 and 1990 (seventy three more vacancies). Upper Roseville had a near one hundred percent occupancy rate in 1950 which has been reduced to ninety three percent in 2000. The majority of the demographic indicators studied indicate a rather stable area with small demographic variability over the four time periods.

The Middle Broadway study area lost over 1,000 people between 1970 and 1990 (twenty two percent). A small increase of two hundred people occurred between 1990 and 2000. Middle Broadway’s Median Family Income in 2000 was $29,732 just below the city’s median level of $30,781. Like Upper Roseville, the Middle Broadway study area had a decrease in Median Family Income between 1990 and 2000 (eleven percent). Middle Broadway lost over three hundred occupied units between 1950 and 1970, but
gained one hundred seventeen units between 1990 and 2000. The occupancy rate for the Middle Broadway study area peaked at 98 percent in 1950, and reached its low point in 2000 at 93 percent. The Middle Broadway study area shows a fair amount of demographic variability, but the study area is much less variable than Mt. Pleasant has been. The Forest Hills and Upper Roseville study areas feature more demographic stability than Middle Broadway has.

Mt. Pleasant and Middle Broadway study areas seem to have been more affected by Newark's decline and purported Renaissance than Forest Hills and Upper Roseville had. The Census years between 1970 and 1990 (Newark's economic decline) saw large shifts in population and housing occupancy for Mt. Pleasant and Middle Broadway, while Forest Hills and Upper Roseville had modest variability. Consequently, the city's rebound in the 1990's in general had a larger positive affect on Mt. Pleasant and Middle Broadway than on Forest Hills and Upper Roseville relating to occupied housing, income, and population. A notable exception was the vast increase in income for the Forest Hill study area in that time period. Mt. Pleasant seems to be the area most affected by Newark's economic situation, with Middle Broadway being a distant second.

4.7 Analysis of Open Space Results

The open space allocations for the four study areas exhibited some similarities to that of the demographic analysis above. Review of Sanborn maps for 1951, 1974 and 1990 allowed the researcher to see how occupied spaces turned into open spaces over time. For the most part, the Forest Hills and Upper Roseville study areas had little to moderate variability in open space allocations from 1951 to 2003.
Forest Hills had a large decrease in open space between 1950 to 1974 because of the development of Lake Street, which borders Branch Brook Park. From 1974 to 2003 there were barely any changes had occurred (a reduction of 6125 square feet) to the open space amount. All Forest Hills’ lots between 1974 and 2003 were under 10,000 contiguous square feet. This study area is composed of larger detached units situated on lots twice the size of the typical Newark 25’ X 100’ lot. The people living in this study area are wealthy relative to the other study areas, and the relatively small amount of vacant space and low open space variability between 1974 and 2003 indicate statistical stability in relation to open space.

Upper Roseville had little variation in open space from 1951 to 1990, and it experienced a fairly significant decrease in open space from 1990 to 2003 of 101,900 square feet (twenty seven percent). This reduction in open space was associated to an increase of infill housing on small lots to eliminate vacant lots in already heavily occupied blocks and additional construction of large townhouse complexes. The visual study conducted in March of 2003 also revealed a large amount of new townhouse construction on 5th Street between Park Avenue and 4th Avenue West which accounted for a significant portion of the decrease in space. Over 42,000 square feet of the reduction involved the demolition of a vacant commercial/industrial structure on 5th Street to clear the way for the townhouses (Sanborn Map Company 1990).

The infill housing over this time period helped reduce the amount of small lots under 10,000 square feet by 34,650 out of the total decrease of 101,900 square feet. The existence of two major parks, St. Benedict’s Park and Thomas Silk Park, make the open space changes less observable. These two parks account for nearly 250,000 square feet
of open space for 1951 and 1974, and nearly 200,000 square feet in 1990 and 2003. St. Benedict’s Park had been reduced by over 50,000 square feet to allow for the creation of a Day Training Center between 1974 and 1990. For 2003, taking existing parks into account, there are only 81,300 square feet vacant space remained in this study area, which is a reduction from 183,200 square feet in 1990 (a fifty six percent reduction).

