SAN FRANCISCO NEIGHBORHOOD PARK BOND FUNDING:

AN EQUITY MAPPING AND ANALYSIS

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In

Geography: Resource Management and Environmental Planning

by

Gia Nicole Grant

San Francisco, California

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CERTIFICATION OF APPROVAL

I certify that I have read SAN FRANCISCO NEIGHBORHOOD PARK BOND FUNDING: AN EQUITY MAPPING AND ANALYSIS by Gia Nicole Grant, and that in my opinion this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirement for the degree of Master of Arts In Geography: Resource Management and Environmental Planning at San Francisco State University.

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SAN FRANCISCO NEIGHBORHOOD PARK BOND FUNDING: AN EQUITY MAPPING AND ANALYSIS

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2015

This research project examines how the San Francisco Recreation and Park Department allocated the 2008 and 2012 Neighborhood Park Bond funds among 214 potential park sites, using an environmental justice perspective to evaluate the distribution in relationship to household median income, number of youth, and the race/ethnicity of people living within a quarter mile of each park. Additionally, this research reviews the selection process and criteria for funding decisions.

I certify that the Abstract is a correct representation of the content of this thesis.

Chair, Thesis Committee — Date: 8/7/15

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1. Introduction

Within the City and County of San Francisco, the San Francisco Recreation and Park Department (SFRPD) serves a current population of over 830,000 through the management of 220 park sites that are spread across the 49 square miles of the city, with an additional two sites that are located outside the city limits. While some research has analyzed the equitable distribution of San Francisco parks and green space (NPC, 2003 and Good, 2006), the distribution of capital funding for these park sites has received little scholarly attention, in particular how voter-approved, park bond funding has been awarded to neighborhood parks.

Park bond funding is the largest source of capital funds available for neighborhood parks improvements from the City and County. In 2008 and 2012, bonds for a total of 214.1 million dollars (minus a contingency and administering cost of $12.7 million) were approved by voters for the city's neighborhood park sites. These funds are critical to maintaining park sites as an environmental amenity that supports social, economic, health and ecological benefits (Young, 1996; Trust for Public Land, 2008; Boone et al, 2009).

Two city departments, the San Francisco Public Utilities Commission (SFPUC) and the San Francisco Department for the Environment (SFE) have existing environmental justice policies and programs that promote equity in the distribution of public benefits as well as in the distribution of hazards/pollutants. The SFRPD, however, has not officially adopted such a policy.

This research examines how the SFRPD allocated Neighborhood Park Bond funds among the 214 potential park sites, both in terms of the distribution patterns as well as the decision process. I use an environmental justice perspective to evaluate the distribution patterns of the 2008 and 2012 neighborhood park bond funds in relationship to household median income, number of youth, and the race/ethnicity of people living within a quarter mile of each park. Additionally, this research reviews the selection process and criteria for funding decisions.

1.1 Research Questions

This study seeks to address three central research questions. First, what are the distribution patterns for neighborhood park bond funding from 2008 and 2012? Second, how do these patterns of funding relate to the population distributions of minorities,

low-income residents and youth under the age of 18? Finally, do the criteria and selection process for awarding park bond funding support environmental justice priorities?

1.2 Research Outline

My research study is composed of eight sections. Section 1 provides an introduction and background to the San Francisco Recreation and Park Department (SFRPD) and park bonds. In Section 2, I discuss the relevant scholarship of environmental justice and explain why this framework was chosen for my study. The literature review is followed in Section 3 by a brief description of my research methods and sources of data for the study. In Section 4, the findings of my study are presented in demographic subsections, along with a series of maps to illustrate them. Section 5 provides a discussion of the findings in relation to social disparities in San Francisco by median household income, numbers of youth, and minority populations, highlighting the ways in which park bond funding supports or doesn't support environmental justice goals. Section 6 contains recommendations for establishing transparent funding criteria for park bond allocations and priorities to support environmental justice objectives. The

study closes with a discussion of research limitations in Section 7 and a conclusion in Section 8.

1.3 Classifications of Parks and Funding Categories

All 220 park sites owned by the San Francisco Recreation and Park Department are eligible for bond funding. This study looks at the allocation of bond funding that is specifically directed towards Neighborhood Parks. Neighborhood park sites can include traditional parks, mini parks, community gardens, playgrounds, plazas, and recreation centers. For the purpose of my study, the three City-Wide Parks (Golden Gate Park, Lake Merced, and McLaren Park) were removed from the list of 220 sites because of their separate dedicated park bond funding. I chose to remove three additional sites from the list (Candlestick Park, the San Francisco Zoo, and the Rowing Club/Dolphin Club) because they do not primarily serve a neighborhood. These sites are geared towards attracting residents from other parts of the city and beyond. Although technically eligible for funding, they did not fit the criteria of primarily serving neighbors within a quarter mile and did not seem likely ever to receive Neighborhood Park funding.

Figure 1. The 220 Recreation and Park Department Sites in San Francisco

Source: San Francisco Recreation and Park (SFRPD)

Under the bond funding, there are several categories of specific or directed allocations that include "City-Wide Parks," "Neighborhood Parks" and the Opportunity Fund. The 2012 bond also included language for two additional categories for the San Francisco Port Authority to fund water front properties as well as a Failing Playgrounds Fund specifically for playground renovations (SFRECPARK, 2013).

The funds that are allocated for Neighborhood Park Bond funding are recommended by SFRPD staff and approved by the Recreation and Park Commission. The Recreation and Park Commission is a seven-person governing body, where members are appointed by the Mayor to four year terms. The primary function of the Commission is policy making for Recreation and Park Department operations (SF REC PARK, 2015).

1.4 San Francisco Recreation and Park Department and Park Bond Funding

The SFRPD was formed in the early 1870's with the creation of Golden Gate Park and the development of a commission to oversee it. Over the years, many additional parks and facilities were added to the recreation and park infrastructure, including more parks, recreation centers, and trails. In 1950, the modern SFRPD was created from the merger of two separate recreation and park department commissions (SF REC PARK, 2015).

Since the 1950's, little has been done to support the capital maintenance of San Francisco park sites and facilities. The SFRPD estimates that most of its infrastructure is 60 to 80 years old with over one billion dollars in deferred maintenance needs (SF REC

PARK, 2013). To address some of the capital infrastructure needs, San Francisco's first ever voter-approved park bond, Proposition A, was passed in 2000, generating dedicated funds for the acquisition, construction and/or reconstruction of San Francisco Recreation and Park facilities. Better known as the Neighborhood Park Improvement Bond, it provided $110 million dollars in funds that completed many small projects in 74 neighborhood parks (SFRECPARK, 2013).

In 2005, then Mayor Gavin Newson and the San Francisco Board of Supervisors adopted Administrative Code Sections 3.20 and 3.21 which required the City of San Francisco to develop and adopt a revised ten year capital expenditure plan for city-owned facilities and infrastructure. The new administrative codes also assured that all new capital expenditure plans are reviewed annually in the context of the existing, adopted capital plan. The new policies covered capital projects in libraries, health services and parks (City and County of San Francisco, 2008).

The development and passing of bonds is central to San Francisco's capital plans for neighborhood parks. Two more park bonds, passed in 2008 and 2012, were part of this new comprehensive capital spending strategy. Capital planning is critical to improving San Francisco park sites, particularly because of their aging infrastructure and

estimated one billion dollars in deferred capital projects. (SFRECPARK, 2013). My research examines the distribution of funding from the 2008 and 2012 park bonds, as they are part of a comprehensive approach to park site funding.

The 2008 and 2012 Neighborhood Park Bond funding included 27 awards totaling $201.4 million dollars in dedicated capital funding, with an additional contingency and administering cost of $12.7 million dollars. Given the massive capital infrastructure needs at most of the 200+ San Francisco park sites, the process for determining park awards has powerful environmental justice implications.

This strategic administrative initiative has made a positive impact on San Francisco according to current Mayor Ed Lee, "It is impossible to miss the incredible transformation of San Francisco's roads, parks, recreation centers, libraries, cultural institutions, and other infrastructure improvements taking place all over the City as a result of our Ten-Year Capital Plan," and "in San Francisco voters have passed nearly $2.8 billion in General Obligation bonds over the past eight years and these important investments support our vision of creating a future where prosperity means that

everyone shares in our success" (SFGOV, 2015). Yet do all San Franciscans share equitably in the benefits of park bonds?

2. Literature Review

This research uses a framework of environmental justice to analyze the equity of the 2008 and 2012 San Francisco park bonds as critical and valuable community amenities. In doing so, it draws upon decades of activism and scholarly research on the distribution of environmental hazards and pollutions, as well as the distribution of environmental benefits, and the resulting impacts on communities of color and other marginalized populations.

2.1 Environmental Justice Theoretical Framework

The environmental justice movement took root in the United States during the 1980's. The first protests in Warren County, North Carolina led the United Church of Christ's Commission for Racial Justice (1987) to produce the study, *Toxic Wastes and Race in the United States*. Using demographic information in correlation with the location of waste facility sites, this study proved that race was the most potent variable in predicating the location of hazardous waste sites (Bullard and Johnson, 2000). This

study was the beginning of academic discourse identifying unequal exposure of hazardous pollutants and commercial toxic facilities to minority populations (Chavez and Lee, 1987).

Over the next twenty years, environmental justice literature has conclusively demonstrated that environmental pollution has disproportionately affected communities based on race and class (Bullard, 1990; Bryant and Mohai, 1992; Bullard, 1993; Pellow, 2003; Pastor, 2002). Most historical research in environmental justice has focused on the unequal distribution of environmental dis-amenities (hazards and pollution), but within the last decade scholars in a variety of disciplines have begun to look at the distribution patterns of environmental amenities (Boone et al, 2009; Wolch, 2000). Researchers are now asking if environmental amenities are equitably distributed in specific spatial areas in terms of race and class, as well as other demographics.

Parks, particularly urban parks, are an important environmental amenity. Parks provide social, economic, health and environmental benefits, particularly to the people living in the immediate area (Young, 1996; Trust for Public Land, 2008; Boone et al, 2009). Some of the documented benefits include improved health from increased exercise (Giles-Corti, 2005; Dahmann et al. 2009), and improved mental health

(Chiesura, 2004; Maller et. al, 2006, Dahmann et al 2009), as well as increased values of nearby property (Crompton, 2001).

Distribution of parks, racial configuration of park usage, and allocation of park funding have all been identified as important environmental justice research issues (Boone et al, 2009; Wolch and Bryne, 2009; Wolch 2000). Research on environmental justice and parks has included examining issues of equity in park access for lower-income and minority communities (Wolch et al, 2000) racial inequities in park access (Byrne et al, 2009), and evaluating service areas for potential park pressure or congestion (Sister et al, 2009).

