

**TOWARDS URBAN EQUITY:
A JUST SUSTAINABILITIES ANALYSIS OF
MUNICIPAL SUSTAINABILITY POLICY AND PLANNING**

by

Lemir Teron

A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Energy and Environmental Policy

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LIST OF ABBREVIATIONS

ABI	Atlanta BeltLine Inc.
APS	Atlanta Public Schools
AJC	Atlanta Journal Constitution
ARC	Atlanta Regional Commission
BTU	British Thermal Units
CBA	Community Benefits Agreements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CO	Carbon Monoxide
CSO	Combined Sewer Overflows
CSS	Combined Sewer Systems
EMC	Electric Membership Corporations
EJ	Environmental Justice
FHA	Federal Housing Administration
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
GRTA	Georgia Regional Transportation Authority
GSU	Georgia State University
LEED	Leadership in Energy & Environmental Design

MARTA	Metropolitan Atlanta Rapid Transit Authority
MSAT	Mobile Source Air Toxics
NGO	Nongovernmental Organization
NAAQS	National Ambient Air Quality Standards
NPU	Neighborhood Planning Unit
RRS	Risk Reduction Standards
TAD	Tax Allocation District
UN	United Nations
VMT	Vehicle Miles Traveled

ABSTRACT

Since the early 1990s, there has been a call for local governments to engage in environmental sustainability planning as an integral part of global sustainable development. Similar to broader sustainable development movements, cities often frame their actions around a triumvirate of concern areas (economic growth, social development and environmental sustainability) to achieve corresponding goals. This dissertation examines and evaluates the challenges and outcomes of urban planning in an U.S urban city. It focuses on municipal environmental sustainability efforts integrated with environmental justice principles, using sustainability as the policy focus and giving attention to equity and justice concerns. This study attempts to distill whether planning and policy are undergirded by equitable practices that ultimately lead to improved considerations and conditions for marginalized communities. Drawing on these strategies this study investigates the tensions between urbanization, sustainability and equity concerns by looking at broader policy issues that extend beyond the analysis of planning, and includes investigating the mechanisms that undergird urban growth and development. A just sustainabilities (Agyeman, 2013) framework will be used to gauge how municipal comprehensive development goes about the work of planning and achieving sustainable development. The work concludes that while cities are conscious of social inequities that are exacerbated and promoted by environmental inequality, it highlights that marginalized communities need a greater voice in policy development to promote more equitable

outcomes; while more aggressive policies and development action that disseminate from governments are needed to actively identify and eradicate environmental threats and concurrently promote improved quality of life outcomes, such as access to greenspace, improved mobility options and healthy food options.

Chapter 1

PROMOTING JUST SUSTAINABILITIES

1.1 Areas of Concern

Since at least the early 1990s with the creation of Local Agenda 21 at the seminal Earth Summit, there have been demands for urban governments to engage in environmental sustainability planning as an integral part of overall environmental sustainability efforts. Similar to broader sustainable development platforms, many cities frame sustainability around a triumvirate of concern areas (economic growth, social development and environmental sustainability) to achieve corresponding goals. As evidence of the increased attention that urban planning regimes have given related issues, is the proliferation of sustainability offices and departments in city halls across the nation (and globally) along with innumerable NGOs (e.g. ICLEI, the Emerald Cities Collaborative, C40 Cities) that are dedicated to confronting environmental challenges on the urban scale. This has been accompanied by the development of municipal sustainability documents and plans, generated by both governments and NGOs, featuring programmatic steps, actions and behaviors for cities to function more sustainably. Considering that many environmental issues (e.g. air quality, traffic congestion and energy consumption) are not bounded by political territory, regional approaches are necessitated and also engaged in (Pavel, 2009). Similarly, whether due to the inaction, inattention or incapacity of governments to perform,

private entrepreneurs also act, through both public/private partnerships and outside of the influence of government. This materializes in a number of manifestations including bike and car share programs, sustainable building credentialing, and renewable energy firms.

In the near quarter century since the initial calls for local sustainability actions, and subsequent behavior, while many threats have been identified, assessed and engaged, disparities in action and outcomes do exist. Within the timeline to evaluate sustainable development planning, while jargon, information and perhaps successful action against threats has risen (UNDP, 2012), questions remain on how the disparities in outcomes persists for marginalized communities and individuals, sustainability planning notwithstanding (Bryant, 1995; Bullard, Mohai, Saha, & Wright, 2007).

This dissertation examines and evaluates the challenges and outcomes of reconciling urban planning and policy efforts in the Age of Urban Sustainability, using environmental sustainability and environmental justice as indicators. By using environmental sustainability and environmental justice as policy and planning implementation criteria, it attempts to distill how urban planning and policy might lead to improved considerations and outcomes for marginalized communities. A case study of the City of Atlanta is used to illustrate the conceptual framework developed in this dissertation as a research tool for those concerned with the evaluation of urban policy and planning to implement processes which meet criteria of environmental sustainability and environmental justice.

1.2 Significance of the Problem

American cities are inundated with risk and harm that is disproportionately experienced by marginalized peoples (Ash, Boyce, Chang, & Scharber, 2013). This is manifest on numerous fronts: economic, social and environmental. Inner-city America, which has for decades been a laboratory for inequality, houses staggering rates of joblessness, dubious educational conditions (from high dropout -- or *pushout* -- rates to inadequate funding) (Ferguson, 2014; Dillon, 2009; Chaddha & Wilson, 2011), to environmental conditions that put residents at increased harm, including toxics, brownfields inundated with legacy pollutants (Landrigan, et al., 1999; Ward B. , 2013; Pellow, 2002). Furthermore, urban structures, transportation networks and overall development strategies have ranged from inadequate to perhaps abetted in the aforementioned marginalization (Zavestoski & Agyeman, 2015). Development strategies that perpetually give primacy to an economic growth agenda, often times at the expense of adequate community input and meaningful interaction with decision making, affect the living conditions and livelihoods of human communities (Bullard R. D., 2000; Ward B. , 2013).

By their nature, municipal governments are, perhaps, the most democratic and influential scale of government in the everyday lives of Americans. Local governments oversee a range of services (e.g. education, transportation planning, emergency services, public works) that residents interface with and benefit from (or potentially harmed by) on a daily basis. It is because of this prominence and ubiquity that it is critical that services and programs not only reflect the will of the people, but are conscious of the options and

outcomes that policy and planning affords the marginalized. The effects of local policies and ground-level living conditions have direct consequences on the quality of life that inhabitants have. A recent study on urban life expectancy perfectly encapsulates disparities that exist. While looking at the nation's capital and surrounding counties, it reveals that life expectancy for District born babies is up to seven years less than their suburban counterparts. The disparity was even more pronounced in Minneapolis and Kansas City, with a city/suburban contrast of more than a dozen years. Most shocking was New Orleans, where the gap was a quarter century (Robert Wood Johnson Foundation, 2014)! A critical component in the stark disparities are a bevy of environmental factors including food security (including access to healthy options), access to transportation, as well as neighborhood design (US EPA, 2013). It may be difficult to reconcile the aforementioned disparities when considering the abundance of sustainability efforts (and jargon) as well as the overall heightened consciousness, since the inauguration of sustainable development efforts in the 1970s (Carruthers, 2001). While there have been laws and policies that have extended protections since the age of Love Canal and siting in Afton, North Carolina, "Death by zip code" is the de facto reality for many communities of color (Bullard, Mohai, Saha, & Wright, 2007; Commission for Racial Justice, 1987). Understanding how cities view equity and justice concerns as relates to broader policies and development strategies is vital if a substantive sustainability, that is one that is inclusive of all communities is to manifest.

Inequality is embedded in the American experience and its racial embodiments have not fallen short of brutal. Disparities that were, perhaps, brought to popular attention

in post-Katrina New Orleans and its broken 9th Ward, have been chronicled for at least a century by the likes of DuBois in the seminal *The Philadelphia Negro* (DuBois, 1995), or as Woodson identified in the classic, *The Mis-education of the Negro* (2000). Central to this inequality has been public policy, which in various incarnations has placed a premium on exclusion and isolation (Coates, 2014). Whether it be through redlining's perpetuation of segregation and locales' use of the business community to enforce segregation perpetuation of segregation, racist transportation policy that isolate and underserve the public (Stone, 1989), or the failures of Urban Renewal leading to a largely marginalized and disenfranchised urban underclass (Wilson, 1987), the dedicated force used to push disadvantaged groups to the socioeconomic margins and in turn creating life quality and intergenerational trauma, while physically tilting blacks to the most environmentally undesirable parts of urban areas.

While environmental injustice gained national prominence in the late 1970s and early 1980s with the disclosure of contamination in a suburban Upstate New York town, and the lethal siting of chemicals in a Southern black town, environmental justice considerations in urban sustainability, considering both conceptualizations and implementations within urban sustainability menus are still "highly constrained" (Pearsall & Pierce, 2010). With the prominence of climate change and related issues receiving increased political attention in comparison to traditional environmental threats (e.g. air pollution, toxics exposure) the prospects for those at the short leg of the sustainability table considering the rising stakes that both emerging and old threats pose.

In order not to repeat the traumas of the 20th Century, it is pertinent that past planning, mistakes and intentional injustices are not replicated, nor ignored, in contemporary policies and programs. Furthermore, given the rise of members of historically discriminated against groups into political power as elected officials and bureaucrats, many cities are governed by, if not cosmetically controlled by members that have historically been recipients of environmental racism and injustice¹ (this analysis recognizes that a lack of economic and institutional control remains a barrier for many historically oppressed groups). If not changing the character of systemic inequalities, this potentially adds an extra layer of scrutiny in weighing the dynamics at play in agenda setting and policy making. Finally, and perhaps least tangential to fundamental issues related to the democratic leanings of policy making, residents that are often times those at heightened risk of environmental injustice while simultaneously being without recourse via meaningful representation and/or involvement and say in how risks are allotted (Gauna, 1998). It is a direct challenge to perceived notions of equity and core democratic instincts if all peoples and communities do not have access to safeguards that reinforce the opportunity to live in safe and healthy communities without systemic, nor systematic, threats to existence.

¹ Of the 10 US cities with the highest percentages of black populations, according to the 2010 Census, six currently have African American mayors and all but one (Montgomery, Alabama) have had at least one black mayor in modern times.

1.3 Theoretical Basis for the Study

The Just Sustainabilities paradigm arose from the realization that mainstream sustainability and environmentalism have historically not addressed broader questions of equity and have not been concerned with economic inequality as key components and determinants of environmental qualities and outcomes (Agyeman, Bullard, & Evans, 2003). This problem can be compounded by the perception of urban sustainability planning as largely being utopian or public relations oriented with environmental justice concerns and supportive policy actions often neglected. Accordingly, just sustainabilities are about dignity, respect (for humans and environmental limits) and the engagement of all communities, especially the marginalized. It intentionally pluralizes its latter term in recognition of the multiplicity of pathways that are necessary in bringing about ecological and environmental balance, and roots justice and equity concerns as being on equal footing with environmental sustainability, if a durable sustainability is to manifest (Agyeman, 2005).

Just sustainabilities approaches are predicated on four co-equal tenets. First, improving human *quality of life*, here the critical emphasis is not on economic and material aggregation, but on well-being rooted in capabilities (Sen, 1992) grounded in extra-economic metrics of well-being, including health, education and environmental quality. It proposes that to achieve the aforementioned there must be a profound reorientation of how societal needs are met and operates antithetical to current consumption patterns that undermine not only future alternatives, but significantly degrades contemporary options and environmental quality as well. Second, it urges for a just orientation that is rooted in

the *recognition* (2007) of all peoples to have moral and political membership in decision making, that **processes** be democratic and transparent, contain *procedural* elements that are true articulations of involvement of participants and verifiable via elected/concerned parties and *outcomes* that suggest broader societal concerns do not negate the aspirations and desires of individuals nor of marginalized communities. Third, the necessity for human communities to *live within ecosystem limits and planetary boundaries*, while wholly conscious of the social components vital to human development (e.g. education, general equality). Finally, it demands that both *inter- and intragenerational justice* concerns factor into, and are a guide for, decision making processes.

This work hopes to demonstrate the usefulness in applying the just sustainabilities framework to the analysis of urban sustainability planning. The framework lends itself to this type of investigation due to its core concerns of developing sustainable communities (Agyeman, 2005, p. 13). While other perspectives can be deployed to do so (e.g. environmental justice, political ecology), this framework is well positioned to look at problems that are scaled to cities. Its tenets, coupled with this dissertation's research questions, allow for urban sustainability planning to be subject to descriptive and explanatory research that can then be used by planners, researchers and those that are committed to improved urban sustainability to gauge how sustainability planning is performing, in the realms of the environment, equity and justice. The review of planning literature, the sustainability plans of the largest cities with plans, and a case study of Atlanta, are together used to examine planning's equity, justice and environmental commitments and effects. Through the mode of analysis offered in the dissertation; the

processes and forces that undergird decision making in urban sustainability planning can be described and the impacts of such planning on community conditions of justice and sustainability.

1.4 On Power, Injustice and Harm

The urbanization of America has a history of disenfranchising and marginalizing people of color and the poor via the production of unequal distributions of social and ecological harms; much of this stress credited as the costs necessary to drive economic growth and physical expansion (Byrne, Glover, & Martinez, 2002). The social and economic nexus which undergirds environmental injustice is hallmark in numerous iterations of domestic environmental and economic exploitation, including the heightened exposure to toxics and illegal dumping that African Americans are faced with (Bullard R. D., 1990; Commission for Racial Justice, 1987) and a general positioning at the bottom of the environmental hierarchy as poor black communities have received the Superfund waste, in the form of coal ash, from marginalized whites in Appalachia (Reece, 2005), Further damaging the plight of environmental justice groups and lessening their resiliencies are deficiencies in five dimensions of power, which include: i) limited *purchasing* power; ii) lack of *decision* making power; iii) limited capacity at *agenda* making, iv) *value* setting, and v) little capacity at *events* creation (Boyce, 2002).

Another critical component of the ecological subordination of marginalized communities is the triangulation of business interests, and community advocates and political elites who cynically collude to bring toxic industries into marginalized communities, thereby creating heightened risk for lethal exposure (Bullard R. D., 2000).

The absence of regulation and persistence of deregulation, along with the spatial distance that policy makers often have from endangered environments highlight issues of procedural injustice as “institutional racism shaped the economic, political, and ecological landscape, and buttressed the exploitation of both land and people (Bullard R. D., 1998, pp. 471-472).” Exacerbating the plight of marginalized groups, large mainstream environmental groups have a history of being unrepresentative of justice concerns, while regulatory authorities have been reluctant, in many instances, in validating and addressing hazards. These forces compound to make planning and development mechanisms vital for the protection of interests and livelihoods of all peoples and communities, particularly those that have historically been exploited, and in the contemporary show the least resilience in resisting threats.

1.5 Research Questions

- How are environmental justice concerns addressed in urban development and municipal sustainability planning?
 - Does the language of sustainability plans address environmental injustice?
 - How is inequality addressed in policy and projects?
 - Do all residents have access to environmental amenities and adequate life quality provisions notwithstanding community characteristics?
 - What role does community input play in shaping urban development?
- Do urban planning and development projects systematically promote safe and healthy conditions?
 - Do a range of actors work in concert to identify, assess and ameliorate threats?
 - How do mobility projects improve or aggravate environmental quality?
 - How does planning address the dispersing of environmental threats?

Chapter 2

LITERATURE REVIEW

2.1 Overview

This chapter begins by exploring the historical development of urban sustainability and then looks at contemporary manners in which urban sustainability is defined. Next it looks to incorporate environmental justice and makes vital links to Just Sustainabilities. It then briefly detours by looking at alternative approaches to investigating problems associated with urbanization and equity. After looking at the potential for just sustainabilities, it concludes with the limitations and overall critiques of sustainability planning.

2.2 Background

While the UN's World Commission on Environment and Development, or the Brundtland Commission (WCED, 1987), provided a canonical, though contested definition of sustainability, urban sustainability is not as clearly defined. It should be noted that Brundtland did acknowledge that the scale of mass consumption and environmental degradation does occur on the city level. A seminal moment for urban sustainability and planning came in 1992 at the UN's Conference on Environment and Development (or the *Rio Earth Summit*). Within the larger action plan for global sustainable development, via social and economic strategies, resource management, the role of various groups (workers and trade unions, NGOs, the business and scientific communities) and strategies for

implementation, it succinctly addresses the necessity for local authorities to engage in sustainability objectives, and furthermore the multitude of problems (and solutions) that “have their roots in local activities...(a)s the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development”(UNCED, 1992). Amongst Agenda 21’s broader goals were: a) providing socioeconomic contexts for sustainability; b) its structuring of resource management; c) stressing the visibility of a multitude of stakeholders and their interests; and d) providing means for implementation. It made calls for sustainability to not merely be the exercise of nations and global bodies, but also the vocation of local entities and municipalities (from Chapter 28) and urged the use of indicators (Chapter 40) for the purpose of informing decision making processes (UNCED, 1992). Since the Summit, innumerable cities worldwide have engaged in varied efforts at sustainability planning by drafting sustainability documents and incorporating ideals of sustainability within their comprehensive development planning. Central to Rio’s objectives are the call for *community involvement* in the construction of sustainability planning, with a particular emphasis for women and youth – two groups at heightened vulnerability to injustice. This beginning gave rise to local governments internationally, including scores in the US, to initiate local sustainability regimes to form and join consortiums with other cities.

It should be noted that Agyeman and Evans (1995) stress the discrepancy between Agenda 21’s aspirations regarding the sustainability nexus and social equity and the inevitability of the linkage amongst the two. They ultimately concluded that “sustainability is not a panacea for dealing with long term and deeply entrenched inequalities” and that “a

community plan for sustainability, informed only by the ideas of the articulate middle classes” ultimately prove inadequate in achieving sustainability (p. 39). Perhaps the US legal framework, if not stratagem, for sustainability was inaugurated by the President’s Council on Sustainable Development, which positioned neighborhood sustainability in terms of economic expansion, steeped in equity and sought to improve human livelihoods both intra- and intergenerationally (Furusest, Lord, & Barcus, 1999). In the US, many cities are party to agreements and organizations such as the Conference of Mayors’ Climate Protection Agreement, the ANSI Network on Smart and Sustainable Cities, ICLEI and other networks that link knowledge, if not resources.

Regarding local manifestations of sustainability, MacLaren (1996) notes that the existence of organizing principles notwithstanding (e.g. intergenerational concerns, extraction rates), there is no generic formula for sustainability and that local conditions must dictate how policy is shaped. This thinking is critical to this dissertation’s research, as it mandates that a plurality of pathways be used to achieve desired outcomes. What works for Chicago and other Great Lakes cities, with their unique geographies, history and politics, will not be formulaic for Boston or Los Angeles. In fact, intra-regional planning pathways should show dynamism as well. There can and do exist wild variations of resources and throughputs, while ultimately -- and perhaps most significantly -- the disparities within communities often create a radical difference in needs and capacity to confront issues.

2.3 Origins

Though *Rio* was a driver in the urban sustainability movement and conceptualization, the roots extend back further. Cornier (2012) notes the historical link between “city” and “environment” perhaps began with the “garden city” movement from the late 19th Century and by the 1970s there were a rise in neighborhood scale quality of life studies (Furuseth, Lord, & Barcus, 1999), which coincided with the formation of sustainable development jargon. The sustainability movement was built around constructs urging for intergenerational responsibilities and comprehensive decision making which put the environment and social issues on equal footing with economic concerns (Furuseth, Lord, & Barcus, 1999). Notwithstanding intentions and language that includes equity as well as empowerment in the sustainable development lexicon, Manderscheid (2012) highlights the inconsistencies between these values and the impulses for neoliberalism ingrained in economic development, which ultimately promotes rivalrous behavior in the pursuit of capital at the expense of socio-spatial justice. Even more problematic for sustainable development is the divergence from its provocative origins, which featured a resistance discourse on the inadequacies of market frameworks in accounting for environmental degradation. While initially featuring a strong commentary on resource scarcity, poverty, inequality, it would adopt jargon that “stripped of its critical content, and reconfigured for compatibility with the larger priorities of the post-Cold War era (Carruthers, 2001).”

Furuseth, et al. (1999) note that the sustainable development movement was built around dual constructs of intergenerational responsibilities and holistic or comprehensive decision making, which put the environment and social issues on equal footing with

economic concerns. Critical to the sustainability narrative was its construction around five organizing principles: i) respect for nature; ii) long term perspectives; iii) equity and fairness – though it had not been fully developed by this point, this was certainly an intellectual table setter for subsequent calls for environmental justice; and iv) public consultation and participation in policy and planning decisions – again, providing a framework for EJ to be constructed around. The above tenets are significant considering the primacy that economic concerns take in shaping policy, while non-economic metrics are subordinated, thus causing vulnerabilities (Martinez-Alier, 2002; Sen, 1992). It is here that the roots of ecological justice became intertwined with equity concerns and that urgings for public participation and long term planning were formulated. London, et al. (2013) illuminate on how even when environmental justice considerations (particularly procedural and distributive dimensions) are considered in subnational environmental policy, conflicts of said policy are wrought with clashes with the predominate market mechanisms and interests, or as they contend EJ considerate policies, can be wrought with “promising beginnings and problematic conclusions” such as cap and trade (London, Karner, Sze, Rowan, Gambirazzio, & Niemeier, 2013).

2.4 Urban Vulnerability

While looking at municipal climate planning, Finn and McCormick (2011) urged that urban sustainability strategies, while praised, do not articulate holistic approaches to planning and furthermore largely fail to “adequately address issues of equitable economic development and environmental justice in their attempts to create a more environmentally

sustainable city” (p. 397). This led the authors to conclude that plans may be perceived as oppositional to their environmental objectives. Morrow (2008) notes that within the context that a social vulnerability framework that recognizes the distribution and assigning of risks and hazards are related to larger social forces and, citing Haque and Etkin (2007), note that policy makers (along with physical scientist) largely have not been receptive to the vulnerability/resilience model. Regarding resilience, Wilbanks (2008) defines a resilient community

as one that anticipates problems, opportunities, and potentials for surprises; reduces vulnerabilities related to development paths, socioeconomic conditions, and sensitivities to possible threats; responds effectively, fairly, and legitimately in the event of an emergency; and recovers rapidly, better, safer, and fairer. (p. 10).

This is critical when looking at sustainability and equity on the community scale, as a vital dimension of this type of analysis must be identifying factors which make some places more durable and resistant to environmental harm than others.

In order to understand the feasibility and effectiveness of urban and sustainability planning, and how the unique needs of vulnerable communities are met, it is also pertinent to define the intent of planning. According to the American Planning Association, planning “works to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations (American Planning Association, 2015).” It encompasses a host of sub-features, including land use, transportation, parks and recreation and historic preservation. Sustainability planning, according to ICLEI, in order to support the social equity, environmental and conditions of local areas, is the “common framework...which ties

together a community's goals, strategies, implementation plans, and metrics for improving sustainability (ICLEI USA).”

Haughton and Hunter (2003) provide a useful definition of urban sustainability, in offering that it is the actions of humans and businesses to enrich both natural and social environments on community and regional scales within the framework of larger sustainable development goals. Sustainability at various times has been framed around any number of pillars that give rise to contesting definitions of what sustainability and development actually are. These include emphasis on ecology and carrying capacity, biospheric orientations, sustainable agriculture, renewable energy and the interaction between sustainable society and economy (Woodson, 2000). While these are not specific to urban sustainability, surely they have informed policy that has disseminated from planning and sustainability offices that profoundly shape the interpretations of bureaucratic activity.

2.5 Incorporating Environmental Justice

Environmental justice literature and studies are the progeny of the work chronicling quality of life and inadequate living conditions of marginalized people going back to at least the late 19th Century. DuBois' (1899) was an early voice that systematically chronicled the squalid environmental conditions that black urbanites subsisted in. The seminal piece illuminated how constrained environments (both socially and spatially) were exploitive, engendered crime and also had detrimental effects on the leisure outlets of African Americans. Similarly, a generation later, Woodson rebuked the confinement to “the most undesirable part of the city (Woodson, 2000, p. 102)” that urban blacks were

trapped in and the concentration of African Americans in unsanitary urban areas by unscrupulous real estate agents – keenly making this observation decades before other observers rebuked the racist policies of redlining – and the suspect health outcomes of African Americans relegated to ghetto life.

More recently, the roots of urban environmental justice literature can be linked with, amongst others, the early work of Bullard, who chronicled environmental racism and looked at the disproportionate siting of solid waste facilities in black neighborhoods, the disproportionately negative environmental impacts that poor and majority people of color communities suffer due to urban growth and the overall negative environmental impacts that political and policy decisions have on the quality of black life (Bullard R. D., 1983; Bullard R. D., 1984). Bullard and Wright's (1986) politics of pollution thesis was an early argument that following a path of least resistance, that poor black communities were highly vulnerable to be pollution destinations (e.g. landfills, industrial siting) as they had little political resilience to thwart disamenities.

Through time, critical contributions to the literature against environmental racism would mature into calls for equity. (Bryant, 1995) These include the landmark Toxic Waste and Race (Chavis Jr. & Lee, 1987) which showed the dangerous and heightened proximity that neighborhoods largely populated by people of color have with toxics, notwithstanding varying income levels, compared to white majority census tracts. A follow up report a couple of decades later would contend that the proximity to toxics were actually understated (Bullard, Mohai, Saha, & Wright, 2007).

A watershed legal moment for the EJ movement came with the 1994 Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which sought to “focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities.” It involves departments and agencies to further the cause of EJ via data collection, research and analysis, and its stressing of public participation and the public’s access to information to fulfill the Order’s objectives. Critical to understanding how environmental justice concerns have evolved around sustainability issues, it is important to examine the legal basis and framework for justice in the U.S. Because of the limitations of an executive order, without mandates being codified by Congress and even allowing for the EPA which oversees many disparities in urban justice concerns, local municipalities are under no obligation to assuage EJ concerns based on the force of this mandate alone. This is significant, because though there are scores of local governments talking justice, there is only one local government in the nation that has an EJ zoning plan: Fulton County, Georgia (GreenLaw, 2013).

Over the last decade, the literature on environmental justice within an urban American contextualization has taken on a multitude of issues. With millions of Americans having limited access to affordable and healthy food, while being positioned in so-called food deserts, the food justice movement and advocates contend that access to healthy, safe and affordable food is a human right (Alkon & Agyeman, *Cultivating Food Justice*, 2011). It is taken provocative stances ranging from looks at EJ indicators, whether it be via the

exploration of “fear ecologies” (Brownlow, 2006), which explores how environmental degradation becomes an active agents in violence and community mistrust and ultimately disintegration; offered analysis of the diminished air quality and premature fatality rate due to proximity of aircraft emissions of poor and of color urban populations (Rissman, Arunachalam, BenDor, & West, 2013); raised a challenging contention that environmental justice *is good for white folks* (Ash, Boyce, Chang, & Scharber, 2013), showing that benefits climb and looks at the unique education, engagement and preparation that EJ communities need to face threats from climate change related threats. (Douglas, et al., 2012) Problematic, perhaps, are Kousky and Schneider’s (2003) conclusions that municipal sustainability approaches tend to be top-down ventures, based on “good business” and/or rational policy making. In these conventions, policy is often the result of potential cost savings or derived co-benefits (i.e. a benefit to climate and some other environmental goal).

Morrow (2008) is extremely helpful in illuminating on vulnerabilities, while noting that vulnerability typically occurs not in isolation, but at the intersection of multiple areas, noting that women (whom on average have longer life spans) are over-represented in both the overall elderly population, as well as poor seniors; concluding with “the most vulnerable group in the United States is elderly African American women”(p. 10) while noting the harshness that Hurricane Katrina allotted its fury on numerous highly vulnerable populations (the elderly, the disabled, people of color and the poor).

It is critical for justice themed sustainability literature to not focus on distributional justice in the sense of allotting environmental pains and gains, but should emphasize the

distribution of participatory power (Fredericks, 2012). Ash, et al. (2013) explore this convention by noting that toxics exposure, such as air pollution, derives from the lack of political clout that imposed upon communities have and that the lack of social capital (along with political influence) leads to a dearth of sustainable outcomes for EJ communities. As sustainability efforts have widened there has been, in some respects, growth in inequality (Hacker & Pierson, 2010).

There exists significant tension between urban sustainability planning and environmental justice conscious policies. For starters, urban sustainability is an amorphous concept, with iterations that vary significantly between locales. Because of this variance, conceptions and considerations of EJ will vary, from those places that are mute on justice concerns, to those where equity is embedded in broader policy making. Some places take justice seriously while others are blind or indifferent to it. Furthermore, with a bedrock premise of sustainability being that humans manage finite resources in a responsible, intergenerational manner, classic tensions and conflicts that are bound to arise when considering the immediate control of those resources – with against foundational premise of the EJ movement being that decision making apparatuses are often removed from marginalized communities (Bullard & Johnson, 2000). In shepherding resources for posterity, those without access in the contemporary face the real concerns of *intragenerational* inequity.

Perhaps the most significant impediment with the city as the site for sustainability are the problems consistent with the political boundaries of cities not coinciding with the geographical boundaries of ecologies. For example, watersheds are not parallel to the

political divisions of which populations are based around (Portney, 2003). Because resource consumption and use inevitably operate outside of human-made boundaries, Portney, referencing Calthorpe and Fulton (2001), urges the necessity of planning to be done on a metropolitan scale. The case study features a prominent example of this model with the San Francisco Bay Area's environmental planning regime. Another example is the municipalities of the Atlanta Metropolitan region, whom cede much planning authority to the Atlanta Regional Commission and the Georgia Regional Transportation Authority. The latter was created due to the loss of federal transportation funding due the city's toxic air quality (Henderson, 2006), which has roots in the suburbanization of the region that superseded municipal boundaries. Thus, a metropolitan-wide strategy to get local air quality back to a federal standard.

2.6 Potential Approaches

When weighing the framing and analysis of the challenges and problems of urban communities, specific to injustice and sustainability, several approaches were looked at considering their unique capacities to unpack the special problems that marginalized communities are confronted by. *Critical race theory*, which holds that racial inequality is embedded in American culture and is embodied by outcomes that institutionalize inequality that is ubiquitous, and predicated on white domination and privilege (Ford & Airhihenbuwa, 2010). In this view, outsiders (i.e. People of Color) are minimized and marginalized. *Intersectionality* proposes that oppression and marginalization occurs at the crossroads of any number of demographic or socioeconomic categories (Cole, 2009). For

example, to understand the plight of a middle-class black female from the South Bronx, the multitude of categories will create factors that places one at a heightened (or lowered) risk of being a recipient of bias, and that looking at any singular factor alone will not allow for the aggregate framing of one's experience. So, to say that one is poor or female is not adequate in understanding the marginalization, exposures and undermining that society will place on an individual or groups, but to totally understand the totality of oppression, one must realize the ensemble of framings that occur.

While both of these stances can credibly be used to explore inner-city life and certainly inform many of the justice appreciations of this work, and it is readily conceded that they are foundationally appropriate for looking at core equity concerns, ultimately neither is robust enough to look at the sustainability challenges and environmental dimensions that communities are faced with, as neither has an ecological concerns primarily within their lenses.

Corfee-Morlot, et al.(2009) view the local scale as a co-equal component (with national policy frameworks and in cross-scale interaction with regional governments) in addressing climate change, perhaps the most problematic and far-reaching sustainability issue, in that it allows for the potential for bottom-up initiatives that can hold sway in national approaches to problems. Though the local scale offers no assurance that all community actors will have a say and presence in policy making – one of EJ's core demands is, indeed, regardless of scale, marginalized communities are voiceless and/or powerless in agenda making. The authors contend that the benefits of the vertical and horizontal integration of policy making (i.e. vertical when considering local/national policy

frameworks and horizontal when gauging local/regional department collaboratives), include strategic planning, the strengthening of stakeholders support, the fusion of long-term vision and near term action and increased capacity for local implementation. Furthermore, concerning the principles of good governance, the local/regional scale is superior to (intern)national efforts in several key areas, including: i) promoting participatory governance and strategic planning, ii) promoting innovation and iii) confronting issues related to procedural equity.

2.7 Towards a Just Sustainabilities Framework to Guide Urban Planning

Just Sustainabilities (Agyeman, 2013) are framed by four tenets that demand that the sustainability, environmental justice and equity nexus: i) improve human life quality, ii) address intra-/and intergenerational justice and sustainability concerns, iii) encases justice in several theoretical framing: recognition, processes, procedures and outcomes and iv) pillaring human activity within eco-system limits. The following sections will explore each of these. While there are varying definitions of the sustainability tenets mentioned above (e.g. in a literature review van Kamp, et al. (2003) extract eight definitions of quality of life alone and conclude the criticality of positioning definitions around a multidisciplinary conceptual framework) just sustainabilities approaches readily embrace this dynamism.

There are several key distinctions between EJ and the Just Sustainabilities paradigm, foremost amongst those is the progressive and policy based approach that just sustainabilities offers, as opposed to the reactionary orientation of EJ that has failed to

“articulate...a coherent, replicable policy agenda for sustainable communities” (Agyeman, 2005, p. 101). Furthermore, while EJ looks at issues from local to global scales regarding equity and justice implications (e.g. threats to local air quality, rainforest destruction, and sea level rise), just sustainabilities willingness to employ concepts such as environmental space and life-cycle analysis allows it to more coherently illustrate connections between local and global problems and concerns (Agyeman, 2005). Similarly, while EJ work has done much to critique economic forces that often generates environmental maladies, particularly amongst the marginalized (Byrne & Hoffman, 2002; Bullard R. D., 2000; Ward B. , 2013), the just sustainabilities framework coherently advocates for an economics that is undergirded with adequate quality of life provisions for all human communities and approaches, such as co-production and sharing as economic model that can bring this into fruition. (Agyeman, 2012) This distinction is critical in that it has implications to make vulnerable populations not just recipients of policy (e.g. via jobs programs), but affords populaces an active role in policy and planning action through the development and rendering of services to their communities. Community empowerment in not only resisting external development threats, but in forging its own interpretation of urban planning and development. Ultimately, it changes the posture of vulnerable communities from defense (e.g. NIMBYism) to progressive self-determinism.

The following section will explore each of the four dimensions of the just sustainabilities paradigm in detail.

2.7.1 Improving Life Quality

Life quality, in its numerous manifestations can be expressed via life expectancy, community walkability, access to (quality) foods and proximity to greenspace. The current economic order based on economic growth, practiced on scales from local to global, has largely been inadequate in improving life quality; particularly at heightened levels of earnings and consumption practiced in the Global North (Agyeman, 2013). Most communities have been unsuccessful in decoupling economic growth and life quality. Jackson (2003) draws links between chronic human health ailments (including asthma, heart disease, diabetes and depression) and the depleted quality of the spatial environment, as forest, wetlands and inhabiting species decline with the expansion of the built environment. The links between life quality and urban planning and sustainability are clear. While recognizing the difficulty in making causal links, she offers that urban design is critical for ameliorating the aforementioned chronic conditions, while noting the roots of urban planning, from its 19th century origins, were designed around protecting human health from the likes of sanitation and emissions threats. Inner-city residents are often far removed from the quality of life that suburbanites enjoy, resulting in shorter life-expectancy by as much as a quarter century (Robert Wood Johnson Foundation, 2014). This disparity can be linked to the aggregation of inequalities that exist within societies based on compounding sets of circumstances and stresses that allow inner city communities to become inundated with environmental threats, including low access to affordable and healthy food nor access to basic environmental amenities such as green space and public space generally (Brownlow, 2006; Zavestoski & Agyeman, 2015; USDA, 2010). Within

the above milieu, metrics that solely monitor growth and economic production, such as the GDP, are not adequate and must be supplanted by alternative indicators (e.g. the Genuine Progress Index) that look at social dimensions of human well-being (Agyeman, 2013). While thus far, wide sweeping indicators have looked at alternative conceptualizations of development on a national scale, cities are beginning to incorporate well-being/happiness into planning criteria.

Numerous commentators have weighed in on what role policy should play in creating equitable spaces in attempts to improve human dignity and life quality. Bührs (2004) notes that environmental space considerations are essential to conceptualizing just public policy, and societies should thematically approach this: a) via a legal-constitutional framework (i.e. a rights based orientation bent on ensuring minimal living conditions); b) by establishing environmental property rights through the likes of instituting depletion quotas (thus, the realization that markets, typically, are not deferential to environmental limits); and c) through green planning and ecologically sound governance. Sen (1992) relates the deprivation of *different spaces* to poverty. Hyper-social segregation and inequality are primary contributors to the urban space wars and automobiles have contributed mightily to the undermining of metropolitan life experiences (Fotel, 2006). Offering the *mobility-welfare nexus* which sees mobility “as the central factor in social processes” which frame democratic activity; in many American enclaves the carless are left isolated. Urban streets that act as thoroughfares leave bystander residents invisible to commuters and disempowered within their own terrain.