The Mt. Pleasant study area, which is consistent with the demographic variability, had the most change in open space allocations. Between 1974 and 1990, the Mt. Pleasant study area gained over 325,000 square feet of open space. The majority of this open space was created on six blocks from Broadway to McCarter Highway north to south, and from Harvey Street to 3rd Avenue east to west. Much of this open space had been created because of apparent demolition and clearance of existing row style housing and apartment complexes on those six blocks. In 1990, vast vacant spaces replaced housing from 1974, and an anticipated drop in population of 1,550 people occurred. A major development activity that affected the Mt. Pleasant study area was the building of the large low density Broadway Village townhouses. Those townhouses built by the Newark Housing Authority in the mid 1980’s, established one hundred eighty five new housing units on Broadway between Harvey and 3rd Avenue East. This large complex replaced (demolished) hundreds of row style housing units, and several apartment complexes. Hundreds of units were cleared between 1974 and 1990 and not built upon, consequently becoming open space.

By 2003, the Newark Housing Authority expanded its apartment holdings on those six Mt. Pleasant blocks, and the Rafael Hernandez School was built upon vacant space on the corner of Broadway and Harvey. The increase in the number of units and
the increase in the number of people occupying each unit caused a surge in population (an increase of nearly 2,500 people) in this study area. The expansion of the Newark Housing Authority’s low density apartment holdings in this study area caused a significant reduction in open space (loss of over 250,000 square feet) between 1990 and 2003. Due to the creation of large low density housing complexes in this study area on vast previously vacant land, a significant change in open space under 10,000 square feet from 1974 to 2003 was not evident. Approximately 125,000 square feet of contiguous open space measuring 10,000 square feet or less still remains in 2003. The extreme variability in total open space and population factors makes predictability for upcoming years difficult to assess, and open space may continue to be lost at a significant rate into the future if infill housing occurs on the remaining smaller lots.

The Middle Broadway study area (like the Mt. Pleasant study area) had a large increase of total open space occur between 1974 and 1990 of over 320,000 square feet. A great amount of open space created along the Broadway commercial district in this time period, and a large open space had been created after the failure to build the proposed 210 unit Kawaida Towers project on Lincoln Avenue. Building the Towers became a political controversy that ended up with the abandonment of the project in 1976 after the excavation of the foundation had been completed (Cunningham 1988). Vast tracts of old industrial land near McCarter Highway that were abandoned and cleared. Roads in Middle Broadway were constructed and subsequently closed because of the lack of interest in building anything in this area. Veteran’s temporary housing built post World War II on Seabury Avenue was replaced with vacant space.
By 2003, an influx of new construction occurred in the Middle Broadway study area. The doomed Kawaida Towers property was replaced by a city-owned townhouse complex on a new street named Carmella Court. Much of the remaining space west of Broadway has been developed, with only the less appealing industrial properties near McCarter Highway remaining. From 1990 to 2003, Middle Broadway lost about 230,000 square feet of its open space, with a very significant loss of over 140,000 square feet of lots under 10,000 square feet. This represents a loss of fifty six percent of this space in this thirteen year span. Large tracts of land near McCarter Highway at Chester Avenue are the open spaces that remain, with small vacant lots of yesteryear being converted into infill housing.
CHAPTER 5
DISCUSSION

5.1 Implications of Inaction Regarding Open Space

As the statistical results of the open space inventories indicate, a tremendous loss of open space in the four study areas had occurred between 1990 and 2003 because of new construction. Much of the open space taken was vacant space being bought by developers to utilize for new infill housing, or the space was developed by the city itself to satisfy the affordable housing needs of its residents. The loss of open space is nearly as dramatic as the forces that had created the open space in the first place. The exodus of a significant portion of the population to the suburbs before and after the 1967 Newark riots. This population shift hastened the demise of the city, and created the vast wastelands of vacant space and boarded up buildings often associated with Newark’s past. Perhaps this vacant space is a painful reminder of the “bad old days” to those who stuck it out in Newark and therefore they believe that new construction erases the city’s past failures.