Park bond funding as a community benefit has received limited attention in environmental justice literature (Wolch et al, 2000; Boone, 2009), yet it has a lasting impact in the value of a park as an environmental amenity. Lack of capital funding for park sites is an environmental injustice because without on-going investment park spaces can become dangerous and unwelcoming, often to the point of non-use (Boone, 2009).With access to tools such as Geographic Information Systems (GIS), there are efficient and relatively simple mechanisms to evaluate the allocation of park resources in specific geographic spaces. GIS has increased scholars abilities to analyze and map

spatial relationships in order to discuss issues of park equity (Wolch, 2000; Good, 2006; Sister et al, 2010; Vaughan, 2013).

This study follows the work of Wolch et al. (2000) entitled "Parks and Park Funding in Los Angeles: An Equity Mapping Analysis", which analyzed similar questions of how patterns of park funding relate to the distribution of children and youth, especially young people of color, and to residents of low-income households in Los Angeles.

3. Data and Methods

My research project used a geospatial database that included existing maps of San Francisco Parks, the dollar amounts awarded to each park from the 2008 and 2012 park bonds, and 2010 census data on the demographic and socio-economic characteristics within a quarter mile "buffer" of each San Francisco neighborhood park.

Data used in my analysis and research includes the US Census Bureau Data 2010 geographic data set for Census Tracts and Census Blocks, a shape file of San Francisco parks from the SFRPD, and 2008 and 2012 Park Bond Data compiled from the SFRPD documents and website.

Data tables were created from lists of bond-funded parks as well as derived from census data and then joined to the Census TIGER (Topologically Integrated Geographic Encoding Referencing) Geography to provide geospatial/map data as well as San Francisco Recreation and Park department shape files. The data was then analyzed using ESRI ArcGIS to calculate median incomes, racial and ethnic percentages, and the number of youth under 18 years of age living within a quarter mile of the 214 neighborhood parks in the study. The quarter mile distance was calculated by creating a buffer around the edge of each park polygon. The same data and GIS were used to create associated maps (Figures 2-9).

The established quarter mile buffer was used to denote the immediate neighbors living within walking distance of each park. The SFRPD definition of a Neighborhood Park is one that primarily serves the neighborhood located within a radius of ¼ mile of the park (Condit, 2005 and Good, 2006). Although many of the parks in San Francisco range in size from mini to regional parks, all parks under 30 acres are considered to serve the immediate area (Condit, 2005) and the immediate neighbors are still the closest stakeholders and walking to a park is critical for children, youth and their families (Wolch, 2000).

The methodology for this research entailed a series of specific step including the following: calculating median incomes within a quarter mile buffer the 214 San Francisco parks in the study, calculating the number of youth living within a quarter mile of the San Francisco parks in the study, identifying the parks with highest Latino/Hispanic, Black/African American, Asian/Pacific Islander and White populations Identifying parks with the lowest-income buffers, highest minority populations and highest number of youth, creating maps using GIS related to these environmental justice factors, evaluating income, race/ethnicity and youth patterns around San Francisco parks with a focus on environmental justice and discussing and analyzing environmental justice as it relates to decision-making criteria for bond funding.

4. Findings and Analysis

To analyze the distribution of park bonds in 2008 and 2012, the funded sites were reviewed in terms of geographic location (neighborhood and Supervisorial District) and dollar amounts funded. These sites were then mapped by individual year and collectively. All of the 214 potential park sites were given quarter mile radius buffers to examine demographic information including household median income, number of youth under 18 and the ethnic and racial composition of the population. The 214 park

sites were then divided into quintiles (approximately 43 parks each) and evaluated in terms of bond funding. The total dollar amounts funded to each park site were also used to calculate per-child spending by park.

4.1 Park Bond Funding in 2008 and 2012

The "Clean and Safe Neighborhood Parks Bond" passed in 2008 for a total of $185 million dollars, of which $115.1 million dollars was allocated for 12 neighborhood parks, including a contingency of $4.7 million. The 12 parks funded in 2008 represented approximately 6% of the total eligible 214 park sites in the City of San Francisco.

Table 1. Funded Parks, Amounts, Neighborhood and Supervisorial District from 2008 Bond

Name of Park	Amount of Funding (Millions)	Neighborhood	Supervisorial District
Palega Recreation Center	21.2	Portola	10
Chinese Recreation Center	14.2	Chinatown	3
Sunset Playground	13.7	Sunset	4
Mission Dolores Park	13.2	Mission	9
Lafayette Park	10.2	Pacific Heights	2
Mission Playground	7.5	Mission	9
Cayuga Playground	7.3	Excelsior	11
Glen Canyon Park	5.8	Glen Park	8
McCoppin Square	5.3	Sunset	4
Cabrillo Playground	4.5	Richmond	1
Fulton Playground	4.2	Richmond	1
Raymond Kimball Playground	3.3	Western Addition	5

The amounts of funding awards for parks in 2008 ranged from $3.3 million for Raymond Kimball Playground to $21.2 million for Palega Playground, with the average award equaling $9.2 million dollars and the median award at $7.4 million dollars. The 12 parks funded in 2008 vary in size, amenities offered, and are spread across the City in 9 different neighborhoods and supervisorial district districts. With only 12 parks funded, surprisingly 3 different neighborhoods, the Sunset, the Richmond, and the Mission received funding for two parks each. Of the City's eleven supervisorial districts, two of them, District 6 and District 7, had no parks funded in 2008. District 6, which contains the downtown neighborhoods of the Tenderloin and South of Market is home to some of San Francisco's densest neighborhoods with high percentages of both low- income residents and numbers of youth.

The 2012 San Francisco Clean and Safe Neighborhood Parks Bond passed with 72% voter approval for a total of another 195 million dollars, of which 99 million dollars was allocated for neighborhood parks with a contingency fund of approximately six million, as well as two million for implementation costs. A total of fifteen neighborhood parks were selected for funding by the San Francisco Recreation and Parks Department.

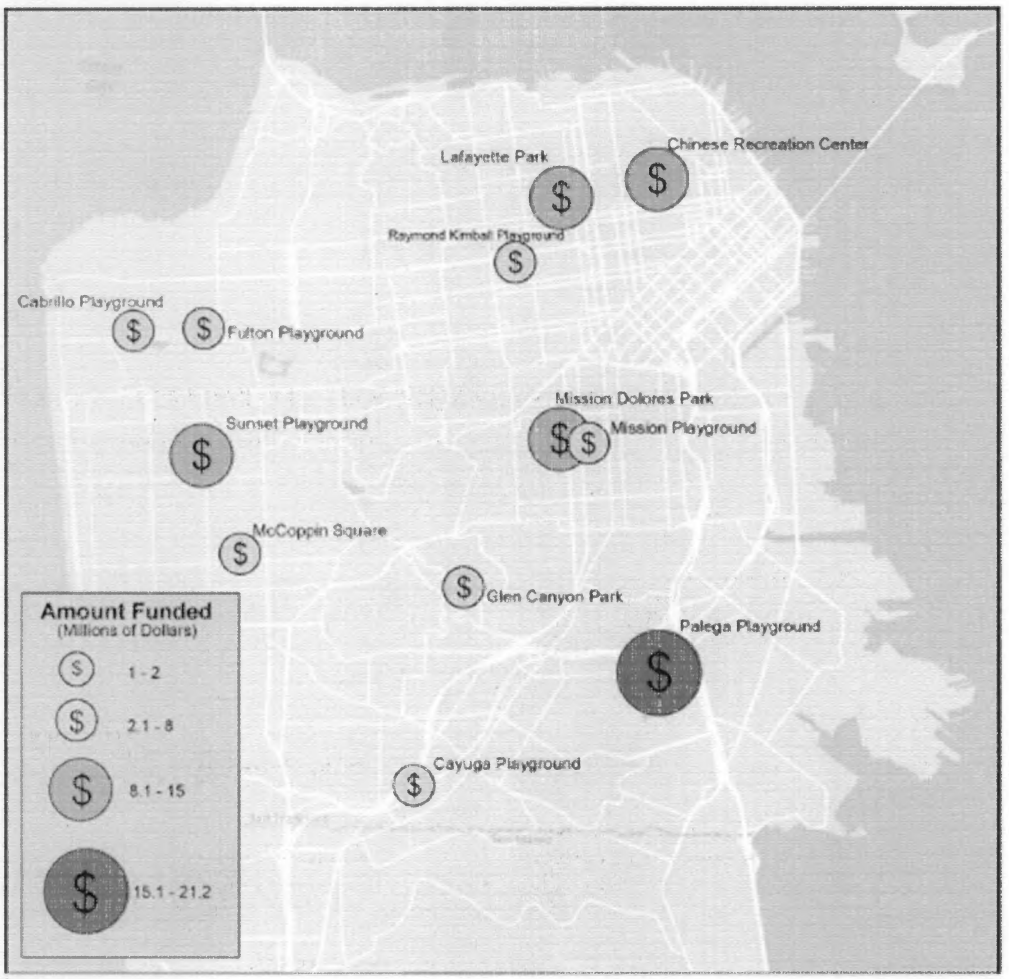
The 2012 park bond awards ranged from a high of 14.0 million that went to Margaret Hayward Playground in the Western Addition to two 1.0 million dollar awards that went to Hyde-Turk Mini Park in the Tenderloin and to South Park in the neighborhood with that same name. The average award equaled approximately 6.1 million dollars and the median award was 5.5 million.

The 2012 awards covered 10 of the 11 supervisorial districts. All but District 7 had parks funded. Interestingly, supervisorial district 7 didn't receive any funding from either bond. District 7 includes the area around Lake Merced (which did receive funding as a Regional Park), the San Francisco Zoo, SF City College, SF State and Mount Davidson. Examples of eligible District 7 neighborhood park sites include Hawk Hill, Garden for the Environment, West Portal Playground, and Miraloma Playground, among others.