Table 1: Improving Life Quality Inventory

Improving Life Quality		
Sample Indicator	Measure	Sample Question
Food Desert Status	Percent of Neighborhood: Low Income/Low Access to Food	Is healthy food accessible in low income communities?
Pedestrian-centered Development	Percent of Streets with sidewalks	How is non-auto based transit emphasized by planning?

2.7.2 Intra/intergenerational Equity

While sustainability advocates have urged for intergenerational equity for years, as espoused by the canonical urgings of the Brundtland Report for development which “meets the needs of current generations without compromising the ability of future generations to meet their own needs (WCED, 1987)”, often not as clearly articulated are clear directives for equally important intragenerational responsibilities. While many intragenerational needs and disparities have played out in the previous section on life quality, Agyeman (2013), citing Wilkinson and Pickett (2009) notes the “material inequality harms mental and physical health and wellbeing with consequences including shorter life expectancy, greater incidence of obesity, and lower overall health... [and that disparities are often housed in] sectors of the population who are in poor health defined principally by

race/ethnicity, socio-economic status, geography, gender, age, disability status, and risk status related to sex and gender (p. 22).” When considering the intragenerational traumas that play out, in the context of the global environment and the future implications of present behavior, the Congressional Black Caucus(2004) notes that amongst all Americans, African Americans contribute the least, yet will suffer disproportionately from, climate change, which possibly is the most significant environmental issue of the 21st Century.

While many of the intra-/intergenerational contests will develop along socioeconomic lines, cities have the opportunity to fill in gaps, via intelligent planning, yet in any number of cases, they are the sight of exacerbation for both present and long-term equity concerns. An accessible example comes from Checker (2011), who notes that while New York City’s PlaNYC has the admirable goal (for both aesthetic and carbon sequestration purposes) of planting a million trees within its boundaries as part of a massive reforestation commitment, it has consistently allowed for the felling of large swaths of trees as part of real estate development projects.

Amongst the challenges of achieving healthy and sustainable communities that low-income and people of color face are toxic facilities (including proximity to chemical plants, refineries, and hazardous waste sites), unhealthy housing (or that which is burdened with indoor air threats including lead paints, asbestos and mold), increased suffering from chronic illness and disease often related to decreased physical activity, inadequate nutrition and the overall burden from cumulative factors (US EPA, 2013). When coupled with other factors such as neighborhoods that lack essential goods and services, displacement often associated with gentrification, these groups carry a large brunt of the inequities of urban

development. In the US Urban areas, exposure to toxic air is positively correlated with the increase in non-white residents (Ash, Boyce, Chang, & Scharber, 2013).

Table 2: Intra-/Intergenerational Equity Inventory

Inter-/intragenerational equity		
Sample Indicator	Measure	Sample Question
Government Debt	Percent of projects financed by TADs	How are revenues generated for publically financed projects?
Life expectancy	Average Life Expectancy	Do mortality rates differ by neighborhood?

2.7.3 Recognition, Process, Procedure and Outcome

The theoretical framing for Just Sustainabilities are housed around principles that look at what ground-level operations and interactions look like in obtaining justice and move beyond the limitations of utilitarian, distributive and egalitarian framings.

Environmental injustices create critical space for marginalized, disadvantaged and invisible communities to be manipulated and exposed to unethical and disproportionately large threats, which can displace these same communities from benefits and amenities (Ward B. , 2013; Checker, 2011; Brownlow, 2006). Because of said treatment, the necessity for a multidimensional input and output processes exist, which is predicated on a framework of recognition, processes, procedure and outcome (Agyeman, 2013). These are essential components in gauging how just and equitable sustainability and comprehensive development policy and planning processes are, as they exist to safeguard

against bureaucratic (though not substantive) responses to problems. Even outcomes that appear favorable to EJ communities must be scrutinized for aggregate effects and downstream harm. This type of injustice is exemplified by downtrodden white Appalachian communities' success in having their toxics down-streamed, albeit to poor(er) black communities in the Deep South (Sturgis, 2009).

Table 3: Recognition, Process, Procedure and Outcome Inventory

Recognition, Process, Procedure & Outcome		
Sample Indicator	Measure	Sample Question
Community Benefits Agreement	Existence of CBA	Do CBAs contain legally binding language?
Public Participation in Civic Processes	Voter Registration & Turnout Rates	What percent of eligible voters are registered and vote?

Recognition (Schlosberg, 2004; Schlosberg, 2007) involves “people’s membership in the moral and political community, as well as providing for the capabilities needed for their functioning and flourishing, moreover ensuring their inclusion in political decision-making (Agyeman, 2013, p. 39)” along with interrelatedness and necessity as part of distributive, participatory and capabilities approaches to justice. The lack of recognition leads to urban conflict in the form of cultural tensions and environmental degradation. For example, *environmental gentrification* undermines numerous cultural practices in urban areas as new residents compromise traditions that predated their inhabitation (Checker,

2011). Bullard (2000) and Ward (2013) both note how jobs blackmail disseminates of a lack of integration form marginalized peoples have in decision making processes.

Recalling the above argument looking at life expectancy, critical to justice paradigms are the actual outcomes that are produced. Noting that material outcomes, along with wealth, can effect human security, disproportionate distribution is deleterious to the health and vitality of community members. There are an assortment of disparities that the environmental justice literature touches on here, but ultimately it is about winning. EJ activists have campaigned for decades against the proximity to toxic threats (e.g. Love Canal and Afton, NC) (Engelhaupt, 2008; The Exchange Project, 2006) and for increased access to amenities (e.g. green space and public transportation) (Brownlow, 2006; Ward B. , 2005). Other campaigns have been built around land use (Arnold, 1998) and food justice (Cadieux & Slocum, 2015). The success or failure of these and similar resistance efforts can directly affect the capacity for inhabitants to develop in a secure and healthy environment.

It is essential that for just processes to play out, particularly though not exclusively, within the urban context, community participation is vital. The US EPA(2013) in its comprehensive study on creating sustainable communities notes that equitable processes build on local values, assets and involve early and consistent interactions with community members and are embodied in strategies such as multilingual outreach, community assessments and visioning workshops. Ward (2013) notes how processes can be subverted when government parties (appear) to give primacy to the interests of industry and expediency over public health. Agencies that place high regard on expediency, lack of

openness and other behaviors that seem adversarial or distant from the public create the impression of being rubber stamps for industry, whether real or not. It must be noted that all participation is not equally meaningful, as Sarnoff(2000) notes, referencing Deshler and Sock (1985), that participation falls into two distinct tiers, psuedoparticipation: in the form of domestication (which consists of informing, therapy and manipulation) and/or assistencialism (including tactics such as placation and consultation); versus genuine participation: which includes cooperation (predicted on partnership) and citizen control (or empowerment). Just and equitable processes must include meaningful engagement with stakeholders through the lifecycle of projects, from conceptualization up to operationalization (Robinson, 2012).

Injustice is recreated and supported by elitism, exclusion, prejudice, greed and despair and manifest in hyper- consumption and waste (Dorling, 2011). Combating injustice must be preceded by first tackling the problem of inequality. Walker (2009) notes the deficiencies of the “simple” geographies and spatial analysis of much environmental justice thought and urges a more robust understanding of space within EJ quarters and calls for a framework based on distribution, recognition and procedural justice as the points of analysis for socio- environmental concerns. Furthermore, racist procedures and social control have debilitating effects on human environment interactions, and produce *outcomes* that create ecologies of fear (Brownlow, 2006). Outcomes for groups outside of the power structure (mainly environmental groups looking for roles in environmental governance) can be improved via alliance building in a diverse set of global circumstances with likeminded actors. Miller (2004) quoting Harvey (1996) offers that this *frames* identities,

by using “place-specific” experiences to “affirm experiences of solidarity” (p. 227) and is requisite in forming coalitions that can combat the status quo power structure that is dominated by globalized neoliberalism. In this climate, policies should be pursued that do not adversely affect low-income communities. For example sustainability transitions to a low-carbon economy should be cognizant of the costs and burdens that marginalized groups often disproportionately are asked to share.(Friends of the Earth, 2011) To achieve goals such as increased mass transit use, fewer flights and more diverse work opportunities, the potential impact of policy inclinations towards social regressiveness (e.g. fuel taxes), evaluating the social justice impact of various policy treatments and with an emphasis on tax credits and massive public investments to pursue programs, which would increase home energy efficiency and subsidizes public transportation.

2.7.4 One Planet Living

Agyeman (2013) notes “(p)rocesses of just transition are needed to eliminate the structures and institutions that reproduce injustice...economic alternative must involve the co-production of justice. But such alternatives cannot be unconstrained in their use of environmental resources” (p. 46) Furthermore, he challenges the “unfair distribution of environmental 'goods', thus exacerbating the effects of unfair distribution of environmental 'bads’ ” (p. 46), and suggests that the concept of environmental space as giving clarity to the interplay between justice and resource use. This is played out in cities via policies that are inclusive and conscious of cultural differences. The potential of compatible outlooks such as New Urbanism (Smith N. , 2002), Transit Oriented Developments (Holmes & James, 2008) and the Complete Streets movement (LaPlante & McCann, 2008) has been

largely inadequate in delinking development and material consumption from environmental degradation. In order for environmental threats to not upend (urban) life, Agyeman calls for a *triple decoupling*, which is housed around efficiency, sufficiency and extracting life necessities and political freedom from consumption.

Social norms can play a significant role in limiting human waste and overconsumption (Levin, 2006). Levin attributes environmental depletion to market failures that produce externalities and stresses how *cooperation* can govern sustainable resource extraction. By building trust, he asserts that environmental governance can be built; and those that violate trust (e.g. through defecting from social norms), can be readily punished by partners. George (1999) sees the necessity of having assessment tools by which consumption within necessary limits can be achieved. The accompanying Environmental Impact Assessment is housed around several broad principles including: i) intragenerational equity; ii) intergenerational equity; iii) support for biodiversity; and iv) reduced greenhouse gas consumption in accordance with the Kyoto Protocol. While the progressive nature of some of the approach is provocative under the predominant political economy of cities and nations alike (such as demands to fully implement Rio's *precautionary principle* to reach *strong sustainability*), his allowance for adherence to Kyoto emissions levels gives a rubber stamp to the hyper consumption that the Global North has engaged in. Conversely, Lohmann (2008) views Kyoto and subsequent carbon trading mechanisms as a *mass creator of ignorance* via abstractions of how and where emissions are made, the creation of dubious scientific equivalencies (e.g. mitigation of one greenhouse gas being comparable to another without substantive rationale) and the

perpetuation of neocolonialist and racist thought in its interactions and treatment of indigenous communities and their livelihoods. Neoliberal responses leave no room for (climate) justice to be actualized, and perpetuate age old injustices.

Roberts and Parks (2006) are adamant that social justice and environmental protection cannot be irreconcilable, as poor disenfranchised peoples often suffer from ecological abuse at the hands of elite outsiders. Environmental damage and its properties as a *global public bad* act as a scaffold for the way that negative impacts are unevenly distributed through societies, with the worst effects manifest in communities that can least afford to counteract the consequences. This is perpetuated by the asymmetrical patterns of globalization. The roadmap for just climate arrangements includes confronting the behaviors of global environmental actors, including their credibility and necessitates compensatory justice. Kennedy (2002) provides an actionable tool for evaluating the economic, environmental and social components that determine urban sustainability. Strong considerations are given to the conflicting interest that public and private interests play to (i.e. private transportation is much more socially beneficial or expedient than public mass transit alternatives, but are accompanied by dubious environmental effects and economic costs to the individual that are significantly greater). Asserting that mass transit is critical to the goal of greater urban sustainability, Kennedy (2002) offers conclusions as to what policies should be implemented to create a more sustainable transportation network, including: increasing performance and reliability of public transportation and the integration of *complete streets* that incorporate bikes in public transportation and light-rail on surface streets. This can go a long way in ensuring that fossil fuels remain below ground

at higher volumes, though complete streets have been contested for over their own limitations (Zavestoski & Agyeman, 2015).

Smith (2007) calls for the restructuring of global societies and economies “away from the ‘business as usual’” approaches that scaffold environmental degeneration and perpetuate *throwaway* cultures. In rejecting carbon taxes and trading schemes, which ask consumers to pay more while not radically altering consumption; short of massive technological overhauls, behavior change is the key ingredient to meaningfully reduce greenhouse gas emissions. To counter the inefficiencies of the current global governance paradigm, Smith offers multiple positive responses, while rejecting the likes of carbon offset regimes, including direct investment in renewable energy products by firms, as an ethical principle and not as compensation for one’s emissions. Most important however is a reexamining of the commodification of fossil fuels, which ultimately makes their extraction more feasible.

Table 4: One Planet Living Inventory

One Planet Living		
Sample Indicator	Measure	Sample Question
Fuel Portfolio	Utility Fuel Mix	What is fuel mix composition of electric utility?
Air Quality	Ozone Levels	Do ozone levels comply with safety standards?

2.8 Just Sustainabilities Actualized: Equity Now and Tomorrow

How to consume earth's resources today, in a manner that does not critically constrain future options -- while offering adequate provisions for all contemporary societies has been highly contested in environmental circles. Becker(1982), using the Rawls' maximum criterion, notes that contemporary consumption patterns significantly affect the environmental quality that subsequent generations have access to, and leads to economic agendas which "never sacrifice the present for the future (p. 165)." Seemingly, preference given to either current generations or future ones excludes access towards the non-favored party. The pursuit of intragenerational inequities is rooted in systematic oppression mostly developed during Colonialism and extended via the Imperial and Industrialism epochs. Stanley (2009) contends that denial and difference are essential to understanding oppression, in light of the universalization of dominant culture and the *otherization* of marginalized groups. This leads to exploitive and polar outcomes for diverse stakeholders.

Weiss (1992) sees sustainable development as requisitely addressing intra- and intergenerational equity. In valuing the costs and benefits of environmental decisions between generations, she rejects discounting, which typically overburdens future generations by devaluing today's environmental degradation. This leaves space in which attempts at eradicating poverty conflicts with intergenerational equity. To address this gap Barry(2003) offers a formula for justice by posing the question of *what is enough* regarding the necessary provisions that need to be afforded future generations. Policies that will stem the tide of exponential population growth (e.g. women's education, increased work

opportunities outside of the home for women, strict child labor laws) are vital in meeting this objective.

Bryant(1995) citing Odum and Odum (1976) stated while money moves upward, pollution moves downward, noting the environmental threats that marginalized groups are confronted with and are inverse to communities socio-economic fortunes; perhaps it should also be contended that when equity is lateralized, everyone moves up – at least in terms of the ecological threats that they are bounded to. The reasoning behind this, as affluent groups have the power to implement NIMBYesque strategies and displace toxins, harms and waste into other communities, with more equity (and subsequent less displacement), those who previously relocated hazards would be less willing to have them ultimately located in their own area, thus potentially stifling initial generation. Simply, the affluent will not be willing to risk their own communities, thus a serious reevaluation of how business is done would have to be engaged in. Intragenerational equity is beneficial for both the contemporary and posterity. White (1998) notes the quandary of urban development in that marginalized peoples are highly vulnerable to NIMBY in its various iterations: NIMTOO (Not in My Term of Office), PIITBY (Put it in Their Backyard) and WIMBY (Why in My Backyard). So, when Bullard and Wright (1987) contend that millions of blacks cannot practice NIMBY -- because they literally do not have backyards -- this provides the impetus for aggressive policy making for the protection of high-risk communities and their inhabitants. Numerous indicators give credence to the contention that African American communities in particular are not economically stable enough to ward off threats. In 2013, the average wealth accumulated for black families was over

seven times lower than their white counterparts (\$95,261 v. \$678,737). The statistics for home value – worth of the house minus loans – was similar as well (\$31,118 v. \$126,064). Perhaps most alarming – liquid assets minus debt – for the two groups came in at \$1128 v. \$180,354 (Fletcher, 2015).

2.9 Human Development and Equality

The capacity at which human communities can frame the trajectories of both individuals and societies factors heavily into societal wellbeing and equity. Sen (1992) frames human development around access to income and *capabilities* which lead individuals to live securely. Market oriented approaches (e.g. GNP), while appropriate for measuring aggregate wealth in a society, are insufficient in assessing individual and group trajectories. Stanley (2009) contends that denial and difference are essential to the understanding of oppression, in light of the universalization of dominant culture and the *otherization* of marginalized groups, which leads to exploitive and polar outcomes for disparate stakeholders. Many western nations with high per capita incomes are replete with communities that face disproportionate environmental risks, significantly stunting their capacities. Notwithstanding the robust economic growth of the post WWII era, Baumol and Oates' (1979) seminal work, was an ominous warning regarding the increased environmental degradation during that period, while contending that environmental stability and market economics can be reconciled through only modest private economic sacrifices.

2.10 On Indicators and Why They Are Not Working

When looking at the emergence of sustainability plans and EJ considerations, perhaps the most critical space for investigation are the indicators of sustainability, equity and justice. Astleithner, et al.(2004) define indicators as “a policy-relevant variable that is specified and defined in such a way as to be measurable over time and or space.” (p. 9) An integral component of this research will be the investigation of sustainability indicators, and how they inform both sustainability doctrines and EJ outcomes. While certainly communities that are prone to environmental injustice are disproportionately affected by extra- environmental maladies, obfuscating these things is problematic in that environmental concerns can be sacrificed or traded for others. Bullard (2000) expounds on this in his jobs blackmail thesis, in which environment and health are sacrificed for low paying jobs. Warner (2002) notes the lack of EJ considerations and indicators in sustainability plans (only five of the thirty-three of the largest cities with sustainability plans had EJ components in his early take on the issue) – and only one of these five buttressed its EJ components with policy initiatives). Nandy (2012) urges that urban indicators typically do not meet holistic purposes of sustainable development (i.e. anthropocentric orientations opposed to ecocentric ones), and serve narrow interests. Furthermore, Brugmann (1997) illustrates that even with the rise of sustainability indicators, when not coupled with a methodical planning process, indicators fall short of goals. Cloutier, et al. (2014) uses the Sustainable Neighborhoods for Happiness Index (SNHI) to gauge how cities receive sustainability and in turn how practices relate to residents’ happiness, in addition to the case for linking sustainability and happiness.

Corfee-Morlott, et al. (2009) contend that while cities have been active since at least the late 1990s in addressing GHG emissions, the lack of organization within efforts for cohesive and widely agreed upon methodologies and assessments ultimately harnesses efforts, and thus urge for common metrics to be used to gauge the efficacy of city programs to identify best practices.

It is essential for urban sustainability planning to take into account discreet indicators in order to specifically address communal needs and areas of urgency. As for specific indicators, MacLaren(1996) notes that they should reflect the following tenets: intra- and intergenerational equity, operating within ecosystem carrying capacities, minimization of nonrenewable resource use along with economic vitality predicated on diverse income streams and self-determination at the community level which is predicated on life quality being based on the securing of basic needs. Extending on the first objective, Haughton and Hunter (2003) advance the need for equity concerns to be housed around three considerations, which include geographic, procedural and interspecies equity – furthering noting the structural inadequacy and unreliability of sustainability indicators. It is critical here to look specifically for the maturation of intragenerational and intergenerational equity. MacLaren (1996), referenced by Fredericks (2012) notes that participation needs to be monitored and that variances amongst disparate groups, and subsequent impacts over time need to be monitored as well. A macro approach in creating indicators, moving away from the three tiers of economy, environmental and society, towards six pillars: i) governance, ii) cultural protection, iii) human rights, iv) waste, v)

chemicals and pollution and vi) ecosystems and biodiversity -- as a more comprehensive alternative (Quental, Lourenço, & Nunes da Silva, 2011).

A shortcoming regarding the participation and organization from community groups is a direct result of the scaling down of federal funds for urban development, and a rise in the role of the business community along with private foundations (both with their own interests) as significant players in economic development. Under this arrangement, Boyd (2008) notes the increased reliance on community groups from said organization and the stifling of critique in addition to confrontation against economic forces by neighborhood groups.

2.11 Limitations

While this dissertation realizes the practicality of using indicators to assess not only sustainability, via its goal of discovering if EJ is being actualized within that context, it is simultaneously aware of the limitations of using them. Nandy (2012) notes that most sustainability plans have an overreliance on anthropocentric indicators. There are also data limitations in that they focus on average data rather than data disaggregated by demographic group means that sustainability indicators often only monitor average moves toward sustainability, not whether some inhabitants are being pushed away (Fredericks, 2012). Downstream impacts are also problematic, such as impacts of waste management where products are consumed in one region but transferred and permanently stored in another. Fredericks acknowledges that the monitoring of GHGs is perhaps the exception when it comes to this. For this reason monitoring justice becomes problematic because it

does not trickle down. Building on Martinez- Alier's (2002) critique that indicators are often over simplifications, Mahdjoubi, et al. (2011) hold that the one dimensional nature of indicators, which focus on unique components of sustainability in piece meal fashion (e.g. non-unified epistemologies for transportation and energy use), and that unified approaches that go beyond the capacities of individual professionals must be employed. Structure and metrics alone (i.e. energy efficient structures, bike lanes, etc.) do not equate to sustainability. Furthermore, approaches must be place specific as opposed to one-size fits all models (Robinson, 2012). Nandy (2012) notes that, though indicators have not encompassed the holistic cannon of sustainable development, but without some type of performance metrics, it would be difficult to measure gains. A final point on indicators raises the query that considering the shortcomings of the predominantly economic emphasis of many valuations, as to what metrics are appropriate in gauging human impacts on the natural world and perhaps more fundamentally whom has the standing to put forth such simplifications (Martinez-Alier, 2002).

LazaroIU and Roscia (2012) maintain that while cities contribute disproportionately to environmental problems (consuming three-quarters of energy production globally while generating four-fifths of CO₂ emissions) the authors urge for the 'smart' city, predicated on smart: economies, mobilities, environments, people, living and governance, the given indicators for such cities, though recognizing that they are amorphous, do not address social and equity problems inherent to sustainability and environmental quality.

While the strategy here was to frame sustainability around economics, environment and equity, Adams (2006) notes that during the materialization of policy, economic concerns take an inordinate amount of interests. This imbalance places significant limitations on the concept of the sustainable city. Further critique rests on the sustainability planning over the last generation has not enabled cities to achieve the economic vitality and life-blood of historic places (Mahdjoubi, Horswell, & Akplotsyi, 2011). Furthermore, paradigms that do not decouple economic growth and environmental soundness are contested for not addressing the irreconcilability of the two (Redclift, 2005).

Cornier (2012) notes the utopian leanings of sustainable cities and the inadequacies in achieving them. By definition, due to dense populations, cities are inherently unsustainable. This provokes the question of whether cities in turn can create anything on a level commensurate with not only the vast material and energy consumption that they require, but also the waste materials that are excreted from them (Martinez-Alier, 2002).

2.12 The Inadequacies of Urban Sustainability Planning

Over the last century, city design and development has sought, through various incarnations and means, to create the more ideal and efficient urban space, ranging from the compact *garden city* movement and its intimate connections to rural areas to Le Corbusier's Radiant City, based on hyperautomobility, vertical construction and strict zoning. While, planning's link between city and the environmental can perhaps be traced back to garden cities (Cornier, 2012), these links did not sufficiently couple environmental concerns and the social inequities associated with urban space, as noted above by DuBois (1995) and Woodson (2000). Early attempts at urban planning would all later be critiqued

for the lack of confidence that critics had in physical design to ameliorate social issues endemic to cities (Fainstein & Fainstein, 2013).

In her seminal work noting the failures of planning, Jacobs (1992) offers a rebuke of urban planning from numerous angles. Taking an early (and organic) view of city design, she notes the vibrancy of cities has been diminished notwithstanding the billions spent on urban development, while offering that growth strategies have failed to eradicate downtrodden areas and in many instances produced chaotic slums that were worse than their predecessors. This came in addition to amplifying the social isolation and hopelessness of residents. Ancillary to this underdevelopment has been the consequent hyper-suburbanization, unsophisticated commercial and cultural centers and transportation projects anchored by expressways that decimate neighborhoods all culminating into what Jacob refers to as “the sacking of cities” (p. 4).²

While urban planning has historically and contemporarily been driven by the *urban growth machine*, in which competition for development drives local strategies, the living conditions of inhabitants are consequently effected by the forces (social, economic and political) that comprise the growth machine (Molotch, 1976). Within this context, coalescing urban regimes, made up primarily of business powers and local government actors exercise policy and planning authority. (Stone, 1989) Though other outside entities can coalesce with the regime, the core membership operates out of the posture which gives primacy to development. This creates a natural conflict with those sympathetic to justice (environmental and social) and equity concerns, as a central tenet of development is to

² Jacobs work is also a forerunner to calls for “Complete Streets” that would arise decades later. She was an early advocate in emphasizing the importance of sidewalks as an essential feature of urban transportation safety as well as a critical component for socialization.

offset costs, which can be externalized to those not fortified to resist. This is given significant attention in Chapters Four and Five of this work.

Critical to the dearth of justice considerations within urban planning historically has been how community involvement is manifest. Figueroa and Mills (2001), note that participatory justice is synonymous with the just distribution of participatory power. It should be recognized that the power to effect outcomes is distinct from merely participating in public hearings and providing comment on planning issues. Ash, et al. (2013) offer that siting for unwanted development and toxics exposures often falls on racial groups that lack the social and political capital, coupled with blatant racial discrimination and lack the economic clout to resist development. Gandy (2013) contends that inequality has actually grown, since sustainability has become an integral policy component.

Operating within a 'planner's triangle' Campbell (1996) notes the constraints that urban planners work within, with tensions generating from economic growth, environmental protection and equity concerns, and concludes that there is no immediate path to sustainable development, theoretically at the triangle's center. Conflict emerges via i) property conflict (involving economic growth and equity forces) between combatants that simultaneously resists and need each other (e.g. landlords and tenants); ii) resource conflict (between societies and nature) and iii) development conflict (between social equity forces and environmental concerns) which involves the clash between the economic sector's indifference to worker's subsistence and its similar attitudes towards sustainable environments, and the challenge of ameliorating both conditions simultaneously. Ultimately it is urged that to reach any semblance of sustainability, one must recognize that it may not be operational, due to the entirety of its theoretical reach and problems with measuring it; yet it offers adherents a trajectory that values social and environmental cohesiveness.

Campbell (2013) recognizes urban planning's recent attention to sustainability and justice concerns, but notes the difficulty in reconciling the two within the corpus of planning; as they have been incongruent movements whose respective interests lie within disparate parties, the former appealing to middle-class environmental concerns while the latter involves the concerns of marginalized populations. Thus a milieu of "conflicting urgencies" exists, that recognizes the conflict of dedicating efforts, resources, physical space and political capital to competing interests. Similarly, Furuseh, et al. (1999) note that equity and fairness were a component in sustainable development's rise in the 1970s, but advocates largely operated separate from the environmental justice movement, and early sustainability calls were not vocal about problems down-streamed to vulnerable places and peoples nor recognized the disparities that marginalized communities have in accessing environmental amenities. Notwithstanding a societal mandate to help people and improve the quality of life for residents, Carmon (2013) contends that by operating without "a clear value orientation", that urban planning has brutal consequences for marginalized communities and nature. She contends that much of this imbalance is due to the advocacy amongst planning teams for economic development and environmental protection, but not giving a similar thrust for social equity concerns.

Since the 1980s, New Urbanism with its advancement of mixed use development and emphasis on regional planning perspectives, as opposed to solely city-centered planning, and has advocated for locally appropriate solutions, running counter to the manufactured preferences of earlier development strategies. While Garde (2004) notes that, though neighborhood design principles have impacts on policy, principles related to broader regional planning, due to a dearth of public support often go unimplemented. Conversely, New Urbanism has managed to gain traction as the US Department of Housing and Urban Development has been influenced by its tenets, particularly its reimagining of

public housing (Vale, 2013) as well as influenced outfits such as the US Green Building Council's Neighborhood Development program.

Noting the emphasis on urban planning's historical preference for 'building places', Healey (1998) urges a shift in emphasis that accentuates 'place-making' while distinguishing between local policy cultures which possess integrated, connected and informing capacities and those that are partitioned, removed from decision making and knowledge bases and lack the ability to deploy support. Similarly, Thwaites, et al. (2013) contend that even with the rejection of urban planning agendas that are based on localism, that planning continues to be a top-down venture "driven by aesthetic and economic agendas which seem to privilege rapid delivery and visual spectacle over social value" (p. 2).

Pearsall and Pierce (2010) note that environmental justice has a diminutive presence in both the environmental policy arena and urban sustainability indicators, due to the growing prominence of macro-scale problems (largely climate change), and also from regionally competitive amenities (e.g. public parks). Portney (2003) notes an overall underrepresentation of EJ in sustainability plans, as these documents tend to be more economic centric, with indicators trending toward biophysical and ecological components, more so than those centered on social dynamics. From here, it becomes common for environmental justice to be coupled with broader (i.e. economic) concerns.

It should be clear from the above that justice and equity issues must be part of the core considerations that sustainability planning engages in. When these issues are put at the periphery (e.g. limited to public hearings) or totally absent, there is a significant risk for an *unjust* sustainability to develop; that is, one that inordinately concentrates on environmental amenities, uncritical perspectives on green jobs (Mulvaney, 2014) or potentially looks at aggregate conditions (Fredericks, 2012; Pearsall & Pierce, 2010), thus

obscuring localized threats, on smaller scales, that vulnerable populations may be exposed to.

2.13 Critiques of Sustainability Planning

Sustainability planning has gone through multiple incarnations as it has become more embedded in development strategies. While initially plans were undergirded by indicators and rankings or score cards, the successive generations emphasized the necessity of a wide-range of those with input, the importance of social capital and the inclusion of a plurality of stakeholders in the formulation of plans, policies and strategy (Robinson, 2012). Even, with these advances, Robinson notes that local entities are still challenged with moving past solely environmental concerns (and outcomes) and including equity dimensions of sustainability.

The ideals behind urban sustainability and its capacity to be achieved have not come without significant pushback. Cornier (2012) questions the relevance or viability of sustainable cities as perhaps utopian and further contends that municipalities are not fully sustainable. Others have noted that due to dense populations, inherently cities cannot be sustainable (Martinez-Alier, 2002; Rees & Wackernagel, 1996). Extending on these critiques are the challenge that cities do not produce anything of value that is commensurate with the abundance of energy and material imports that are necessary for them to function. Satterwhite (1999), as quoted in Keirstead and Leach (2008) counters this thinking by suggesting that the goal is not necessarily for a city to be sustainable, but to replicate behaviors and patterns via governance, production and consumption along with waste management that are in alignment with broader, extra-urban sustainable development

goals. Furthermore, with dollar valuations being the primary means of assessing success, the power to simplify gross environmental degradation into dollars is an oversimplification – and perhaps undemocratic.

Portney (2003) suggests that the coupling of *sustainability* with *community* can be problematic due to the amorphous nature of each concept. While the former is conceived in a bevy of ways, if not entirely contested, the latter, due to its capacity to not easily be conceptualized on scalar levels (i.e. a community can be a range of actors with common interests that spans a few neighborhood blocks up to those that have solidarity on a global level.) Notwithstanding, Portney defines the sustainable community as “mechanisms that can be used to redress the often negative or deleterious environmental and social effects of adherence to mainstream approaches to economic development (p. 4).” Even with the above shortcomings and challenges, because of the prominence that sustainability planning has in cities, at the very least it is an appropriate scale in the transition phase towards more equitable and ecologically sound environments.

Chapter 3

RESEARCH PLAN AND METHODOLOGY

3.1 Overview

This chapter begins with an acknowledgment of the intellectual foundations of the work to preface how the research was conducted. It then looks at the various tools and research methods used to engage its research questions and offers a rationalization for the use of each.

3.2 Forethought

This dissertation is the progeny of environmental justice analysis inaugurated in the 1980s and early 1990s by seminal scholars such as Bunyan Bryant, Beverly Wright and Robert Bullard, who laid the foundations for how race and class factors have immense effects on environmental outcomes, the placing of threats and access to quality living. Building on these early works have been innumerable contributors, who have expanded the EJ tent to include concerns about food sovereignty, transportation, and a planet centered focus in the form of ecological and climate justice. Precursors to this analysis are Warner (2002) and Pearsall and Pierce (2010), who examine how environmental justice addressed in sustainability planning by city governments operationalize and assess their respective sustainability schemes. Those works built on the collection and evaluation of data from sustainability and development projects of municipal governments. Whereas the core

elements in those assessments were based on distributional and procedural takes, this dissertation will go beyond by looking at other factors, as called for by the *Just Sustainabilities* paradigm (Agyeman, 2005), including recognition and equality of outcomes for all inhabitants. Agyeman's work is at the heart of the analysis as a just sustainabilities framework is the theoretical basis for assessing sustainability, justice and equity issues that are interwoven in urban environmental planning. I use the plural (*sustainabilities*) in the same spirit as Agyeman, realizing that there is not a singular pathway for any city/place, to reach sustainability. It is this document's contention that a just sustainabilities paradigm has the dynamism to integrate holistic approaches embodied by sound sustainability planning and be cognizant of the overlooked -- if not wholly invisible -- concerns of environmental justice communities, with a goal to inform a more equitable public policy and planning and embody the promises of meaningful sustainability planning that affords present and future generations dignified life quality while responsibly acting within the boundaries that ecosystems house life in. Ultimately, *the framework and research hopes to assess, whether or not sustainability planning and implementation is conscious of and improves the living conditions of marginalized people and places, and in turn moves them towards environmentally just outcomes*, as part of overall sustainability pursuits.

The methodology will use a triangulation strategy to meet its objectives. By employing a bevy of research methods and tools (archival analysis, the review of academic literature along with city and regional planning documents, attendance at public meetings and hearings, GIS), the sum of these materials will be used to build a case study of the

observed. Following Pearsall and Pierce (2010) city specific evaluations will be limited to government plans and those acting with government authority, as governments are not only the legally bound body for implementing policy, but also the entity that is responsible for promoting the well-being of inhabitants and ensuring public safety. This in no way diminishes the critical role that NGOs and activists groups play in policy, particularly in protecting and advocating for the well-being of the disadvantaged, but there is a recognition that informal channels can vary widely from place to place (just as municipal efforts do), but also substantive, with there being no legal imperative for these groups to protect the commonwealth, their strategies have been omitted from analysis, though their input will be included and is critical in framing of local issues.

The following sections offer a comprehensive overview on how the plans for approaching the problems that the dissertation addresses in the analysis chapters have evolved and how the research has been conducted.

3.3 The Research Logic

The research questions listed in Figure 1 are interrelated with the just sustainabilities paradigm and collectively allow for a thorough analysis of urban development and sustainability planning's attention to equity and justice. Question one generally examines sustainability and its environmental justice implications, before precisely investigating various machinations involved in the shaping of planning. It gives attention to intragenerational equity as well as recognizes the moral standing of all communities. This is critical in the overall consideration of sustainability in that if all communities do not have the capacity at being recognized as an integral part of achieving

sustainability, then the potential for truly sustainable outcomes are dubious, as some places and inhabitants will be negatively exposed to the external activity of off-site behaviors. In addition, it raises the importance that just processes play in equitable planning and development. It operates off of the premise that all peoples should have a meaningful say regarding their individual development and as part of a collective. It further explores who benefits and who pays for environmental outcomes. Whether or not problems are ultimately dispersed is also a matter of intergenerational concern. The underlying principle here is that in order for sustainable behavior to be actualized, high risk areas cannot be the dumping grounds for more affluent and politically well-connected area, nor should harm disproportionately concentrate in said communities. The research methods used to analyze this portion of the dissertation involve: i) reviewing sustainability plans and engaging in subsequent text analysis in order to assess what documents emphasizes and concentrations are, ii) the use of GIS to look at how environmental amenities and threats concentrate, particularly in vulnerable communities and iii) attending public meetings in order to assess the accessibility that residents have in decision making processes.