Newark’s future need not be one that sacrifices its usable open space inventory in deference to economic development that has finally arrived in the city. Newark should pursue policies that encourage both new construction and open space preservation, with the goal of securing quality neighborhoods into the future. Focusing primarily on new construction will inevitably lead to land battles similar to those that had transpired in New York City’s community gardens. Proactive city policy towards open space can help improve the quality of Newark’s neighborhoods.
The results of this study clearly indicate a large increase in new construction over the past thirteen years, and the city cannot afford to allow another thirteen years to go by without addressing the open space issue. The National Recreation and Parks Association guidelines (which are the guidelines cited most often in today’s literature including the 2002 Essex County Open Space Master Plan) for open space reveal that the city lacks adequate open space for its current population (National Recreation and Parks Association 1984). Newark’s building Renaissance is not a one-way ticket to solving all the city’s problems. It can even be surmised that jumping into complete build out may be risky itself. Complete build out suggests that the city and county would need to address the less than optimal amount of activity that occurs in their respective parks. Newark’s residents will expect the city and county to provide them something in return for surrendering the spaces they used to farm, play, and relax in.

More new construction will mean more people, more pollution, more traffic, and more of a need for good open spaces. Continuing the hodgepodge infill development will leave the city scarred in the future. It is much easier to preserve open space when there is an inventory of spaces exists that is available for preservation. If complete build out occurs, the prospect of preserving open space is greatly reduced. Creating open space in this case would entail having to remove structures which is much more difficult and expensive than sound planning (Bates 2001). To meet the open space needs for city residents, Newark officials, the private sector and organizations from the nonprofit world must craft a viable open space alternative. Continuation of the status quo is not an option that should be considered.
5.2 Alternatives

The most effective open spaces are those that have input from residents who live in proximity to the space (Francis 1987, Rosen 1997). Appropriate design (and not over-design) makes a space inviting to the people who will frequent it (Bradley and Millward 1986, Katz 1995). The ultimate key to open space success is the amount of use it receives (Francis 1987, The Pennsylvania Horticultural Society 1998, Whyte 1980). In urban areas, proximity (of residents) is important to park usage (Burgess et al. 1988, Cooper-Marcus and Greene 1990, Francis 1987, Katz 1995). Many people in Newark do not own or have access to personal vehicles and are therefore dependant on mass transportation (United States Census 2000). This reality limits the ability of many people to easily go to larger neighborhood or regional parks, which may be too distant for residents to walk to or may not be easily accessible by bus or train. Less than 64 percent of the employed population from the Mt. Pleasant and Middle Broadway study areas drove to work in a privately owned vehicle, as compared to 69 percent from the Forest Hills and Upper Roseville study areas (United States Census Bureau 2000). This shows either that more people own vehicles and drive them to work in the more affluent study areas, or that they are more willing to use mass transportation to get to work as compared people in the less affluent study areas.

Many urban areas such as Newark have lost significant amount of their population and tax base post *World War II*. This situation has translated into a reduction in public funding for park creation and maintenance (Francis 1987, Essex County Department of Parks, Recreation and Cultural Affairs 2002, Katz 1995, State of New Jersey, Green Acres Program 1994). Many urban parks have undergone the same type of decay
(Jackson 1981) consistent with the cities that contain them. Urban parks have become areas known for crime (Burgess et al. 1988, Francis 1987, Jacobs 1969, Pennsylvania Horticultural Society 1998). The combination of lack of usage, safety issues relating to crime, and reduced public funding have contributed to the decline of Newark’s parks.

A more appropriate alternative for preserving open space is to advocate for the construction of smaller community-run gardens or mini-parks. These gardens may have many different names including community gardens, playgardens, playgrounds, vest-pocket parks and/or tot lots. The overall success of the space is commensurate with the amount of activity that occurs within the space. Residents at the local level have the opportunity for input on the open space’s design, and when people put their own sweat and energy into a project, it is rarely overdesigned. Smaller sites require more efficient space utilization. Depending on the community’s wants and needs, residents can have many different types of activities geared to various age groups. For instance, children may want play equipment, adults a vegetable garden, and seniors may simply desire a peaceful retreat. If any space is available in their immediate neighborhood, then a viable democratic garden club could flourish. Generally, community gardens or mini-parks are frequented by people from a four block radius where residents do not have to cross a busy thoroughfare. The vast majority of the participants will be from a two block radius (Cooper-Marcus and Greene 1990).