Table 2—Funded Parks, Amounts, Neighborhood and Supervisorial District from 2012 Bond

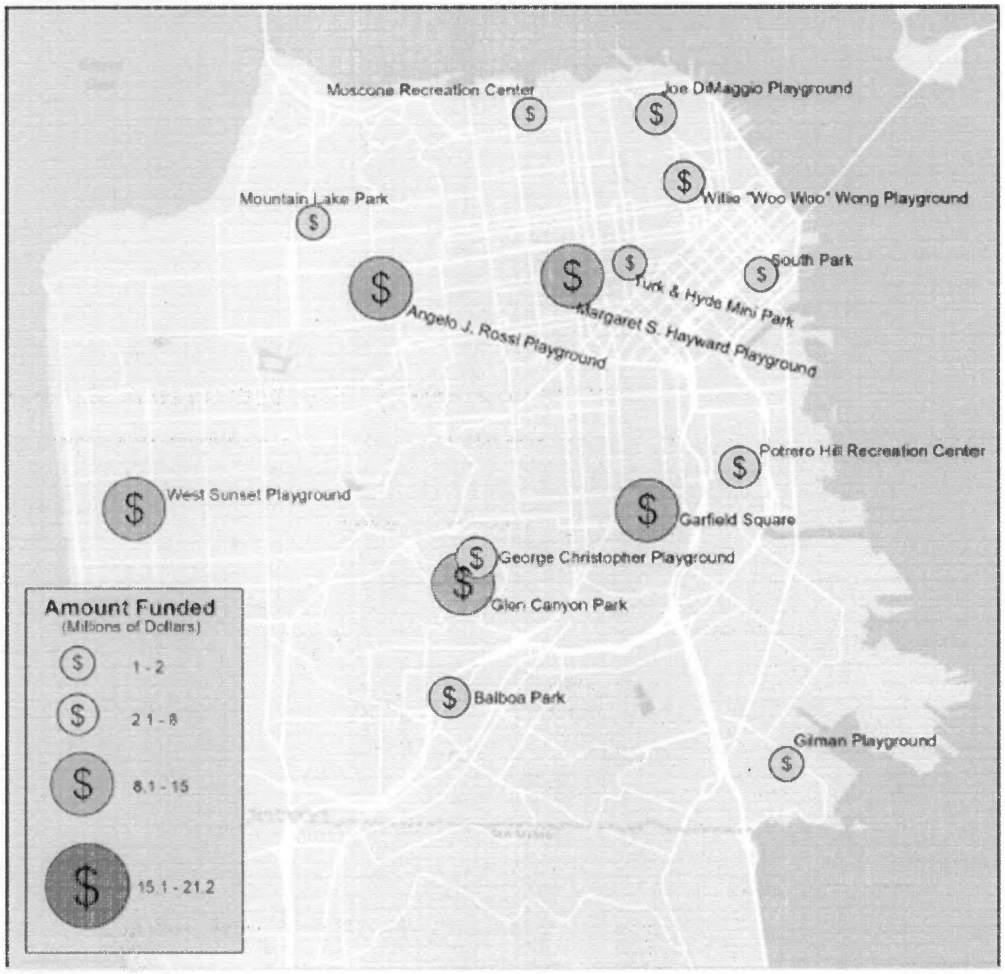
Name of Park	Amount of Funding (Millions)	Neighborhood	Supervisorial District
Margaret Hayward Playground	14.0	Western Addition	5
West Sunset Playground	13.2	Sunset	4
Glen Canyon Park	12.0	Glen Park	8
Garfield Square	11.0	Mission	9
Angelo J. Rossi Pool and Park	8.2	Richmond	1
Balboa Pool	7.0	Excelsior	11
Willie "Woo Woo" Wong Playground	6.0	Chinatown	3
Joe DiMaggio Playground	5.5	North Beach	3
Potrero Hill Recreation Center	4.0	Potrero Hill	10
George Christopher Playground	2.8	Diamond Heights	8
Mountain Lake Park	2.0	Presido	2
Gilman Playground	1.8	Bay View Hunters Point	10
Moscone Recreation Center	1.5	Marina	2
Hyde-Turk Mini Park	1.0	Tenderloin	6
South Park	1.0	South Park	6

Figure 2: Sites Funded by 2008 Neighborhood Park Bond



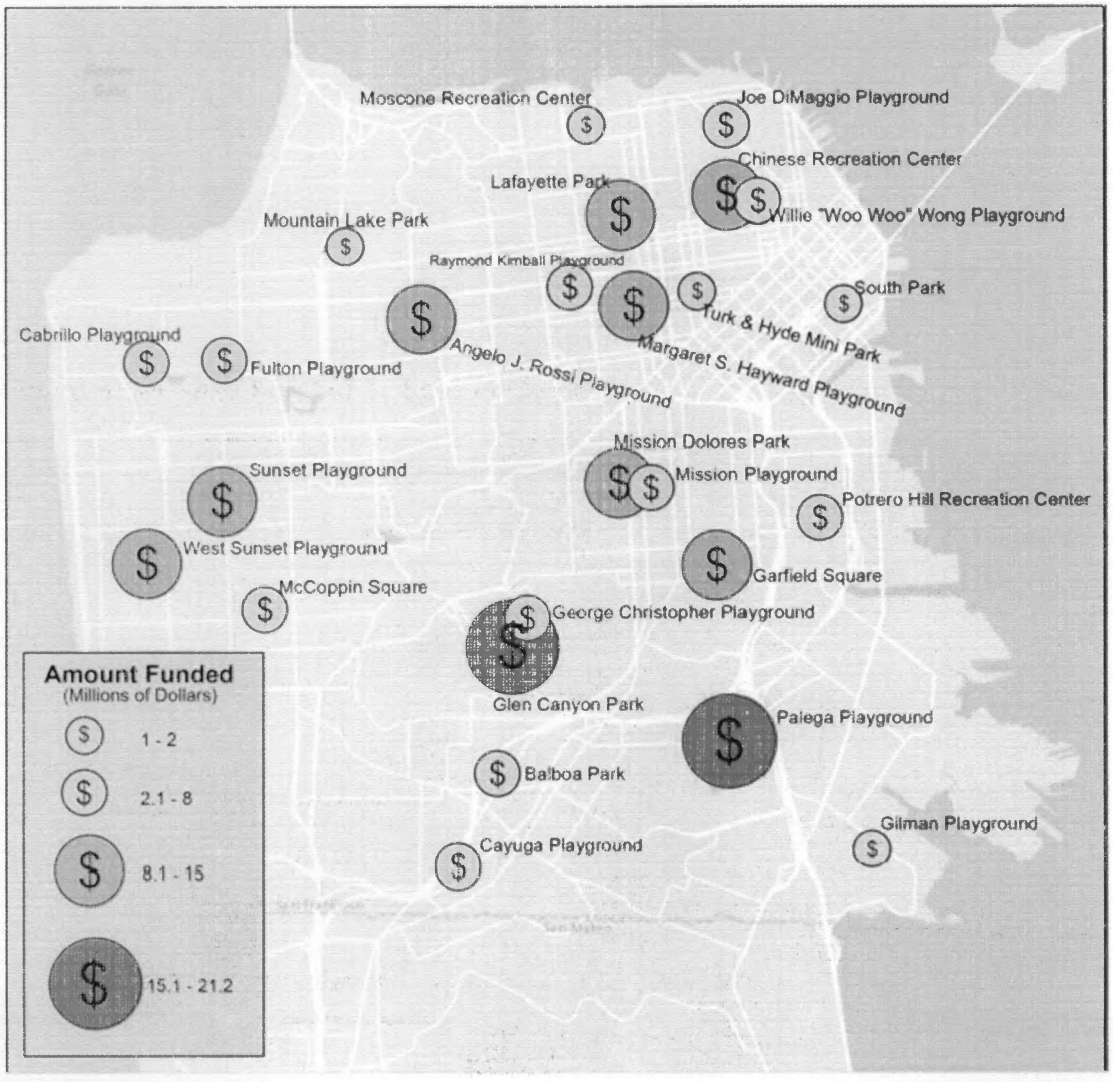
Source: SFRPD

Figure 3: Sites Funded by 2012 Neighborhood Park Bond



Source: SFRPD

Figure 4: All Sites Funded by both the 2008 and 2012 Neighborhood Park Bond



Source: SFRPD

4.2 Park Bond Funding and Household Median Incomes

For my analysis, household median incomes were established within a quarter mile buffer around each park site in San Francisco using 2010 Census data. The household median income ranges by quintile were the following:

1) $21,000 to $56,000
2) $57,000 to $72,000
3) $73,000 to $89,000
4) $90,000 to $100,000
5) $101,000 to $130,000

Between both the 2008 and 2012 park bonds, there were a combined total of five awards to park sites in the lowest quintile of household median income. This represents 19% of the total number of bond awards benefiting parks with the lowest-income neighbors. The five parks that were funded in the lowest-income buffers, included Willie "Woo Woo" Wong Playground, Hyde &Turk Mini Park, Raymond Kimball Playground, and Margaret S. Hayward.

An additional seven funded parks had buffers with median income ranges of $57,000 to $72,000, or were in the second lowest quintile of median household

incomes. These parks included Sunset Playground, Garfield Square, Palega Playground, Balboa Park, Gilman Playground, Cayuga Playground and Joe DiMaggio Playground.

Parks that have the lowest 40% of household median incomes, or households earning less than $72,000 a year, benefited from 12 of the 27 park bond awards, or 44% of the awards. Households living in park buffers with a median income in the top 60%, or over $72,000 a year, benefited from 15 park bond awards or 55% of the total awards.

Five of the 43 parks surrounded by the lowest quintile of median income levels received park bond funding in either 2008 or 2012, equating to 12% of parks that are with the lowest-income neighbors in the City. 7% of parks within the highest income areas were awarded park bond funding.

The mapping of the lowest quintile of median-income parks showed that they were all located on the east side of San Francisco. All of the funded parks within the lowest-income areas were located in the north-east quadrant of the City, specifically within the three neighborhoods of Western Addition, Tenderloin and Chinatown. None of the low-income park areas in Southeast neighborhoods received funding, despite the

fact that seven of the park sites are located in the Bayview Hunters Point neighborhood and four low-income park sites are located in Visitacion Valley.