Question two broadly looks at the human health implications of planning before specifically looking at how networks systematically address related issues. This has significant implications regarding not only environmental thresholds, but also quality of life for inhabitants and the prospects for future generations to inhabit and move through safe places. The research tools used to engage this portion of the analysis include: i) using GIS and site visits to gain a spatial appreciation for environmental conditions, ii) attending public meetings and neighborhood planning association gatherings to see who is involved in decision making and to view how those forces align, and iii) consulting germane planning documents to determine documents' representations of issues and efforts to address relevant issues.

Collectively, the questions allow for a sufficient demonstration of whether urban sustainability planning can meet the challenges that years of urban development, and the political and economic forces that undergird it, have put into place. Because of the amorphous natures of both environmental justice and urban planning concerns it was important that the questions not be evaluated in an isolated manner thus informing the necessity that issues be addressed throughout the work and not be limited to a regiment that allowed for topics to be limited to a respective chapter's purview. For example, when looking at community input and the role of the public in shaping policy development, it was essential to not only see what that process looked like at public meetings, covered in chapter five, but to also read about the public process as part of an environmental impact statement covered in chapter six.

Research Question 1: How are environmental justice concerns addressed in urban development and municipal sustainability planning?

- Does the language of sustainability plans address environmental injustice?
- How is inequality addressed in policy and projects?
- Do all communities offer access to environmental amenities and adequate life quality provisions notwithstanding community characteristics?
- What role does community input play in shaping urban development?

Research Question 2: Do urban planning and development projects systematically promote safe and healthy environments?

- Do a range of actors work in concert to identify, assess and ameliorate threats?
- How do mobility projects improve or aggravate environmental conditions?
- How does planning address the dispersing of environmental threats?

Figure 1: Research Questions

3.4 Type of Research

As stated in Chapter 1, the work employs both descriptive and explanatory research. The evaluation related to Research Question 1 above and its extensions, is primarily descriptive. The question focuses on whether or not all peoples under a planning regime have access to environmental benefits and access to a public input process in order to influence plans. Research Question 2 and its extensions are primarily explanatory, and seeks to assess if the conditions to produce healthy communities are present, whether the interactions by and between actors can mitigate environmental threats and through a qualitative evaluation, whether and how projects affect life quality. In order to engage these areas, the methods and tools listed below were used. The methods were applied to distinct problems: 1) to assess the conditions of healthy communities, brownfields and the phenomenon of food deserts; 2) to analyze mobility options, three transportation projects were examined; and 3) to evaluate the effects of sustainability planning on life quality, brownfield distribution was studied.

3.5 Consultations

After research questions were formulated consultations with a consortium of relevant actors were the starting point for the development of this work. Developing a presence at public meetings to understand the culture of policy and planning and to obtain insight on how municipal considerations and actions pertaining to EJ are perceived within the community and understanding the intentions of policy makers first hand was extremely valuable. The analysis is an exercise of *process-tracing*, that is as Swanborn (2010) states “the description and explanation of social processes that unfold between persons

participating in the process, people with their values, expectations, opinions, perceptions, resources, controversies, decisions, mutual relations and behaviour (p. 13)”.

Attendance at numerous public engagements and forums related to sustainability planning were integral to the study. Observations could be made regarding processes and an understanding of how bureaucrats and government officials engaged the public regarding sustainability and related matters could be captured. How the public in turn shaped the policy and planning process could also be observed. The author attended two BeltLine quarterly briefings, three ARC Board meetings, an NPU meeting and four phone conferences led by environmental justice officials. These interactions allowed the author to observe how officials interacted and presented program materials and to assess the public’s level of engagement and capacity to make comment. In addition, this component of the research allowed for the gathering of onsite literature and meeting agendas so that the content of those agendas, and in effect what received attention, could be easily documented. Where necessary, follow-up, was pursued by email correspondence to gather further information and clarity regarding materials when necessary. Parties consulted and observed include: members of civil society organizations, local government bureaucrats (including personnel from the City’s Planning Department and the Office of Sustainability and other policy makers from local/regional governmental planning networks, such as Atlanta Regional Commission and BeltLine officials), other bureaucrats that have inputs into city practices (e.g. federal and state level officials from the EPA), researchers that have looked at either issues directly related to Atlanta or issues that make up the theoretical framework of this analysis, law firm predicated on mitigating environmental trauma and

community meetings. I began with community groups, as it is essential to have first-hand accounts from residents reflected, they are uniquely qualified to bear witness to the *special problems* that (EJ) communities are matched against. Direct interaction is essential for understanding and conveying whether, or not, the marginalized have trust in government processes.

This investigation relies heavily on this type of analysis; while index building may be necessary for assessing EJ problems that can be juxtaposed across other communities and/or municipalities, whether or not residents have faith in planning and policy processes cannot be understood via quantification. Furthermore, any recommendations that this research will make to increase the conditions of communities without reflections of inhabitants would come across as ill-informed to say the least, and potentially didactic and condescending. Because the federal government has been using EJ specific language for nearly two decades and often partners with, advises and funds local communities on environmental programs, its perspective on local planning was valuable as well. Civil society interests also have meaningful perspectives of what is actualized in communities, as their ground-level emphasis often have justice themed focuses. Furthermore, these groups, as part of their embedded missions, often have a heightened awareness, in contrast to many community members, of the plans that governing bodies are developing. Finally, as the primary purveyors of localized sustainable development, via policy, funding and programming initiatives, it is requisite to interact with government personnel whom oversee planning and development. Consultations sought to find whether city actions i) recognize environmental justice communities; ii) make programmatic efforts to aid these

communities in encountering environmental problems; and iii) employ democratic processes to involve community members and also determine community impressions. If residents' perceptions are not reflected by recognized policy, this undermines the process of public participation, and ultimately implementation. Furthermore, meetings acted as a mosaic to answer the broader research questions mentioned in chapter one section six (1.6).

It is worth mentioning the unreturned phone calls and emails, along with commitments to interview and invitations to speak that did not get followed through by consenting personnel – this is a reality of this type of research. These roadblocks necessitated attending numerous government planning meetings that were open to the public, to speak directly to and hear from government officials. While this may be considered a hindrance (considering the time and expense of traveling to have just a handful of questions answered), the opportunity to meet with folk in dynamic settings offered the benefits that electronic communications do not have. Furthermore, these settings allowed for interaction with dozens of people in a period that separate interactions would not have allowed for.

3.6 Documents and Archival Data

Archival data, including that from a bevy of local news media, including print newspapers and their companion websites were collected and analyzed. Going back as far as the 1960s, this type of research provided critical contemporary accounts of urban policy making. Additionally other, non-print based news websites were consulted. For materials that support the historical framework and contextualization of analysis, the Special

Collections of multiple libraries archives were visited, including the Fulton County Library, as well as the libraries at the city's numerous research universities and colleges. Supplementing the above are statistical data from the US Census Bureau, the EPA and data from City of Atlanta, Fulton County and Regional (e.g. ARC, GRTA, MARTA) agencies that either measure sustainability and environmental impacts or play a significant role in regional planning. The following section, beginning with planning documents, will present what types of documents and data were used, the sources of the documents and the value that each added to the research.

3.6.1 Planning Documents

Amongst the most significant documents and materials for this study's review are those disseminated from the Mayor's Office of Sustainability and the City's Department of Planning and Community Development, which includes plans pertaining to sustainability, transportation and comprehensive development. These materials have been scoured for a range of relevant words (see the content analysis section below) that have allowed for the creation of an empirical outlet for the principles of a just sustainabilities(Agyeman, 2005; Agyeman, 2013) framework. Furthermore, when city specific literature and programs are evaluated, the study investigates the inclusiveness of the planning processes and how the process and policies dealing with sustainability address and improve the living conditions of those that inhabit EJ communities. In addition to the planning documents used in the case study analysis, similar documents, particularly sustainability and comprehensive development plans from a number of other city and

metropolitan governments were used. This provides the undergirding for the systems analysis which compares the sustainability plans of various locales, and investigates each areas own respective incorporations of justice and equity.

3.6.2 News Media and Websites

Atlanta has multiple print and associated media that were significant in compiling information in the analysis section. News sources include the region's most prominent periodicals and online news sites. Using this assortment of news media was valuable due to the multiple lenses of presentation and sympathies of the respective publications. For example, one alternative news weekly with sensitivities that reflect progressive urban politics, while another source presents a narrative that is largely pro-business/development oriented.

3.6.3 Organizational Documents

Documents from NGOs and other bodies were critical in completing the analysis. For example, the Atlanta based Partnership for Southern Equity, via its Metro Atlanta Equity Atlas GIS work, has generated a series of maps looking at various dimensions of equity in a series covering nearly 30 metropolitan counties within the region. Numerous documents were useful (maps on environment, transportation, health and public safety) with specific ones covering topics like distribution of parks, particulate matter pollution, public transit, vehicle miles traveled and asthma hospitalization, all broken down on either the census tract or county level. When possible and appropriate, this analysis chose to use

documents based on the census tract level, as broader surveys can obscure the effects that local populaces feel. This can be particularly true for EJ communities that disproportionately feel the impacts of burdens related to urban life, while the intensity of burden sharing can be camouflaged by aggregate data (Pearsall & Pierce, 2010).

A drawback to the MAEA information was the PDF format of their maps that, while tract related, did not allow for the manipulation of variables. To offset these limitations, I conducted my own GIS analysis using, including using shape files from the City of Atlanta as well as plotting my own coordinates using primary data from the state's Brownfield database. Another GIS tool that aided the analysis is the USDA's Food Access Research Atlas, which identifies food deserts across the US and offers analysis on multiple levels, i.e. identification of low-income areas along with vehicle access from multiple degrees of access. Finally, existing research by others that has investigated a number of dimensions related to this project: environmental justice, economic development, along with sustainability and urban growth, were consulted. This ranged from books and journal publications to works in popular sources.

3.6.4 Court and Legal Documents

Due to the legal contests involved in a number of issues in the analysis section of this document, numerous court documents were accessed to explore how EJ, sustainability and economic issues intertwine and play out within legal systems and to further display contentiousness embedded in said issues. Furthermore, legal agreements and business

contracts that involve the transactions in the analysis were consulted to demonstrate the financial and business aspects of the associated projects that said documents cover.

3.7 Content Analysis

Content analysis is “the systematic, objective, quantitative analysis of message characteristics” that involves the thorough examination of word use (Neuendorf, 2002, p. 1). The objective is to engage in a systematic description of a text’s manifest content (Berelson 1952 p. 18 quoted by Neuendorf p. 10). The exploration of said text’s specified characteristics facilitate the development of inference making (Stone, Dunphy, Smith & Ogilvie p. 5 quoted by Neuendorf p 10). There are a number of methods that can be explored within the field of text analysis; this research will employ a *standard discourse analysis*, which monitors “consistency and connection of words to theme analysis of content and the establishment of central terms” with the aim of typifying customary word use from the said text (Neuendorf, 2002, p. 5).

In order to capture whether the sustainability planning *speaks the language* of justice in cities’ programmatic material, the text analysis of relevant literature included planning and sustainability documents from several sustainability regimes. In addition to assessing how justice themes are articulated in documents, it is important to see how language, policy, planning and targets ultimately reconcile with outcomes of ongoing programs. Krippendorff (1980) (as cited by Stemler (2001)) identifies the characteristics and underlying questions of all content analysis: i) which data is analyzed; ii) how the data is defined; iii) what population the data is drawn from; iv) what is the context relative to

which the data are analyzed; v) the boundaries of analysis; and vi) the target of the inferences. The content analysis will be comprised of a preliminary word frequency count that identify words of interest and key words in context (KWIC), the latter being essential to account for consistency.

The analysis will use *a priori* coding, that is, it will be predetermined which categories are looked for within the text. Specific terms that this analysis will check for are environmental justice and the related concept of environmental racism. Word frequency counts do encounter multiple limitations, including: synonyms, the political realities that some issues are more (or less) palatable than others and thus are easier to raise, and words having multiple meanings (Stemler, 2001). To combat the problem of reliability, as when word meanings are ambiguous, clarifying steps were taken via contacting document authors (when known) or members of the agency that publishes the tested document to gain clarity. As with any experiment, validity is an issue. To make the work credible, the analysis will act in concert with the other parts of the methodology (i.e. the case study's findings – via interview, archival research and news reports as well as the indices analysis and results) to show whether actualized patterns are consistent with the emphasis placed on EJ in sustainability documents.

Similar to how text analysis was used in Agyeman (2005), in which it was employed as a tool to assess the frequency of EJ and equity language used in the missions and programmatic material of the Big 10 national environmental organizations, here, its use is expanded to not only look at the use of environmental justice/equity verbiage, but also sustainability and economic terminology. In addition to the aforementioned jargon on

justice, the discourse analysis will run similar searches for economy (and related terms, like employment, job) and environment (and related terms, such as ecology, and sustainability). In the case of the latter, it may seem intuitive that these documents address these issues, but initial analysis showing their inclusion suggest that documents that are light on actual sustainability language, have the potential to be fronts for economic development.

Because terminology cannot act as the sole determinate regarding whether justice related issues are (or are not) being considered and served in American cities, it is necessary to also be cognizant of proxy language that cities can use that will identify justice orientations in public policy documents and efforts. A battery of terms that, when contextually appropriate, will act either as synonyms with EJ, or indicate at least some appreciation of the pervasive existence of inequality by agencies. The proxy terms that this methodology uses and allows for are: environmental equity (when used in the context of intragenerational equity, and accounting for socioeconomic imbalances) and community involvement/participation., along with language that specifically identifies marginalized communities (including terms related to residents race/ethnicity, income level, age or other language that identifies socioeconomic characteristics that places a party at either heightened risk of environmental degradation or increased proximity from environmental amenities).

An exegesis of each plan was performed to ensure that key terms were used within the context of this analysis. For example, the inclusion of the term equity in a sustainability plan could not be counted if its use did not address fairness, equality or a related meaning.

Thus, its use in the phrase of “debt-to-equity” ratios in the context of personal wealth was not considered.

3.7.1 Indexing

The purpose of the Just Sustainabilities Planning Index will be to couple discourse analysis with an interpretive analysis (see Table 5: Just Sustainabilities Planning *Index*

Adapted from Agyeman). The attached index was adapted from Agyeman (2005), who created a similar metric to gauge national environmental organizations’ infusion of just sustainabilities frameworks in their discourse. In addition to monitoring language related to justice, equity and sustainability, this research also looks at documents’ use of economic terms for the purposes of comparing emphasis amongst the themes. This index was generated looking primarily at the sustainability related development plans, along with relevant materials from departments’ websites and relevant programmatic materials. The purpose here is to get a sense of not only what coordinated and unified efforts are *planned* to act on behalf of EJ communities, but to also examine what has been codified by implementation and programs.

Table 5: Just Sustainabilities Planning Index
Adapted from Agyeman (2005)

0	EJ and proxies not prominently mentioned in plans
1	EJ & proxies not mentioned in plan; limited mention in ancillary materials
2	EJ and proxies limited mentioned in plan; limited mention in ancillary materials
3	EJ and proxies significant mention in plan; substantive feature in ancillary materials

3.8 Geographic Information Systems

Due to the proximity that many urbanites have to legacy pollutants and the attention that development and environmental agencies have given them, the quantitative analysis is undergirded by the exploration of urban brownfields. This required geocoding and plotting sites with GIS software for spatial analysis and was performed using two different lists of brownfields. The following section begins by illuminating how the compilation of data from state and municipal sources was collected. It concludes by explaining how the data was plotted and contributes to the overall analysis.

3.8.1 State Listings

The Georgia's Environmental Protection Division was consulted to compile a list of state identified sites. The Brownfield Development Unit within that division keeps a

public record of brownfields properties that are in various stages of remediation via voluntary action under the state's response program. This is facilitated by CERCLA Section 128(a), which is a federal law created to fund the cleanup and remediation of hazardous sites. Additionally, the state has a second classification of cleanup sites under the Georgia Hazardous Site Response Act (the state's incarnation of superfund) for non-voluntary hazardous sites. From the statewide Brownfield Summary Table, which contained 570 sites, I focused on just sites in the City of Atlanta, which totaled 236. Of those sites, this analysis was primarily interested in those that had gone un-remediated, and they totaled 117 sites. Of those sites, all were plotted/geocoded with the exception of several for which there was ambiguous or incomplete address information. The rest were included in the analysis, with the exception of sites that, while on city property, existed outside of Neighborhood Planning Unit (NPU) boundaries.

3.8.2 City Listings

A different process was used to identify the sites within the City of Atlanta database. The City's website has numerous GIS shape files for download at its website. From here a list of each brownfield site was generated with the exception of those that were duplicates from the state's Brownfield Summary Table and those that were potentially duplicate sites due to proximity and potential for duplicate recording and incomplete information on the site (e.g. address). The Atlanta listings were divided into two categories: known sites and "potential" brownfields. After this process, the Atlanta's list tally stood at 163 locations.

3.8.3 The Analysis

Once the lists of brownfield sites were complete, analysis considering a number of factors began. First off, as aforementioned, the scale for the analysis was done on the NPU level; this is a system established by Atlanta for clustering neighborhoods in the mid-1970s, and is the city's most direct way of having interface with residents. The city is comprised of 25 such NPUs, which themselves are groupings of adjoining neighborhoods. This system was initiated to allow for citizen participation in the development of a Comprehensive Development Plan, but still exists for planning purposes, as a way for citizens to give input to city policy and to get information on government happenings. These groups (which are locally run and organized and whose executive boards are comprised of residents) each has a planning department official that is the official liaison to the NPU. They also act as a way (external to the city) for various efforts at community empowerment and overall improvement, although due to a multitude of forces (e.g. organization) some function better than others do.

The locations of brownfields was considered against a number of factors concerning each of their respective NPUs, and include factors such as overall population, population density, the age of the population, race/ethnicity, the number of housing units along with the number of units occupied and owner/rental status and income. The rationale for looking at these demographics and factors is in line with the overall goal of looking at how sustainability interacts with issues of equity and justice. It can help answer questions related to brownfield/location and demographics (e.g. affluent, distressed) that lives in the communities and are toxics more prevalent where the most vulnerable populations

concerning health -- such as the young and elderly -- live. Do brownfield communities in Atlanta have a higher clustering in racially significant manners and also are transient populations, or those less able to resist (renters?) at greater or lesser risk of having proximity to toxic sites. The state's listings allow this level of analysis more readily, due to the more comprehensive listing, which includes: the date in which a cleanup plan was developed (and completed -- though as mentioned above, this work looks at those sites that have not been remediated as of December 2014), and also lists risk reduction standards, that is the cleanup standard for individual sites, the size of each property (think here, having one 5 acre brownfield may be more of a threat to public health than having three .25 acres sites). Georgia's list also identifies whether sites are on the Hazardous Site Inventory, which are locations that have known or suspected regulated substances releases into the local environment at levels above minimum standards that have yet to have been remediated (Georgia Department of Public Health). Finally, the listing notes whether there are any property use restrictions.

Plotting the state listed sites and using the city shape files using GIS software adds another dimension to the analysis. After plotting the sites I was able to overlay them with a number of other layers (locating them within NPUs, against the Atlanta BeltLine project) to see where sites are located. This enabled the juxtaposition of toxics with sites that the city has dedicated for broader economic development; for example, the BeltLine project, which has been associated with 1100 acres of brownfield remediation in its tax allocation district. It should be noted that Atlanta is home perhaps the largest brownfield rehab in the

nation's history, with the rehabilitation of Atlantic Station, a former steel mill (Commercial Real Estate Development Association, 2005).

Spatial analysis that is observable by eye allows the viewer to visualize the magnitude and clustering of locations in the manner that non-visual formats do not. It also allows for the enhancement of analysis that shows where sites are actually located. For example, are an NPU's toxic sites located in remote stretches of industrially zoned lands, or are toxic sites in immediate proximity to schools, recreational sites and neighborhoods? Additionally, using GIS allows observers to make sense of sites or information that may otherwise seem non-intuitive. For example, a distressed neighborhood that previously (or currently) housed land-use that would make land seemingly suspicious of at least having a potential brownfield may be replete with them merely because analysis has not been conducted. With the city's brownfield regime placing a significant emphasis on developing all land "to its highest and best use" (Atlanta Office of Planning, 2012) and when considering the economic imperative by targeted tracts, this readily reconciles with the innumerable parcels that have not been analyzed.

There are limitations to this part of the analysis. First, regarding the brownfield sites on the state's list, as mentioned above, it only looks at those sites on the voluntary cleanup program list and also does not include sites that are on the list but have already been remediated to some degree – perhaps the latter would have been helpful to illuminate how various forces have been in cleaning up areas and to look at the trends that exists for those sites. As for the city's listings, in addition to not having the categorical breakdown of the state's listings (e.g. size of brownfield, risk reduction standard or the status of the cleanup

plan in place) there is no indication of the status of the cleanup or programmatic way in which remediated sites have been approached.

3.9 Case Study

A portion of the research will be a case study looking at Atlanta, Georgia. This component of the research is critical because it works to illustrate the challenges, limitations, successes and possibilities of urban development and sustainability planning in a practiced manner. Furthermore, it allows for the demonstration of just sustainability usefulness as a tool in looking at the aforementioned challenges. To be clear, it is not an evaluation that concludes aggregate success or failure, but a look at specific plans, activities and projects and illustrates areas of strength, weakness and forces that undergird germane processes. The process of deciding on Atlanta began with the investigation of American cities that have sustainability offices or departments. From here, the author scoured plans and other resources (websites, documents and news media). Considerable attention was given to the extent to which cities were addressing environmental justice (whether directly, or through proxy language) within their sustainability programs. It was important not to simply make the case that municipalities are not considering their most vulnerable residents in policy making. While indeed, many are not, there are urban areas, whom at least in language, that are giving considerable attention to the concerns and outcomes of vulnerable populations. Through the aforementioned distilling process, an assortment of locales were in the running for further analysis. In some cases, language in plans was either ambiguous or needed clarification, which prompted contacts to the departments responsible for

creating relevant documents (e.g. a city's planning or development department), and after this process, it was decided that several cities would be included for consideration for further analysis. After speaking with an acclaimed EJ/Sustainability scholar, who noted the dearth of studies on Southern cities, the author took a heightened interest in pursuing a municipality confined to this geography and from here Atlanta was chosen due to its prominence.

When sustainability related literature and programs are investigated, the research's EJ components stress that the study investigates the inclusiveness of the planning process and how the process and policies dealing with sustainability address and improve the living conditions of those that reside in EJ communities (e.g. decreases in particulate matter, increases in non-auto transportation options and access to environmental amenities.) The sample indicators associated with the four pillars of just sustainabilities were used to illustrate rather than directly measure the presence of conflicts between justice and sustainability in community conflict. For example, food desert status or debt incurred to pursue a sustainability project are used for descriptive purposes, to highlight the plights of communities operating within the context of sustainability policy. This strategy cannot measure the exact conditions, but it can reveal the underlying forces that are creating those conditions.

Also critical in this case study will be the illustration of how projects and macro-policy decisions (e.g. land use) that do not necessarily derive from the city's sustainability department are implemented and whether other municipal actions are consistent with codified sustainability plans. An example here involves the investigation of the pending

demolition of Atlanta's Georgia Dome, a facility that will be approximately 25 years old upon demolition, and its replacement by a new stadium. Not to mention the physical resources that go into this type of effort, but the effects on the surrounding community (e.g. the purchasing of land from historic African American churches and Morris Brown College, a once prominent HBCU) will be critical to the investigation. By doing so, the foundation of the research is advanced for two reasons. First, it allows for the demonstration of how inclusive planning processes are. From here, it can begin to determine whether policies associated with sustainability planning address and improve the ground floor conditions that EJ communities and residents exist in. Additionally, it allows for the assessment of city projects and large-scale land use decisions implemented in conjunction with and after codified sustainability and development plans. This facilitates an understanding on whether or not the sustainability planning is actually consistent with the implementation of policy.

The case study will take the following considerations into account, including: i) how its narrative advances the research question; ii) problems that arise from generalization; iii) extrapolation and inference from city specific events; iv) what theories underlie the observation; and finally v) what are the limits of partaking in this type of qualitative analysis. The case study will enact an *intensive approach* (Swanborn, 2010). Important here is to assess Atlanta's unique context, engaging in a variety of data collection and investigative processes (e.g. observations of germane parties, in the form of attending public meetings).

Sub-national actors are a potential answer to the current impotence and ineffectiveness of macro level environmental inefficacy that inadequately addresses a range of issues that, perhaps, originate locally, but have far reaching implications: e.g. polluted waterways, diminished air quality, and waste storage. Even considering the aforementioned, local governance should rely on the case/site specific realities that are unique to a given region; one-size-fits-all approaches can be counterproductive -- the renewable energy arena can be looked at as a model to combat this, as power generation efforts typically place primacy on local conditions. This is not to suggest that sustainability or justice in Omaha should look or feel radically different from in Atlanta, but only that the needs, starting points and programs that are geared towards different communities must be acknowledged from the outset, as opposed to homogenous prescriptions. As Pearsall and Pierce (2010) note, scale is important, and requires analysis that goes beyond even the city level and looks at specific communities and census tracts – as opposed to the broader city or region, analysis of which can obscure inequities. The consolidation of the sustainability and environmental justice paradigms are a path towards this direction. It is the intention of this research, that while it realizes the uniqueness and special circumstances and processes that frame sustainability planning and policy within Atlanta and all urban areas, that the dynamism of steps to approach the issues within are suitable for replication which will ultimately allow for comparison and, perhaps, more equitable and just approaches and outcomes in planning.

Chapter 4

CASE STUDY BACKGROUND

4.1 Overview

This chapter begins with a look at urban growth and development trends in the US Southeast and Metropolitan Atlanta. Next, it provides the geographic scope for the studied region and provides a historical basis for development patterns that have informed contemporary (inequitable) outcomes. It then looks at Urban Renewal's role as a precursor to contemporary planning and environmental problems. It concludes with a look at additional projects and planning efforts that have set the table for Atlanta's development regime.

4.2 Trends

By the mid-21st Century projections indicate that at current rates of sprawl, the Southeast US will see its urban area increase by up to 190% creating a Southern Megalopolis from Atlanta to Charlotte with Birmingham and North Carolina's Research Triangle on the periphery (Terando, Costanza, Belyea, Dunn, McKerrow, & Collazo, 2014). Undoubtedly, the region's anchor is Metropolitan Atlanta and its suburbs, which is not only the population epicenter -- with its interior 10 counties having over 4 million residents, and the broader region housing over 6 million inhabitants (Atlanta Regional Commission, 2013), the metropolis is the Southeast's economic engine as well, being home to the world's busiest airport, is a major American tourism and convention

destination and headquarters to over a dozen Fortune 500 firms. Due to Atlanta's recent and rapid climb as a population hub and business power -- the latter a result of its unique racial and political economy along with its geography, it is been effected by many of urbanization's corresponding traumas (e.g. inequitable planning, hyperautomobility, ecological crises) that are emblematic of cities that have matured in the post-WWII era. Considering the above trends, both the city and region have employed comprehensive urban and regional planning to mitigate existing and emerging threats, whether on the city level via the planning department and the Office of Sustainability or via regional networks, like the Atlanta Regional Commission and the Georgia Regional Transportation Authority. Its atypical history regarding racial politics in planning and economic development and current stratification along socioeconomic fronts, make Atlanta ripe for assessment regarding how its current urban planning strategies, and particularly sustainability policy and planning, reconcile with both environmental justice and equity concerns and outcomes.

Notwithstanding a history of racial antagonism and a brutal past intertwined with Jim and Jane Crow, Atlanta, Georgia has a unique story regarding racial politics and policy making, particularly in contrast to its Southern counterparts. For example, it became the first Southern city to elect a black mayor with the ascension of Maynard Jackson in 1973 and it also was the site of a multiracial governing regime, it too without much precedent, up to that time, in the US. It is because of its over four decade history of unique racial politics, what Stone(1989) refers to as an *Urban Regime*, that makes Atlanta planning and policy (along with outcomes) an interesting study. The analysis in this chapter looks specifically at the nexus of urban planning and its justice and sustainability implications,

along with the equity outcomes of the policy making apparatus. These issues will be explored first with an overview an historical overview of policy making and continues with a look at how urban renewal in the city set the table for contemporary policy and planning battles, setting the table for current woes and victories.

4.3 Defining “Metro” Atlanta

It is crucial to first provide clarity on how “metropolitan” is defined. This is critical for a number of reasons. First off, it is a concept that will be used throughout this work, and as expounded upon below, will have alternate (yet clear) meanings. Foundationally, as mentioned in the literature review chapter, urban sustainability is a problematic concept when looked at on solely a city-wide scale. So when Bryant (1995) makes the case those institutions that confront environmental hazards that are not respectful of political boundaries – albeit having an international framing in his analysis – he could have very easily been addressing the crises that urban areas face. Just as climate change or acid rain are transnational issues, toxic land, air and water along with a host of other local and regional threats that supersede local political boundaries. Also critical, the concept metropolitan has varied meanings to different entities. Context means everything here, and when the term metropolitan is used, the associated boundaries will be clarified to place that given use in context.

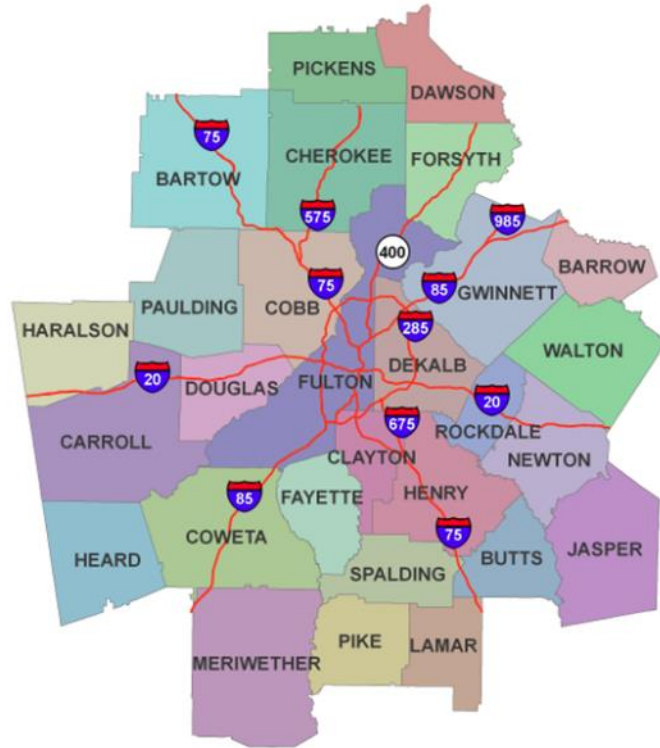


Figure 2: 28 County US Census Bureau Designated Metropolitan Statistical Area (Atlanta Regional Commission, 2014)

According to the US Census Bureau and the Office of Management and Budget, a Metropolitan Statistical Area is one that is “a large population nucleus, together with adjacent communities having a high degree of social and economic integration with that core (US Census Bureau)”. In the case of Atlanta, this encompasses 28 counties –given that Georgia as a whole is made up of 159 counties (second only to Texas, nationally), this number is not inordinate. As shown in Figure 2 above, these counties extend to the West and border Alabama, to the north approaching the Tennessee border, and cover a significant portion of central Georgia to the south, nearly touching Columbus and Macon.

The Atlanta Regional Commission, the region's intergovernmental planning agency, has a more constrained metropolitan area, which covers the interior 10 county region that surrounds Atlanta (this includes Fulton and DeKalb Counties – the two counties that the City of Atlanta is located in). While most of the ARC's work is confined to this tighter geography, for purposes of air quality data, it does generate data for a broader 20 county area.

Finally, for historical purposes, an even more truncated definition will be used in this work at times, mostly when looking at public transportation and its history in the region; a five county (Clayton, Cobb, DeKalb, Fulton, Gwinnett) area will be the focus, as this is the geography most talked about (currently and historically) when looking at the expansion of the region's most conspicuous public transportation agency, MARTA.

4.4 Urban Renewal, Setting the Table for Contemporary Development

While having roots in the late 19th Century, the US incarnation of urban renewal gained momentum in the first half of the 20th Century – particularly in the interwar years – and reached its apex in the decades following WWII (Weiss M. A., 1985). It was a hodgepodge of intertwining interests and outcomes, an economic development tool, an experiment on social change along with being a gentrifying force, and a great manipulator of space and place. Massey and Denton (1993) note that “racial segregation – and its characteristic institutional form, the black ghetto – are the key structural factors responsible for the perpetuation of black poverty” and that it “is the principal organizational feature of American society that is responsible for the creation of the urban underclass” in what they

label *American Apartheid* (p. 9). As urban renewal perpetuates and informs this hyper-segregation, this has serious implications on planning and policy outcomes. Massey and Denton further note that intense segregation in the US was a 20th century product via early laws that segregated housing in the 1910s in many cities, including Atlanta by 1913. As part of a perverse trend that saw increased black isolation in cities across the US in the decades surrounding Renewal, as a measure of segregation, Atlanta was the nation's most isolating city for black residents by 1970.

The post-war incarnation of urban renewal was largely a cyclical process that fed itself. As middle- and upper-income residents left inner-cities in droves, due to policies such as redlining and racist underwriting practices encouraged by the FHA, which advanced the maintenance of property value based on the social and racial components of occupants (Ware & Davis, 2012). Weber (2002) rhetorically refers to this era as being one in which "affirmative action was for whites" (considering the lack of housing loans accessible to blacks), depopulated cities became more concentrated with blacks and poor immigrants.

Indeed, as Avila and Rose (2009) note, urban renewal was not a singular policy, but a consortium of policies and acts that culminated in the leveling of slums, the rising of monument office towers and the laying of expressways to bring whites into downtown areas. Keating (2001) concludes that the "stadiums, civic centers, university buildings, and middle- and upper-income housing" that were the result of projects "were inaccessible to the former residents and provided only modest benefits to most Atlantans (p. 3)." Amongst the codified forces that propelled the processes (in Atlanta and elsewhere across the nation)

were the Housing Acts of 1949 and 1954 which gave cities the legal framework (and financing) for property acquisition for the areas that were slated to be upended for renewal purposes. Ironically, the Housing Act of 1954, perhaps, can be viewed as the crude genesis of modern sustainability planning as it required that publically funded projects engage in comprehensive community development planning as a requisite part of renewal (Teaford, 2000) (or by this time, what had been labeled the “redevelopment”) process. The process of renewal, which targeted slums and so-called blighted areas (and were disproportionately black and poor; James Baldwin is credited with labeling the program “Negro Removal”) often involved the subsidization of private developers. Weber (2002) views this as Schumpeter’s creative destruction process at play, as inner-city communities (if not inhabitants) were sacrificed for neoliberal favored and induced outcomes and all done under the guise of prompting ““healthy”” cities – “as the moral overtones of blight blurred the boundaries between public and private responsibility (p. 527).”

As mentioned in Chapter 2, urban planning has historically favored of economic development and urban growth interests, and marginalized the concerns of environmental and social justice. This was ubiquitous in Atlanta during the era of urban renewal as a host of development projects, including a civic center, stadiums and expressways served to decimate black neighborhoods, like Buttermilk Bottom, in the name of development. The failure to address inequality and to recognize sustainability as an obligation the city has to *all* communities defines the urban renewal and development experience in Atlanta and other cities. (Bryson, 2012)

4.5 The Physical Properties of Urban Renewal

While Urban Renewal was not the genesis of urban segregation, it physically embodied and perpetuated racial separation, via the construction of massive housing projects that tended to concentrate poor blacks (Fainstein, 2010). Though Le Corbusier's "radiant city" designs, which clustered poor (mostly) blacks into high rise apartments, is typically associated with Midwestern and Northeastern cities, Atlanta featured these megaprojects that consequently left dubious legacies, such as the concentration of poverty into tight areas. Ironically, the same programs that culminated in concentrations were also dissolvers of communities. The installations of interstates and expressways through urban areas were notorious for partitioning inner-city black neighborhoods and providing buffer zones between racial communities (Mohl R. , 2002). Chi and Parisi (2011) note the conflicting narratives between EJ and social equity literature on one hand, and regional economic literature on the other, as the former views expressways as harmful (bringing assorted forms of pollution including toxic air, noise and debris) and siting that was consciously placed in vulnerable neighborhoods, while the latter views their construction under the guise of economic growth and the proliferation of mobility. It is worth considering that highway construction was met with resistance during the time via highway revolts across the nation; Atlanta too, was at the site of resistance for expressway projects. These styled projects were effectively harnessed in the 1960s with the passage of federal legislation (Mohl R. A., 2004), though the long term consequences that they have had on black communities are still felt on numerous levels. From a sustainability lens, expressways have been especially horrific regarding the environmental and human health consequences that they have reaped on poor urbanites. As thoroughfares that transport

commuters, freight via 18-wheelers and buses often directly through neighborhoods, residents are directly threatened by the associated particulate matter that vehicles emit. This is particularly brutal for places like Atlanta and the massive amount of auto-based commuting.