Advocates for smaller community-run parks and/or gardens could suggest that the city save money on the creation of new under-funded, and under-maintained government run parks in lieu of community-run spaces appropriate for local residents. Community-run spaces are generally frequented by people that do not use traditional park systems
Community gardens can also pay off for a city government. A case in point involves a public park and community garden in downtown Sacramento, California. Research conducted on those two similarly sized open spaces found that the public park cost twenty times more to develop than a community garden, cost twenty seven times the expense to maintain, and was only four times as used in comparison to the adjacent community garden (Francis 1987).

Community gardens tend to be bare bones and less formally designed than traditional public parks are. Community gardens are appreciated more by non-participants than by non-participants at public parks (Francis (2) 1987). Community residents that do not even participate in the garden usage appreciate the effort that those gardeners in their neighborhood have been giving to improve the locale's look. Observers really appreciate the fact that residents are volunteering to improve the neighborhoods aesthetic and environmental quality because they like it, and not because the concerned participants are getting paid to do it. Many of these gardening ventures are initiated because of the frustration people feel with the negative aspects of the more traditional parks they no longer frequent (Francis 1987).

The Olmsted family firm designed the Essex County Park System in the late 1800s to the early 1900s. Those parks were created as urban oases meant to isolate park goers from the city around them and civilize the under-classes who were in the park together with the urban elite (Heckscher 1977). Many current dwellers resent the lack of connection between the parks and the city around them (Burgess et. al 1988) and some of the features that made the parks great a century ago now have led to their non-use by urban residents. Take a stroll through Newark's West Side Park and the observer will
experience a less than comfortable feeling of isolation. In the center of the park, one realizes that he or she is sunk down and truly isolated from the activity on the street.

People desire to be safe when they go to a park (Burgess et al. 1988, Francis 1987, 2, Pennsylvania Horticultural Society 1998), which is probably why many people in Newark do not take advantage of the current limited open space possibilities in the city. Some argue that urban residents do not appreciate open space and therefore more new construction should occur because that is what they want. The literature supports the premise that urban residents appreciate open space and nature and wish to have more quality open space (Burgess et al. 1988, Foresta 1980, Little 1974).

5.3 Policy Alternatives at the City Level

Each of the four selected study areas has several small vacant spaces (10,000 square feet and under) that can be transferred into community gardens or into neighborhood-run-parks. Use of these locations eliminates the need of having a large park of one acre or more which is not available in many neighborhoods of the North Ward. Smaller gardens can be managed by community groups with the help of local nonprofit organizations such as the Greater Newark Conservancy, Rutgers Cooperative Extension or other appropriate agencies. The city can provide assistance by attaching water hookups for gardeners, free soil, compost, mulch, woodchips, a fence on insecure sites, and general support of the local gardening associations and nonprofit organizations.

Other cities like New York City, Chicago, and Seattle have agencies within their city apparatus’ that exclusively deal with helping neighborhood groups get started in gardening. Operation Green Thumb in New York City, Neighborspace in Chicago, and
P-Patch in Seattle have long traditions of cooperation between respective cities and their community gardening movement. The city of Newark can follow the lead of these progressive cities and promote neighborhood reliance through community gardening.

The city of Newark should take some other proactive measures in securing appropriate areas of open space for its residents to enjoy into the future. The Forest Hills and Upper Roseville study areas have the benefit of their proximity to Branch Brook Park and may access the park rather easily by foot or by bicycle. Upper Roseville (in particular) also has access within the perimeter of its study area to St. Benedict’s Park and to Thomas Silk Park which provide an additional four acres of open space. The less wealthy Mt. Pleasant and Middle Broadway study areas each have a satisfactory amount of open space available in the form of vacant land. This vacant land is the only real opportunity for residents in these two study areas to enjoy future open space. Many residents in these two areas cannot easily get to Branch Brook Park or to St. Benedict’s Park, and to some extent they are forced to work with the vacant lots as the only viable open space alternative.