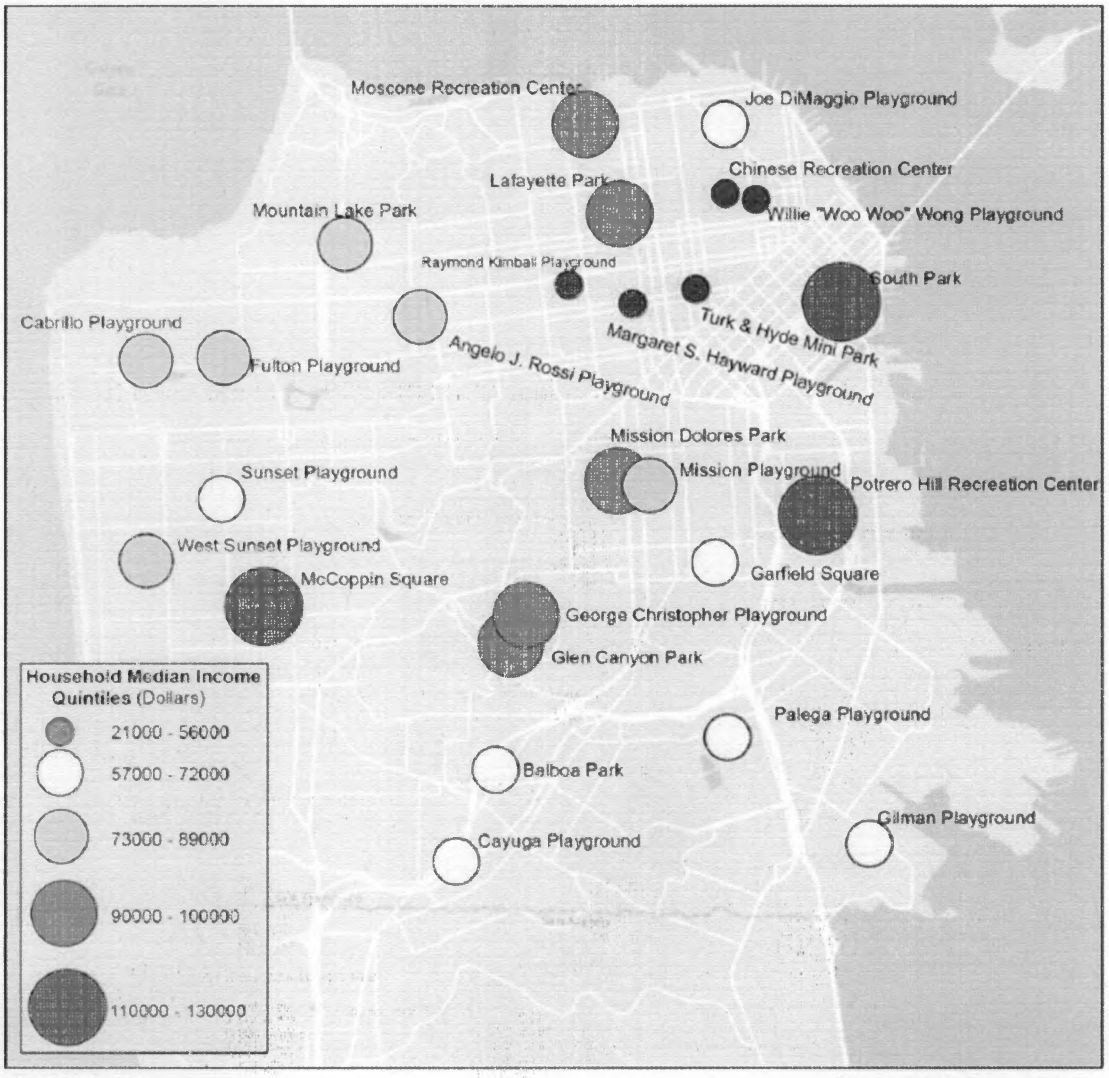
4.3 Household Median Income and Bond Dollar Awards

The dollar amounts awarded in each quintile reflect similar percentage breakdowns as the number of awards (See Table 3). While the highest- income park areas received the fewest awards and the lowest percentage of funding, the lowest-income neighborhoods had the second lowest number of awards and second lowest percentage of funding. Parks sites where the median household incomes were below $57,000 received 19% of the total funding available, or $38.5 Million, from the two bonds.

Table 3—Number of Parks Funded, Percentages and Amounts by Income Quintiles

Quintile Ranges	Number of Parks Funded	Percentage of Total Awards	Amounts Awarded	Percentage of Total Funds
$21,000 to $56,000	5	19%	$38.5M	19%
$57,000 to $72,000	7	26%	$67.5M	33%
$73,000 to $89,000	6	22%	$39.6M	20%
$90,000 to $100,000	6	22%	$45.5M	23%
$101,000 to $130,000	3	11%	$10.3M	5%

Figure 5: Household Median Income Quintiles for Funded Park Sites



Source: 2010 Census Data

4.4 Park Bond Funding and Youth under 18

According to Census data, the total population of the City of San Francisco in 2010 was 805,235 people, with an under 18 population of 107,901 or 13.4%. Given the benefits and amenities of parks, particularly for youth and children, my analysis looked at the number of youth and children living within a quarter mile, including which of these were funded, the amounts of the awards, and per child spending of all the parks that received funding.

The numbers of youth living within a quarter mile of San Francisco parks sites greatly vary depending on the area of the City. For example, Crocker Amazon Park has 2998 youth living within a quarter mile, while Justin Herman Plaza has only 117. There are also wide variances in the quintile ranges. The ranges of in the number of youth by quintile, from lowest to the highest, are the following:

1) 743 to 117
2) 977 to 752
3) 1217 to 980
4) 1620 to 1217
5) 2998 to 1638

A total of eight awards, to seven different parks, were made to the highest 20% quintile of youth and children. Glen Canyon Park received two separate awards. This represents 30% of the total awards between the two bonds. Another eleven awards were made to parks with youth and children in the next quintile. In total, the San Francisco Recreation and Parks Department awarded over 70% of the bond awards to park sites that fell within the highest 40% of youth and children living within a quarter mile.

The total amount of bond funding was also directly correlated to the number of children. Thirty-nine percent of the funding, or $78.5 million of $201.4 million awarded, went to parks with the highest number of youth and children living within a quarter mile. Another $83.7 million went to the next highest quintile of parks and the combined total equated to 81% of the available funding from both bonds being directed at the parks with highest 40% in numbers of children (See Table 4). However, of the top 43 parks with the most youth living within a quarter mile, only seven parks or 16% of them have been funded in the two rounds of park bond funding cycles. Glean Canyon Park was funded twice.

The parks with the top 20% of the youth are largely concentrated in a hand-full of neighborhoods, including the Bayview Hunters Point, Visitation Valley, Excelsior, Bernal Heights, the Mission and Chinatown. Around 80% of these parks are located on the east side of San Francisco, with 26 out of 43 located in the central and southeastern section of the City.

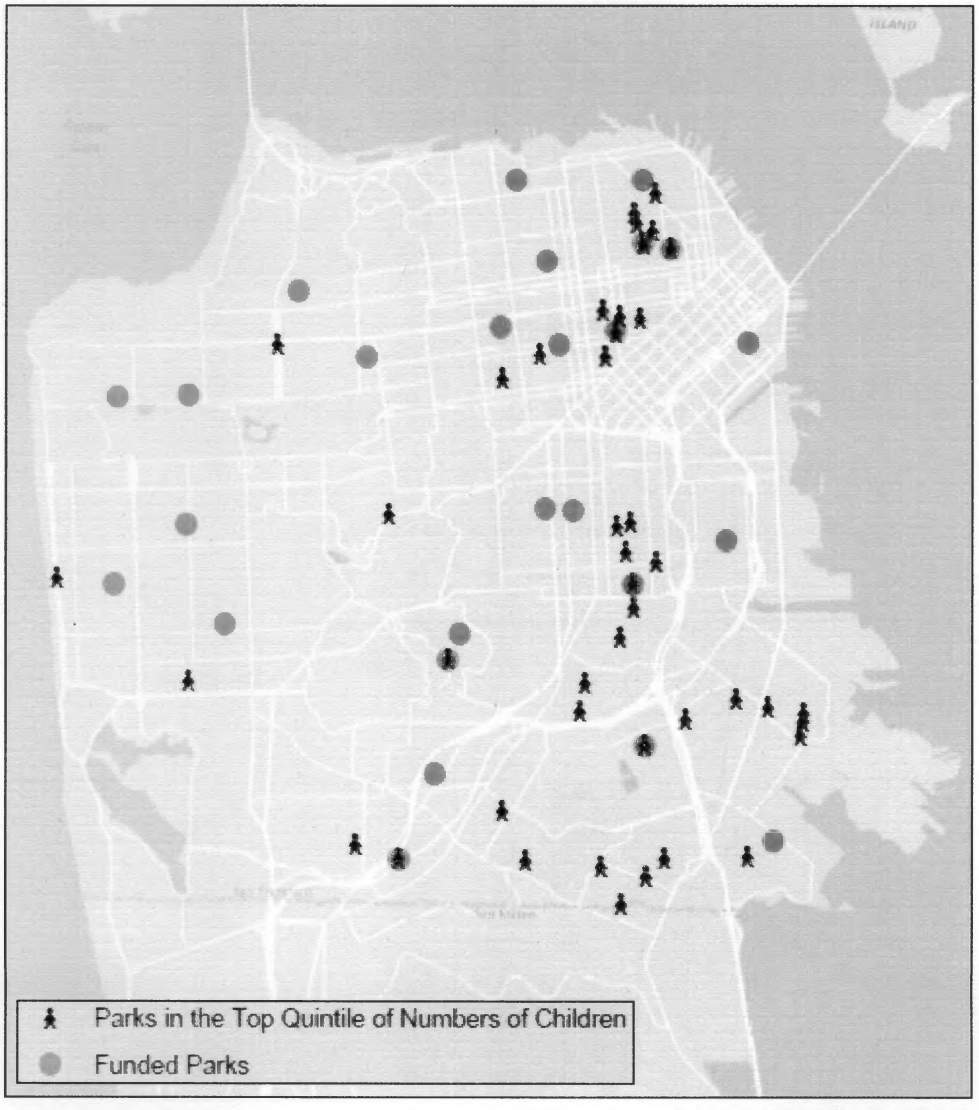
While there are particular neighborhoods with concentrated, high numbers of children and youth, there is no indication that park bond funding is directed to these areas. Bayview Hunters Point has six parks in the highest quintile of youth and children (top 20% city-wide), yet the expansive neighborhood only received one bond award to Gilman Playground. The funding to Gilman Playground was one of the smallest amounts awarded at $1.8 million dollars and although it is located in the Bayview Hunters Point neighborhood, it is not one of the parks identified with the highest number of youth within a quarter mile. The six parks in Bayview Hunters Point that were included in the list of top 20% of youth and children included Adam Rodgers, Palou Phelps Park, Bayview Park, Ridgetop Park, Hilltop Park and Joseph Lee Recreation Center. None of these parks have received funding from the 2008 or 2012 Park Bond.

Visitacion Valley had four parks that made the top quintile list and no parks were funded from the bonds in 2008 or 2012. Bernal Heights had four parks that made the list with no park bond awards. The Mission had four parks in the top 43 parks, with one award going to the Mission Recreation Center. The Excelsior and Outer Mission neighborhoods also lacked funding awards, despite having some of the highest number of youth and children surrounding several parks. Crocker Amazon Park, Excelsior Park and Ocean View Park were all in the top fifteen parks, the top 7% of parks city-wide. One top 20% park in the Excelsior neighborhood, Cayuga Park, did received bond funding in 2008.

Table 4— Quintiles of Number of Youth, Numbers and Percentage of Awards, Amounts and Percentage of Total Funding

Number of Youth	Number of Awards	Percentage of Awards	Amount of Funding	Percentage of Total Funding
1663-2998	8 (to 7 Parks)	30%	$78.5 M	39%
1217-1620	11	41%	$83.7 M	42%
980-1217	3	11%	$25.2 M	12%
752-977	3	11%	$ 8.5M	4%
752-977	2	7%	$ 5.5M	3%

Figure 6: Parks in the Top Quintile in Numbers of Children



Source: 2010 Census Data

The Tenderloin neighborhood has one of the highest, densest concentrations of youth and children in the City. Four of the Tenderloin neighborhood parks, Father Alfred E Boedekker park, Hyde &Turk Mini Park, John MacCually Park and Tenderloin Recreation Center, all ranked in the top 5% in numbers of youth and children. Of these three parks, Turk & Hyde Mini Park was the only Tenderloin park site to receive a park bond award, yet funding was at the lowest level of one million dollars. So although overall park bond money is being directed to parks with high numbers of youth, particular neighborhoods with very high numbers of youth and children surrounding their parks are receiving little to no funding from the park bonds.