Expressways also cut through neighborhoods often times without regard for the social geography and community connectedness of areas – a result of when expediency, physical geography and racial and economic domination converge on marginalized communities. By physically manipulating space and creating detachment amongst residents, social and commercial centers, work and other destinations by largely non-traversable (without vehicles) thoroughfares; relationships, bonds and other outlets that are important to communities become manipulated if not entirely upended.

4.6 Projects and Public Stakes

To be clear, there were competing forces surrounding Urban Renewal in Atlanta. While the Urban Regime was in favor of renewal that promoted economic growth, via protection of business district properties from encroaching slums and by backing construction that generated new money makers, competing groups, comprised of the poor, neighborhood and housing advocates and civil rights groups fought for government funds to go towards combating the deterioration of housing stock in the forms of both public housing and privately developed low-income housing (Holliman, 2009).

Amongst the first proposed renewal projects in Atlanta was the redevelopment of the mostly white Hemphill Avenue area and ran adjacent to Georgia Tech, which met with

controversy from a bevy of forces (local businesses, residents, anti-socialist sentiments) and was ultimately rejected. Efforts to redevelop the historic black district of Auburn Avenue met a similar fate as local forces united to reject the upheaval of the neighborhood which had already been upended by the previously constructed north-south expressway (Stone, 1989). The plans for renewal in the city would often trickle towards the path of least political resistance. Sacrificed areas would include numerous inner-city (and mostly black neighborhoods), including: Buttermilk Bottoms, Old Fourth Ward, Summerhill, Peoplestown, and Mechanicsville (Keating, 2001), with white forces coalescing against relocation of low and medium income blacks into their neighborhoods, via programs such as the Fourth Ward Zoning Committee. Newspapers acting as an arm for the pro-renewal front publicly challenged and chastised local real estate interests that were resistant to renewal projects, as a local newspaper of the era claiming that renewal was “vital to the city’s future (Stone, 1989, p. 44)”. It should be noted that a later editorial would ask is “the city too busy to hate, also the city too busy to care?” in regards to the expendable manner in which the urban poor had been treated and preyed upon, as megaprojects such as stadiums lied at the doorsteps of slums -- and on top of former ones (Stone, 1989). Further isolating the black poor were the inability to get housing loans. As noted in a groundbreaking racial discrimination study from the 1980s, blacks that were more qualified for loans than whites were rejected at a higher rate in 35 metropolitan areas across the nation. Atlanta was amongst the 35 (Massey & Denton, 1993).

While a good portion of this work looks at the contemporary crossroads of sustainability, equity and Atlanta’s pursuit of massive public projects such as stadiums,

these developments (figuratively and literally) have a multigenerational history of (re)producing themselves in the city. Indeed, a major part of making Atlanta as a ‘national city’ was former Mayor Ivan Allen’s pursuit of major-league sports teams’ for the city (Stone, 1989). In fact, it would be just prior to his initial mayoral run that Allen, then head of the City’s Chamber of Commerce chapter, developed a six-pronged program of redevelopment that was the embodiment of urban renewal, including expressway construction, continued urban renewal, rapid-transit, professional baseball, civic centers and city advertising (Keating, 2001). This would require physical accommodations in the form of stadiums and arenas to accommodate teams and events.

In the contemporary, the pursuit of public sporting events and facilities are not a uniquely Atlanta (or even American) venture (Zimbalist, 2015) -- and the corruption associated with high profile venues is ubiquitous, ranging from bribery to secure Olympic games, slave labor used to make World Cup facilities, not to mention the stadium blackmail that is seemingly omnipresent in cities around the nation as owners vie for publically financed sports facilities which often pits municipalities against one another (Waldron, 2012; Pattisson, 2013; Longman, 2000) -- Atlanta has perpetually engaged in venue construction (for multiple sports) since the city lured the Atlanta Braves from Milwaukee in the 1950s. The impetus for a baseball facility was perhaps the capstone project of the earlier rounds of renewal, Atlanta Stadium, which was constructed “for a team not yet signed, with money [Atlanta] did not have, on land it did not own (Stone, 1989, p. 63).”

Even more problematic, while neighborhoods were razed with the promise that improved housing and industrial jobs would be sited at the location of the former slums, a

baseball stadium was ultimately constructed, ignoring the initial plans of renewal (Keating, 2001). This same tell would also play out at the site of the civic center constructed in the former Buttermilk Bottoms neighborhood. Whitelegg (2000) views this as part of a deep seated insecurity within the city establishment which seeks to position itself as an (inter)national city, to be placed on par with the likes of New York and Chicago, thus an incessant pursuit of projects like the 1996 Olympic Games. This is coupled with its willingness to remove the unsightly (including peoples – poor and homeless) and a semiotics built on images; in Atlanta's case, sports facilities. Furthermore, the main drivers of this pursuit, and a radical inducement to change (or create) images and public perceptions was early 1980s research from the city that, precluded the possibility of the city from being a premier convention space due to its dearth of cultural life and attractions (Whitelegg, 2000). This was coupled with a report from the same period that ominously ranked the city as the busiest convention city in which attendees spent the briefest time (Helyar, 1988). The pursuit of the 1996 Olympics was a panacea for multiple problems; the space and construction needs of the project (and certainly subsequent projects and attitudes) necessitated the dispersal of homeless folk – and in the Olympics case over 70 local business, 1000 homeless residents and four shelters (Whitelegg, 2000). This was accompanied with the notorious one way bus tickets to leave town that homeless Atlantans received around the time of the games (along with signing requisite documents stating that that they would not return to town). While not as aggressive as anti-homeless action elsewhere, the sterile treatment of the marginalized is perhaps more systemically toxic. It should be noted that Atlanta has often experimented with its criminalization efforts (while

in the name of public safety), under the guise of *protection* for tourist and others from homeless, via anti-panhandling, loitering and drunkenness ordinances that are particularly enforced in the business and tourism districts (Stone, 1989). Similar legislation (with fluctuating intensities of enforcement) has arisen in Atlanta on into the 2000s, numerous times (National Coalition for the Homeless, 2013; McWilliams, 2012).

Also noteworthy is that even though the City has continuously made efforts to support downtown tourism since the time of urban renewal's heyday, with projects including the long-troubled festive marketplace Underground Atlanta, it has consistently failed to attract the dynamic life which has been sought. Holliman (2009) argues that even though the city "had unilaterally emphasized white downtown business expansion even as white tourists and shoppers alike continued to abandon downtown (p. 370)." Blight was viewed as a cancerous threat that had to be eliminated to stunt its spread, according to Mayor Allen -- whom was initially received favorably by many blacks, although this support would disintegrate after his conspicuous backing of the infamous Atlanta Wall -- a physical partition that separated black and white neighborhoods in Southwest Atlanta during the early 1960s.

Urban renewal projects were notorious for ransacking black communities in Atlanta, like Buttermilk Bottoms, and redevelopment would further isolate (poor) blacks from business and tourist districts.³ This did meet with some resistance by the federal

³ A central, if not visible, component to Atlanta's renewal strategy was the infusion of *buffer zones* decoupling Downtown from poor neighborhoods (Stone, 1989).

government as it staunchly fought off the processing of renewal applications for funding until a thousand housing units for displaced residents were identified. Prior to this, Mayor Allen was staunchly against placing public housing on renewal property.(Holliman, 2009) Furthering the perception of the city's duplicitous behavior was its failure to proactively create relocation plans for the dislocated. This was done for numerous reasons, first it would create rallying points amongst residents, as documents would be a source of galvanization; also, the omission of plans mollified white urbanites; codified plans would provide entrée and destination points for encroaching blacks.(Holliman, 2009) It is impossible to know the numeric displacement of urban renewal and expressway construction programs caused Atlantans due to the city's willful neglect to account for the number of folk displaced. "Estimates by knowledgeable local planners are that 68,000 people were forced to move, that nineteen out of every twenty people displaced were black, and that these 68,000 people represented between 19,000 and 20,000 households." (Keating, 2001, p. 93) This was offset by the Atlanta Housing Authority's construction of approximately 4700 units (3600+ for families and nearly 1100 more for the elderly) in the 22 years following the 1949 Housing Act. In the case of Fulton County Stadium, it is known that renewal resulted in the clearance of 600 acres. This included the decimation of over 3000 integrated housing units (Holliman, 2009). Further adding insult was that feasibility studies did not address parking and traffic impacts and consequences for the remaining areas of adjacent Mechanicsville and Peoplestown that were not directly touched by renewal's excavator.

Chapter 5

ATLANTA AND DEVELOPMENT

5.1 Overview

This chapter explores numerous development projects that, while falling outside of the formal purview of sustainability planning, have significant environmental and quality of life implications, suggesting a more expansive approach to sustainability planning is needed. It concludes by exploring perhaps the most critical quality of life issue, food security, by specifically looking at challenges that Atlanta faces.

5.2 Chasing the Dream

Hartsfield Jackson International Airport, perennially the world's busiest, acts as a central figure in Atlanta's reputation for being a national business epicenter, a chief tourism destination and also a convention goliath. Travel is bolstered by the prominence of a number of regionally and nationally significant institutions, including several Fortune 100 firms, the Centers for Disease Control and Prevention, a number of nationally ranked research universities and numerous sporting events (including collegiate championships, the Superbowl and the 1996 Olympics). This ensemble supports over \$58 billion in commerce (Rissman, Arunachalam, BenDor, & West, 2013). The airport is adjacent to predominantly communities of color, poorer and less educated than the region at large and leaves those communities with a more dubious imprint, toxic particulate matter from

aircraft emissions (Rissman, Arunachalam, BenDor, & West, 2013). This contrast is emblematic of environmental injustice, within and beyond Atlanta: those who are burdened with the most risk, often see benefits transplanted to other communities.

Activists are also wary of Atlanta's Combined Sewer System (Jelks, 2008). While during light rains, CSS's can be advantageous as rain water gets treated, during heavy rains, these systems can be problematic as the combination of rain and waste waters overburdens treatment facilities. Jelks (2008) reveals how similar inequality plays out over water issues in Southwest Atlanta with the City's initial plans to meet state and federal compliance with reducing phosphorus levels in discharged wastewater and the abatement of CSOs, in a manner that "would have only exacerbated the pre-existing issues of environmental and social inequity" already consuming the area (p. 174). Though combined sewer overflow upgrades have been made to send overflow to one of seven CSO facilities (Department of Watershed Management (City of Atlanta), 2010), , the city has a history of non-compliance with federal clean water statutes, as excess discharges that disrupt biological oxygen demand and total suspended solids are discharged to an area river (Echols, 2013). Failure to handle this issue has caused the state and federal governments to give the city a 13 year extension (to 2027) to reach compliance as an estimated \$445 million in repairs to the city's CSO are still needed (US EPA, 2012).

Furthermore, Bullard, et al. (1999) note that the CSOs and the toxic brew of associated compounds (heavy metals, fecal coliform bacteria, etc.) are more prevalent in black neighborhoods and nearly 80% of the CSOs in the city are in majority black neighborhoods with below median incomes. Staying with the theme of water, Charles and

Flowers (2014) note that high water demands in Atlanta as a whole has left downstream residents (along with use by farmers to the south) scarce freshwater in Florida's Apalachicola Bay. Across the metropolitan region, Deganian and Thompson (2012) exhibited a correlation between low-income homes (sub \$25,000 annually) and pollution, and high pollution blocks are nearly double for communities that are majority people of color in contrast to those that are majority white. Within this dysfunction, perhaps no local area has been wrought with as much social, economic and environmental upheaval as an area just west of downtown known as Vine City.

This chapter will look at several development projects that while not directly overseen by Atlanta's Office of Sustainability and Planning Department, all fall within the purview of the sustainability impact areas that the office espouses. This is important for numerous reasons, chief amongst them, if sustainable outcomes are the true work of the city, then behaviors consistent with this, must permeate the city's broader actions. High profile projects, especially, should be consistent with the city's overall goals. Also, because it is not practical to compartmentalize all sustainability efforts within a single agency or department (nor is this desirable), it is vital for other key players, to embody behaviors consistent with sustainable practices.

5.3 The Battle of (New) Atlanta (Stadium)

In 2012 it was announced that the then 20 year old Georgia Dome would be demolished by 2017 and replaced by an adjacent facility, currently known as New Atlanta Stadium. The project has been controversial, particularly among nearby residents that feel

disenfranchised from the decision making process and those that have serious questions about the financial soundness of building a new stadium. There have been broken promises from similar efforts in the past (including Turner Field across town and the Georgia Dome itself) and the transparency and community involvement (or dearth of both) involved in the process. The impetus for the new stadium originated largely from Arthur Blank, owner of the Atlanta Falcons, co-founder of Home Depot and a well-connected member of the city's business elite. Because of the push from the business community, and perceived rubber stamp from city government, the project was fast tracked into development, to the consternation of local groups, thus prompting a lawsuit that challenged the legality of \$200+ million in public financing, via hotel tax bonds. While a county superior court judge rejected the lawsuit brought by area residents, the issue has subsequently been appealed to the state's Supreme Court.

5.4 Destroy and Rebuild, Atlanta Style

The New Atlanta Stadium will accommodate up to 75,000 spectators and be located on the southern tip of the Georgia World Congress Center, adjacent to the Vine City and English Avenue neighborhoods. The construction of the stadium has caused trepidation amongst locals for a multitude of reasons, chief amongst those is siting. When the proposal for a new stadium was introduced, two sites in the stadium district were offered as tenable. One alternative on the north side of the complex, which would have bordered a largely white-middle class area and the ultimately chosen south side location. The latter is located on the edge of a black and economically distressed community and was considered optimal

because of its unobstructed view of the downtown skyline. This site, which was chosen after a short but inflammatory process of protests and community push back, has set off a wave of community demonstrations, the aforementioned lawsuit and press conferences as articulations of the detachment from the planning process that residents feel.

It is worthwhile to contrast historic urban renewal with (prominently explored in the preceding chapter) with the current development projects on the edge of Vine City and adjacent areas. While historically (and contemporarily) the neighborhood has been the site of concentrated black poverty, Dr. Martin Luther King, in an effort to shame the city establishment into making moves to alleviate those conditions, said in regards to then Mayor Allen, “I do not believe he knows such conditions exist in Atlanta” (JET , 1966). A contemporary renewal, involving the demolition of historic black churches and sale of land by a Historically Black College, raises questions regarding what the city development establishment hold sacred. The following section begins by exploring the deal making involved in the development project. Next it looks at some of the environmental impacts of said project and then looks at the equity implications of development. It closes with broader considerations regarding where justice fits in urban development and the need for protective policies.

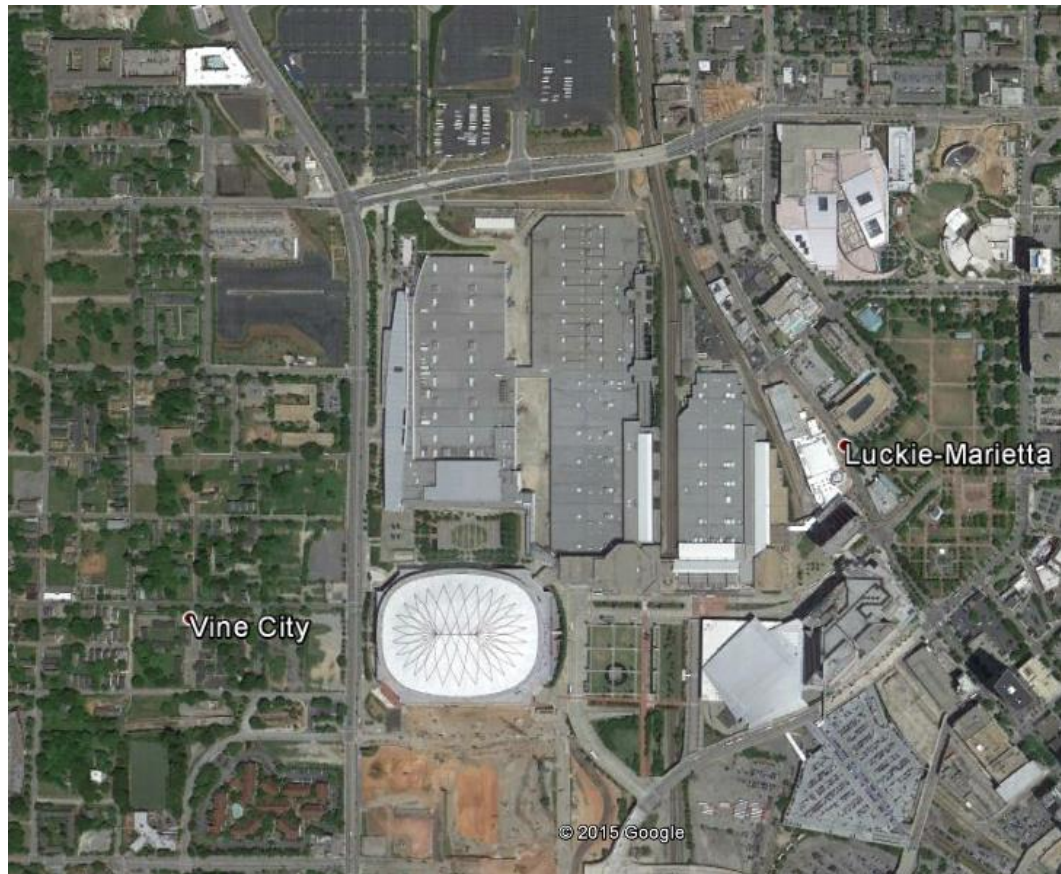


Figure 3: New Atlanta Stadium Construction

Directly to the south of the Georgia Dome, construction is underway for New Atlanta Stadium. The alternate site, several blocks north of the Georgia Dome is also visible. The long embattled Vine City, on the edge of development, is to the west. (Overhead image: Google Earth).

5.4.1 Souled Out

The buying of property, and subsequent demolitions, of two historically African American churches, thus far is the most iconic image associated with Atlanta's latest development scheme. Friendship Baptist and Mount Vernon Baptist, which were founded in the 19th Century, became involved in months long negotiations with the city and the

Georgia World Congress Center respectively, in separate negotiations to sale the churches' properties, which were ultimately sold for a collective \$34 million. If the purchase, leveling and potential removal of parishioners to new and disparate locales, while upending generational and communal ties that go back well over a century, does not constitute as antithetical to community continuity, perhaps no projects would meet that standard.

Mayor Kasim Reed has been one of the most conspicuous champions for the new stadium's development and the city's overall economic growth strategies. The destruction of the churches and their ties to the city and residents, and the real potential for replacement siting outside of the community (and perhaps the City of Atlanta) is the antithesis of the city's aspirations of promoting strong neighborhoods. Similar to the churches, Morris Brown College, the local HBCU that's struggled financially for years, proactively sold 30 acres of its property for \$14 million. This came after the objections of nearby Clark-Atlanta University arguing that Morris Brown did not have the right to sell the property (Saporta, 2014). A prominent local attorney and law firm, that has been involved in EJ activity and questions the overall schemes behind such plans, asks if the city is willing to disrupt these institutions for purposes of economic development, what are the fate of other historic and black institutions nearby?

Had the disruption of community life stopped there, though public engagement opportunities would have been undermined, the transactions involved the sale of private property the capacity of the public's involvement may have been limited, notwithstanding the very public purposes of those institutions being sold. The ancillary processes also involved a controversial road closing and realigning of Martin Luther King Drive Jr. Drive,

a major artery giving local residents entrée into the city. This became contentious for numerous reasons, not the least of which was just a week before the closing; the city firmly stated that a closing was not imminent (Rumley, 2014). Notwithstanding dubious information regarding the project, the bigger issue is, perhaps, related to who has rights to the city and disenfranchisement. The street closing has been perceived by activist and community members as a conscious effort to limit their access within a larger gentrification process. The closing represents not only the imposing of development values on communities, but the lack of recognition that those communities have in their own self-determination.

As with the Chapter 6 case involving the Atlanta Streetcar, perhaps the most significant threat to EJ concerns is the lack of public engagement and involvement throughout the development and maturation of the process. It was largely conceived of (at least for purposes of public consumption) under a very tight time horizon of less than a year. Once again, if one holds that the community development plans and processes are to have meaning beyond being functions of bureaucracy, and in order for jargon on community participation in development to have any credibility, processes should reflect the seriousness of deliberation. Comprehensive development plans constructed by the Planning Department, and are inundated with and vetted by public input, including hundreds of formal and informal contacts between city officials and community members, should reflect the desire for multi-billion dollar development projects that are potentially on the horizon, particularly if public funds and transactions are significant drivers for the process. If a \$1.2 billion project does not constitute as such a project, and particularly one

that excludes marginalized communities from the process, questions abound regarding what projects should involve substantive engagement between city officials and the public.

5.4.2 Functioning Within Environmental Boundaries

In regards to the stadium development's environmental impacts, the most alarming ones relate to its embodiment of hyper-consumption. The new stadium is replacing one that will only be 25 years old at the time of demolition. The grounds for this, as with many sporting facilities across the nation, has been that status quo configurations do not allow for maximal capitalization (primarily through the sale of luxury services to corporate partners like skyboxes that have come into vogue over the last 15 years.) This is a story that has played out across cities nationally as team ownership uses the threat of relocation (both within and beyond metropolitan boundaries – a process that just played out as the crosstown Atlanta Braves recently released plans to move to the northwestern suburbs) if ransoms in the form of public financing or other capitulations are not paid and made. In spite of seemingly interminable stadium battles between proponents of publically backed stadiums -- typically representing the business interests of given communities, and predicated on arguments concerning temporary job creation, ancillary spending in the local community, and tourism benefits -- public backing of sports venues does not pay off for governments (from local to state scales), as most spending is derived from locals and the ultimate outflow of monies from the local neighborhoods (the high salaried professionals associated with the venues, players, coaches and execs) often reside far outside of the sports facilities districts (Legislative Reference Bureau, 2013).

Circling back to environmental concerns, one needs to wonder what happens when the next round of stadium innovations occurs after construction has been completed for the forthcoming stadium. One would not be hard pressed to believe that the scenario may play out again in the next generation when the then completed stadium will just be reaching its teens. An additional – if less defined – part of this narrative are the physical materials involved in stadium construction and those designated for supporting infrastructure (thoroughfares, parking, etc.). While the extent of the lifecycle of these concerns are not directly germane to this analysis, the additional commitments to create a new stadium (for the sake of luxury suites and other ultra-elite amenities) is the equivalent of leveling an entire home to construct a sunroom, instead of remodeling; this becomes more egregious particularly when significant public financing is involved. The project does claim strong sustainability credentials as part of its approach, however. This includes the pursuit of LEED Certification credentials, the use of recycled content for building materials, recycling or composting to make the facility meet zero waste standards, the installation of solar panels and the promotion of three nearby public transit stations (New Atlanta Stadium, 2015). Interestingly, Atlanta has a track record of coupling sporting events with environmental progress, as evidenced by its efforts as host to the 2013 Men’s NCAA Final Four.⁴

⁴ The City has used begun to use green marketing to tout its responsibility in procuring major attractions. The 2013 NCAA Final Four is an example, relating each of the Atlanta’s Sustainability Impact Areas to the event. The Education component featured a video informing attendees of the city’s sustainability initiatives while community health and vitality programming initiative was achieved via a clothing drive for charity (2013 Men’s NCAA Final Four Sustainability Committee, 2013).

5.4.3 Equity Implications

The intragenerational implications of the stadium project and negotiated tradeoffs are significant. In order to ameliorate local resistance, \$45 million dollars in commitments have been designated to community improvement for the distressed neighborhoods. (Burns, 2013) While this is a significant investment, especially for a community with catastrophic unemployment, half its families living below the federal poverty level, and with nearly 40% of homes unoccupied; the promises ring eerily similar one's made 20 years early; in the early 1990s, progressive mayor Maynard Jackson promised redevelopment to the same neighborhoods during the conception phase of the Georgia Dome. While an \$8 million Georgia Dome Trust Fund was established for the purposes of developing single family units and encourage home ownership, along with improving the rental stock in the area, the area remains one of the most economically stressed communities within the city. Here, history (and accountability) matters. Again, in 2004, the Vine City Civic Association, in collaboration with the City, developed a redevelopment plan for the neighborhood that involved future land use, a robust transportation plan, and an overall action plan that included funding mechanisms and a 20 year strategic plan. Notwithstanding the gallant effort on paper, the area still has a sense of desperation a dozen years after that plan. NPU-L, the cluster of neighborhoods largely dominated by English Ave and Vine City, lost over 1000 residents between the 2000 and 2010 Censuses. And while an \$8 million Georgia Dome Trust Fund was set up in 1989 to primarily build single

family homes in the Vine City area, along with improving rental housing quality, the area has gained little momentum in over years since the funds creation (Garey).

5.4.4 Justice as a Process

The most substantial failure in the project's development has been related to procedural concerns and the lack of faith that residents have in the process, as suggested by the lawsuit and resistance mentioned above. It's worth keeping in mind the emphasis on parallel collaboration, social connectedness, and communitywide awareness that the city advances as part of its sustainability regime. On a more fundamental level, what faith in institutions is instilled in residents when hundred year old institutions are readily replaced for entertainment establishments with life spans of perhaps only a few decades? If institutions that anchor communities are not beyond the reach of urban development and economic expansion, then questions abound regarding what will the private sector offer of commensurate value to fill the vacuum. The social voids left from discarded social institutions, particularly those with understandings of the local and special problems that sacrificed inner-city urban areas face have not been articulated by any parties; those issues cannot be amended with \$45 million. The language of growth is inherently devoid of these considerations. In place are the allure of temporary and part-time jobs, and redevelopment and recommitment schemes that seem ever elusive.

It is critical to consider the potential for unjust sustainability to arise in projects such as New Atlanta Stadium. While sustainability initiatives associated with the project such as solar panels and the repurposing of waste materials may offer environmental

benefits, the project simultaneously amplifies existing environmental inequalities. For example, the potential for new construction to exacerbate water runoff in an area that is already harmed by its dependence on a combined sewer system was not adequately considered in the planning of this stadium. The lack of attention deepened the vulnerability of an already heavily burdened community (See Section 5.2).

5.4.5 Then Need for Protective Policies

The absence of environmental justice policies lends to the traumas that neighborhoods such as Vine City are exposed to. As development policy can place profits over (vulnerable) people, and the stadium development is just the latest articulation of that. More concrete will lead to more water runoff issues; as Southwest Atlanta already deals with environmental injustice related to CSOs (Jelks, 2008).

5.5 Food Security

While vibrant neighborhoods are key to just and sustainable outlooks, just as important are the capacity for residents to have healthy food options. The following section explores numerous food sovereignty issues. It begins with a broad consideration of food deserts and then explores the impacts of food sovereignty and insecurity in metropolitan Atlanta.

5.5.1 Food Deserts

The USDA classifies food deserts as those areas in which a significant portion of the population are low-income and jointly has low access to fresh and healthy foods. Income is based on the federal definition of poverty while access is based on proximity to

grocery stores within a mile and the prevalence of automobiles in individual homes. In many instances these areas are inundated with bodegas (corner stores) that serve highly processed foods and other foods that are not considered healthy. The issue is not without contest though, as some commentators have identified these areas, not as deserts (or being food barren) but as “swamps”, as havens that lack quality food (Burns, Stranded in Atlanta's Food Deserts, 2014). Nationally, there are over 23 million Americans whom reside in deserts with a quarter of this population being youths (USDA, 2010). For those that reside within deserts, there are very different implications for carless versus those with private vehicle access. The particular challenges related to getting to ample produce and other grocery store amenities for those reliant on public transportation can be particularly cumbersome, often involving multiple bus transfers, route limitations and the challenges of walking to bus stops which may not be near residences.

In addition to the acute problems associated with food deserts are food access issues that exist amongst low-income households, generally. Health impacts can be particularly harmful for children as their bodies are not fully developed, thus complicating nutritional deficiency issues. Casey, et al.(2001) found that low-income children (whether in food-sufficient or –insufficient settings, with insufficiency defined as households in which respondents are characterized as either not having enough to eat or sometimes not having enough to eat), consume fewer calories and carbohydrates as compared to higher-income households, and greater instances of overweight adolescents and higher rates of time spent watching television. Adding further disconcert to the situation is the market logic driven behavior of private grocers, which relies heavily on demographic information to guide

citing decisions (Burns, 2014). While not necessarily a cause, there is a significant correlation between desert status and lethal health effects, as food barren tracts are associated with heightened rates of obesity and other diet related illness (News One, 2011).

5.5.2 Local Food Insecurity

5.5.2.1 Quantifying

The crises associated with food insecurity is particularly problematic in Atlanta, with the city having been ranked as the 3rd worst food desert in the nation, noting the chronic disparities in food equality that various groups in the cities face (News One, 2011). As a whole, the Metro region has a half-million persons in the interior 10 counties whom live in food deserts (Burns, Stranded in Atlanta's Food Deserts, 2014). Atlanta's affluent neighborhoods have three times the number of grocery stores as low-income ones, and along racial ones there is an even greater disparity – white neighborhoods have four times the number of supermarkets than black ones. While nearly a third of majority white census tracts in the city have supermarkets, less than 10% of black ones do (News One, 2011). The consequences for Atlanta are malnutrition induced sickness that makes the population more prone to fatally succumb from intake (Burns, 2014). The Atlanta Regional Commission made significant findings regarding the correlation of fresh foods and fast food access across several neighborhood characteristics, including traffic volume, population density, percent white population and household income (Atlanta Regional Commission, 2011). Population density has the strongest correlation of prevalence for both fast food and fresh foods and presence of white population is profoundly correlated

with dearth of fast food access, and with only a mild negative correlation with fresh food access. Household income has an inverse relationship with fast food access (i.e. the higher the income the less fast food access) while the opposite is true for fresh food access (i.e. the higher the income, the stronger the association with fresh food access). Very low income Atlanta households are removed from fresh foods, while low density areas are remote from all types of food, fresh and fast (Atlanta Regional Commission, 2011).

5.5.2.2 The Social Impacts

The equity dynamics of Atlanta's food issues play out in a number of realms. Whether it be the aforementioned access and health implications or how communities fortify as a response to be more food secure. One issue is the transferal of locally grown foods from lower income areas to wealthier local precincts. This enables the latter groups to enjoy the prestige of local foods, yet fundamentally reproducing behaviors that undermine sustainable agriculture. Others have wondered why the city can enable billion dollar expressway systems and (seemingly) perpetual stadium construction, yet not support supermarkets in impoverished communities. Furthering this insult is an entire museum (and tourist destination) "dedicated to a soft drink (Burns, 2014)."

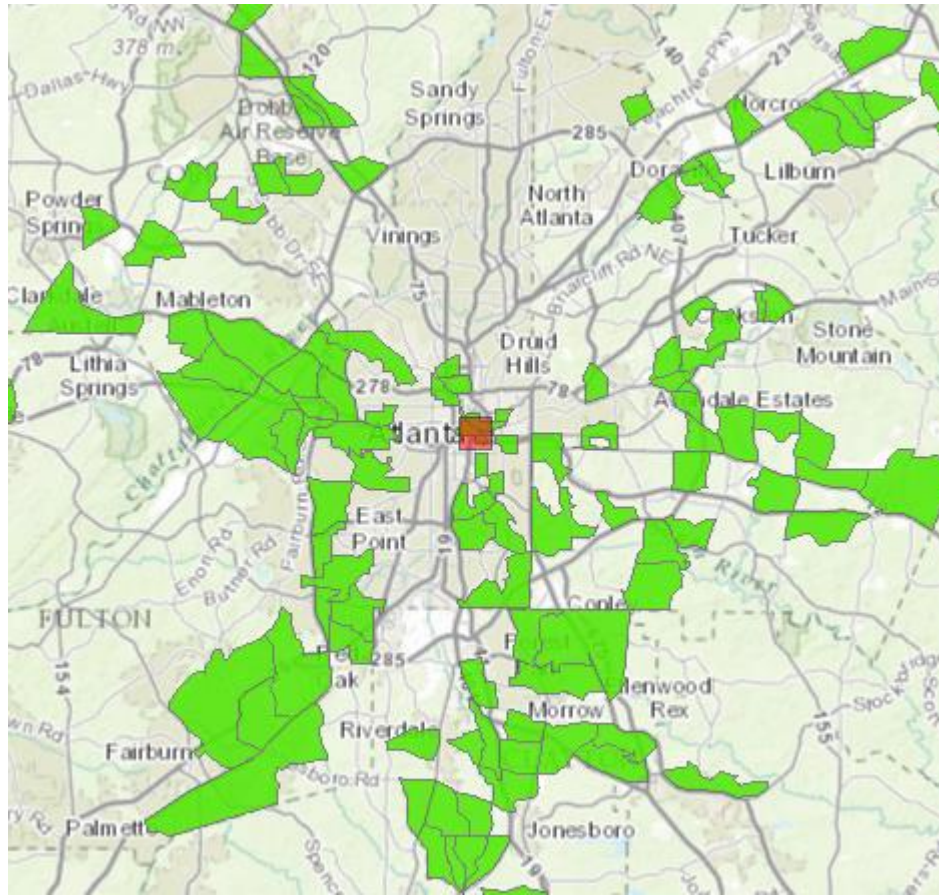


Figure 4: Metro Atlanta Food Deserts

Shaded green territory represents areas that are low income census tracts and in which a significant portion of the population are at least one mile from the closest supermarket. (USDA, 2015)

The city's food crisis is interwoven with the broader patterns of sprawl throughout the region. For example, in the pre-sprawl 1960s, Vine City grocery shopping was highly accessible at any number of area grocers, but as residents fled the city in the subsequent decades, and population density plummeted (thus grocers were less enticed by diminished resident numbers), the proliferation of food markets vanished. In this vacuum, has arisen the bodega as food outlet. Of the food outlets in the stadium area, consisting of Vine City

and the nearby English Avenue neighborhood, of the 20 main markets carrying food (dominated by bodegas) half carried no produce, while a majority of the rest only carried one or two items (Barrett, 2015).

5.5.2.3 The Health Crisis

The health consequences for Atlantans, due to its food crisis, are just as troubling as trends seen throughout both the state and nationwide. Georgia spends over \$2 billion dollars annually on obesity related illness, with 3 out of 10 residents classified as obese, and with rising trends, that number is on pace to top well over half of the state's residence in 15 years (Giang, Harries, & Treering, 2011). A recent study has shown the correlation between childhood obesity in poor Atlanta neighborhoods and presence of convenience stores (Burns, 2014). It cannot be overstated that a majority of the city's food deserts are congregated in two regions, southeastern and southwestern Atlanta; both are solidly majority black regions with numerous areas of high concentrations of poverty (Nunn, 2013). The ARC showed that while 90% of these areas residents had proximity to fast foods, only about half of the tracts with large concentrations of people of color had access to fresh produce (Atlanta Regional Commission, 2011; Nunn, 2013). Conversely, metro-wide, in areas with higher concentrations of whites, there are less fast food outlets (Burns, 2014).

5.5.2.4 The Atlanta Response

Atlanta has engaged in numerous efforts to combat food insecurity in recent years. In 2007 it allowed for community gardens to exist in city parks and to this point there are

20 gardens in the program. Gardens not on city property have been estimated at over 160, and that estimate is assumed to be conservative (Berry, 2013). While these gardens are excellent public relations tools, Smith, et al. (2013) contend that they do not substantially alter the food access paradigm as produce is not available year round and typically produces low yields. Their work deduced that a more systemic approach to access is the development of food policy councils and advocacy, which can push for supermarkets, grocer siting and overall healthy food promotion.

Additionally, the city has gained a portion of a \$30 million federal grant, via the New Markets Tax Credit Program, which will be overseen by the city's quasi-private economic arm, Invest Atlanta (Pendered, 2013). While the program has existed for years, the food component is new and has a stated goal of "increasing the distribution of agricultural products; developing and equipping grocery stores; and strengthening producer-to-consumer relationships. In addition, the financing of these projects brings needed economic development and job creation to these underserved communities (Pendered, 2013)."

Chapter 6

SYSTEMS ANALYSIS

6.1 Overview

This chapter illustrates how systems can help achieve or thwart just sustainabilities. It begins with a brief history of mass transit in metropolitan Atlanta and then looks at three contemporary projects, each with a unique way of moving inhabitants and connecting people and places. Keeping with the theme of place, it concludes with a look at some of the region's most undesirable locales, brownfields, and how local and state actions have addressed toxic areas.