The city should be proactive in providing open space to the parts of the city that are so deficient in this regard. People in these neighborhoods are the most likely ones to want to participate in a community gardening project to grow food for themselves and their families. The city of Newark could support these efforts by reinstating the Adopt A Lot program for the North and South Wards. This study has shown that open space is vanishing quickly in the North Ward, and the discontinuance of the Adopt A Lot program in the North and South Wards sends a clear message to developers that the door is open to new construction and that residents can do little to stop it. Reinstating this beneficial
policy would send the proper message that Newark's residents have the right to quality open space in their immediate neighborhood, and that the city supports the needs of residents at least equal to developers' interests.

The city of Newark can address some of its crucial environmental issues by updating its zoning law. Newark has not completed a full update of its zoning ordinance since the early 1950's. Current Newark zoning allows for all dedicated Newark open spaces to "fall into zoning designations where other uses such residential may be permitted" (City of Newark, Department of Economic and Housing Development 2001). This study addressed a time frame from 1950 to 2003 and has shown that Newark has changed quite a bit since then in regards to land use. It makes sense to update the zoning ordinance to encourage smart growth practices advocated by Governor McGreevey and the New Jersey State Plan (New Jersey State Planning Commission 2001). Updates of the Master Plan are important, but without the teeth of a zoning ordinance, the Master Plan does not exert as much influence as it should in shaping appropriate land use decisions. The most recent Draft Master Plan states that Newark needs more local neighborhood or pocket parks (City of Newark, Department of Economic and Housing Development 2001). The city should listen to its research when it considers building these small parks, but a zoning ordinance requiring open space would be more effective.

The city could also engage in the preparation of an open space master plan like the one just recently completed by Essex County (Essex County Department of Parks, Recreation and Cultural Affairs 2002). The process of completing an open space plan will help focus the city's attention on improving local open space needs, and it should provide a forum for community residents and nonprofit organizations' input.
Some other fiscal programs could be put in place to help stem new construction for the expressed purpose of preserving open space. Development impact fees could be implemented so that developers compensate the city for additional sewage, road construction and maintenance, or for childcare expenses connected to their new construction projects. The fees have been used in ten states to preserve open space in the area where the new construction has occurred (The Global Cities Project 1991). Congestion Fees (Bates and Santerre 2001) are similar to the development impact fees since they are raising money to compensate the city for increased traffic caused by new construction.

The city currently is allowing construction to go unchecked and without any current guidance plan them on what amount of construction is acceptable within each neighborhood of the city. The tremendous decrease in open space allocations explained in this paper should send to government officials' a signal that open space might not be available to be saved in the future. By the time the city administration and council decide to put together an appropriate land use planning apparatus, the vast majority of necessary open space may be lost in favor of infill housing which may or may not be supported by the local community. A successful alternative to waiting for the city to decide that planning is good is to encourage developers to do the right thing and leave some space for residents to enjoy. A Newark based nonprofit organization in the North Ward called La Casa de Don Pedro has recently developed open space guidelines to their construction projects in the city (La Casa de Don Pedro 1999). Perhaps this responsible method of developing may catch the attention of city officials and help sway their opinion towards community based planning rather than towards citywide construction.
Other nonprofit organizations including the North Ward Center, and the city-wide Master Plan Working Group have identified the need to create and preserve open space throughout Newark. These organizations are particularly concerned with the fate of open space in the North Ward. Groups like the Greater Newark Conservancy and Rutgers Urban Gardening will likely continue to advocate for the creation of more community-run open spaces in Newark, and this message is starting to permeate at the local level with residents becoming concerned with the lack of recreation and open space for children and seniors alike.

If significant amounts of open space are to be preserved in Newark, it will most likely occur with the support of the city, neighborhood residents, planners, local nonprofits, and developers coordinated to forge an acceptable common ground that will make the city a better place in which to live and work. Nonprofit organizations will need to press the city to implement progressive open space policies because it is unclear if the city will act on this account without substantial pressure from community residents and the nonprofit open space community. Without a new framework regarding open space being put in place soon, open spaces in the four study areas researched in this paper may become difficult to find.
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