4.5 Per Child Spending of Park Bond Funds

In analyzing the park bond awards solely in terms of per child spending around each park site, there is striking differences in the youth investments made. Per child spending reveals a range of between $409 at Turk & Hyde Mini Park in the Tenderloin to $12,304 at Palega Playground in the Portola neighborhood. Per child spending by each funded park is calculated in Table 5.

Table 5—Per Child Spending for Bond Funded Park Sites in 2008 and 2012

Park Site	# Youth within ¼ mile	Amount of Park Bond Funding	Per Child Spending
Hyde –Turk Mini Park	2448	$ 1,000,000	$ 409
South Park	708	$ 1,000,000	$ 1,412
Mountain Lake Park	1355	$ 2,000,000	$ 1,476
Gilman Playground	948	$ 1,800,000	$ 1,898
Moscone Rec Center	772	$ 1,500,000	$ 1,943
West Sunset Playground	1536	$ 3,200,000	$ 2,083
Raymond Kimball Playground	1267	$ 3,300,000	$ 2,605
Potrero Hill Recreation Center	1303	$ 4,000,000	$ 3,069
Willie Woo Woo Wong Playground	1664	$ 6,000,000	$ 3,605
George Christopher Playground	768	$ 2,800,000	$ 3,645
Joe DiMaggio Playground	1427	$ 5,500,000	$ 3,854
McCoppin Square	1256	$ 5,300,000	$ 4,219
Cayuga Playground	1707	$ 7,300,000	$ 4,277
Garfield Square	2451	$11,000,000	$ 4,488
Balboa Park	1480	$ 7,000,000	$ 4,730
Mission Playground	1480	$ 7,500,000	$ 5,068
Fulton Playground	819	$ 4,200,000	$ 5,128
Cabrillo Playground	743	$ 4,500,000	$ 6,056
Angelo J Rossi Park	1247	$ 8,200,000	$ 6,576
Chinese Recreation Center	1964	$14,200,000	$ 7,230
Glen Canyon Park <Funded twice>	2143	$12,000,000 $ 5,800,000 $17,800,000	$ 8,306
Lafayette Park	1048	$10,200,000	$ 9,732
Sunset Playground	1286	$13,700,000	$ 10,653
Margaret S. Hayward Playground	1287	$14,000,000	$ 10,878
Mission Dolores	1143	$13,200,000	$ 11,548
Palega Playground	1723	$21,200,000	$ 12,304

Average per child spending from the combined awards of the 2008 and 2012 park bond were mixed among the median income quintile ranges. The lowest-income areas, with median incomes under $56,000, had an average per child spending of $4,945 from the five park awards. Thirteen parks with higher median incomes benefited from a substantially higher average per child amount from the bonds. The highest median income areas, with median household income ranges from $101,000 to $130,000 had three park bond awards, yielded $2900 per child spending.

Table 6—Per Child Spending by Median Income Quintiles

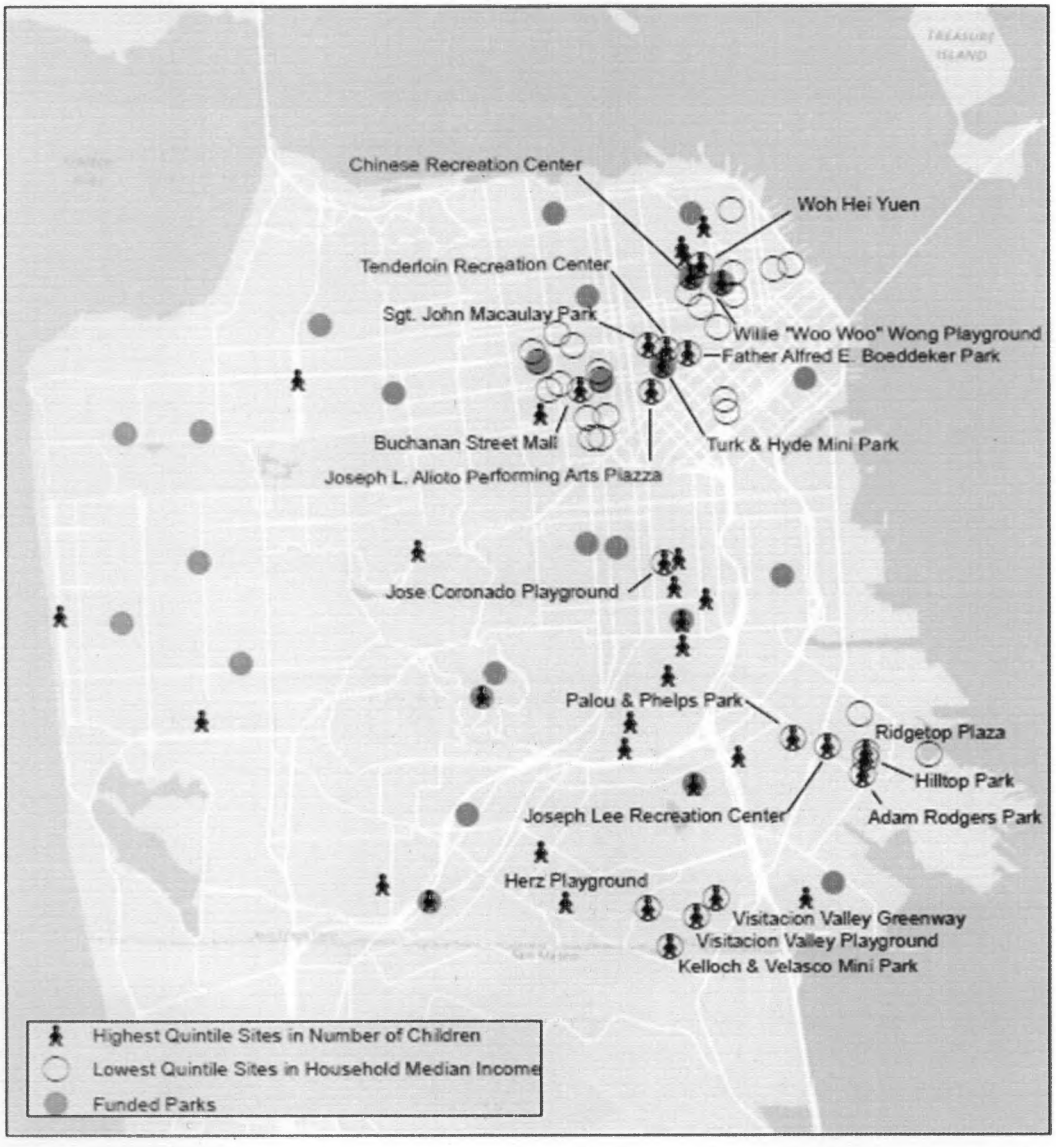
Median Income Quintile Ranges	Number of Parks Funded	Total Children Within ¼ mile of Bond Funded Park	Average Per Child Spending
$21,000 to $56,000	5	8,630	$4,945
$57,000 to $72,000	7	11,022	$6,029
$73,000 to $89,000	6	7,180	$4,066
$90,000 to $100,000	6	5,874	$7,034
$101,000 to $130,000	3	3,267	$2,900

4.5 Lowest Median Income Parks with the Highest Number of Youth

There are nineteen park sites in San Francisco that are surrounded by the lowest 20% of median income households and the highest 20% of youth and children living within a quarter mile. These parks are largely concentrated in five neighborhoods that include Chinatown, Tenderloin, Western Addition, Bayview Hunters Point, and Visitacion Valley. Three of these eighteen parks have received park bond funding in either 2008 or 2012. Two of the funded parks were in the Chinatown neighborhood, Chinatown Recreation Center and Willie Woo Woo Wong Recreation, and the third park was Hyde & Turk Mini Park in the Tenderloin. Collectively, these three sites received $21.2 million dollars or about 10% of possible funding from both bonds.

None of the five parks in Bayview Hunters Point with the lowest-income neighbors and highest numbers of children have been awarded any park bond funds in 2008 or 2012. These parks include Adam Rodgers, Hilltop, Ridgetop, Palou Phelps, and Joseph Lee Recreation Center. The same is true for Visitaction Valley, where four parks including Herz Playground, Vistiacion Valley Playground, Visitacion Valley Greenway, and Kelloch Velasco have not reaped any benefits from the most recent two park bonds.

Figure 7: Park Sites in the Lowest Quintile of Household Median Income and Top Quintile in Numbers of Children



Source: 2010 Census Data

4.6 Park Bond Funding and Race and Ethnicity

In 2010, the total population of the City of San Francisco was 805,235 people. Of that population, the racial and ethnic breakdown of the population included 48.5% White /Caucasian, 33.3 % Asian, 15.1% Hispanic/Latino, and 6.1% Black/ African American (CENSUS, 2014).

4.7 Latinos/Hispanics and Park Bond Funding

The highest percentages of Latinos/Hispanics around park sites in San Francisco, not surprisingly, are in the Mission neighborhood, as well as in Bernal Heights, the Excelsior and a few others scattered in Bayview Hunters Point, Dog Patch and the Tenderloin. The quintile ranges of percentages of Latino or Hispanic population were the following:

1) 54% - 25%
2) 24% -13%
3) 13%-9%
4) 9%-6%
5) 6%-3%

Of the 27 bond awards between 2008 and 2012, six awards, or approximately 22% of them benefited the areas with highest percentages of Latinos in San Francisco. These parks and the percentage of Latino/Hispanic population within the quarter mile included, Garfield (51%), Mission Playground (34%), Cayuga (28%), Gilman (25%), Balboa (25%) and Turk & Hyde Mini Park (25%). The total amount of bond funding that was directed to these highest quintile parks was $35.6 Million and represents about 18% of the total available bond dollars.

An additional three parks were funded in the next quintile, which totals eight parks and equates to 30% of park bond awards benefiting park areas where at least 13% neighbors were Latino or Hispanic. These parks received some of the highest funding awards, making the combined dollars amount of top two quintile awards $74 Million. This represents 37% of total available funds.

However, funding six of the top 43 parks, represents only 14% of parks that have the highest percentages of Latino/Hispanic neighbors. Bond funding for only nine out of the top 86 parks represents funding for only 10% of all parks where neighbors were at least 13% Latino or Hispanic.