6.2 Background

It was not the best of times in 1970s Atlanta. While the *city was too busy to hate*, racist fear mongering ruled the day in the policy arena, particularly in the arenas of urban growth and transportation. In 1971 the core Metropolitan Atlanta counties (Clayton, DeKalb, Fulton and Gwinnett) were preparing for public referendums to bring mass transit to the region. A previous referendum in DeKalb and Fulton had failed just three years earlier. The public debate was contentious and highly racialized (a process that would be repeated numerous times over the following decades as the public transit question would be put to voters during various election cycles in a number of suburban counties). Typically these contests prominently involved some variation of MARTA, the region's public transit

agency, apocryphally being labeled as a black-run outfit, a non-coded way of stoking racist anxieties along with media that openly stated transit would give poor urbanites entrée to areas that they otherwise could not access (Henderson, 2006). Coincidentally, the initial votes would occur just before environmental justice and sustainable development would enter the lexicon of bureaucrats and a couple of decades before cities nationwide started using the terms in planning material. By default, the short-sightedness of the anti-public transit development strategy by suburban governments and populations, coupled with the fierce racial antagonism that surrounded the project, would have justice and sustainability implications up to the time of this writing -- and will continue to pose challenges to environmental health and urban development for decades to come.

Atlanta has been identified by numerous entities as having some of (if not) the worst traffic commute times and associated air quality in the nation and perhaps beyond (Atlanta Business Chronicle, 2008; Hart, 2013; Environment America Research & Policy Center, 2011). The aforementioned 1971 up or down vote over bus and rapid rail was ultimately shot down by Clayton and Gwinnett Counties (with the issue not gaining a quarter of the electorate in either locale), while DeKalb and Fulton voters would barely approve the referenda with razor thin 51% and 52% voter approval, respectively. Inner-city blacks largely supported the idea of transit while suburban whites mostly resisted. The irony here is that the most prominent backers of the system were white elites whom wanted workers to have access to the central business districts. Worth noting is that though backers pushed for and won rail, Atlanta is the least densely populated city in the nation with rapid rail service, along with being the smallest (Stone, 1989), which raises questions about its

suitability; not to mention the associated racial stigmas regarding the demographic profiles of bus riders (as oppose to rail commuters). Frankly, there are perceptions that buses are for the poor, are crime-ridden, have a dominant ridership of people of color, and is not expedient, while commuter trains do not suffer from similar stereotyping (Walker C. , 2014; Hess, 2012)

Ultimately, the rejection of mass transit in large swaths of what would become the nation's 9th largest metropolitan area would have effects on the region's environment, public health and physical growth for the four decades following MARTA's creation. While the entire metropolitan area (including several counties outside of the aforementioned four) had a population of just over 1.5 million in 1970, it would nearly triple in size in four decades, as the population would balloon to over 4.2 million by 2013 (Atlanta Regional Commission, 2013). The MARTA-less exurban counties -- which now have limited bus service -- mainly weekday rush hour commuter express routes to and from the city -- are largely impermeable outside the private automobile, consequently limiting the mobility possibilities for millions of suburbanites. Furthermore the sprawl associated with the suburbanization of the Southeast's anchor city -- as well as key cities in the rest of the region, at current rates of growth over the next 50 years is slated to increase urbanization by up 190%, a model that would be brutal for natural and agro-ecosystems throughout the region, and would have repercussions far outside of the South's borders (Terando, Costanza, Belyea, Dunn, McKerrow, & Collazo, 2014).

Bullard (2009) referencing Buzbee (1999) contends that aligned suburban sprawl is predicated on finance, land use policy and planning and transportation services which

form an “iron triangle”, that have both socially and environmentally harmful consequences, including: the concentration of poverty, economic disinvestment, perpetuation of racial inequities (Blackwell, 2001), and environmental harms: energy obesity, hyperautomobility and the exacerbation of public health threats via toxic air, flooding and threats to the ecology.

By the 1980s Atlanta began to emerge as the South’s epicenter of commerce, a substantial tourist destination and home to a number of the nation’s most prominent corporations (including several Fortune 100 companies: AT&T Mobility, the Coca-Cola Company, Home Depot and UPS). The city’s image had been assembled under the architecture of Central Atlanta Progress (CAP), a planning outfit dedicated to comprehensive development, and made up of local business elites – membership in recent years does have a nuanced civic face, and CAP is still influential in city development today. With an exploding population that added on average over 77 thousand residents annually between 1990 and 2010 (Atlanta Regional Commission, 2014), the consequences of misguided development and the bungling of the aforementioned referenda are being fully felt.

As a bustling hub for jobs and swollen population, largely car-centric development has created a host of issues for the area, ranging from environmental consequences (including air quality issues and massive deforestation), to housing and residential segregation, to educational disparities (Bullard, Jonson, & Torres, 2000). Much of the region’s working (and playing) population is bound by automobile to get from suburban areas into job and entertainment districts, mostly located within city limits or elsewhere

inside the perimeter of the I-285 corridor, the interstate that encircles the city and surrounding urbanized towns. Of the over 4.2 million people that live in the 10 county metro area, less than 40% inhabit Fulton and DeKalb Counties and only 10% of all metropolitan residents reside in Atlanta (Atlanta Regional Commission, 2014).

The above would culminate in one of the most chronic (yet unsung) toxic crisis in US history. Atlanta holds the dishonorable distinction of being the first city in the nation's history to lose federal highway funding because of air toxicity. The city just recently reached compliance of the 1997 ozone standards of 84 ppb, by coming in at 80ppb some 16 years later. Due to federal cuts, numerous highway projects were sacked, with the loss of hundreds of millions of dollars in funds. The area is still out of compliance with the current rule (75 ppb) and will have until 2015 to meet the mark. In terms of human health, the toxic air conditions can mean life and death for populations with respiratory vulnerabilities. In 2010, just two of Atlanta's hospitals alone had over 500 ER visits related directly to smog (Henderson, 2006; Leslie & Williams, 2013). Going back to 1996, the CDC identified that during the Olympic Games (with its reduced traffic volumes due to city regulations) daily ozone reductions decreased by nearly 28% (falling from 81.3 ppb to 58.6ppb) corresponding with a 22.5% decrease in morning rush hour traffic. During this same window, asthma acute care events related hospitalizations dropped by over 41% (Friedman, Powell, Hutwanger, Graham, & Teague, 2001).⁵ It should be added that the loss of hundreds of millions of dollars in federal funding -- not the assaults on human health

⁵ Non-asthma medical hospitalizations did not drop during that timeframe.

-- gave rise to the Georgia Regional Transportation Authority (GRTA), which was created to combat Atlanta's transportation and air quality issues. We know that the transportation authority's concerns were not on the asthmatics and those sickened by toxins because human health concerns are not a part of their core mission, the agency's formal charge is "to reduce congestion and improve mobility" while operating "high-quality, efficient regional commuter services." Its vision is to create "a lean responsive state transportation authority working to improve Georgia's world-class transportation network (GRTA, 2013)."

The lack of foresight in planning, poisonous racial politics and a business climate would formulate a classic sustainability and environmental justice quandary. Inner-city residents (largely black) placed at increased threat of pollutants largely generated from commuting suburbanites (mostly whites) – or simply a spatial mismatch between risks (in this case diminished health from proximity to smog) and rewards (corporate salaries that would leave the city and migrate into suburban communities). Not lost in this milieu are the mobility consequences. Atlanta has been ranked as having amongst the nation's worst commutes, with drivers spending over 50 hours per year sedentary and behind the wheel, costing those drivers each over \$1100 annually (Black, 2013). This adds up to dollar consequences that can be particularly brutal for the working poor that are car owners. While a forgone comprehensive MARTA system may have had the potential to thwart these trends, as opposed to being a force promoting sustainable outcomes and a hub for multi-modality, at its inception and core it is been guided by "laissez-faire development

(which) inverted the role of the system from “growth shaping” to “growth chain,” with a concomitant reduction in public benefits (Keating, 2001, p. 3).”

One does not have to speculate that massive public infrastructure commitments that were predicated around the private auto would be disproportionately punishing to non-car owners and those neighborhoods with disproportionately low car access. When reconciled with the decline of the inner-city in terms of population and retail over the past couple of generations, those who are auto-less face significant challenges in getting to work and other basic transportation functions (e.g. grocery shopping).

6.3 Three Takes on Mobility

The following section looks at three unique transportation projects, each with its own mobility options, strategies in gaining support, project development and environmental consequences. It begins with a look at the city’s streetcar revival before exploring the BeltLine project, one of the nation’s most ambitious efforts at connecting intown neighborhoods. Finally, it investigates at the process and consequences of adding toll lanes to a metropolitan interstate highway.

6.3.1 A Street Car Undesired?

The Atlanta Streetcar’s stated purpose “is to provide an integrated multi-modal, high-quality transit network that will link communities, improve mobility by enhancing transit access and options, support projected growth in a sustainable manner, promote economic development, and encourage strategies to develop livable communities (City of Atlanta; MARTA, 2010, pp. 0-1).” This underscores the transit projects four stated goals to promote: i) livability in the nearby community; ii) the region’s economic competitiveness;

iii) safe and convenient travel; and iv) sustainable transportation options (City of Atlanta; MARTA, 2010, pp. 0-3). Amongst the specific mobility challenges which it seeks to remedy are disjointed communities that are underserved by transit, the proliferation of both work and non-work trip-making,⁶ limited transit connectivity and changing neighborhood characteristics (City of Atlanta; MARTA, 2010).

Once a popular mass transit option in droves of US cities, after decades on the decline, there is been a streetcar redux in numerous cities across the US (including Portland, Seattle, and Dallas along with proposed systems in LA, Kansas City and Washington DC) in the 21st century. Following this revival has been Atlanta which recently inaugurated a project of its own. This project has been one of the city's most prominent (and costly) attempts to increase its transit diversity, while simultaneously doing so under the guise of sustainability. As with the other cities committing to streetcars, the Atlanta incarnation has been touted as a figurative vehicle for neighborhood revitalization and economic expansion. Much of the publicity from projects around the country was used by local backers to generate support for its own project, along with the availability of federal funds.

The Obama administration has been a major proponent, of such projects, and has sent over \$500 million to various projects across the US (Robillard, 2014). The administration has encouraged this influx due to its relaxing of rules that bound

⁶ By 2035, the study area associated with the Streetcar project is projected to have an 80% increase in population and a 30% increase in employment. (City of Atlanta; MARTA, 2010)

transportation projects to standards related to cost-effectiveness and decrease in commute times and allowed for factors such as carbon emissions cuts and economic development to factor in (The Economist, 2014; Robillard, 2014). Atlanta has readily touted how Portland's incarnation catalyzed nearly 150 real estate projects worth \$3.5 billion and increased adjacent property values by 50% while Seattle's \$51 million streetcar was directly tied to 3.3 million SF of development (Atlanta Streetcar, 2015).

Detractors have showered a litany of claims against these rail projects, including: the inefficacy of cars when they are not protected by dedicated and sole serving traffic lanes; thus creating conditions that are no more expedient than bus traffic, while buses have the advantage of altering routes given obstructions. Another critique has been the capacity for mission creep when projects drift from concerns about mobility (i.e. those that tout prior claims concerning development and revitalization) (Robillard, 2014). The revived Atlanta Streetcar project is a joint project between the City of Atlanta, MARTA and the business community, whose nearly three mile track connects Atlanta's Sweet Auburn District,⁷ runs in a ring east through Downtown Atlanta (and across downtown's most conspicuous and significant property owner Georgia State University) to Centennial Olympic Park and other tourist attractions just west of Downtown.

⁷ Sweet Auburn has for over 100 years has years has been home to, at various time, the city's African American business community, a Mecca for black social life, a religious hub, the Auburn Avenue Research Library and the Martin Luther King, Jr. Center for Nonviolent Social Change.

The project's intent is to link businesses, educational facilities and tourist activity to spur economic growth. To aid this goal, the city has gone as far as giving businesses along the corridor several months of free rent to prop up commerce along the route (Cauley, 2014). The project largely came about due to the potential for the city to claim a \$47 million federal TIGER II grant in 2010. Up until then, neither area residents, nor city bureaucrats seemed to show desire for the project (as suggested by its absence in comprehensive development planning materials prior to this time, or playing any other meaningful part in other local development dialogs). Also, of chief importance, and corresponding to the neighborhood's pathway, is the expansion of the city's downtown research facility at university Georgia State University (GSU), as the school has invested significantly in acquiring Downtown property over the last decade, including adding numerous buildings, a planned law school and dormitories. GSU has transformed from its largely commuter school status of the last century, as students seek on-campus living options, as well as alternatives in adjacent neighborhoods. Those most threatened by expansion are residents of previously largely black and working class neighborhoods, whom, with expansion, face the risk of falling victim to what is an unconventional, *educational gentrification* by members of what Florida (2002) has referred to as the creative class.

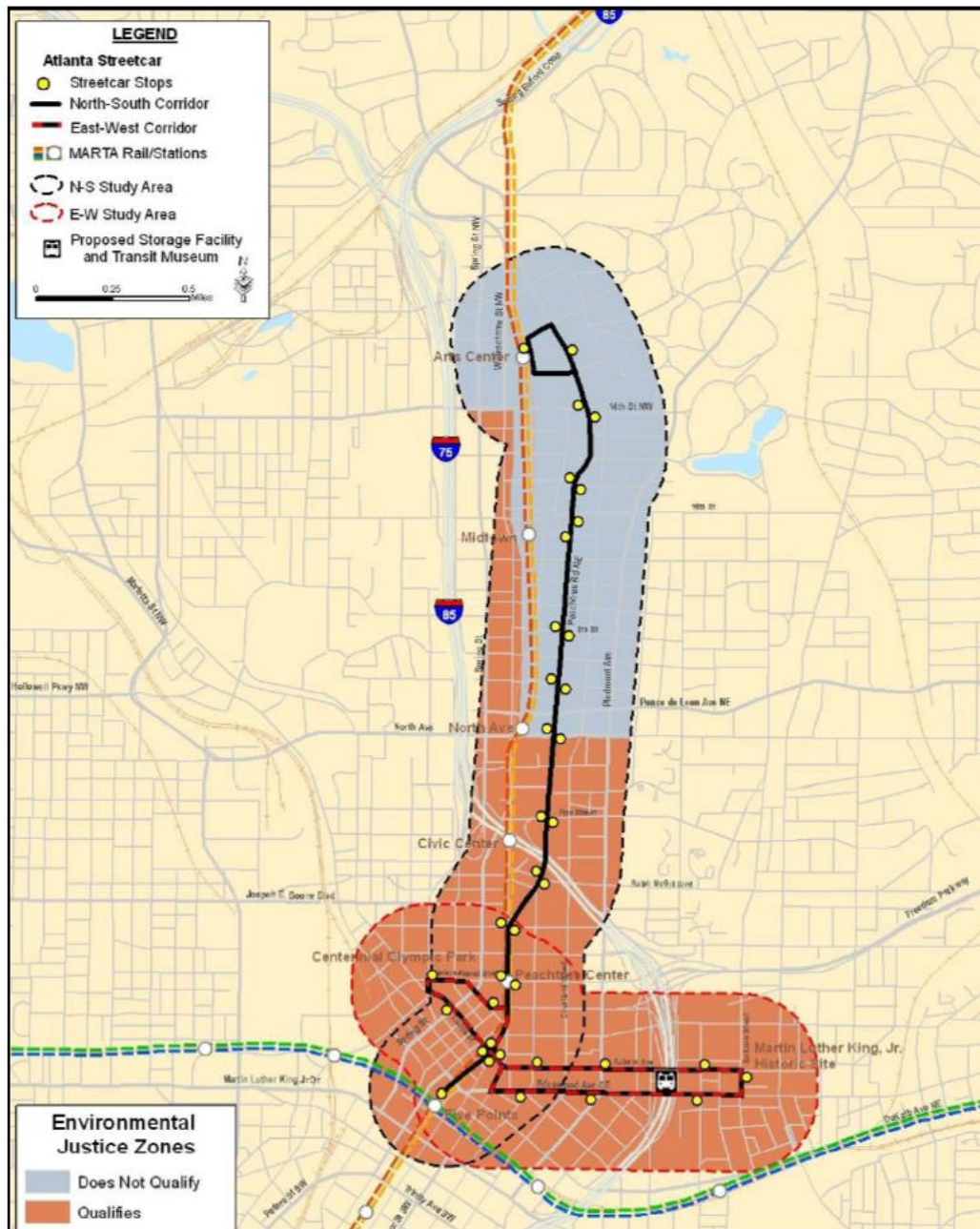


Figure 5 Atlanta Streetcar and Adjacent EJ Areas (City of Atlanta; MARTA, 2010).⁸

⁸ While that 2000 Census had citywide low-income and persons of color populations at 24% and 69%, respectively, within the East/West alignment of the streetcar, 7 out of the 10 blocks had high concentrations of low-income earners (10+% greater than the entire City) and all of those blocks were at least 50% persons of color majorities. Within the

6.3.1.1 The Streetcar, Environmentally Speaking

Internal sources have raved about the positive environmental impacts that the Streetcar would have. Advocates promote each streetcar, which are scheduled to run at 15 minute intervals for most of the day and can remove 170 cars from the road. This methodology uses the number of occupants from private cars that the train can hold, not a projection related to anticipated ridership. Since virtually all of those (virtual) cars will be powered via gasoline and the streetcar will be an electric based system, the potential for localized drops in emissions level is substantial as streetcars have no exhaust. This point cannot be understated in light of the earlier point regarding Atlanta car emissions and the loss of federal transportation dollars. If the objective is reached, this has the potential to help the City be within EPA compliance mentioned above, although not by 2015. The projection that the Streetcar could potentially reduce VMT by over 914,000 by 2030 would cause CO concentrations to fall below NAAQS.

In its Environmental Impact Assessment, the project claims that it will lead to reductions in VMT, and thus lower pollutant concentrations, by up to 5.7 billion BTUs annually – though adjoining road improvements may lead to long-term energy use increases (See

North/South alignment, four Census blocks had large concentrations of low-income while eight were majority persons of color

Table 6). Additionally, there is a self-proclaimed “limited potential to encounter contaminated materials due to at-grade or near-grade construction (City of Atlanta; MARTA, 2010)”. The Streetcar is being touted as the centerpiece of making the surrounding neighborhoods into a LEED certified EcoDistrict.⁹ Notwithstanding this potential benefit to local air quality, the fuel resource mix from which the electricity that the streetcars run on is derived indicates downstream issues. Georgia Power, the utility company that produces the energy has a fuel mix that is 35% coal, 23% nuclear and nearly 40% gas and oil (Georgia Power, 2014). While the transition fuel of natural gas appears to be a net positive over coal in terms of GHG potential, factors such as localized methane leakage at site of capture should be considered; though such analysis is not within this work’s scope. Additionally, with nearly 25% being derived from nuclear energy, the picture is even more favorable for point source pollutions than natural gas, as facilities emit no GHGs. This is not the case when looking at the life-cycle of nuclear, and considering considerable extraction and transportation emissions. Perhaps most problematic with nuclear, however, are the related intergenerational issues that arise when considering long-term storage of waste, as of right now, most waste at nuclear facilities are stored on sight,

⁹ Marketing material presents this proposition in vague terms, as an FAQ page refers to an EcoDistrict as “among the hottest solutions being discussed and piloted in the realm of community sustainability (Sustainable Atlanta, 2013)”, but does not move beyond the amorphous into concrete visioning as to providing any definition nor how they are ecologically or environmentally advantageous for areas.

and even when not the case, the lingering concerns about the dubiousness of long-term disposal *anywhere* is problematic.

Table 6: Projected VMT and Energy Savings from the Streetcar project
(City of Atlanta; MARTA, 2010)

Alignment	Annual VMT Savings	Energy Savings (BTUs)
East/West	635,500	4.0 billion
North/South	279,000	1.7 billion
Both	914,500	5.7 billion

6.3.1.2 Generationally Equitable?

The Streetcar project must also be looked at via both intra- and intergenerational equity lenses. Beginning with the former, the most glaring consideration is reconciling the clash between the City's stated purpose of spurring economic development and people and projects that do not fit within the confines of this mission. Considering that the streetcar runs adjacent to Woodruff Park, a congregating ground for a significant and highly visible homeless population, the irony here is that there is no adjoining program to bring the Atlantans most detached from the mainstream economy into the fold. While Atlanta has produced anti-homeless legislation through the years, which have outlawed panhandling and soliciting particularly in high tourist areas, the dichotomous invisibility and proximity that this community has in relation to the Streetcar is disturbing. Having an economic growth plan for an area that houses the city's most destitute and vulnerable, but avoids

including such populations on the agenda emits the optics of cruel public policy that lacks a comprehensive plan to include vulnerable populations.

Also puzzling is the area in which the streetcar has been positioned. When considering the population density, exclusive of the attractions of the area, it certainly would not be considered the most suitable site for a high profile transit project. Notwithstanding the population density, for economic purposes, many of the metro regions consists of 45 million domestic visitors, and the \$13 billion spent, are drawn to different attractions within walking distance of the Streetcar. This is important to note; with tourist attractions (e.g. Centennial Olympic Georgia Aquarium, the World of Coke) and the sports facilities districts all within close proximity on one end and the King Center and Historic Sweet Auburn Avenue on the other, it is quite clear that this is, as perhaps indirectly claimed, an infrastructure project that will disproportionately benefit tourists. Furthermore, with GSU along the route, there is hope that this will be heavily used by students to get around campus, though at less than a mile or two from where students would be commuting, it is doubtful that this venture would be transplanting many cars (and in fact may compete with funding from the city to aggressively pursue bike accommodations and/or bike sharing which would seem natural given the short distance and young adult population). Moreover, once again, the payoff is not necessarily for Atlantans here, or at least for residents that live in surrounding communities.

The intergenerational outlook is a bit more favorable, and one should look to the history of Atlanta and streetcars to understand why. This is not Atlanta's first dalliance, as the city once had a thriving streetcar in the late 19th Century. Similar to the current

incarnation, the main driver behind the historic streetcar was economic development, as developers wanted inner-city residents to have access to leisure and recreational attractions on the town's outskirts. (Cauley, 2014) The rub for the contemporary car is its potential impact for future generations and the increased transit options that non-autocentricism will give the region. While it is rote for central planning to project population, financial growth, and development outcomes over relatively long time frames (decades) – and perhaps steer transitions to meet those numbers, the amount of unforeseen activity, ranging from the *known unknown*, to the *unknown unknown* (Taleb, 2007) limits the efficacy of projections. Notwithstanding, the opportunity for 21st Century Atlanta not to look like its toxic 20th Century self, and the potential for it to reach a truly pioneering *complete streets* model, and not a parody (Zavestoski & Agyeman, 2015), is at least on the table.

6.3.1.3 ...and of the Atlantans

The process for the development of the Streetcar largely unfolded after local officials saw the opportunity to win a federal economic development grant. So while there was a comprehensive development plan in place for the city, which was put together with significant public input, the plans for a streetcar was nowhere on that agenda. This is an important point, and as we'll see later is mirrored by the process involving another high profile development project, the New Atlanta Stadium. While the development of a city should not be beholden to planning, in fact, quite the contrary, it is necessary for cities to grow organically and take advantage of opportunities that were previously unseen; when one thinks about the vitality of great public planning and cities versus those that are centrally planned, the former are more vibrant, democratic and livable. The latter has given

us the likes of Urban Renewal and its associated problems (high rise projects, hyper-segregation, residents isolated from work and play, and large infrastructure projects that partition communities). Decentralized planning processes allow for uncalculated dynamism, and while opportunities should be seized, reconciling this with meaningful public involvement in planning is difficult, particularly if community engagement is meaningful and is to flow in multiple directions (i.e. both between the public and planning apparatus). Otherwise, community involvement gets staged to meet certain ends and becomes little more than a bureaucratic exercise that rubber stamps pre-ordained processes.

If city leaders were not convinced that the Streetcar needed to be revitalized in 2007 during the development of that year's comprehensive development plan, what changed by 2010 -- other than access to nearly \$50 million in federal funds? This degrades the process of previous and subsequent comprehensive development plans which involves extensive public outreach with neighborhoods and city residents. There are substantial protocols in place to deliver and procure information from the public (e.g. monthly neighborhood planning unit meetings in which city officials, community leaders and residents interact) but when these forums are completely bypassed in agenda setting, the potential for residents to become inconsequential to outcomes is plausible and likely. It should be stated that there was a public process involving the streetcar, including opportunities for comment, the dissemination of assessments and plans, that had to happen for numerous purposes, including federal Title VI requirements, but the stake in outcomes is questionable. Who sets the table for development, whether it be bureaucrats, neighborhoods, the business community, NGOs, ecological considerations or a consortium

of these, ideally, is important. It appears in the case of the Streetcar that the process was largely guided by the first two, with the other entities being *also rans*.

With a transit project – and other development – predicated on economic growth, and when reconciled with student expansion, the fate of the character of historic places remains to be seen. There have already been significant conversions in the area. While Sweet Auburn was the focal point of political and spiritual life, particularly during the heyday of the Civil Rights Movement as the neighborhood was home to high profile churches, including Ebenezer Baptist, the institution that Dr. Martin Luther King, Jr. co-pastored from 1960-1968 (Ebenezer Baptist Church, 2014). Indicative of the neighborhood's changing character in recent years, a church themed bar recently opened *in* the midst of Ebenezer and several other historic churches with 19th Century roots.

6.3.1.4 Improving Life Quality

The City anticipates that the streetcar project will lead to the development of 80+ acres of underused land and over two dozen buildings along the route (Atlanta Regional Commission, 2014). The frequency of rides and interconnectivity will offer tourists an opportunity to seamlessly connect to downtown attractions. But what are the benefits for area residents? Without a grocery store as part of its route, and a considerable swath of the land located in federally recognized food desert territory, a considerable opportunity may have been lost.¹⁰

¹⁰ At the close of 2014 a deal was announced to bring a grocer to nearby Underground Atlanta, thus potentially changing the areas status as a food desert.

The streetcar will run adjacent to Woodruff Park and its aforementioned conspicuous homeless population. It is not clear how this reality will ultimately reconcile with the economic growth strategy, along with fluctuating peaks of aforementioned anti-homelessness legislation enforcement which have led to significant arrests spikes at times (largely recognized as an accommodation to the city's significant tourism industry); it is doubtful that the competing narratives of economic growth and chronic homelessness will be allowed to coexist within the midst of the same tracks for long.

After several weeks of operation, in February 2015, the \$98 million dollar Streetcar had produced lukewarm results. Ridership projections were off by nearly 20%; while approximately 124,000 riders were projected, the system aided 102,000 commuters (Schmitt, 2015). (See Table 7 for projected ridership figures). Adding to the underwhelming results are costs that were significantly under projected. While initial operating costs were slated at about \$3.2 million, the updated figures come in just under \$5 million. After the first quarter of 2015 concluded, it was announced that ridership had reached over 180,000 (Leslie, 2015) and that the \$1 fare, projected to begin in April would be suspended for the remainder of the year. This will cause a further erosion of projected revenues by approximately \$304,000, but according to the project, a combination of private donations and operational savings will counterbalance the losses (Atlanta Streetcar, 2015).

While the potential to remove automobiles from Atlanta's congested streets offers relief from toxic air conditions, tradeoffs have included socially dubious actions, such as

the treatment of homeless populations via anti-homeless legislation. In effect, the homeless are defined as problems and tourists as a means to building sustainable communities – a clear case of plan-sponsored and city sanctioned unjust sustainability.

Table 7: Atlanta Streetcar Projected Ridership Projections
(City of Atlanta; MARTA, 2010)

Scenario	Annual New Riders		Annual Regional System Boardings			
	2015	2030	2015	2030	Change from No-Build 2015	Change from No-Build 2030
No-Build	--	--	135,470,000	212,040,000	--	--
East/West Alignment	65,100	378,200	136,555,000	213,745,000	1,085,000	1,705,000
North/South Alignment	99,200	275,900	135,935,000	213,125,000	465,000	1,085,000
Both Alignments	198,400	378,200	137,020,000	214,830,000	1,550,000	2,790,000

6.3.2 The Atlanta BeltLine

The Atlanta BeltLine is, perhaps, the antithesis of the Streetcar in terms of its development, extent of its infrastructural commitment and penetration into greater Atlanta communities. It is one of the most comprehensive efforts at urban development in the US. It is a project that includes public parks and trails and scheduled transit options that will inner-connect the neighborhoods that circle Downtown Atlanta. The project was initially conceived in the late 1990s by an area student as part of his graduate thesis. He saw the opportunity based on the unused 22 mile railroad corridor encircling downtown. The project covers 45 in town neighborhoods and is slated to remediate 1,100 acres of brownfields. It also has historic preservation and public arts projects within its initiatives (Atlanta BeltLine Inc., 2014). The area is disproportionately populated with EJ populations

(people of color and low income) as well as having high zero car households (See Table 8). The latter point is significant due to the project’s emphasis on increasing transportation options and connectivity for the city’s residents.

Table 8: BeltLine Study area featuring EJ and Transit Dependent Populations based on 2000 Census. During the last three decades much of the city’s real estate development has been concentrated in the city’s northern and eastern territory – the areas with the least poverty and persons of color populations, along with a (relatively) low level of transit dependent persons (AECOM/JJG Joint Venture, 2012).

Area	Percent Below Poverty	Percent Minority Population	Percent Transit Dependent Population
Northeast Zone of the Study Area	19.4%	44.9%	14.5%
Southeast Zone of the Study Area	28.0%	72.1%	15.5%
Southwest Zone of the Study Area	33.9%	98.9%	26.1%
Northwest Zone of the Study Area	19.8%	50.1%	12.4%
Atlanta BeltLine Study Area*	23.8%	60.9%	15.0%
Atlanta	24.4%	68.7%	15.0%
Fulton County	15.7%	54.7%	9.3%

The BeltLine Project includes eight stated goals: i) “Contribute to an integrated regional multi-modal transportation network that promotes seamless intermodal connectivity, increases community access to the existing transit and trails networks, and improves reliability of personal travel”; ii) “Manage and encourage the growth and economic development of the city, region, and state by providing transit and transportation improvements to areas designated for growth”; iii) “Preserve and revitalize neighborhoods and business districts through context sensitive design of transit and trails...and provision

of affordable housing and transportation, and other community benefits”; iv) “Provide a cost-effective and efficient transportation investment”; v) “Provide a transit, bicycle, and pedestrian friendly environment”; vi) “Provide transit, bicycle, and pedestrian connectivity among communities, and between communities and existing and planned recreational opportunities”; vii) “Minimize adverse impacts to the environment and foster positive environmental impacts”; and “Ensure consideration of public input throughout project planning and development (AECOM/JJG Joint Venture, 2012, pp. 2-17 - 2-18)”.



Figure 6: Atlanta BeltLine Map.
(Atlanta BeltLine Inc., 2015)

While the city has gained a hearty reputation of being the epicenter of high society and a lively social scene, going back to 1980s, this reputation came associated with high profile cross-cultural conflicts. The city was known to attract mega-events that brought in mostly young students and professionals (including the annual Freaknik, the NBA All-Star game, the Superbowl, and other regional and national events). While tourism has injected billions of dollars into the region's economy, there was consternation over the demographics that some events brought, with the city actively campaigning to deter some events that attracted young and black crowds. As city leaders tried desperately to shake the city's party image (in favor of one that was business and tourist friendly, across age and racial groups – as suggested by the city's bids for numerous attractions – the failed NASCAR Hall of Fame bid, the College Football Hall of Fame, the Georgia Aquarium), the BeltLine Project is a part of Atlanta's overall rebranding.

6.3.2.1 An Equitable Space for Today and Tomorrow

In addition to the BeltLine's infrastructure and greenspace commitments, the project has promised to add more than 5000 affordable housing units to the city. This is significant considering the history of urban improvement and the changing socioeconomic character of neighborhoods across the country and Atlanta as well. The proactive commitment to protect low-income families from displacement has the potential to guard against gentrification. Checker (2011) exposed that preserving the cultural integrity of

neighborhoods is essential for long-time community residents; this is evidenced by illuminating on how the influx of elites and those without prior communal ties bring new values to gentrified areas which were largely at odds with those of prior inhabitants. Without the maintenance of strong ties and community organizations, the BeltLine project does have the potential to disrupt the mores of communities, even if unintentional.

The project is funded by a bevy of sources, including a tax allocation district (TAD) based on 2005 tax revenues, local contributions (philanthropic and otherwise) and federal funds. Because the tax financing is spread out over a 25 year period, both present and future generations will share the costs (and benefits) of project development. Across generations the project is a commitment to the future of the region (or at least Atlanta) to look and feel drastically different than the unsustainable Atlanta of the past.

Table 9: Potential Travel Time savings of BeltLine versus the status quo (AECOM/JJG Joint Venture, 2012).

Transit Trip		Average Travel Time (minutes)		Travel-Time Savings Difference between Preferred Transit Alternative and No-Build Alternative (minutes)
Origin	Destination	No-Build Alternative	Preferred Transit Alternative	
Grant Park	Cascade Avenue at Ralph David Abernathy Boulevard	48	28	20
Cascade Avenue at Ralph David Abernathy Boulevard	Joseph E Boone (Simpson Road)	66	10	56
Lindbergh Center	Joseph E Boone (Simpson Road)	37	25	12
Boulevard Heights	Ansley Mall	99	27	72
Colonial Homes	Ansley Mall	56	24	32

6.3.2.2 Recognition

The BeltLine project is significant due to the emphasis that the project has placed on the development and heightened status that parks in marginalized communities have received. This speaks to a process that though initially overseen by elites, has infused environmental justice and community participation efforts at multiple steps, as evidenced by the consistency of public meetings, the commitment to the rehab of ecologically toxic land in battered neighborhoods and the potential positive human health impacts of the projects, via its emphasis on parks and outdoor recreation, particularly in impoverished areas. Also relevant is the core idea of interlocking all of neighborhoods, which runs counter to a historical legacy of racial segregation in housing and education, which by default kept races largely isolated in racially homogeneous communities. The process for bringing about the BeltLine was replete with arguments championing the health impacts that the project would bring massive engagement with the community before and during the on-going infrastructure acquisition and installation process. Equally important is that the project broke down the demographics of neighborhoods to be served by the BeltLine and the health disparities amongst areas. This addresses problems that arise from reliance on aggregate city-wide data, which has the capacity to obscure local, tract level conditions (Pearsall & Pierce, 2010).

6.3.2.3 Controversy

The BeltLine's public private partnership and its financing model has direct Atlanta roots that go back to urban renewal projects from the 1950s, when the city's emphasis on

ballparks, civic centers and expressways were used as tools to buttress property values via strengthening the sales and tax base, with the renewal era development predicated on strengthening Downtown Atlanta (Holliman, 2009). In the quid pro quo, many black leaders supported the efforts to prop up renewal efforts (which would later harm the credibility of some leaders after the inequitable outcomes would play out) as the razing of communities was traded for public housing creation that would ultimately prove elusive.

The BeltLine has largely been financed by the creation of a TAD, in a joint agreement between Atlanta BeltLine Inc., the City of Atlanta, Atlanta Public Schools (APS) and Fulton County. While Atlanta is split between two counties (with the lion's share in Fulton),¹¹ the tax split has APS receiving approximately 50% of property taxes, and the city and country receiving 28% and 22% respectively. Worth noting, is that APS, which was a reluctant partner at the projects inception, agreed to a set revenue amount based on the 2005 cap, and not a percentage, thus protecting itself from fluctuating amounts from receipts (Wheatley, 2010). TADs are a specific type of tax increment financing and economic development instruments which allow for property taxes in excess of a specified amount (and in this case with a significant portion designated for education) to be collected and used for some development project lasting over a set period of time. It is thought that over the long run that the entity, which does not see the increased tax revenues, will benefit from the revitalization efforts as projects are used to improve the targeted community, thus

¹¹ As all taxing authorities within the area must agree upon their creation – the portion of Atlanta that extends into DeKalb County is not part of the project.

raising aggregate property tax amounts (i.e. future economic development and tax receipts acts as the funding mechanism for contemporary projects). So, theoretically, all the excess monies created through redevelopment will funnel into the government that received a short-term financial hit over the life of the TAD.

The BeltLine TAD was reached in 2005 and covers 6500 acres (approximately 8% of the City's land area) and allows for APS to receive tax revenues at the 2005 level and covers a 25 year period. It is projected to generate \$1.4 billion, and cover a third of all project costs (with the remaining 2/3 covered by grants, private investment and other sources) through the life of the project. Government bonds finance capital investments associated with the projects and the incremental tax increase is used to pay back the security and interest. The city is projected, by Atlanta BeltLine, Inc. (ABI), to have a \$20 billion higher tax base than at the TADs inception, directly related to the BeltLine project (Atlanta BeltLine Inc., 2014). TAD funds are slated to be spent on a host of project specific ventures including "land acquisition, multi-use trails, greenspace, transit, transportation improvements, and affordable workforce housing and Atlanta Public Schools projects" along with brownfield remediation (Atlanta BeltLine Inc., 2014).

Due to controversy surrounding a failure to make significant payments to the school system, APS, ABI has come out swinging regarding the value that the BeltLine (and really the TAD) adds to communities and expressly schools and districts. One of the claims is based on the Livable Communities Coalition (2007) which asserts that statewide, projects have historically increased a TAD area's tax base by 300% faster than surrounding communities – and consequently giving the district access to more funds. Additionally,

ABI contends that schools are better situated because revived communities increase diversity, mixed income residents and promote better food options via new retailers.

Perhaps, most concerning is the treatment of the issue by the city's most prominent BeltLine advocate, Mayor Reed, when he noted the public importance/primacy of the BeltLine over the school system. Instead of advocating for a beleaguered school system – which was in the midst of numerous teachers and administrators involved in criminal lawsuits (with some receiving RICO charges) over a massive cheating scandal), he advocated for the BeltLine system that has widely perceived public support.

6.3.2.4 Things Fall Apart

In spite of the lofty financial projections that the BeltLine came with, the project hit a significant impasse with the housing market crash over the second half of the last decade, as a significant portion of tax revenues that the project had projected would never be actualized, with one estimate claiming that Invest Atlanta, the quasi-private development arm of the city) owes the school district almost \$20 million. (WSB-TV, 2014) While others place the debt substantially lower, but at least at \$6.75 million (with another payment for the same amount being due at the top of 2015) (Bloom & Leslie, 2014). In a contentious exchange, Mayor Reed, when referring to then superintendent of APS Erroll Davis stated that “Nobody's going to negotiate at the end of a gun. So, if you're going to take hostages, you'd better be ready to shoot the hostages,” after the latter had threatened a lawsuit to recover the nonpayment. Reed would go on to add that “The Atlanta BeltLine is the most popular public project in the entire city of Atlanta -- by a lot -- more popular

than APS” (WSB-TV, 2014) While these sentiments are not surprising, perhaps, coming from the local political economic establishment that has not hidden an inclination to favor economic and development projects, the utterance by a public official, without qualification, is disheartening to many that are associated with the city’s school system, whether parents, employees or students. In a letter addressed to a member of City Council, the Neighborhood Collaborative Group, a coalition of community groups and parents were concerned about the failure of the project (and city) to meet its financial obligations to the public schools system (The Neighborhood Collaborative Group, 2014).

Attempts at settling the debt have been contentious as well, involving potential tradeoffs with the city covering the school systems costs for internet services, or reducing charges for water bills or police services, and a property swap which the city oversees (Leslie & Niese, 2014). Inflaming many locals, including the Neighborhood Collaborative Group and the parents group, the city (via Invest Atlanta) was slated to pay APS prior “to any other entity, including Fulton County, however each year the City has elected to continuously pay Fulton County and others instead of APS (The Neighborhood Collaborative Group, 2014).”

The BeltLine project, notwithstanding its considerable attention to equity issues, including the protection of affordable housing units and brownfields remediation, allowance of a beleaguered school system – and consequently educators and students – to carry an inordinate costs proves that equity must be looked at dynamically, and suggests the potential for unjust scenarios to win out when intragenerational and intergenerational concerns are not wholly reconciled.

6.3.2.5 Environmental Study Analysis

The BeltLine seeks to address a number of the city's development needs (including transportation, housing and economic) in the context of the city's uneven and low-density settlement, inadequate and underused transit options and housing issues which culminate to create barriers to high life quality.(AECOM/JJG Joint Venture, 2012) The environmental impact study, which justifies the design and development of the BeltLine project in its current incarnation over several alternatives, details the needs and context, along with alternate iterations of the project that were under consideration. After a series of public hearings and informational workshops, a bevy of feasibility screening criteria were developed concerns related to engineering, security, environmental impacts, access and costs.

Versus the no-build alternative, the BeltLine project purports to improve commute travel times, serve nearly 60,000 more people based on 2030 population projections, create 30,000 full-time jobs and 5,600 affordable housing units (over the 25 year life of the project), create 50+ acres of parks and recreational space. It will concurrently present numerous challenges, including: noise and vibration impacts from construction, create pedestrian conflicts between transit and roadways and potentially disturb the numerous sites that contain hazardous materials along the study area.

6.3.2.6 Community Outreach

Public involvement and outreach involved a bevy of methods from project conception and design onto development. Communication tools included the establishment of a stakeholders' database, informational websites and newsletters, public comment forms

along with the development of a consortium of committees that looked at various issues related to the project (e.g. the tax allocation district, affordable housing) and finally scoping meetings and workshops that provided information, open house environments and public comment sessions.

6.3.3 The Fast Lane

In the midst of the two high profile mobility options above, the region is also looking to a more embedded, if less sustainable, means of moving denizens across the region via a massive expansion of its toll based expressways. Given the attention that Atlanta's traffic issues have received for gridlock, Forbes ranked the region as having the 7th most extreme commute in the nation (Gourdrea, 2013), the region has employed an all options on deck manner to reduce commute times. That same study had average travel times at over 34 minutes, nearly 10 minutes longer than the national average. The Georgia Department of Transportation is slated to build four express lanes over the next several years, with three already in the design phase, which will give willing drivers the options to pay a congestion pricing toll in order to bypass interstate snarls. The projects will add over 50 miles of expressway lanes to the sprawling region, is presented as a tool not only to make transit more expedient and reliable, but also cost effective as an economic development proposition (GDOT, 2014). The following section of analysis will focus on the I-75 expressway additions located in the region's southern suburbs by first providing a background for the project and then looking at potential alternatives. It concludes with a take on the public outreach process involved in the project and a look at potential environmental impacts.

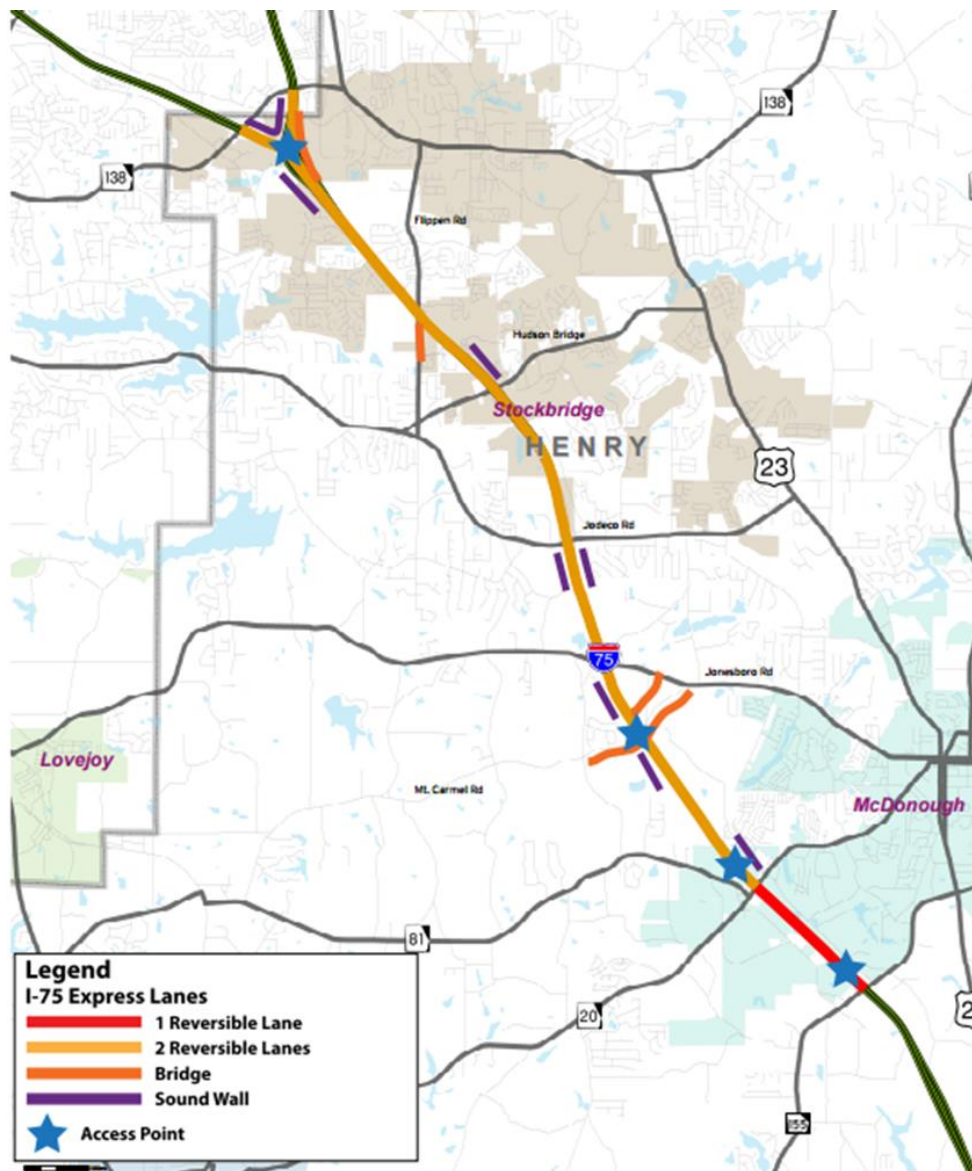


Figure 7: Planned I-75 Express Lane Map
(US DOT, 2015).

6.3.3.1 Background

While the affluent contribute the most to emissions from private autos and suffer relatively low amounts from such emissions, poor people of color, particularly children suffer the

harshest health effects (Jephcote & Chen, 2012). The flow of goods across American roadways, a cornerstone of the American economy, has been associated with significant and increased risk involving the poor and people of color, including premature death and an assortment of other acute illnesses (Garcia, et al., 2013). Running counter to the desire to make major overhauls to its expressways, via congestion pricing, Friedman, et al. (2001) show that when Atlanta has constrained automobile traffic – as it did at the time surrounding the 1996 Olympic Games, air quality (and consequently human health) benefited.

The 12 mile expressway project will extend from the Eastern tip of Clayton County down into bordering Henry County and will add two toll lanes along the I-75 interstate (See

Figure 7: Planned I-75 Express Lane Map

). The project's purpose is to “improve traffic flow, increase options for motorist and transit and registered vanpool customers, provide reliable trip times, create jobs and bring economic benefits to the residents of the region (GDOT, 2014).” After a three year design and constructing period, it is slated to be open to traffic during winter 2017. When reconciling this project with some of Metro Atlanta's broader development goals, as suggested by the work, previously alluded to, being done by the likes of the ARC and GRTA, it is vital to gauge how this project fares regarding sustainability and health-minded and transportation related goals. Again, being cognizant of the Just Sustainabilities framework, it is appropriate to evaluate the project's Environmental Assessment. The

FHWA has determined the project will have “No Significant Impact” regarding environmental issues.¹²

6.3.3.2 The Expressway Not Travelled

The project was selected amongst several alternatives to address the transportation issues along the I-75 corridor in the Southern portion of Metro Atlanta, with the other top two alternatives being a do nothing alternative (the environmental impacts of that are contrasted with the selected alternative in the table above) and the establishment of a High Occupancy Toll-3+ project. The latter alternative, is nearly identical to the selected option, vehicles with three or more passengers would have been exempt from paying tolls. This alternative was ultimately not selected because of its less favorable economics as it was projected to generate 5% less revenue (FHWA, 2013). This raises broader concerns regarding environmental sustainability and economic equality; while options that promote carpooling, are not as environmentally optimal in contrast to public transportation -- or forgoing trips altogether -- but when considering in contrast to the decline of carpooling over the last three decades, as the cost of vehicle ownership has fallen and the spread of

¹² Regarding the Expressway Toll Summary of Impacts (FHWA, 2013), while most categories have either no adverse nor significant impacts according to the FHWA study, immediately apparent is the Community Impacts/Environmental Justice implications, which is the only category slated to have “adverse” effects. In light of Executive Order 12898 which mandated attention to federal projects which place the environmental and human health concerns of marginalized communities at the forefront, departments and agencies must appropriately address “any disproportionately high and adverse human health or environmental effects” that these communities are confronted with. (Shepherd, 2011)

jobs into suburbia (Park & Gebeloff, 2011), projects that promote multiple occupants are vital.

6.3.3.3 Community Input

The FHWA (2013) conducted EJ outreach to ascertain perceptions of the project. Though individuals with lower incomes were more likely to support the project, they were significantly less likely to believe that the project would remove cars from existing lanes and had very low confidence that the project would lead to increased reliability. The project is slated to have numerous indirect and cumulative effects on EJ populations, perhaps most critical to equity is federal funding for a project that favors higher income earners (i.e. those more capable of paying a toll) over lower income earners (e.g. the carless). This is partly countered by the FHWA's recommendation (or option) that joining a carpool is viable, but due to the rejection of the HOT-3 strategy, there is no economic benefit for those that choose to take advantage of this (at least in terms of accessing the toll lane to expedite trips).

6.3.3.4 Environmental Impacts

Because the project would add nearly 120 acres of impervious surface to the covered tract, it is expected that the roadway may potentially affect the Ocmulgee River Basin. Additionally the project is slated to impact 8 streams (5 of which already are in a state of "somewhat" or "fully" impaired condition) and 12 wetlands areas. Additionally, when the project's emissions projections (through 2035) are contrasted with no build and status quo emissions levels, though emissions levels are expected to decrease from current

levels, due to an assortment of factors (e.g. increased CAFE standards), the no build alternative is slated to produce less emissions in all seven categories, by nearly 1%. This is significant considering the region has been out of compliance with federal air quality regulations since the 1990s.

6.4 Brownfields

Before engaging in the analysis of brownfields in Atlanta it is necessary to note the differing definitions used by the three bodies that oversee brownfield policy in the city, the US EPA, the Environmental Protection Division within the state's Department of Natural Resources and the city's Office of Planning. The EPA states that "(b)rownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant (US EPA, 2014)." While not having an explicit definition of brownfields, Georgia uses less ambiguous language than the federal government, and in order for a site to receive that classification, it has to release a toxic substance subsequent to sampling. Atlanta classifies brownfields as "properties that are abandoned or underutilized because of actual or perceived contamination (Atlanta Office of Planning, 2012)." While an exact tally on the number of sites across the US is not known, the Government Accountability Office has approximated that there are 425,000; other projections say that these sites cover some 5 million acres of territory lessening property value by \$2 trillion dollars (National Brownfields Association). Similarly, a precise number of brownfields in Atlanta is unknown, as no comprehensive attempt to identify all brownfield land has been

undertaken. At least one projection puts the number at approximately 1100 city acres (Atlanta Beltline Inc., 2015). In compliance with the state's Hazardous Site Reuse and Redevelopment Act, the state does keep track of all properties enrolled in the voluntary clean up status program and have been remediated or have plans for proposed remediation. Of these, 236 sites have been identified in Atlanta, and of those 128 have been remediated.

The consequences of toxic environments in Atlanta have effects in numerous aspects of residents' lives. Squalid environmental conditions in poor neighborhoods surrounding the city's stadium district have been associated with negative mental and physical health outcomes along with violence and resident concerns with injury and poisonings (Redwood, Schulz, Israel, Yoshihama, Wang, & Dreuter, 2010). Furthermore, Leigh and Coffin (2005) have determined that the impacts of brownfields on property values in Atlanta should not be determined by near-term economic efficiency nor the sole criterion on which public investment should be made, when looking at broader questions of community revitalization and economic and environmental justice. They note that as a result of government redevelopment strategies that do not target brownfields in the most distressed communities, this lessens the opportunity for economic revitalization in said neighborhoods.

The state's Voluntary brownfield program was created in 2002 and is funded by federal grant monies and a \$3,000 application review fee for prospective program entrants. The program promotes entry due to the liability waivers given to "innocent" prospective purchasers in exchange for the remediation of hazardous materials from land for pre-existing activity. Additionally, participants are not responsible for ground water cleanup

which further encourages participation and tax abatement funds are available to participants for costs associated with cleanup (US EPA, 2013). In 2006, the Georgia Brownfields Rescue, Redevelopment, Community Revitalization and Environmental Justice Act were put forth in the state Assembly. It called for support for site revitalization and targeted the disproportionate number of sites in marginalized communities. The legislation failed (Deganian & Thompson, 2012).

The city of Atlanta has a nearly a 20 year history of identifying and remediating brownfields, after receiving its first brownfield related EPA grant in 1996 (Atlanta Office of Planning, 2012). Consistent with its overall economic development strategy, and steady population growth, the program has a stated goal of developing “every parcel of land available...to its highest and best use (Atlanta Office of Planning, 2012)” which are consistent with the three 2012 initiatives to address brownfields that the city is involved in: the Area-Wide Planning Pilot Program (an EPA initiative), the Brownfield Assessment Program and the Brownfield Revolving Loan Fund Program. The collective goals of these programs include: redevelopment of properties, human health and environmental protection, greenspace creation, increase of the local tax base and neighborhood revitalization (Crawford, 2012). In a study conducted by the Bleakly Advisory Group (2012), a real estate and economic advisory firm, prepared for the City of Atlanta, the organization looked at 11 neighborhoods in Southwest Atlanta, an area unique for a number of reasons, including its demography. While in 2010, this cluster had just over 45,500 residents, this was an over 22% decline from the previous 2000 Census, or a decrease in over 13,000 residents. By contrast, the city as a whole had a population increase by just

less than 1% during that time span. Based on the Bleakly survey, these neighborhoods are comprised of approximately 91% of residents that self-identify as black (compared to the broader city which is 54% blacks. Educationally, nearly a quarter (22.8%) of these residents lack a high school credential, while nearly 18% have college degrees (the city as a whole comes in at 13.8% and 45% respectively in these areas). Household income is just under \$27,000 while the median income across the city as a whole was \$41,631. Also germane, and relevant to numerous black populated enclaves in Atlanta, is what Geltman refers to as the “brownfields trap” or how “business owners are precluded from expanding, refinancing, or selling their businesses because of fear of discovering environmental contamination in the transaction process (Geltman, 2000, p. 5).”

The following section will look at the known totality of the Atlanta Brownfields crisis, using both state and city data and will conclude with the BeltLine’s contributions to site remediation.

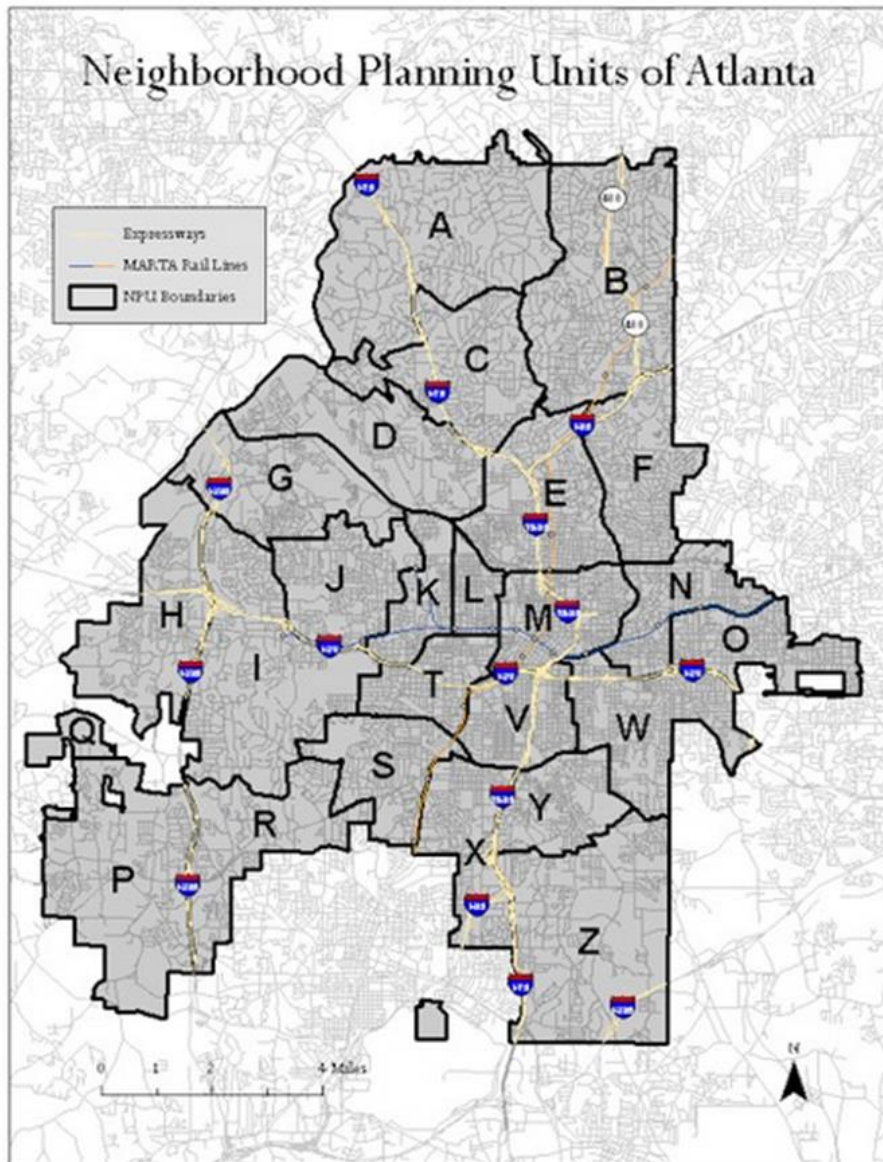


Figure 8: Atlanta NPU Map
(Atlanta Office of Planning, 2015).

6.4.1 Overview

As mentioned in the Methodology Chapter, the following analysis looks at two separate groups of brownfields. Ultimately 71 sites from the state's list were used in the

analysis (after approximately 25 were culled for various reasons) and 160 from the city's list, for analysis of over 230 sites. This section will begin with a look at an examination of what can be ascertained from the state's sites and then a closer look at the City's list of sites. The analysis will conclude with a take on what can be gauged from all sites.

6.4.2 Georgia's Brownfield Summary Table

Of the over 70 plans that made the Georgia list, covering over 300 acres of Atlanta soil, over a third were at least five years old (i.e. a cleanup plan had been put in place, but as of December 2014 there was no remediation). These sites, as with the other sites, run the gamut of risk reduction standards (RRS), which are Type 1, or "levels that pose a condition of no significant risk based on conservatively standardized site conditions and residential exposure assumptions"; Type 2, "levels that will pose a condition of no significant risk based on conservatively standardized site conditions and residential exposure assumptions"; Type 3 "levels that will pose a condition of no significant risk based on a site-specific risk assessment for residential property"; Type 4, "levels that will pose a condition of no significant risk based on a site specific risk assessment for non-residential exposure assumptions"; and Type 5 which "allows higher contaminant threshold levels for sites where Types 1-4 are inappropriate and where removal of source materials are impractical, requiring control of exposure potential by implementation of engineering and/or institutional controls (ABC Soils, Inc., 2012)."

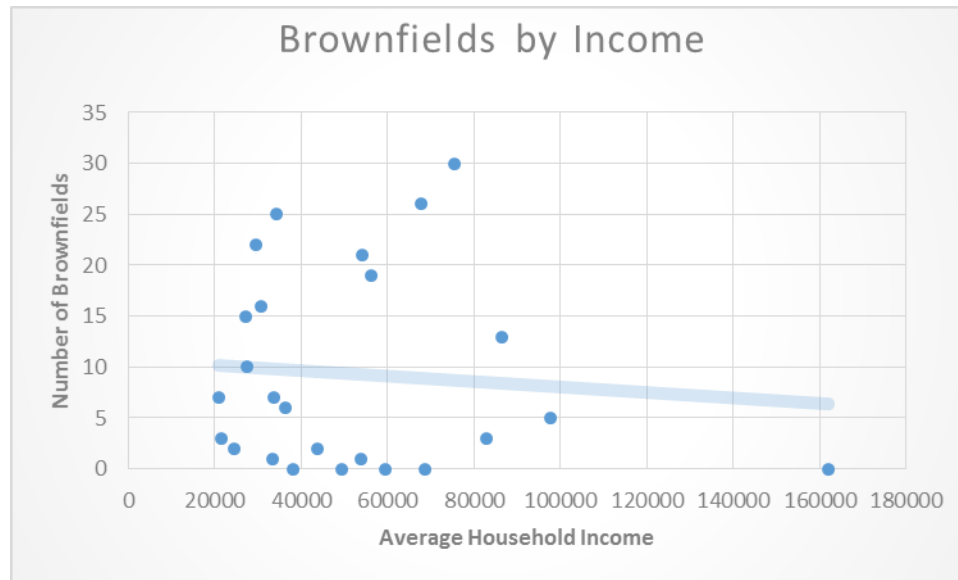


Figure 9: Brownfields Scatter Plot by average household income.

A third of the sites fell into the RRS status of Type 3 or above, indicating a heightened threat to human health. Twenty-eight of the properties were at least 3 acres in size and seven sites were in excess of 10 acres, including one covering over 23 acres that's been on the list for over ten years. As of August 2015, there will have been five sites that have had cleanup plans (not to mention how long the threats actually existed) that date over 10 years in age. In all there are 15 sites on the list with a RRS code status to be determined, placing the risk to the local ecology, drinking water and population at unknown levels.

The above tabulations account for just the brownfield sites from the state's list that was inside Atlanta NPU boundaries (See Figure 8). There are an additional 11 sites on city property that fall outside these boundaries. While this research did not include in its GIS tabulation, still can account for on multiple fronts. These sites, covering over 107 acres of

land, date as far back as 10 years ago and, similar to the sites confined within NPU boundaries, cover a range of threats to human health: three have RRS codes of 3-4, while three of the properties RRS status is yet to be determined. The largest of these properties, perhaps unsurprisingly, resides in Southwest Atlanta on Fulton Industrial Boulevard, on the grounds of a recycling center. While Pellow's(2002) seminal work on the threats that recycling facilities pose to not only local environments, but also worker health and safety, this area of the city, replete with numerous manufacturing centers (as suggested by the thoroughfare's name) has been an epicenter for illegal drug activity and prostitution.

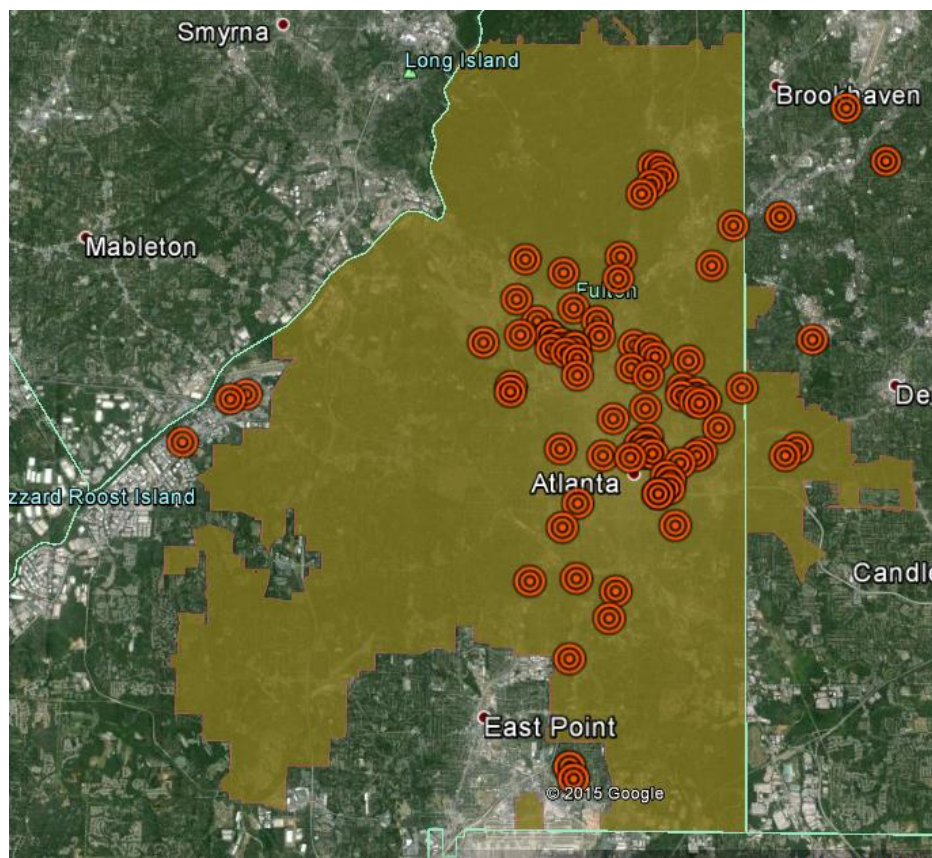


Figure 10: State of Georgia's Brownfield Summary Table Atlanta Sites
Author generated via Google Earth.

6.4.3 City of Atlanta's Brownfield Inventory

It is apparent after first gazing at the brownfields that were ascertained from the Atlanta list is the conspicuousness of where sites lie, that are tightly circling the urban core, in almost perfect alignment with the BeltLine project discussed in the section above. This concentric relationship, perhaps having developed for a number of reasons. First, sprawl in Atlanta has been a relatively new occurrence – the entire ten country metro region had just over 1.5 million inhabitants in 1970. By 2014 that number was projected to be nearly 4.3 million, adding on average over 77,000 residents annually between 1990 and 2010. This includes a net gain for all the counties while the city of Atlanta lost nearly 70,000 residents (Atlanta Regional Commission, 2014). The population center, along with threats related to human activity, had been concentrated mostly around the urban core. Secondly, as with its broader efforts at planning and development, and actualized through programs as disparate as securing sporting events and venues, its commitment to tourism, and also the development of massive public infrastructure projects (see the BeltLine and Streetcar sections) the city's attention has always focused on projects that are high profile and that can lure and rehabilitate choice sites.

As part of its Brownfield Area-Wide Planning Pilot Program, the city targeted 14 sites in various Southwest Atlanta communities, mostly within the Beltline corridor, with two locations (both on Sylvan Rd) just to the exterior, for rehab. While Southwest Atlanta has struggled economically and development-wise in contrast to rest of the overall growth in the city (see Vine City analysis as an example) even when considering the significant

program investment in the past, the scrutiny and identification of these brownfields are a function of land assessment. Less valuable (i.e. those parcels that typically are more remote from the urban core) have not been afforded similar commitments to rehabilitate the soil chemistry. Finally, along with the historical argument involving population, the outlying parts of the city are typically less dense, and so along with less use in the past, have been currently less targeted for development, and consequently less surveyed. It (literally) does not pay for a prospective land buyer to enter into the state's voluntary brownfields program, and benefit from the perks mentioned in the previous section (liabilities, tax advantages, etc.), if the potential parcels of land are not going to come with adjacent development -- or at least targeted for development -- by Atlanta's urban growth regime that is looking for inner-city development.

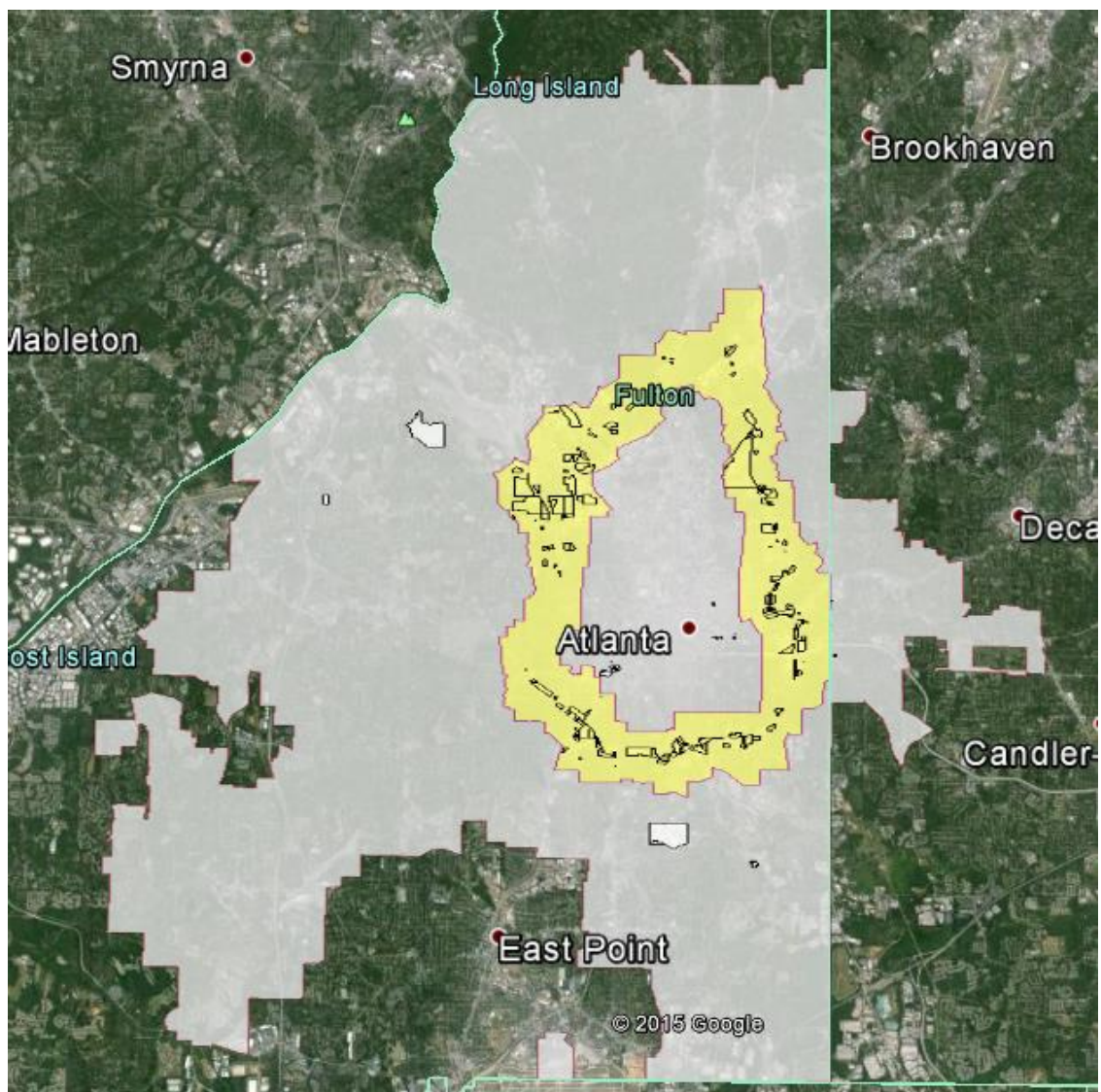


Figure 11: City of Atlanta's Brownfields Inventory

6.4.4 The BeltLine's Contribution

If the aforementioned Area-Wide Planning Pilot Program is appetizing for how the city of Atlanta is pursuing brownfields in threatened communities, undoubtedly the entrée would be how it is BeltLine program has been involved in site remediation. After having enrolled in the state's EPD's Brownfield Program, and have had over 123 acres of

associated property enrolled into the program (approximately 1/6 of the project's 6,500 acre TAD is estimated to be brownfields), receiving over \$700,000 in federal grant and loans funds to help pay for remediation. Thus far, over 40 acres have been remediated. (Atlanta BeltLine Inc., 2015) This accounts for less than the 4% of the estimated total brownfields inside Atlanta's Fulton County borders. The BeltLine is projected to have over 130 brownfields along its 22 mile corridor (US EPA, 2010).