4.8 Black/African Americans and Park Bond Funding

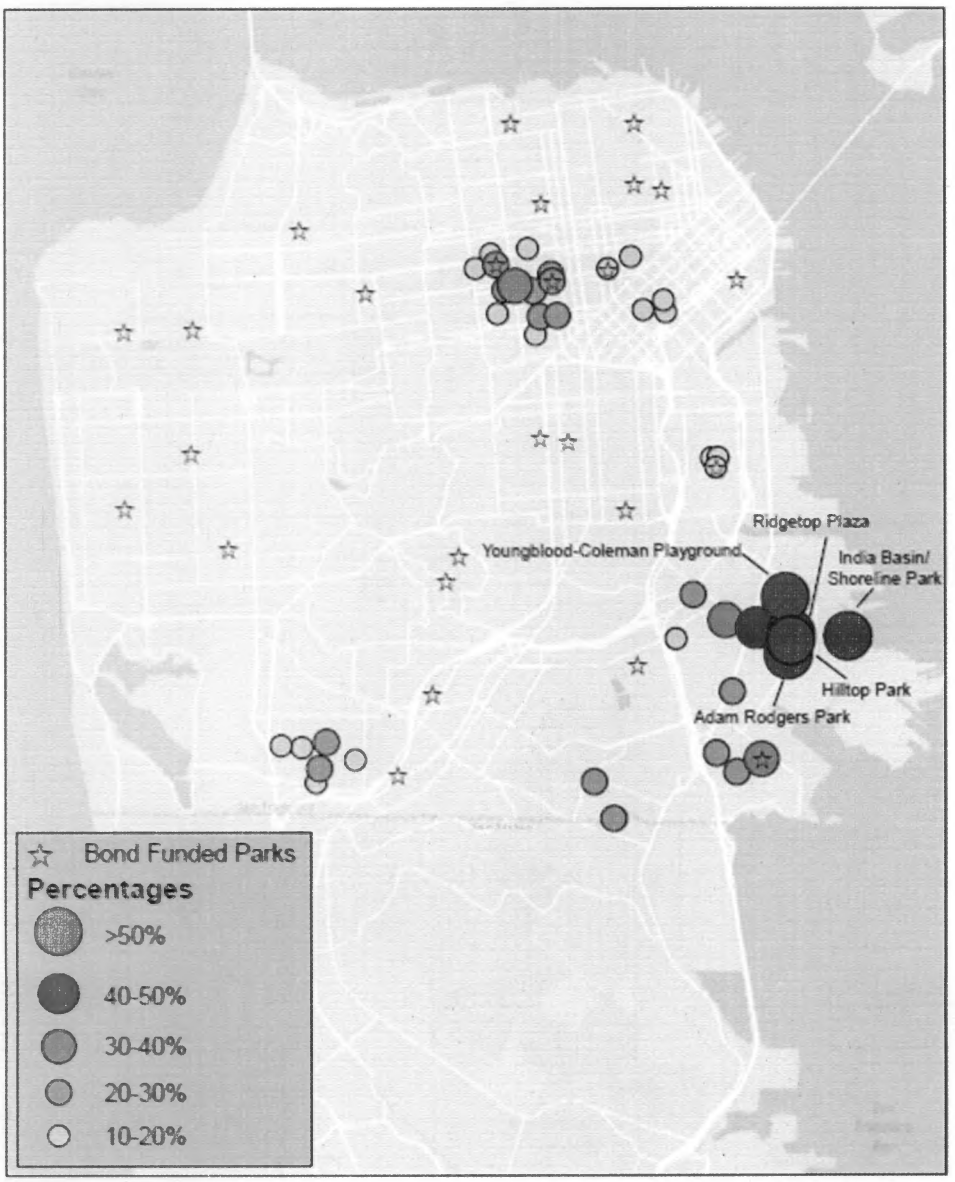
In 2010, San Francisco had a Black/African American population of around 6% (CENSUS, 2014). The quintile breakdowns, particularly within the top 20% of park sites, have considerable ranges. The quintile ranges for Black/African Americans percentages surrounding park sites were the following:

1) 66% -13%
2) 12% - 6%
3) 6% - 4%
4) 4% - 2%
5) 2% - 1%

Within the top quintile of parks surrounded by Black/African American neighbors, four parks were funded by the two bonds. This represents 15% of the bond awards. The funded parks and there corresponding percentage of Black/African American populations included Gilman Playground (34%), Margaret S Hayward (26%), Raymond Kimball (20%), and Potrero Hill Recreation Center (15%). The total bond funding that was allocated to the parks in the top quintile totaled $23.1 Million dollars or 11% of available funds.

Funding for four parks in the top quintile, where at least 13% of the population is Black/African American represents 9% of the possible sites. The second quintile starts with only 12% of the population identifying as Black or African American and therefore is difficult to consider any additional awards or funding as being directed to this population. Notably, only five parks in San Francisco are surrounded within a quarter mile by Black/African American populations of greater than 50%. These five parks are Indian Basin/Shoreline, Ridgetop Plaza, Hilltop Park, Adam Rodgers, and Youngblood Coleman (See Figure 8). None of these parks received any of the 2008 or 2012 Neighborhood Park Bond funding.

Figure 8: Park Sites in the Highest Quintile of Black/African American Population Percentages



Source: 2010 Census Data

4.9 Asian/ Pacific Islanders and Park Bond Funding

The 2010 population in San Francisco was reported being just over 33% of an Asian/ Pacific Islander descent, making it the second largest racial/ethnic group in the City. The quintile ranges for Asian/ Pacific Islanders surrounding San Francisco park sites were the following:

1) 80% - 47%
2) 47% - 33%
3) 33%-21%
4) 20%-15%
5) 14% - 8%

Within the top quintile, buffers with the highest 20% of Asian neighbors, ten park sites were funded. These sites include Willie Woo Woo Wong, West Sunset, Sunset, Palega Playground, McCoppin, Chinese Recreation Center, Cabrillo Playground, Cayuga, Fulton, and Balboa. Interestingly, seven of these sites were funded in 2008 where there were a total of only twelve awards. Funding of these ten sites equates to 37% of the park bond awards being directed to park sites with the highest percentages of Asian neighbors within a quarter mile buffer. This is three times more than white

neighborhoods, more than double Black/African American neighborhoods and 15% more than Latino/Hispanic neighborhoods. In the second quintile, three additional parks were funded, which is a combined percentage of 48% of the bond awards in the top two quintiles. Out of the thirteen sites funded only two of these park sites, Willie Woo Wong and the Chinese Recreation Center, are located in the lowest-income park areas.

The total funding amount allocated in the top quintile to park sites with the highest percentage of Asian neighbors was $96.6 million dollars or 48% of available funding. Including the second highest quintile this amount jumps an additional $14.7 million dollars to $111.3 million or 55% of the available funding.

4.10 Whites and Park Bond Funding

San Francisco had an almost half white population in 2010 or approximately 390,539 people (48.5%) identifying as white alone in the Census data. The quintile range percentages of the white alone populations within a quarter mile of the studied parks are the following:

1) 86% - 67%
2) 67% - 60%
3) 59% -51%
4) 51% -37%
5) 36% -7%

Within the top quintile, meaning over 67% of the park neighbors are white, three parks received park bond awards. These parks were Mission Dolores, Moscone Recreation Center, and Lafayette Park and represents 11% of the bond awards. Combined they received $24.9 Million dollars or 12% of the available bond dollars.

The next quintile, where the park neighbors are still over 60% white, received five more park bond awards for a total of eight awards in the top two quintiles. These parks include George Christopher, Glen Canyon Park two times, Mission Playground, and Mountain Lake. The top two quintiles of white populations received $55 Million in available bond dollars or 27% of the available funds.

Giving funding to three out of the top 43 highest white population parks represents 7% of the possible sites, while funding eight out of 86 represents funding for 30% of the top two highest quintiles of white population parks.

5. Discussion: Research Findings and Social Disparities

Income disparities in San Francisco are increasing as the gap widens between top and bottom earners. San Francisco has a growing low-income population and has seen the highest increase in inequality of all California counties between 2007 and 2012 as it

relates to a change in household income. Poverty in most major California counties has remained flat since 2011, yet it is rising in San Francisco (SFHSA, 2014).

San Francisco also has a declining youth population. The reported youth population of 107,524 in 2010 was the lowest percentage of youth in San Francisco in the last 80 years (SFHSA, 2014). Since the 1950's the city has also seen a shrinking Black/ African American population, estimated to have decreased 48% over the last sixty years to 89,278 residents. And while the percentage of Latino/Hispanic population appears to be growing, currently at an estimated 121,774, this number is slight in comparison to the increasing Asian Pacific Islander and White populations (SFHSA, 2014).

With these trends in mind, it's clear that the distribution of park bond funding is a critical part of sustaining a diverse San Francisco. Realizing the need to sustain diversity along with the historic environmental injustice within particular neighborhoods, two of San Francisco's city departments have existing environmental justice policies and programs. The San Francisco Department of the Environment has an Environmental Justice Program that "promotes healthy environments in the city's

under-served communities". One of the program's missions is to "seek to address health inequities by ensuring that places where we live, play, learn and work are safe and healthy and that everyone has access to affordable and healthy food, housing, and quality surrounding amenities and services" (SFE, 2015). As well, the San Francisco Public Utilities Commission (SFPUC) adopted a formal and comprehensive environmental justice policy in 2009 that detailed the agencies commitment to "prevent, mitigate, and lessen disproportionate environmental impacts of its activities on communities in all SFPUC service areas and to insure that public benefits are shared across all communities" (SF PUC, 2009). Through a framework of environmental justice, the following sections discuss the research findings, highlighting the social disparities found in the distribution of the park bond funding from 2008 and 2012.

5.1 Median Household Income

Each of the five quintiles of median income ranges benefited from bond awards and funding. The highest quintile of median incomes, which is $101,000 to $130, 000 received the least amount of awards, three out of 27, and the least amount of funding at $10.3 million. However, the lowest quintile of median income ranges, $21,000 to $56,000, benefited from the next least amount of bond awards and funding, receiving

five awards that totaled 38.5 million. All other three median income quintiles had higher number of awards and more funding allocated.

In addition, all five of the bond awards to the lowest-income park sites were in just the three neighborhoods. Two awards went to Chinatown, two to the Western Addition, and one to the Tenderloin neighborhood. And while 29 out of the 43 lowest-income parks are located in some of the densest neighborhoods in the northeast quadrant of downtown San Francisco, two low-income neighborhoods in the southeast section of the City received no park bond funding for their lowest-income park areas. Bayview Hunters Point, with seven of the lowest median income park sites and Visitacion Valley with 4 sites received no benefits for these parks from the bonds. Both these neighborhoods, but Bayview Hunters Point in particular, has historically suffered disproportionally from environmental injustice. The lack of city investment through park bond funding perpetuates this pattern.

5.2 Park Sites with High Numbers of Youth

The park areas with the highest 40% of youth living within a quarter mile, received nineteen out of the 27 bond awards for a total of $162.2 million, or 81% of the

available funding. The highest quintile ranges, where there were 1638 to 2998 youth, had eight of those awards or 30% of awards equaling 78.5 million dollars.