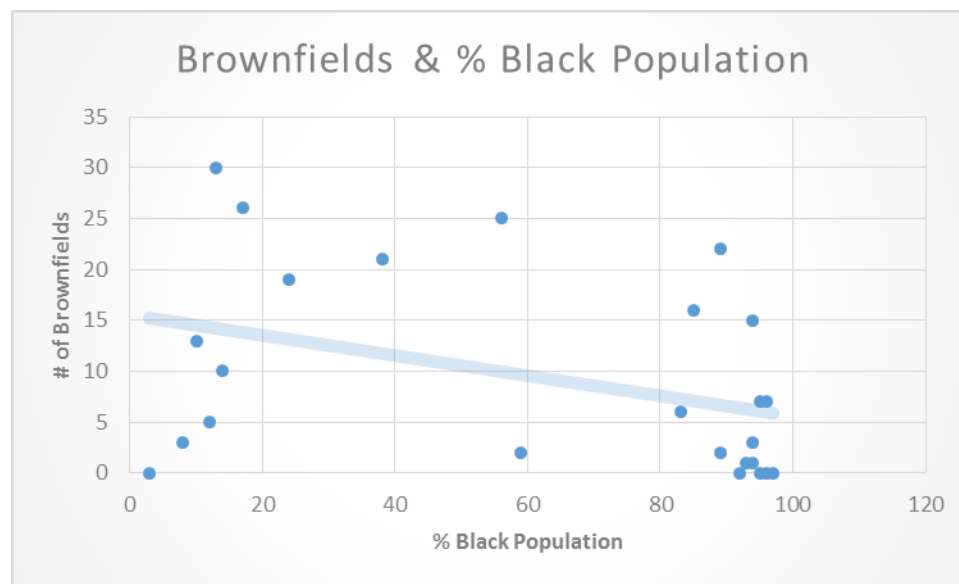


Figure 12: Clustering of Brownfields in NPU Grouping by Atlanta's Black population

Table 10: Citywide Brownfield Properties and NPU Demographics.

	Pop Density/ Acre	Average Age	% Black	% White	% Asian	% Other	% Hispanic/ Latino	Total Resident s	% Occupied Housing Units	Average Income	Number of Brownfields
A	1.6	42.4	3	92	3	2	2	11691	92	161988	0
B	7.3	35.3	12	76	5	7	9.5	47018	85	97761	5
C	4.7	34.4	8	84	3	5	6	18032	92	82905	1
D	2.6	29.5	24	59	5	12	16	10690	83	56338	9
E	11.1	28.1	17	65	13	5	5	33262	83	67843	14
F	7.8	34.4	10	80	3	7	10	23245	91	86543	2
G	2.3	22.4	94	3	1	2	2	8622	80	21575	1
H	3.5	29.5	92	2	0	6	4	14049	84	38150	0
I	3.5	37.8	94	2	0	4	4	21201	85	53679	0
J	4.4	34.3	96	2	0	2	1	11376	66	33782	2
K	6.1	35.9	85	9	0.4	2	2	7151	63	30665	0
L	7.3	30.8	89	6	1	4	3	5993	57	24483	1
M	11.1	33.3	56	34	5	5	5	26886	78	34170	17
N	7.9	34.4	13	80	3	4	4	17385	91	75431	4
O	6.3	33.7	59	37	1	3	3	13777	87	43597	2
P	3	34.8	95	2	1	2	2	17097	87	59477	0
Q	2.7	37.6	96	2	1	1	1	2036	92	68547	0
R	4.8	30.7	97	2	0	2	1	16490	83	49518	0
S	4.1	35.1	94	4	0	2	1	9965	75	27193	0
T	9.3	24.1	95	2	0	3	2	11364	76	20848	0
V	7	27.4	89	6	1	3	3	14024	76	29461	2
W	5.7	33	38	55	2	6	6	19043	88	54189	6
X	4.4	33.8	83	10	1	6	6	11790	82	36335	3
Y	5.3	29.5	14	81	0	5	9	8687	78	27554	2
Z	2.7	26.6	93	3	1	3	4	18010	80	33222	0

Chapter 7

SUSTAINABILITY PLAN MINING

7.1 Overview

This chapter investigates numerous urban sustainability plans from across the US and analyzes those plans for their varied attentions to equity, justice, environmental and economic concerns. It concludes with sustainability planning's considerations of limited English proficiency households.

7.2 Plan Mining

The criteria for plan selection were that any cities within the 11 largest populated metropolitan areas in the nation were subject to investigation. Of those, over half had plans (New York, the San Francisco Bay Area, Washington DC, Chicago, Philadelphia and Atlanta). The following is an overview of each city's plan, which looks at not only their sustainability principles, but also draws attention to equity and justice. As stated elsewhere, each region has its own unique geographies, resource bases and populations that would require a deep analysis – which is not within the scope of this project. The purpose here is to illuminate on how cities are talking about sustainability. The section will conclude with a content analysis¹³ for each plan and illuminates on the emphasis that each

¹³ A note on using content analysis. This author is cognizant that its use should be employed with an ensemble of tools to ascertain how cities and other entities go about the

plan places on three different themes common to most urban sustainability literature: the environment, equity/justice and the economy.

7.3 Atlanta

Atlanta's *Power to Change* (2014) is that city's sustainability initiative and disseminates from the Mayor's Office of Sustainability. With a mission of Atlanta becoming a "top-tier" sustainable city, it is built around 10 impact areas: 1) water management, 2) air quality, 3) community health and vitality, 4) education, 5) energy efficiency and renewables, 6) growing business, 7) land use, 8) materials management and recycling, 9) sustainability planning and 10) transportation and mobility, with each being assessed by multiple measures and cumulatively backed by over 100 initiatives. Pillaring the initiatives are five core stakeholder groups: government, business, academia, NGOs and residents. Each of the core impact areas is backed by a goal, a map of the current situation and a vision for the future. The document touts environmental gains that the city has made since the beginning of the decade, including the development of a climate action plan, city-wide residential energy audits, strengthening the area's tree canopy (over 23,000 trees have been planted; bringing urban tree coverage to nearly 50%) and the mitigation of auto emissions by over 4.3 million lbs. of pollution.

business of sustainability. As 19th Century Michigan Senator Lewis Cass urged, "People may doubt what you say, but they will believe what you do." It is vital to recognize that prominently discussing equity, justice or jobs does not equate with an effective means of bringing any of those into fruition. Conversely, a non-codification does not necessarily mean that holistic sustainability is not occurring.

It boasts of numerous accomplishments, such as having half of all jobs located within a ½ mile of public transit and 25 farmers markets within the city. As alluded to earlier in chapters five and six, each of these areas (mobility and food) has created short and long-term challenges for the city and region. While many city jobs are within a short walk from a bus stop or rapid rail station, as many as 80% of all metro Atlantans drive to work alone (Carlson, 2015) with an average daily commute of 35 miles per day (Atlanta Office of Sustainability, 2014). Just as problematic, the city along with the wider metro area, is littered with food deserts, and with no food policy or coherent strategy in place it will be hard to comprehensively confront these shortcomings. The plan seeks to address some of the city's most pressing environmental issues, including its toxic air quality, though there is not an aggressive posture to pursue sustainable outcomes. For example, its goals for air quality include meeting 2012 National Ambient Air Quality Standards – and the 2008 ozone standard, by the end of 2015. While the constraints of past decision making are very real limitations, having safe targets defies what true sustainability is, and gives primacy to those past decision makers over tomorrow's (and today's) consumers of air. While its energy efficiency and renewables goal to “reduce energy use through conservation efficiency best practices (Atlanta Office of Sustainability, 2014, p. 25)” is praiseworthy, this laudable goal is tempered by language that states that energy consumption begins with retrofits (and not conservation). Perhaps most promising about the plan is its commitments to sustainability education, particularly in light of the concurrent goal of improving public health and incorporating health issues into the sustainability conversation.

7.4 San Francisco Bay Area

The San Francisco Bay Area is the eleventh most populated metropolitan statistical area in the nation, with over 4.5 million inhabitants in the San Francisco-Oakland-Hayward region. Unlike the other plans assessed here – and local sustainability plans in general -- as opposed to individual municipalities having their own respective plans, area governments created a unified sustainability plan. This is sensible because as expressed previously, issues related to sustainability are often not confined to political boundaries; many of which, including transportation, water and air quality are often triggered by, or have downstream impacts on entities that are not a significant (if at all) part of the problem's cause.

The Bay Area Plan (Association of Bay Area Governments, 2013) is the work of a consortium of government actors, including several counties, numerous municipalities, and a transportation commission. The current plan, which was adopted in July 2013, is a joint regional transportation and sustainable communities plan, which covers the years 2013-2040. The broader nine county region that makes up the Bay Area has a population of 7 million, which is projected to grow to 9 million over the next 25 years. The plan, which is divided into six chapters, is an extension of California SB 375 -- the California Sustainable Communities and Climate Protection Act of 2008 -- which mandated each of the state's metro areas to reduce GHGs from passenger vehicles and promoted sustainable mixed-use development. The plan's equity components focus on marginalized communities' access to housing, jobs and transportation. Required goals, per SB 375 for Climate Protection include reducing emissions from cars and light trucks by 2035 and housing protection for

low-income residents. The areas most germane to EJ communities involve largely voluntary efforts, which have targets to reduce PM emissions, with the broad goal to “achieve greater reductions in highly impacted areas (p. 19)” and reducing the costs of housing and transportation for low income earners by 10 percent. Barbane (2009) notes that the in regards to the Bay Area and sea level rise, that people of color in the region are in a majority of counties (seven of nine) at a heightened risk of being effected by SLR. This was accompanied by an urging for policy makers to plan for occurrences to mitigate potential injustice.

According to the plan, equity voices “focused on increasing access to housing and employment for residents of all income categories...and establishing policies to limit the displacement of existing residents (Association of Bay Area Governments, 2013, p. 3)”. If this representation of groups is largely accurate, it is problematic to environmental outcomes because of the lack of emphasis on environmental concerns in favor of economic and social development. The plan does not mandate zoning or any other local changes, decisions remain in the hands of local governments; perhaps this is counterproductive to underlying reasons to engage in regional planning, and can create (or increase) rivalrous activity amongst member governments.¹⁴

¹⁴ This played out recently with the San Francisco 49ers 2014 move to Santa Clara.

7.5 Chicago

The 2015 Sustainable Chicago Action Agenda (Sustainable Chicago, 2012) prefaces Chicago's sustainability on seven areas: 1) economic development and job creation; 2) energy efficiency and clean energy; 3) transportation options; 4) water and wastewater; 5) parks, open space and healthy food; 6) waste and recycling; and 7) climate change and places a focus "on the choices, commitments and actions that will deliver immediate results over the next few years and will continue to pay dividends for our people, businesses and environment for years to come." (p. 4) It is a joint office between the city's Sustainability Council, the Office of Budget and Management, the City's Chief Sustainability Officer, and the mayor of Chicago. The document was completed in 2012 and is updated by a yearly progress report.

Indicative of the plan's focus is its first chapter, which frames the local sustainability narrative around "building a vibrant economy on 21st century infrastructure (p. 6)". In contrast, the plan does not recognize marginalization and inequality as components of sustainability planning, as it makes no mention of "equity" or "justice". In light of the groundbreaking work that Pellow (2002) did regarding the city's waste and recycling regime, and its increased positioning of threats that waste management burdens communities of color (as well as employees that are from these communities) with, it is problematic that the effort has this blind spot, considering the troubled and toxic history that those two industries have had in the city. The food chapter does tout promotion of healthy food in all neighborhoods as a goal, and to do so is buttressed by several actions: including doubling the amount of space designated for urban agriculture, and allowing for Link Card (EBT) acceptance at farmer's markets. The food justice literature (Alkon &

Agyeman, 2011) has been forceful that urban food deserts must give citizens access to (healthy) food options, which are replete with fresh fruits and vegetables. Giving alternative methods for low income earners to do this is a pathway towards this.

Meta-actions to support many of larger goals have no justice components as part of key actions. Examples include the target to improve energy efficiency by 5% citywide or the goal to make Chicago the most bike and pedestrian friendly city in the nation. While actions to create 100 miles of protected bike facilities, and launching 400 bike share stations are laudable, with no clear roadmap to ensure marginalized areas will benefit, it raises concerns over whether unique issues (e.g. bike shops/prevalence of bike repair facilities) in these areas will factor high on the implementation agenda. Another lost opportunity is the section on climate change. While comprehensive in some of the projected effects that the city will suffer, it neglects to differentiate how communities will be potentially harmed in different ways. Without forethought on disparities on how heat waves and droughts can be most harmful to those with least capacity for resilience (the elderly and poor), there is little confidence that these groups will be fortified against the most intense impacts of warming.

7.6 DC

Sustainability DC (Sustainable DC) is the capital city's sustainability plan and is purposed on "creating jobs and economic growth, improving health and wellness, increasing equity and opportunity, and preserving and protecting our environment in the face of a changing climate (p. 3)." The document is a 20 year plan with the goal of making the nation's capital the healthiest, greenest and most livable city in the US. It is a joint

product of the City's Office of Planning and Department of the Environment. It is unique in that its chapters are not built around environmental themes, but overall looks at: public engagement, governance, prioritizing challenges, solutions and a summary of necessary actions.

After the initial idea to embark on Sustainable DC, public engagement started in all wards, involving over 180 events and contacts. Each of the plan's 32 goals is broken down into a series of actions and this approach does seem to pay service to EJ groups. For example, the infusion of sustainable jobs training into city schools¹⁵ and the goal of job creation for over 17,000 unemployed and underemployed residence including those related directly to Sustainable DC (Sustainable DC). The goal of expanding healthy and active lifestyles for all residents regardless of income, ability and employment is backed by short term actions to enlarge the public park systems in poorly connected neighborhoods; compulsory sustainability education for all school-age children, further commitment to the brownfields program and eliminating 50% of household health treats (e.g. mold, lead, CO) in half of the city's affordable housing. There are multiple concerns that arise in the plan. The document is replete with language concerning equity -- though mentions of justice are scant, which can cause limitations to its long-term brownfields strategies in absence of this context. Its energy conservation program, though containing educational components, is efficiency based, rather than pushing for the conservation of use.

¹⁵ In the 2014-2015 school year, approximately 84% of students in DC Public Schools are black or Latino. During the 2013-2014 school year over three-quarters of all students were eligible for free or reduced lunch services.

7.7 NYC

New York is on its second sustainability plan, with the publication PlaNYC (2011), while the original incarnation dates to 2007. The plan is overseen by the Mayor's Office of Long-Term Planning and Sustainability and is a shared responsibility between that office and the Mayor's Office of Recovery and Resiliency (which was subsequently established in 2014) in regards to its implementation. The document updates quadrennially and is supported by yearly progress reports. PlaNYC is backed by Local Law 17 of 2008. The original plan is credited with adding 200 acres of parkland and preserving over 64,000 affordable housing units along with GHG reductions of 13% compared to 2005, although the latter follows a national trend, which can be linked to the Great Recession (Climate Central, 2012). The current plan positions the sustainability challenge around the following areas: 1) housing and neighborhoods, 2) parks and public space, 3) brownfields, 4) waterways, 5) water supply, 6) transportation, 7) energy, 8) air quality, 9) solid waste and 10) climate change, with each of these backed by initiatives. The document has been translated into multiple languages, as has the associated website, making its contents accessible to many of the over 1.8 million New Yorkers with limited English proficiency. This is a significant component of EJ, as programs cannot be effective if communication does not reach (vulnerable) populations. While nationally, over 60 million Americans speak a language other than English at home (Ryan, 2013), New York is even more linguistically diverse, with just over half of city residents speaking only English at home and over 1.8 million city residents having limited English proficiency.(NYC Mayor's

Office of Immigrant Affairs) Though it has an entire chapter devoted to climate change, the plan pays minimal attention to sea level rise, and considering the impacts that Superstorm Sandy had on the region just a year after the document was drafted, and it is disproportionate impact on low-income earners and people of color k, it is hopeful that the city will reassess these issues with the impending 2015 update.

7.8 Philadelphia

Greenworks Philadelphia (2009) is the City of Brotherly Love and Sisterly Affection's chief sustainability document. Created in 2009, it is published by the Mayor's Office of Sustainability. After coming to office in 2008, Mayor Michael Nutter set a course for Philadelphia to become "the greenest city in the nation" by 2015 and Greenworks is the city's attempted passport to that destination. The document frames sustainability through five lenses: 1) Energy; 2) Environment; 3) Equity; 4) Economy; and 5) Engagement. Its equity section is built around four targets: bringing stormwater into EPA compliance, an open-space plan that brings parks within 10 minute walk to 75% of residents by 2015 (Parks and Recreation has a 100% goal by 2025), building a network of local foods that brings them within a 10 minute walk of 75% of residents by creating 86 local food outlets by 2015, to keep tree coverage toward 30% in all neighborhoods by 2015 and planting 300,000 trees by 2015. EJ targeted work within the energy plan is the expansion of low-income weatherization efforts and workforce development along with energy efficiency strategies for public and low-income housing.

Despite the current administration's emphasis on Sustainability, because Greenworks is a part of the Mayor's office (and not an entrenched city department – this

is not uncommon in municipal sustainability), there is a potential for the thrust that the current effort has may not maintain if a future executive, who is not as committed to an environmental agenda comes into office.

7.9 What is in a Word

For the purposes of justice and equity, it can be argued that that which is omitted and overlooked, cannot lead to fragrant endings. While this section will engage in content analysis to gauge whether justice is on the agenda, it wholly recognizes that if accompanying processes do not recognize the words, equity and justice cannot be meaningfully pursued nor reached.

A significant problem with two of the seven plans (i.e. Atlanta and Philadelphia) is that the sustainability office is based solely out of the mayor's office. So while even departments are prone to budget cuts, or losing the confidence and support of the city council, mayor's cabinet offices may find themselves constrained by the enthusiasm (or lack thereof) of a non-sympathetic administration. The powers of mayor's offices are also weakened by the potential of administrations that comes into power and are either hostile or indifferent to sustainability issues.

Table 11: Just Sustainabilities Planning Index

Figures in the EJ, Economy and Environment columns indicate number of mentions in context within the respective sustainability plan. (For a methodology of the score column see Chapter 3.7).

Just Sustainabilities Planning Index via Content Analysis				
	EJ	Economy	Environment	Score
Atlanta	1	84	38	1
SF Bay Area	62	416	37	3
Chicago	0	92	24	0
DC	34	290	152	3
NYC	8	163	165	2
Philadelphia	7	141	45	2

Another broad critique of municipal sustainability and associated documents are the sense that, in addition to being economic development plans (confirmed in part by the inordinate use of language related to jobs and economic development; See *Table 11*), plans can have the feel of public relations documents than one's that are actually targeting environmental and ecological concerns. An example is Atlanta's Power to Change, and its goal of achieving 1,000,000 "sustainable acts of change" without being backed by a coherent strategy, or even firm definition, of how to go about this. Certainly, ambiguous language will not be a tour de force in reversing many of the region's troubling environmental trends. Furthermore, the use of environmental justice and equity language was conspicuously absent, even when it was broadly being acknowledged within plans. An example is the Greenworks (Philadelphia) plan, which has a chapter dedicated to equity; though the term is mentioned more in the section's footer – here used to identify the name of the section – than in the actual chapter itself. This contrasts significantly with

the same plan's treatment of economy related terms, which sees the chapter designated to that topic, flooded with the language of economy. The rationales for scoring content analysis and scoring are explained in Chapter 3. Overall, all plans were significantly more focused on economic issues over justice. Perhaps even more disconcerting, economic language in all but one plan was mentioned more than aggregate environmental language. The city of Chicago, with no mentions of EJ or equity terms, embodies what Agyeman (2005) terms the *equity deficit*.

7.10 Considering Limited English Proficiency

A significant barrier to planning and connecting with the public deals considers limited English proficiency individuals. Nationally, over 61 million U.S. residents speak a language that is not English while at home, and over 25 million residents have limited English proficiency (Zong & Batalova, 2015). Because of these barriers, the federal government, via Executive Order 13166 extends Title VI protections to, and recognizes the necessity for, these populations to meaningfully have access to government services. Table 12 displays English proficiency levels in the case studied cities.

Table 12: City Residents and Language
 2013 American Community Survey 1-Year Estimates; Percentages represent portion of area population that are primarily non-English speaking households and that self-classify as not speaking English “Very Well”

2013 American Community Survey 1-Year Estimates: Language Spoken At Home		
City	Language Spoken Other than English at Home	Speak English Less than “Very Well”
Atlanta	10.5%	3%
San Francisco	44%	21%
Chicago	35.7%	15.7%
DC	17.9%	5.5%
New York	49%	23.2%
Philadelphia	22%	10%

When reconciling the above with the emphasis that just sustainabilities places on recognition, processes, procedures and intragenerational equity, it necessitates that urban sustainability planning provide outreach to these populations. Of the studied planning regimes, only the Bay Area Plan and PlaNYC, the two places with the highest level of non-English speaking households, made sustainability planning materials available in at least one non-English language. If urban sustainability is going to make commitments to facilitating just processes and outcomes, regimes must place emphasis on communicating with all communities, regardless of language barriers.

Chapter 8

CONCLUSION

8.1 Revisiting Questions

The attention that urban development and municipal sustainability planning has given to environmental justice concerns has produced mixed results. While planning may comply with federal mandates, when applicable, regarding deliberations on the effects that projects have on environmental justice communities, cities need to do more in incorporating basic justice language into plans. So long as development strategies concentrate on economic growth, in concert with the scant attention given to the socioeconomic plights of distressed communities and residents, economic and environmental inequality will continue to be a characteristic of developments outcomes. An essential feature in rearranging the status quo is through robust involvement in the planning and development sphere by the public – especially those that are most vulnerable to environmental threats: this includes people of color, women, disabled persons, young people and the elderly.

After these ground level conditions are met, it is important for urban spaces to produce environments that are safe and healthy; considering the prevalence of brownfields, food insecurity and mobility options that are deleterious to communities, planning has not been adequate in this area. Even when planning incorporates disparate actors to address environmental issues, there needs to be greater synergy between parties. Brownfields are emblematic of this problem. In order to quantify and remediate the unknown quantity of toxic land in our cities, governments, researchers, developers and the public must work

together. Literally moving beyond the physical threats must also be an objective in our pathway to healthier cities. While toll lanes and similar projects attempt to address congestion, and consequently vehicle emissions, they do little to disrupt the car-centric paradigm that is the source of many lethal conditions. Planning which is based on multimodal options and emphasizes pedestrianism is critical in mitigating environmental damage, and also in actively supporting healthy communities. Furthermore, these strategies are most comprehensive when coupled with policies that energetically address existing damage to communities.

Sustainability options for cities are not simple, but the underlying proposition is: moving forward mandates planning either exemplify coordination or chaos.

8.2 Summary

This dissertation has investigated how urban planning and environmental sustainability regimes go about the business of development and the consequent implications for communities. The threats that urban planning and development face have implications that are environmentally deleterious, inequitably distributed across populations and disrupt economic development. In raising concerns regarding how planning considers environmental justice and inequality, along with the role of community input in shaping development that is safe, healthy and accessible to all, this work seeks to ultimately expand the considerations of sustainability-minded actors. Hopefully it does so. It has employed a bevy of means in its exploration, including a review of literature encompassing urban sustainability and development along with environmental justice, offered an examination of sustainability plans from six of the nation's largest urban areas and engaged in a case study of Atlanta, Georgia that has illuminated on the challenges,

successes, limitations and potentials that sustainability planning has. More precisely, it has investigated some of the consequences and subsequent problems of sustainability planning, including those initiated under the era of Urban Renewal. It has explored how the level of (meaningful) community involvement can shape projects and in turn displays how those efforts that are not predicated on public input can have devastating consequences beyond land use and the environment, including profound social consequences. This is exemplified by the destruction of numerous historic churches by development's excavator. The examination and subsequent findings on mobility projects show that efforts that are steeped in equity and are environmentally sound are achievable, when they are guided by the values implicit within a just sustainability framework. When justice and equity concerns are ignored or are only superficially engaged, projects that perpetuate social inequality and are environmentally dubious can result. The work has also displayed how systemic threats, including toxic land, need to be comprehensively documented, evaluated and addressed by various levels of government that work in concert and that without comprehensive testing and assessments, the scope of these problems will not be fully realized. To be clear, this analysis has not attempted to draw conclusions regarding general levels of success or failure in urban sustainability planning, but to look at strengths and weaknesses in critical areas of policy and planning.

To achieve the above aims, a comprehensive approach was engaged upon. In addition to the literature review dealing with urban sustainability and environmental justice; that allowed for a greater understanding of the issues and profound impacts that urban areas confronted with, attendance at planning and neighborhood meetings were ,

necessary to deepen and contextualize the framing of problems. From here, it was necessary to make site visits and use GIS analysis, so that the issues of concern could be evaluated spatially. Finally, the critical engagement of relevant planning materials, legal documents and text analysis was performed so that contextualization of actions and development strategies could be more deeply evaluated.

In reviewing plans from the sustainability offices of six of the largest metropolitan areas in the nation, in regards to environmental justice concerns, efforts leave significant space for improvement. Many of these documents scarcely mention EJ and equity concerns; this becomes even more pronounced in contrast to the attention given to economic development interests. Although, the two should not compete, and are ideally complimentary, when environmental justice issues are subordinate to economic ones, marginalized communities are exploited and made expendable (Bullard R. D., 1990; Ward B. , 2013).

While Atlanta has made strides in becoming more equitable since Urban Renewal's heyday, there are still areas of concern regarding the protection of marginalized groups from urban growth strategies and those powers that give primacy to economic development above life quality and the environment. The turbulent state of Vine City, perpetually on the edge of both development and commitments, illustrates this.

Conversely, there is adequate reason for hope when considering the Beltline project; although it has not escaped controversy, it has given significant attention to toxics remediation and has coupled economic development goals with environmental gains and human health concerns.

Overall, Atlanta's urban planning and sustainability commitments have produced mixed results. Far from taking justice and equity issues seriously, the city's approach to sustainability planning has followed a template led by economic development. While Atlanta's brownfields program is making strategic gains in some high profile areas, with no comprehensive plan to analyze much of the city's acreage, nor firm efforts in place to eradicate air toxics, there are no guarantees that ecologically distressed areas will not continue to be made disposable.

The penultimate chapter expanded the scope of the investigation by looking at sustainability programs nationwide. While its contrast of cities does not take into account the unique geographies and political economies of each, and it should be understood that cities are bound by past decisions making (at least in the near term). Looking at current policy menus without a historical framing or contextualization cannot fully capture the rationale for decision making. However, the evaluation is useful in that it shows that justice and equity concerns can be featured prominently in sustainability programming.

This work has also considered a most basic threat to human life quality, the pervasiveness of food insecurity. Even when problems such as food sovereignty and security issues are identified by local level officials, the reality that market mechanisms have not eliminated insecurity, suggests the need for food access to occupy a more prominent space on the policy agendas of said officials.

The just sustainabilities framework is offered as the means to conceptually explore and characterize the impacts of urban sustainability planning on communities. The dissertation makes the case that just sustainabilities analysis is robust enough to

comprehensively assess urban sustainability planning, amid competing environmental, equity and justice themes. The research expands on previous just sustainability inquiry in several critical areas. First, in the sections that weigh development and mobility, and more broadly life quality and one planet living, it gives prominent attention to energy consumption, efficiency and conservation. It also considers the ramifications of fuel source mixes and gives regard to future energy use. Second, as a vital component to just and sustainable outcomes, its attention to urban sustainability plans gives parties including government officials, community members and sustainability experts an accessible tool to gauge whether or not cities are considering justice and equity issues and how that contrasts with emphasis placed on economic and environmental matters. Finally, the use of GIS to explore brownfields, and to a lesser extent food security issues, provides a tool to visually highlight and assess vulnerabilities.

This chapter concludes the dissertation by first looking at several limitations to the research. This is followed by several recommendations that urban regimes can undertake to engage in planning that is both just and sustainable. It concludes with recommendations for future avenues of research.

8.3 Limitations

Perhaps the most crippling limitation to the research was the reluctance of policy makers and government officials to be interviewed. This was offset by attendance at government meetings so that the voices and values of the sustainability and development establishment would be represented. A second limitation regards the inability of content analysis to reflect the intentions and behind the scenes actions of policy makers. While it

is essential for competent planning to be undergirded by articulated laws, policies and directives, this work readily acknowledges the unwritten unspoken forces at play in agenda setting, policy creation and implementation processes. So, while it may not be expedient for an agency to transparently campaign for justice, thus limiting the rhetoric of equity and justice in documents, this does not mean that there is not work going on behind the scenes to further the causes of equity and justice. A final limitation of the work regards the scalar challenges that this type of analysis is wrought with. Most significant is the embedded conflict between geographic/ecological boundaries and political ones, along with jurisdiction and authority considerations for policy making and implementation. Assessing sustainability efforts is not as simple as looking at what any city is doing. There are any number of regional, state and federal agencies that partner, oversee and guide urban development and sustainability work. Also, there are significant numbers of NGO and private sector actors that are involved as well. This work does look at significant relationships and interactions amongst the aforementioned, but the entire web of activity is outside the purview of this work.

8.4 Recommendations

The sustainability programs that cities and regions engage in will need a significant overhaul if just, equitable and sustainable urban planning is to develop. A broad rethinking, which considers the current limitations regarding how planners are trained at the university level and that stresses that both social and environmental justice as necessary goals on par with development concerns. While the research shows that urban policy and sustainability produces mixed and at times harmful results when core equity and justice concerns are not

represented at all stages of planning, while conceding that there are no formulas to produce wholly equitable outcomes, the following section offers critical areas that must be addressed in the movement towards equitable and sustainable cities.

8.4.1 Who's At the Table?

A challenge that sustainability policy and its implementation faces considers who gets to make decisions. So long as those making policy do not reflect communities, it will be a challenge to get EJ conscious policies to proliferate. This may seem out of place when looking at Metro Atlanta, and even the state of Georgia. Statewide, the African American population is nearly a third of all residents, and citywide blacks make up over half of all residents. A walk through either City Hall or the Gold Dome (the state's capitol building) will readily reveal scores of people of color with decision making authority, while in prominent executive level and legislative positions. To counter this portrait, one should look at the Georgia EMC, the statewide consortium of energy cooperatives, with over 40 member organizations. Its 40-plus board of directors have no African American members, and few that are not white males. While it is reductionist to equate environmental justice concerns to racial background, or other socioeconomic characteristics, the lack of a wide racial spectrum represented at the top tiers of decision making may make the concerns of EJ communities, notwithstanding the most well-intentioned acts of decision makers, as remote as their representation on boards.

At the formative stages of policy, communities must define the course of development projects, so that they will not have to subsequently defend against them, as exemplified in the case of the forthcoming New Atlanta Stadium. Recognition of distressed

populations and procedural issues that include their inclusion in decision making must also be employed. For example, the public midday meetings convened by the ARC during the workweek, presents challenges to healthy public participation. The agency has employed internet strategies for taking public comment, but has left it to individual member cities to push this strategy. This creates the potential for disparities amongst municipalities. Conversely, the BeltLine convenes its quarterly public hearings in a top-down fashion, but meetings are in the evenings, are largely accessible and involve extensive public comment. Public involvement for the express lanes project involved significant community outreach, including senior centers, schools and faith communities; this included weekend engagements as well. While meaningful public involvement does not guarantee just solutions, it does make processes more transparent and decision making more accessible. Additionally, unconventional approaches at making outreach must be explored. This can include a range of strategies that consider the abilities and mobility of community members, such as officials going not only into neighborhoods but also to residences.

8.4.2 Changing the Language

The language of urban sustainability must change. Advocates are often seduced by coupling environmental commitments with economic growth. This diminishes environmental sustainability's capacity to stand on its own, and makes equity even further isolated from core concerns. While advocates for economic development should not be stricken from the conversation, they need to have no greater standing than those pressing for quality of life, human health and justice dimensions of sustainability. This will be met with resistance in Atlanta, as it will elsewhere, as the city's development apparatus has for

over 50 years of success advancing their interests. These forces are not intractable and the urge to do business as usual must be repelled by those interested in safe and equitable environmental outcomes for all communities. While some communities are remote from known threats, or have the financial might to mitigate damage; communities and individuals that do not have the resources to stave off problems deserve recognition and the protection from harm.

8.4.3 Stronger Policies

From a policy perspective, there remains significant space for just sustainabilities to play out. Cities can look to past progressive policies, when relevant, for guidance here. Atlanta was a pioneer in provocative affirmative action programs. Upon initially taking office in 1974, with the impending expansion of what would become the world's busiest airport, Mayor Maynard Jackson demanded that 25% of all related contracts would go to businesses owned by people of color; significant for a nearly half billion dollar project (Dingle, 2009). Though the percentage was contested, with a slightly lower percentage goal ultimately targeted, it created the template for using "the mayor's office as an agency of change and a bully pulpit to create a level playing field (Dingle, 2009)." Similar progressive policy can be the prototype for sustainability concerns. Local sustainability entrepreneurs see space for contractors and solar financing targeted towards people of color; otherwise, those who could most benefit from solar – and its low monthly costs – are left out due to high initial investment.

8.4.4 Building on Victories

Those seeking just and sustainable outcomes should also build on victories, such as Fulton County, Georgia's Environmental Justice Zoning Policy, a first of a kind in the nation. The legislation "establishes distance requirements between environmentally adverse land uses and pollution points...and uses that result in the discharge of pollutants" (Fulton Country Government, 2013). Furthermore, it requires EJ review processes for a host of commercial and residential activity, including rezoning and land use and disturbance permitting as the country attempts to better account for the competing forces of economic development and environmental stability. There is a sense amongst some activists that the policy is inadequate because it does not have the teeth of enforcement behind it, nor funds and accountability mechanisms. However, the zoning policy does embody the precautionary principle, which is bedrock if sustainability measures, whether considering equity or not, are to be meaningful. The implementation of municipal Just Sustainabilities Impact Statements for development projects would alter how equity and justice is considered in decision making. Similar to Executive Order 12898 and Title VI of the 1964 Civil Rights Act requirements on the federal level, local planning regimes, that were bound to consider life quality, equity, justice and environmental impacts all in concert during the processes of planning and development would have a significantly altered menu of development pathways than under the status quo.

Community Benefits Agreements are also necessary in fortifying communities and creating a just sustainabilities framework, as they have the capacity to protect developing neighborhoods from destruction and displacement, while affording residents increased housing and job opportunities (Saito & Truong, 2015). They also create the potential for

bottom-up approaches to development. These agreements typically are negotiations that involve (private) pro-development forces and community groups whom seek to protect and aid the marginalized from amoral pro-growth forces. While, they do not alter underlying tenets of the growth machine, they do have the capacity to infuse “value-conscious” growth in a legally binding manner (Cain, 2014). In the case of Atlanta, while tens of millions of dollars are slated to be invested in the Vine City and English Avenue neighborhoods as part of the New Atlanta Stadium deal, and a community benefits plan was agreed to by city council, the recommendations are non-binding, leaving some community members to question the efficacy of the CBA (Blau, 2013). It is pertinent that CBAs be legally binding and not only quantify goals, but also contain clear roadmaps as to how goals will be met along with penalties for those that violate agreements.

In the 1960s, civil rights and labor leader Whitney Young urged black Americans to mobilize their economic and political prowess “to reward...friends and punish...enemies (Associated Press, 1968)”. It would behoove EJ communities to employ strategies to deploy forces including exercise of the ballot, political patronage, and more aggressive actions when threats warrant, in order to promote sympathetic entities and to penalize forces that do not act to clear communities of hazards. While there are risk involved in going against entrenched forces communities must recognize that the stakes at play, which include human mortality due to neglected, deteriorated and toxic environments.

8.5 Future Research

Considering the diverse actors involved in urban development and sustainability planning and their competing interests, future attention should be given to coalition building and strategies that are replicable across communities and that emphasize community control, public awareness and communal self-determination. Regarding the latter, until all communal environmental threats and to develop their own strategies on dealing with the likes of neighborhood livability, food security, and transportation, the movement towards sustainability will be elusive.

REFERENCES

- 2013 Men's NCAA Final Four Sustainability Committee. (2013). *2013 NCAA Men's Final Four Sustainability Impact Report: The Road to Atlanta is Paved Green*. Atlanta.
- ABC Soils, Inc. (2012). *Georgia Soil Testing Regulations*. Retrieved from Dirttrade: http://www.dirttrade.com/index.php?option=com_content&view=article&id=118&Itemid=21
- Adams, W. (2006). *The Future of Sustainability: Re-thinking Environment and Development in the Twenty-first Century*. The World Conservation Union.
- AECOM/JJG Joint Venture. (2012). *Atlanta BeltLine Corridor Environmental Study: Tier 1 Final Impact Statement Appendices*. Atlanta: AECOM/JJG.
- Agyeman, J. (2005). *Sustainable Communities and the Challenge of Environmental Justice*. New York: New York University Press.
- Agyeman, J. (2012, April 26). *This Revolution Will be Co-produced*. Retrieved from Julian Agyeman: <http://julianagyeman.com/tag/co-production/>
- Agyeman, J. (Ed.). (2013). *Introducing Just Sustainabilities: Policy, Planning and Practice*. London: Zed Books.
- Agyeman, J., & Evans, B. (1995). Sustainability and Democracy: Community Participation in Local Agenda 21. *Local Government Policy Making*, 22(2), 35-40.