Allocations of park bond money were significantly directed to park areas with high numbers of children, however, similar to low-income median areas, particular neighborhoods with high numbers of youth were left out. Bayview Hunters Point again topped the list with six parks in the top 20% of number of youth that received zero funding. Visitacion Valley and Bernal Height each had another four that received no funding. The Excelsior and Tenderloin despite having some of the largest numbers of youth living within a quarter mile of the parks received one award each. The award that was made to the Hyde and Turk Mini Park in the Tenderloin was for only $1 million, the smallest amount of all the awards.

Per child spending was mixed between the quintiles of household median income levels, however the dramatic differences between parks was notable. The lowest household median income park sites were not the areas with the highest per-child spending. Rather the second highest income quintile ($90,000 to $100,000) saw the highest rate of per-child spending.

5.3 Race and Ethnicity in Funding Priorities

The highest number of awards and most funding from the bonds by race and ethnicity was dominantly Asian/ Pacific Islander. And while this Census classification covers a broad and diverse group of people, it is still noteworthy that the top 43 parks with the highest number of Asian/ Pacific Islanders received 37% of the bond awards and 48% of the available funding.

The other three top quintiles of race/ethnicities received much smaller awards and funding percentages. Parks with the highest quintile of Latino neighbors received 22% of the awards and 18% of the funding, while park sites in the highest quintile of Blacks/ African American neighbors received 15% of the awards and 11% of the funding, and park sites in the highest quintile of White neighbors received 11% of the awards and 12% of the funding. While the funding for Latino/Hispanic and Black/African American populations are similar to those of White populations in terms of top quintile funding ranges, it is difficult to assess Black/African American populations by the same categories because the range of percentages in the highest quintile is so wide (66% to 13%). There are only five parks in the City of San Francisco that are surrounded by

populations of 50% or more Black/African Americans and none of these parks received Neighborhood Park bond funding in 2008 or 2012.

Table 7—Number of Awards and Percentage of Funding to Park Sites with the Highest Percentages of Residents by Race/Ethnicity

Race/Ethnicity	# of Awards to Top Quintile	% of Awards to Top Quintile	Amount of Funding to Top Quintile	% of Money to Top Quintile
White	3	11%	24.9M	12%
Asian / Pacific Islander	10	37%	96.6 M	48%
Black / African American	4	15%	23.1 M	11%
Latino	6	22%	35.6 M	18%

5.4 Park Funding and Environmental Injustice

Only three out of the all nineteen parks with the lowest 20% median income neighbors and highest 20% number of children were funded with the 2008 and 2012 bond funding for neighborhood parks. The three funded parks were Willie Woo Wong Playground, Chinese Recreation Center, and Turk & Hyde Mini Park. Turk and Hyde Mini Park, however, received the lowest funding award of both bonds at $1 million dollars.

Sixteen parks with the lowest-income neighbors and highest number of youth didn't receive awards from either the 2008 or 2012 neighborhood parks bond funding. Eight of these sixteen park sites were also in the highest quintile of Black/African Americans living within a quarter mile, with three of the park sites both in the highest Latino/Hispanic and Black/African American quintiles (See Table 8).

Bayview Hunters Point park sites are most notably not receiving the benefits of the Neighborhood Park Bond funding. None of Bayview Hunter Point's five parks with lowest-income neighbors, high numbers of children and the highest percentages of minority neighbors received funding in the 2008 or 2012 Neighborhood Park Bond Funding.

Bayview Hunters Point and the Mission are the only two neighborhoods in San Francisco with parks surrounded by over 50% minority neighbors. Bayview Hunters Point has five parks surrounded by an over 50% Black/African American population (See Figure 7) and the Mission has five parks surrounded by an over 50% Latino/Hispanic population. None of these ten park sites in the Mission or Bayview Hunter Point received Neighborhood Park Bond funds in 2008 or 2012.

Some of these parks did receive funding from the 2000 Park Bond, although those awards tended to be much smaller than the 2008 and 2012 bonds, with the exception of Coffman Pool at Herz Playground, Joseph Lee Recreation Center and Father Alfred E Boedekker park awards. And while other parks on this list are slated for funding from other bond funding sources, such as the 2012 Failing Playground Funds (awards of between $1 and $2 million) or have won smaller awards competitively through their applications to the park bond Opportunity Fund (whose awards don't exceed $500,000) they have not benefited from the selection process of the Neighborhood Park bond funds (See Appendix B).

Table 8—Park Sites that Received No Neighborhood Bond Funding in 2008 and 2012 in the Lowest Quintile of Household Median Income, Highest Quintile in Numbers of Youth and either Highest Quintile Percentage of Latino and/or African American populations

Park Name	Highest Latino	Highest Black/AA	Neighborhood
Who Hei Yuen			Chinatown
Joseph L. Aliotio			Civic Center
Sgt. John Macaulay			Tenderloin
Tenderloin Rec Ctr			Tenderloin
Father A E Boeddekker		Yes	Tenderloin
Buchanan Street Mall			Western Addition
Adam Rodgers	Yes	Yes	Bayview Hunters Point
Ridetop Plaza		Yes	Bayview Hunters Point
Hilltop Park		Yes	Bayview Hunters Point
Joseph Lee Rec Ctr	Yes	Yes	Bayview Hunters Point
Palou & Phelps	Yes	Yes	Bayview Hunters Point
Herz Playground		Yes	Visitacion Valley
Kelloch &Vellasco		Yes	Visitacion Valley
Vis Valley Playground			Visitacion Valley
Vis Valley Greenway			Visitacion Valley
Jose Coronado			Mission

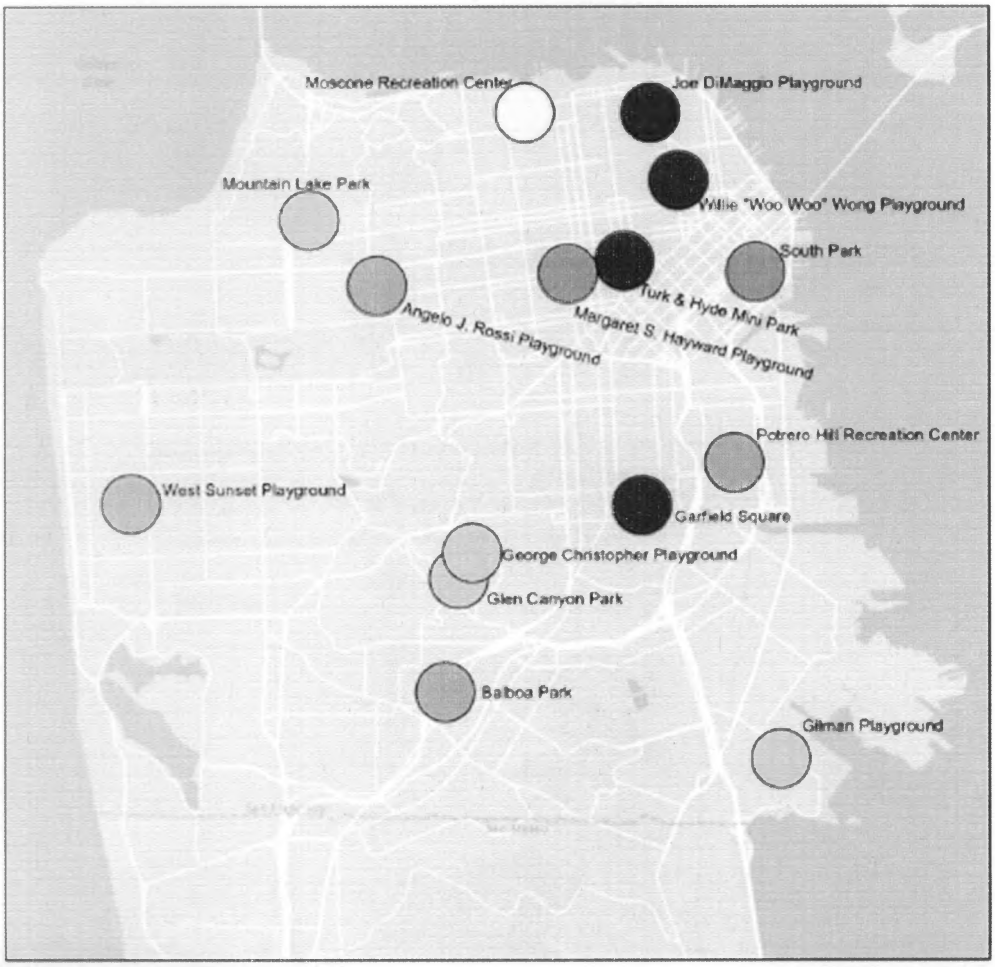
5.5 Funding Selection Process and Criteria

The park sites selected for bond funding in 2008 and 2012 were recommended by Recreation and Park staff, under the Capital and Planning Division. According to the City and County of San Francisco, the 2008 park bond "allocated the majority of the funding to capital improvement of neighborhood parks throughout the city, selected on

the extent to which they are unsafe in an earthquake, in poor physical condition, as well as their ability to provide basic, recreation uses to many San Franciscans" (Emerson and Brown, 2013). In 2012, the criteria language listed four standards that would be used for evaluating park sites including seismic safety, facility physical condition, urban density, and park features and amenities. Outreach materials for the bond stated, "SF Rec and Park will use policy driven criteria to determine facilities that should be considered for the bond" (SFREC, 2013).

Yet these criteria appear to be general guidelines with no weighted values. For example, in looking at urban density, the easiest quantifiable stated criteria for the 2012 bond, my analysis found that only four of the fifteen funded sites were in the highest quintile of all park site population densities, which is between 34,288 and 111,404 people per square mile (See Figure 9). The other eleven had population densities of less than 34,500 people per square mile. And while urban population density is just one of four stated criteria, it is difficult to ascertain the influence of each criterion in the overall selection.

Figure 9: Population Density within a Quarter Mile of 2012 Neighborhood Bond Funded Park Sites



After researching city documents and websites, as well as personal communications with Dawn Kamalanathan, SFRPD Director of the Capital and Planning Division, I didn't discover any official scoring, ranking or other official process for selecting funding sites or funding amounts. In one conversation with Dawn Kamalanathan about the award process she admitted that it was partly politically driven.

The final selection process of how awards are recommended by Recreation and Park staff to the Commission is not transparent. The process for determining the dollar amounts awarded to each park is also unclear. The final approval of the recommendations is made by the Recreation and Park Commission meeting through a vote by the seven member body (SF REC PARK, 2015).

Scholars have found that "broad criteria that are not designed to evaluate merit-based distribution of funds in a systematic way, but rather consider the implications of voter participation and political influence, can create subtle forms of racism that guide both race and class relations" (Boone, et al 2009). Specific, quantifiable criteria for park bond site selection are critical to achieving a transparent process that supports

environmental goals. Recommendations for establishing such a process are elaborated below.

6. Discussion and Recommendations

Park funding is a critical piece in supporting thriving neighborhoods. This research sought to analyze how funding decisions were made in San Francisco. It further sought to identify where funds have been distributed since a comprehensive plan was established in 2005. This author found that neither the process nor the criteria for park bond allocations is clear. Further, the data indicate that bond funding from 2008 and 2012 has largely not gone to many of the neediest, highest minority park sites. Specifically:

- Park sites with neighbors in the lowest income quintile ($21,000 to $56,000) benefited from the second least amount of park bond awards.
- Only three out of nineteen parks that were in both the lowest quintile of income and the highest quintile of children were funded. In other words, sixteen sites with likely the highest numbers of children in poverty did not benefit from the 2008 or 2012 awards.

- Only five park sites in San Francisco are surrounded by over 50% African American/Black neighbors and only five are surrounded by more than 50% Latino/Hispanic neighbors. None of these parks received bond funds.
- The Bayview Hunters Point neighborhood hosts all five sites with the highest percentage of African American/ Black neighbors. It is also home to five of the sites that are in both the lowest income group and the highest number of children. None of these parks received funding in 2008 or 2012.

In light of San Francisco's current rapidly changing demographics and widening income disparities patterns, it is only becoming more pressing to identify patterns in parks funding, and decide if changes are needed. This research suggests that if the City wants to ensure that all of its residents have equitable access to environmental amenities such as safe and inviting park and recreation spaces, then changes are necessary. The following steps are recommended for bringing future allocations of Neighborhood Park Bond funding more in line with principles of environmental justice.

1) The Neighborhood Park Bond funding process needs a criteria ranking or scoring system that includes a systematic evaluation of environmental justice factors.

Distribution of parks bond funding does not constitute justice unless the procedures to allocate them are just as well. An assessment of justice needs to include an evaluation of procedural equity (Boone, 2009). Precedent has already been set with the process for determining the Failing Playground awards under the 2012 bond awards. In that process, a task force was appointed that developed clear criteria for the awards. The task force decided that all playgrounds containing toxic pressure treated wood be the first priority, followed by tiers based on low household median income, high youth density, and a low Parks Alliance report card grade (SFRECPARK, 2014). This process was transparent and based on trackable, pre-determined metrics. A similar model could be used for the larger neighborhood park sites bond funding. The selection process should clearly defined for the public to understand, using a defined scoring or ranking system to determine the awards and the funding amounts.

2) The San Francisco Recreation and Parks Department should have a stated commitment to environmental justice. In 2009, the San Francisco Public Utilities Commission and, the City's largest department, passed resolution 09-0170 in order to "affirm and commit to the goals of environmental justice to prevent, mitigate, and lessen disproportionate environmental impacts of its activities on communities," and

furthermore, to "insure that public benefits are shared across all communities" (SFWATER, 2009). The SF PUC policy and the related set of guidelines set a new standard for public agencies. The Recreation and Parks Department should follow this model to develop a similar policy, creating an institutional commitment to environmental justice.

3) To achieve environmental justice we must acknowledge historic injustice through both a commitment to equitable allocation of environmental benefits (as well as environmental hazards). Historically, communities of color across the U.S. have suffered from disproportional amounts of pollution and environmental hazards. In San Francisco, the Bayview Hunters Point neighborhood has been the dumping ground for noxious and unwanted land uses in for decades (Rechtschaffen, 1996). Recognizing and rectifying these deep historical imbalances requires intentional re-balancing of resources.

4) The criteria for funding decisions should include attention to specific demographic factors, including income, race, and age. Therefore, park sites in the lowest income neighborhoods should be prioritized in order to strengthen them with capital investments. Park sites with the highest numbers of youth living nearby should also be prioritized, specifically within the Bayview Hunters Point, Visitacion Valley,

Tenderloin, and the Excelsior neighborhoods. Award amounts should be informed by an analysis of per child spending. Additionally, funding for park sites with higher populations of minority neighbors and historic environmental injustice issues should be prioritized. Those parks in locations with more than one of these factors should receive even stronger consideration in the selection process.

7. Limitations and Further Research

There are three key limitations and sources of error in my study. First, using Census Data for demographic information presents potential under representation of certain demographics as lower-income and non-English-speaking populations are less likely to respond to Census collection surveys and staff. As well, the data used in the Race and Ethnicity sections were White alone, Black/African American combined, Asian Pacific Islander combined and Latino/Hispanic combined. The broad and complex nature of the Census categories for race and ethnicity, and specifically Asian /Pacific Islanders and Hispanic/Latino is acknowledged.

The three demographic categories analyzed in this study revealed patterns of funding that are concerning for environmental justice and future research could be enriched by including more or different categories. Most immediately, the elderly, who

often have limited mobility and incomes, and can benefit disproportionately from public park resources.

In addition, this research study doesn't include the 2000 Neighborhood Bond funding awards, which may leave out relevant data. I chose to focus on the 2008 and 2012 bonds primarily because they were awarded after a strategic capital planning process was adopted by the City and County in 2005 and because I believed that the high number (74) and smaller amounts of the awards would skew the data. However, during the course of the research, I discovered that several of parks near lowest-income, highest youth, and highest Black and Latino populations had received funding awards in 2000. A combined analysis of all three bond funded sites and the amounts from the earlier 2000 bond would provide further detail and funding distribution history.

Finally, given the wide variety of park sites that are eligible for the neighborhood park bond funding, analyzing the types of spaces, their size, current amenities, and potential for private or philanthropic funding would add to the discussion of park bond resources.

8. Conclusion

Monitoring for environmental justice, particularly when public funds are being allocated to support park sites, is essential to avoid exacerbating inequalities and social polarization (Wolch, 2000). Fortunately, reliable demographic information is both accessible and easily monitored given the tools available through Geographic Information Systems (GIS) and other computer technologies.

This research provides an example of the kind of data that should be included in decision making. Regarding income, the lowest-income park sites were still receiving fewer awards and less funding than parks in wealthier neighborhoods. Given the current income disparities in San Francisco, environmental justice would be better achieved if more park bond funding was allocated to park sites surrounded by lower median household incomes.

This analysis of per child spending demonstrates huge discrepancies between the parks and their funding levels. Many neighborhoods with the highest numbers of

youth were left out of the funding awards, including Bayview Hunters Point and Visitacion Valley. The Excelsior and Tenderloin also received limited funding despite the highest city-wide numbers of youth living closest to the park sites.

In looking at race and ethnicity data, nearly half the funding went to park sites dominated with Asian /Pacific Islander populations, while only 11% of funding went to neighborhoods with the highest percentages of Blacks/African Americans and 18% with the highest percentages of Latinos/Hispanics. As San Francisco sees declining diversity, particularly the loss of the Black/African American community, priority should be given to these park sites.

Most notably, Neighborhood Park Bond funding has not prioritized sites with multiple environmental justice considerations, such as low-income, highest youth populations and high concentrations of minority populations. The last two park bonds funded only three out of the nineteen parks in the City that meet these three criteria.

Neglect and lack of funding is an environmental injustice. Lack of capital funding can make a parks space dangerous, unpleasant, and unwelcoming, often to the point of non-use. The simple presence of a nearby park doesn't mean that people perceive it as

an amenity (Boone, 2009). Some departments within the San Francisco city government already has existing policies and commitments to environmental justice, but the Recreation and Park Department does not. These policies should be expanded and implemented at the San Francisco Recreation and Park Department.

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Appendix A—Environmental Justice Policy of the SF PUC

ENVIRONMENTAL JUSTICE POLICY
(SFPUC Commission Resolution No.09-0170, dated October 13, 2009)

The San Francisco Public Utilities Commission affirms and commits to the goals of environmental justice to prevent, mitigate, and lessen disproportionate environmental impacts of its activities on communities in all SFPUC service areas and to insure that public benefits are shared across all communities.

The SFPUC defines environmental justice as the fair treatment of people of all races, cultures, and incomes and believes that no group of people should bear a disproportionate share of negative environmental consequences resulting from the operations, programs, and/or policies of the SFPUC.

The SFPUC acknowledges that enforcement of environmental laws, rules, regulations, and best practices that apply to its resource supply, operations and delivery of water, wastewater, and power services is core to the fair treatment of the people we serve and the stewardship of our lands.

The SFPUC believes that everyone has the right to a job and reaffirms its commitment as an equal opportunity provider.

In application of this policy to SFPUC projects and activities, SFPUC staff shall:

- Develop and implement training in SFPUC environmental justice issues in conjunction with staff orientation and continuing education efforts.
- Recognize community need for employment through continuation and expansion of workforce development strategies, including green job opportunities in community historically disproportionately burdened by pollution.
- Identify new and continue to implement existing initiatives to avoid or eliminate disproportionate impacts of SFPUC decisions and activities in all service areas.
- Develop diverse and culturally appropriate communication strategies to ensure that stakeholders can participate in decisions and actions that may impact their communities.
- Work with stakeholders, including the SFPUC's Citizens Advisory Committee (CAC) and CAC Environmental Justice Subcommittee, to:

(1) Develop a concise checklist of environmental justice guidelines or best practices that may be useful in assessing how SFPUC actions are improving or can improve specific proposed SFPUC projects, in addition to the enforcement of applicable environmental laws, rules, regulations and the above standards.
(2) Identify SFPUC projects that best demonstrate the implementation of this policy and useful best practices.
(3) Identify SFPUC projects that may have additional environmental impacts on communities already affected by disproportionate environmental impacts and work to minimize those impacts.
(4) Continue to identify and partner with organizations in order to prioritize, establish and fund appropriate activities to improve environmental justice performance in communities already affected by disproportionate environmental impacts of SFPUC activities.

Appendix B—Other Known Bond Related Funding or Funding Factors

Park Name	Other Bond Related Funding or Funding Factors
Who Hei Yuen	Built in 1999, so infrastructure is newer.
Joseph L. Aliotio	None Identified
Sgt. John Macaulay	2012 Bond Tier 1 Failing Playground -$1 to $2M
Tenderloin Rec Ctr	None Identified
Father A E Boeddekker	2000 Park Bond-$6M Private Funding Renovated
Buchanan Street Mall	Tier 2 Failing Playground- funding is tentative
Adam Rodgers	None Identified
Ridetop Plaza	None Identified
Hilltop Park	Received up to $1M in funds for a skate park from the competitive application process of the 2010 and 2012 Park Bond Opportunity Funds
Joseph Lee Rec Ctr	2000 Park Bond—$10M
Palou & Phelps	None Identified
Herz Playground	2000 Park Bond for Coffman Pool—$10.8 M 2012 Park Bond Tier 2 Failing Playground Funds-tentative
Kelloch &Vellasco	2000 Park Bond –$2M
Jose Coronado	Received less than $500K in funds from the competitive application process of the 2010 Park Bond Opportunity Fund