- Agyeman, J., Bullard, R. D., & Evans, B. (Eds.). (2003). *Just Sustainabilities: Development in an Unequal World*. Cambridge, MA: The MIT Press.
- Alkon, A. H., & Agyeman (Eds.). (2011). *Cultivating Food Justice*. Cambridge, MA: The MIT Press.
- Alkon, A. H., & Agyeman, J. (2011). *Cultivating Food Justice: Race, Class, and Sustainability (Food, Health, and the Environment)*. Cambridge, MA: The MIT Press.
- Alkon, A., & McCullen, C. G. (2011). Whiteness and Farmers Markets: Performances, Perpetuations...Contestations? *Antipode*, 43(4), 937-959.
- American Planning Association. (2015). *What is Planning?* Retrieved from American Planning Association:
<https://www.planning.org/aboutplanning/whatisplanning.htm>
- Angelovski, I. (2014). *Neighborhood as Refuge: Community Reconstruction, Place Remaking, and Environmental Justice in the City*. Cambridge, MA: The MIT Press.
- Arnold, C. A. (1998). Planning Milagros: Environmental Justice and Land Use Regulation. *Denver University Law Review*, 1-153.
- Ash, M., Boyce, J. K., Chang, G., & Scharber, H. (2013). Is environmental justice good for white folks? Industrial air toxics exposure in urban America. *Social Science Quarterly*, 94(3), 616-636.
- Associated Press. (1968, July 7). Urban League Chief Favors Black Power. *Chicago Tribune*, pp. 1A-14. Retrieved from

<http://archives.chicagotribune.com/1968/07/07/page/38/article/urban-league-chief-favors-black-power#text>

Association of Bay Area Governments. (2013). *Bay Area Plan*. Oakland: Association of Bay Area Governments; Metropolitan Transportation Commission.

Astleithner, F., Hamedinger, A., Holman, N., & Rydin, Y. (2004). Institutions and indicators - The discourse about indicators in the context of sustainability. *Journal of Housing and the Built Environment*, 19(1), 7-24.

Atlanta BeltLine Inc. (2012, March 14). *Beltline Equitable Development Plan*. Retrieved from Atlanta BeltLine: <http://beltline.org/wp-content/uploads/2012/04/Atlanta-BeltLine-Equitable-Development-Plan.pdf>

Atlanta BeltLine Inc. (2014). *The Atlanta BeltLine: The 5 Ws and then some*. Retrieved from Atlanta BeltLine: <http://beltline.org/about/the-atlanta-beltline-project/atlanta-beltline-overview/>

Atlanta BeltLine Inc. (2015). *The Atlanta BeltLine: The 5 Ws and Then Some*. Retrieved from Atlanta BeltLine: <http://beltline.org/about/the-atlanta-beltline-project/atlanta-beltline-overview/>

Atlanta Beltline Inc. (2015). *Turning Brown into Green*. Retrieved from Atlanta Beltline: <http://beltline.org/progress/progress/environmental-progress/initiatives/brownfield-remediation/>

Atlanta BeltLine Inc. (2015). *Turning Brown Into Green*. Retrieved from Atlanta BeltLine: <http://beltline.org/progress/progress/environmental-progress/initiatives/brownfield-remediation/>

Atlanta Business Chronicle. (2008, May 1). *Forbes: Atlanta traffic the worst in America*.

Retrieved from Atlanta Business Chronicle:

<http://www.bizjournals.com/atlanta/stories/2008/04/28/daily97.html>

Atlanta History Center. (1965). *Buttermilk Bottom Neighborhood*. Retrieved from Atlanta

History Center: 2015

Atlanta Office of Planning. (2012, June 30). *Sustainable Brownfield Redevelopment*.

Retrieved from Office of Planning:

<http://www.atlantaga.gov/index.aspx?page=382>

Atlanta Office of Planning. (2012, June 30). *Sustainable Brownfield Redevelopment*

Program. Retrieved from City of Atlanta:

<http://www.atlantaga.gov/index.aspx?page=382>

Atlanta Office of Planning. (2015). *Neighborhood Plannign Units*. Retrieved from Office

of Planning: <http://www.atlantaga.gov/index.aspx?page=739>

Atlanta Office of Sustainability. (2014). *Power to Change*. Atlanta: City of Atlanta.

Atlanta Regional Commission. (2011, January). *Regional Snapshot*. Retrieved from

Atlanta Regional Commission.

Atlanta Regional Commission. (2013, August 15). *ARC's 2013 Population Estimates*.

Retrieved from Atlanta Regional Commission:

<http://news.atlantaregional.com/?p=1282>

Atlanta Regional Commission. (2014). *28 County Metropolitan Statistical Area*. Atlanta:

Atlanta Regional Commission.

- Atlanta Regional Commission. (2014, August). *ARC's 2014 Population Estimates: Steady as She Goes*. Retrieved from Atlanta Regional Commission:
http://documents.atlantaregional.com/research/pop_estimates_main2014.pdf
- Atlanta Streetcar. (2015). *A Better Way to Get Around: Benefits of the Atlanta Streetcar*. Retrieved from Atlanta Streetcar: <http://streetcar.atlantaga.gov/about/>
- Atlanta Streetcar. (2015, Apr 6). *Atlanta Streetcar to Remain Fare-Free through 2015*. Retrieved from Atlanta Streetcar: <http://streetcar.atlantaga.gov/news/atlanta-streetcar-to-remain-fare-free-through-2015/>
- Avila, E., & Rose, M. H. (2009). Race, Culture, Politics, and Urban Renewal: An Introduction. *Journal of Urban History*, 35(3), 335-347.
- Barbane, Z. G. (2009). *Environmetnal Justice Impacts of Rising Sea Levels in the San Francisco Bay Area*. Retrieved from
http://nature.berkeley.edu/classes/es196/projects/2009final/BarbaneZ_2009.pdf
- Barrett, S. R. (2015). *Investigating the Local Food System: A Mixed Methods Study of Sustainability in Southwest Atlanta*. Atlanta.
- Barry, B. (2003). Sustainability and Intergenerational Justice. In A. Light, & H. Rolston III (Eds.), *Environmetnal Ethics* (pp. 487-499). Malden (MA): Blackwell Publishers.
- Baumol, W. J., & Oates, W. E. (1979). *Economics, Environmental Policy and the Quality of Life*. Englewood Cliffs, NJ: Prentice-Hall.
- Becker, R. (1982). The capital-environment trade-off. *Journal of Environmental Economics and Management*.

- Berry, S. (2013). *A Food System Analysis of the City of Atlanta*. Atlanta.
- Black, J. (2013, Feb 5). *Study: Atlanta traffic 7th worst in nation*. Retrieved from WSB Radio: <http://www.wsbradio.com/news/news/study-atlanta-traffic-7th-worst-nation/nWF7c/>
- Blackwell, A. G. (2001). Promoting Equitable Development. *Indiana Law Review*, 34(4), 1273-1290.
- Blau, M. (2013, Dec 3). *Council OKs Community Benefits Plan for Falcons Stadium Neighborhoods*. Retrieved from Creative Loafing Atlanta: <http://clatl.com/freshloaf/archives/2013/12/03/council-oks-community-benefits-plan-for-falcons-stadium-neighborhoods>
- Bleakly Advisory Group. (2012, June). *Baseline Market Conditions and Site Analysis*. Retrieved from City of Atlanta, Office of Planning: <http://www.atlantaga.gov/modules/showdocument.aspx?documentid=4482>
- Bloom, M., & Leslie, K. (2014, Dec 12). *Exclusive: APS Parents Turn Up Pressure on City Leaders Over Beltline*. Retrieved from AJC: <http://www.ajc.com/news/news/exclusive-aps-parents-turn-up-pressure-on-city-lea/njRLW/>
- Boyce, J. K. (2002). *The Political Economy of the Environment*. Cheltenham: Edward Elgar Publishing Limited.
- Boyd, M. R. (2008). Integration and the Collapse of Black Social Capital: Nostalgia and Narrative in the Neoliberal City. In J. L. Collins, M. di Leonardo, & B. Williams (Eds.), *New Landscapes of Inequality: Neoliberalism and the Erosion of*

- Democracy in America* (pp. 91-111). Santa Fe: School for Advanced Research Press.
- Boyle, D., & Harris, M. (2009). *The Challenge of Co-Production: How Equal Partnerships between Professionals and the Public are Crucial to Improving Public Services*. London: NESTA.
- Brownlow, A. (2006). An archaeology of fear and environmental change in Philadelphia. *Geoforum*, 227-245.
- Brugmann, J. (1997). Is There a Method in Our Measurement? The Use of Indicators in Local Sustainable Development Planning. *Local Environment*, 59-72.
- Bryant, B. (1995). *Environmental Justice: Issues, Policies, and Solutions*. (B. Bryan, Ed.) Washington, DC: Island Press.
- Bryson, J. (2012). Greening Urban Renewal: Expo '74, Urban Environmentalism and Green Space on the Sokane Riverfront, 1965-1974. *Journal of Urban History*, 39(3), 495-512.
- Bullard, R. D. (1983). Solid Waste Sites and the Black Houston Community. *Sociological Inquiry*, 53, 273-288.
- Bullard, R. D. (1984). Endangered Environs: The Price of Unplanned Growth in Boomtown Houston. *California Sociologist*, 7, 85-101.
- Bullard, R. D. (1990). *Dumping in Dixie: Race, Class, and Environmental Quality*. Boulder: Westview.

- Bullard, R. D. (1998). Anatomy of Environmental Racism and the Environmental Justice Movement. In J. S. Dryzek, & D. Schlosberg (Eds.). New York, NY: Oxford University Press.
- Bullard, R. D. (1999). Dismantling Environmental Racism in the USA. *Local Environment*, 5-19.
- Bullard, R. D. (2000). *Dumping in Dixie: Race, Class and Environmental Quality* (3rd ed.). Boulder: Westview Press.
- Bullard, R. D. (2009). Addressing Urban Transportation Equity in the United States. In M. P. Pavel (Ed.), *Breakthrough Communities: Sustainability and Justice in the Next American Metropolis* (pp. 49-58). Cambridge, MA: The MIT Press.
- Bullard, R. D., & Johnson, G. S. (2000). Environmental Justice: Grassroots Activism and Its Impact on Public Policy Decision Making. *Journal of Social Issues*, 56(3), 555-578.
- Bullard, R. D., & Wright, B. H. (1986). The Politics of Pollution: Implications for the Black Community. *Phylon*, 71-88.
- Bullard, R. D., & Wright, B. H. (1987). Environmentalism and the Politics of Equity: Emergent Trends in the Black Community. *Mid-American Review of Sociology*, 12, 21-38.
- Bullard, R. D., Johnson, G. S., & Torres, A. O. (Eds.). (2000). *Sprawl city: Race, politics, and planning in Atlanta*. Washington, DC: Island Press.
- Bullard, R. D., Mohai, P., Saha, R., & Wright, B. (2007). *Toxic waste and race at twenty: why race matters after all of these years*. United Church of Christ.

Burns, R. (2013, March 13). *It's going to take more than \$45 million* to help Vine City.*

Retrieved from Atlanta Magazine:

<http://www.atlantamagazine.com/civilrights/its-going-to-take-more-than-45-million-to-help-vine-city/>

Burns, R. (2014, Mar 3). *Fresh vs. Fast Food.* Retrieved from Atlanta Magazine:

<http://www.atlantamagazine.com/great-reads/fresh-vs-fast-food/>

Burns, R. (2014, Mar 3). *Mapping the terrain of Atlanta's food deserts.* Retrieved from

Atlanta Magazine: <http://www.atlantamagazine.com/great-reads/mapping-the-terrain-of-atlantas-food-deserts/>

Burns, R. (2014, Mar 3). *Stranded in Atlanta's Food Deserts.* Retrieved from Atlanta

Magazine: <http://www.atlantamagazine.com/great-reads/stranded-in-atlantas-food-deserts/>

Buzbee, W. W. (1999). Urban Sprawl, Federalism, and the Problem of Institutional Complexity. *Fordham Law Review*, 68(1), 57-136.

Byrne, J., & Hoffman, S. M. (2002). A 'Necessary Sacrifice:' Industrialization and American Indian Lands. In J. Byrne, L. Glover, & C. Martinez (Eds.). New Brunswick, NJ: Transaction Publishers.

Byrne, J., Glover, L., & Martinez, C. (2002). The Production of Unequal Nature. In J. Byrne, L. Glover, & C. Martinez (Eds.), *Environmental Justice: Discourses in International Political Economy* (pp. 261-291). New Brunswick, NJ: Transaction Publishers.

- Cadieux, K. V., & Slocum, R. (2015). What Does it Mean to Do Food Justice. *Journal of Political Ecology*, 1-26.
- Cain, C. (2014). Negotiating with the Growth Machine: Community Benefits Agreements and Value-Conscious Growth. *Sociological Forum*, 29(4), 937-958.
- Calthorpe, P., & Fulton, W. (2001). *The Regional City*. Washington DC: Island Press.
- Campbell, S. (1996). Green Cities, Growing Cities, Just Cities?: Urban Planning and the Contradictions of Sustainable Development. *Journal of the American Planning Association*, 62(3), 296-312.
- Campbell, S. D. (2013). Sustainable Development and Social Justice: Conflicting Urgencies and the Search for Common Ground in Urban and Regional Planning. *Michigan Journal of Sustainability*, 1, 75-91.
- Carlson, A. (2015, Jan 22). *Map: most Atlantans Drive to Work Alone*. Retrieved from Atlanta Journal Constitution: <http://www.ajc.com/news/news/map-most-atlantans-drive-work-alone/njtC9/>
- Carmon, N. (2013). Urban Planning and Its Societal Mandate. In Carmon, Naomi, & S. S. Fainstein (Eds.), *Policy, Planning, and People: Promoting Justice in Urban Development* (pp. 13-31). Philadelphia: University of Pennsylvania Press.
- Carruthers, D. (2001). From opposition to orthodoxy: the remaking of sustainable development. *Journal of Third World Studies*, 93-112.
- Casey, P. H., Szeto, K., Lensing, S., Bogle, M., & Weber, J. (2001). Children in Food-Inufficient, Low-Income Families. *Archives of Pediatrics & Adolescent Medicine*, 508-514.

- Cauley, H. (2014). Rail Redux. *Georgia State University Magazine*, pp. 29-33.
- Chaddha, A., & Wilson, W. J. (2011). "Way Down in the Hole": Systemic Urban Inequality and The Wire. *Critical Inquiry*, 38(1), 1-23.
- Charles, J., & Flowers, W. (2014). Water Wars in the Southeast. *American Water Works Association*, 20-22.
- Checker, M. (2011). Wiped out by the "Greenwave": Environmental gentirfication and the paradoxical politics of urban sustainability. *City & Society*, 210-229.
- Chi, G., & Parisi, D. ". (2011). Highway Expansion Effects on Urban Racial Redistribution in the Post-Civil Rights Period. *Public Works Management & Policy*, 40-58.
- City Data. (2013, July 2). *How TADs Work*. Retrieved from City Data: <http://www.city-data.com/forum/atlanta/1785245-atlanta-beltline-parks-updates-2013-a-33.html>
- City of Atlanta; MARTA. (2010, November). *Georgia Transit Connector: Atlanta Streetcar*. Atlanta: City of Atlanta; Metropolitan Atlanta Rapid Transit Authority. Retrieved from http://www.atlantadowntown.com/_files/Atlanta-Streetcar-29Nov10.pdf
- Climate Central. (2012). *Can U.S. Carbon Emissions Keep Falling*. Princeton: Climate Central.
- Cloutier, S., Jambeck, J., & Scott, N. (2014). The Sustainable Neighborhoods for Happiness Index (SNHI): A Metric for Assessing a Community's Sustainability and Potential Influence on Happiness. *Ecological Indicators*, 40, 147-152.

- Coates, T.-N. (2014, June). *The Case for Reparations*. Retrieved from The Atlantic:
<http://www.theatlantic.com/features/archive/2014/05/the-case-for-reparations/361631/>
- Cole, E. R. (2009). Intersectionality and Research in Psychology. *American Psychologist*, 170-180.
- Commercial Real Estate Development Association. (2005, January). *Atlantic Station*. Retrieved from Commercial Real Estate Development Association:
<http://www.naiop.org/en/E-Library/Development/Atlantic-Station.aspx>
- Commission for Racial Justice. (1987). *Toxic wastes and race in the United States: A national report on the racial and socio-economic characteristics of communities with hazardous wastes sites*. New York: United Church of Christ.
- Congressional Black Caucus Foundation, Inc. (2004). *African Americans and Climate Change: An Unequal Burden*. Washington, DC: Congressional Black Caucus Foundation, Inc.
- Corfee-Morlot, J., Kamal-Chaoui, L., Donovan, M. G., Cochran, I., Robert, A., & Teasdale, P.-J. (2009). *Cities, Climate Change and Multilevel Governance*. OECD Environment Working Papers, No. 14. OECD Publishing.
- Cornier, T. (2012). The urban sustainable development in European Union through ranking: a tool for governance or a report of territorial disparities. *International journal of Environment & Sustainable Development*, 11(1), 64-86.

- Crawford, B. (2012, June 30). *Sustainable Brownfield Redevelopment Programs*. Retrieved from City of Atlanta, Office of Planning:
<http://www.atlantaga.gov/modules/showdocument.aspx?documentid=4483>
- Davis, J. (2014, Feb 6). *Residents Blast Decision to Close Part of MLK Drive for Stadium Construction*. Retrieved from Creative Loafing Atlanta:
<http://clatl.com/freshloaf/archives/2014/02/06/residents-blast-decision-to-close-part-of-mlk-drive-for-stadium-construction>
- Deganian, D., & Thompson, J. (2012). *The Patterns of Pollution: A Report on Demographics and Pollution in Metro Atlanta*. Atlanta: GreenLaw.
- Department of Watershed Management (City of Atlanta). (2010). *Combined Sewer Overflow*. Retrieved from Clean Water Atlanta:
<http://www.cleanwateratlanta.org/combinedseweroverflows/history.htm>
- Deshler, D., & Sock, D. (1985). Community Development Participation: A Concept Review of the International Literature. *International League for Social Commitment in Adult Education*. Ljungskile.
- Dillon, S. (2009, Apr 22). *Large Urban-Suburban Gap Seen in Graduation Rates*. Retrieved from The New York Times:
http://www.nytimes.com/2009/04/22/education/22dropout.html?_r=0
- Dingle, D. T. (2009, February 10). *Maynard Jackson: The Ultimate Champion for Black Business*. Retrieved from Black Enterprise:
<http://www.blackenterprise.com/small-business/maynard-jackson-the-ultimate-champion-for-black-business/>

- Dorling, D. (2011). *Injustice: Why Social Inequality Persists*. Bristol: The Policy Press.
- DuBois, W. (1995). *The Philadelphia Negro: A Social Study*. Philadelphia: University of Pennsylvania Press.
- Ebenezer Baptist Church. (2014). *Church History*. Retrieved from Ebenezer Baptist Church:
http://www.historicebenezer.org/index.php?option=com_content&view=article&id=51:church-history&catid=49&Itemid=53
- Echols, J. (2013, March). *City of Atlanta Violating Pollution Control Permit*. Retrieved from South River Watershed Alliance: <http://southriverga.org/content.cfm?sid=43>
- Engelhaupt, E. (2008). Happy Birthday, Love Canal . *Environmental Science & Technology*, 8179-8186.
- Environment America Research & Policy Center. (2011). *Danger in the air: Unhealthy air days in 2010 and 2011*. Boston: Environment America Research & Policy Center. Retrieved from
http://www.environmentamerica.org/sites/environment/files/reports/DangerInTheAirReport_AME_PRINT_0.pdf
- Fainstein, N., & Fainstein, S. S. (2013). Restoring Just Outcomes to Planning Concerns. In N. Carmon, & S. S. Fainstein (Eds.), *Policy, Planning, and People: Promoting Justice in Urban Development* (pp. 32-53). Philadelphia: University of Pennsylvania Press.
- Fainstein, S. S. (2010). *The Just City*. Ithica, NY: Cornell University Press.

- Ferguson, L. (2014, Feb 3). *In America's War on Poverty, Inner Cities Remain the Front Line*. Retrieved from Initiative for a Competitive Inner City:
<http://www.icic.org/connection/blog-entry/blog-in-americas-war-on-poverty-inner-cities-remain-the-front-line>
- FHWA. (2013). *Final Impact Assessment*. Atlanta: US Department of Transportation.
- Figueroa, R., & Mills, C. (2001). Environmental justice. In D. Jamieson (Ed.), *A Companion to Environmental Philosophy* (pp. 426-438). Malden, Ma: Blackwell.
- Finn, D., & McCormick, L. (2011). Urban Climate Change Plans: How Holistic. *Local Environment: The International Journal of Justice and Sustainability*, 397-416.
- Fletcher, M. (2015, January 25). A Shattered Foundation. *The Washington Post*, pp. A1, A10-A11.
- Florida, R. (2002). *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.
- Ford, C. L., & Airhihenbuwa, C. O. (2010). Critical Race Theory, Race Equity, and Public Health: Toward Antiracism Praxis. *American Journal of Public Health*, 530-535.
- Foster, M. (2012, Dec 8). *Atlanta Falcons: Will Fans Warm Up to New Stadium Talk?*
Retrieved from Bleacher Report: <http://bleacherreport.com/articles/1437850-atlanta-falcons-will-fans-warm-up-to-new-stadium-talk>
- Fotel, T. (2006). Space, Power, and Mobility: Car Traffic as a Controversial Issue in Neighbourhood Regeneration. *Environment and Planning A*, 733-748.

- Fredericks, S. E. (2012). Justice in sustainability indicators and indexes. *International Journal of Sustainable Development & World Ecology*, 19(6), 490-499.
- Friedman, M. S., Powell, K. E., Hutwanger, L., Graham, L. M., & Teague, G. (2001). Impact of Changes in Transportation and Commuting Behaviors During the 1996 Summer Olympic Games in Atlanta on Air Quality and Childhood Asthma. *The Journal of the American Medical Association*, 285(7), 897-905.
- Fulton County Government. (2013, July 17). *Fulton Board Adopts Innovative Environmental Justice Policy*. Retrieved from Fulton County:
<http://www.fultoncountygga.gov/latest-news/6229-fulton-board-adopts-innovative-environmental-justice-policy>
- Furuset, O. J., Lord, J. D., & Barcus, H. (1999). Defining & Measuring Neighborhood Sustainability in Charlotte, North Carolina. *Applied Geographic Studies*, 3(1), 1-21.
- Gandy, O. H. (2013). Wedging equity and environmental justice into the discourse on sustainability. *Triple C: Communication, Capitalism & Critique*, 1, 221-236.
- Garcia, A. P., Wallerstein, N., Hricko, A., Marquez, J. N., Logan, A., Nasser, E. G., & Minkler, M. (2013). THE (Trade, Health, Environment) Impact Project: A Community-Based Participatory Research Environmental Justice Case Study. *Environmental Justice*, 6(1), 17-26.
- Garde, A. M. (2004). New Urbanism as Sustainable Growth?: A Supply Side Story and Its Implications for Public Policy. *Journal of Planning Education and Research*, 24, 154-170.

- Garey, E. (n.d.). *Georgia Dome Community/Housing Development Trust Fund*. Atlanta: Invest Atlanta.
- Gauna, E. (1998). The Environmental Justice Misfit: Public Participation and the Paradigm Paradox. *Stanford Environmental Law Journal*, 3-72.
- GDOT. (2014, Aug 14). Georgia Express Lanes. Atlanta, GA: Georgia Department of Transportation.
- Geltman, A. G. (2000). *Recycling Land: Understanding the Legal Landscape of Brownfield Development*. Ann Arbor: The University of Michigan Press.
- George, C. (1999). Testing for Sustainable Development Through Environmental Assessment. *Environmental Impact Assessment Review*, 175-200.
- Georgia Department of Public Health. (n.d.). *Hazardous Site Inventory*. Retrieved from Georgia Department of Public Health: <http://dph.georgia.gov/hazardous-site-inventory>
- Georgia Power. (2014). *Energy sources: Diversity for Reliability*. Retrieved from Georgia Power: <http://www.georgiapower.com/about-energy/energy-sources/home.cshtml>
- Giang, T., Harries, C., & Treering, D. (2011). *Food for Every Child: The Need for More Supermarkets in Georgia*. Philadelphia: The Food Trust.
- Godoy, M. (2006, August). *Tracking the Katrina Diaspora: A Tricky Task*. Retrieved from NPR: <http://www.npr.org/news/specials/katrina/oneyearlater/diaspora/>

- Gourdrea, J. (2013, Mar 5). *The Cities with the Most Extreme Commutes*. Retrieved from Forbes: <http://www.forbes.com/sites/jennagoudreau/2013/03/05/cities-with-the-most-extreme-commutes/>
- GreenLaw. (2013, July 18). *Environmental Justice Prevails in Atlanta Zoning*. Retrieved from GreenLaw: <http://greenlaw.org/news/press-releases/environmental-justice-prevails-in-atlanta-zoning.html>
- Greenworks Philadelphia. (2009). *Greenworks Philadelphia*. Philadelphia: Mayor's Office of Sustainability.
- GRTA. (2013). *About Us*. Retrieved from Georgia Regional Transportation Authority: http://www.grta.org/index.php?option=com_content&task=view&id=14&Itemid=75
- Hacker, J. S., & Pierson, P. (2010). Winner-take-all politics: Public policy, political organization, and the precipitous rise of top incomes in the United States. *Politics & Society*, 38(2), 152-204.
- Hall, C., Easley, R., Howard, J., & Halfhide, T. (2013). The Role of Authentic Science Research and Education Outreach in Increasing Community Resilience: Case Studies Using Informal Education to Address Ocean Acidification and Healthy Soils. In H. E. Muga, & K. D. Thomas, *Cases on the Diffusion and Adoption of Sustainable Development Practices* (pp. 376-402). Hershey, PA: Information Science Reference.

- Hart, A. (2013, Feb 5). *Atlanta traffic bad but predictable*. Retrieved from Atlanta Journal Constitution: <http://www.ajc.com/news/news/atlanta-traffic-bad-but-predictable/nWGCL/>
- Harvey, D. (1996). *Justice, Nature, and the Geography of Difference*. Oxford: Blackwell.
- Haughton, G., & Hunter, C. (2003). *Sustainable Cities*. London: Routledge.
- Healey, P. (1998). Building Institutional Capacity Through Collaborative Approaches to Urban Planning. *Environment and Planning A*, 30, 1531-1546.
- Heberger, M., Cooley, H., Moore, E., & Herrera, P. (2012). *The Impacts of Sea Level Rise on the San Francisco Bay*. Oakland: Pacific Institute.
- Helyar, J. (1988, Feb 29). The Big Hustle. *The Wall Street Journal*, 1.
- Henderson, J. (2006). Secessionist automobility: Racism, anti-urbanism, and the politics of automobility in Atlanta, Georgia. *International Journal of Urban and Regional Research*, 293-307.
- Hess, A. (2012, July 10). *Race, Class, and the Stigma of Riding the Bus in America*. Retrieved from City Lab: <http://www.citylab.com/cityfixer/2012/07/race-class-and-stigma-riding-bus-america/2510/>
- Holliman, I. V. (2009). From Crackertown to Model City?: Urban Renewal and Community Building in Atlanta, 1963-1966. *Journal of Urban History*, 369-386.
- Holmes, J., & James, v. H. (2008). *Transit Oriented Development*. Denver: Rocky Mountain Land Use Institute.

- Huang, A. (2012, Nov 15). *Hurricane Sandy's Disproportionate Impact on NYC's Most Vulnerable Communities*. Retrieved from Switchboard: Natural Resources Defence Council Staff Blog:
http://switchboard.nrdc.org/blogs/ahuang/hurricane_sandys_disproportion.html
- ICLEI USA. (n.d.). *What is a Sustainability Plan*. Retrieved from ICLEI USA :
http://www.icleiusa.org/action-center/planning/ICLEI_What%20Is%20a%20Sustainability%20Plan.pdf
- Jackson, L. E. (2003). The Relationship of Urban Design to Human Health and Condition. *Landscape and Urban Planning*, 64, 191-200.
- Jacobs, J. (1992). *The Death and Life of Great American Cities*. New York: Vintage Books.
- Jelks, N. O. (2008). Sewage in Our Backyards: The Politics of Race, Class, + Water in Atlanta, Georgia. *Projections: MIT Student Journal of Planning*, 172-189.
- Jephcote, C., & Chen, H. (2012). Environmental Injustices of Children's Exposure to Air Pollution from Road-transport within the model British Multicultural City of Leicester: 2000-2009. *Science of the Total Environment*, 414, 140-151.
- JET . (1966, Feb 17). Dr. King Takes Walk in Slum Area, Calls it 'Appalling'. *JET Magazine*, pp. 45-46.
- Keating, L. (2001). *Atlanta: Race, Class, and Urban Expansion*. Philadelphia: Temple University Press.

- Keirstead, J., & Leach, M. (2008). Bridging the gaps between theory and practice: A service niche approach to urban sustainability indicators. *Sustainable Development, 16*(5), 329-340.
- Kennedy, C. A. (2002). A comparison of the sustainability of public and private transportation systems: Study of the Greater Toronto Area. *Transportation, 29*(4), 459-493.
- Kennedy, S. H. (Director). (2008). *The Garden* [Motion Picture].
- Kousky, C., & Schneider, S. (2003). Global Climate Policy: Will Cities Lead the Way. *Climate Policy, 3*(4), 359-372.
- Krippendorff, K. (1980). *Content Analysis: An Introduction to Its Methodology*. Newbury Park, CA: Sage.
- Landrigan, P., Claudio, L., Markowitz, S., Berkowitz, G., Brenner, B., Romero, H., . . . Wolff, M. (1999). Pesticides and Inner-city Children: Exposures, Risks, and Prevention. *Environmental Health Perspectives, 107*, 431-437.
- LaPlante, J., & McCann, B. (2008). Complete Streets: We Can Get There from Here. *ITE Journal, 24*-28.
- Lavine, A. (2008, May 19). *Atlanta Beltline Community Benefits*. Retrieved from Community Benefits Agreements: <http://communitybenefits.blogspot.com/2008/05/atlanta-beltline-community-benefits.html>
- Lazaroiu, G. C., & Roscia, M. (2012). Definition Methodology for the Smart Cities Model. *Energy, 47*, 326-332.

- Legislative Reference Bureau. (2013). *Review of Economic Impact of Selected Professional Sports Venues and Downtown Revitalization Efforts in Oklahoma City*. Legislative Reference Bureau.
- Leigh, N. G., & Coffin, S. L. (2005). Modeling the Relationship Among Brownfields, Property Values, and Community Revitalization. *Housing Policy Debate*, 16(2), 257-280.
- Leslie, K. (2015, March 31). *Atlanta Streetcar to Remain Free for 2015*. Retrieved from Atlanta Journal Constitution: <http://www.ajc.com/news/news/atlanta-streetcar-to-remain-free-for-2015/nkjLk/>
- Leslie, K., & Niese, M. (2014, Feb 19). *Beltline Misses Another Payment to Schools*. Retrieved from AJC: <http://m.ajc.com/news/news/local/beltline-misses-another-payment-to-schools/ndTm6/>
- Leslie, K., & Williams, M. (2013, Feb 4). *Metro area reaches 1997 air quality standards — but not newer ones*. Retrieved from Atlanta Journal Constitution: <http://www.ajc.com/news/news/local/metro-area-reaches-1997-air-quality-standards-but-/nWFwg/>
- Levin, S. (2006). Learning to Live in a Global Commons: Socioeconomic Challenges for a Sustainable Environment. *Ecological Research*, 328-333.
- Livable Communities Coalition. (2007). *Survey and Analysis of Tax Allocation Districts (TADs) in Georgia: A Look at the First Eight Years*. Atlanta: Bleakly Advisory Group.

- Lohmann, L. (2008). Carbon Trading, Climate Justice and the Production of Ignorance: Ten Examples. *Development*, 359-365.
- London, J., Karner, A., Sze, J., Rowan, D., Gambirazzio, G., & Niemeier, D. (2013). Racing Climate Change: COllaboration and Conflict in California's Global Climate Change Policy Arena. *Global Environmental Change*, 23, 791-799.
- Longman, J. (2000, July 21). *Olympics; Leaders of Salt Lake Olympic Bid are Indicted in Bribery Scandal*. Retrieved from The New York Times:
<http://www.nytimes.com/2000/07/21/sports/olympics-leaders-of-salt-lake-olympic-bid-are-indicted-in-bribery-scandal.html>
- MacLaren, V. W. (1996). Urban Sustainability Reporting. *Journal of the American Planning Association*, 62(2), 184-202.
- Mahdjoubi, L., Horswell, M., & Akplotsyi, R. (2011). Determination of urban sustainability compliance with national indicators. *WIT Transactions on Ecology and the Environment*, 167, 101-111.
- Manderscheid, K. (2012). Planning sustainability: Intergenerational and intragenerational justice in spatial planning strategies. *Antipode*, 44(1), 197-216.
- Martinez-Alier, J. (2002). *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*. Cheltenham, UK: Edward Elgar.
- Massey, D. S., & Denton, N. A. (1993). *American Apartheid: Segregation and the Making of the Underclass*. Cambridge: Harvard University Press.

- McWilliams, J. (2012, Oct 2). *Atlanta City Council Passes New Anti-panhandling Law*. Retrieved from AJC: <http://www.ajc.com/news/news/local/atlanta-city-council-passes-new-anti-panhandling-l/nSRpM/>
- Miller, B. (2004). Spaces of Mobilization: Transnational Social Movements. In C. Barnett, & M. Low (Eds.), *Spaces of Democracy: Geographical Perspectives on Citizenship, Participation and Representation* (pp. 223-246). London: SAGE Publications.
- Mohl, R. (2002). *The Interstates and the Cities: Highways, Housing, and the Freeway Revolt*. Poverty and Race Research Action Council.
- Mohl, R. A. (2004). Stop the Road: Freeway Revolts in American Cities. *Journal of Urban History*, 674-706.
- Molotch, H. (1976). The City as a Growth Machine: Toward a Political Economy of Place. *American Journal of Sociology*, 82(2), 309-332.
- Morrow, B. H. (2008). *Community Resilience: A Social Justice Perspective*. Oak Ridge: Community & Regional Resilience Initiative.
- Mulvaney, D. (2014). Are Green Jobs Just Jobs? Cadmium Narratives in the Life Cycle of Photovoltaics. *Geoforum*, 54, 178-186.
- Nandy, S. (2012). Gaps in urban Sustainability Indicators. *The International Journal of Environmental, Cultural, Economic & Social Sustainability*, 7(6), 127-144.
- National Brownfields Association. (n.d.). *Brownfields News: A Regional Report*. National Brownfields Association. Retrieved from <http://www.epa.gov/osw/hazard/correctiveaction/curriculum/download/brown.pdf>

- National Coalition for the Homeless. (2013, Jan 10). *A Dream Denied: The Criminalization of Homelessness in U.S. Cities*. Retrieved from National Coalition for the Homeless:
<http://www.nationalhomeless.org/publications/crimreport/summary.html>
- Neuendorf, K. A. (2002). *The Content Analysis Guidebook*. Thousand Oaks, CA: Sage Publications.
- New Atlanta Stadium. (2015). *Stadium Overview*. Retrieved from New Atlanta Stadium:
<http://newstadium.atlantafalcons.com/overview/>
- News One. (2011, Sept 22). *America's Worst 9 Urban Food Deserts*. Retrieved from News One: <http://newsone.com/1540235/americas-worst-9-urban-food-deserts/>
- Nunn, F. (2013, July 2). *Local 'Convenient Market' Looks to Fight Food Insecurity in Atlanta*. Retrieved from Atlanta Daily World:
<http://atlantadailyworld.com/2013/07/02/local-convenient-market-looks-to-fight-food-insecurity-in-atlanta/>
- NYC Mayor's Office of Immigrant Affairs. (n.d.). *Constituent Facts & Maps*. Retrieved from NYC Mayor's Office of Immigrant Affairs:
<http://www.nyc.gov/html/imm/html/news/stats.shtml>
- NYC Mayor's Office of Recovery and Resiliency. (2011). *PlaNYC Update April 2011*. New York: Mayor's Office of Recovery and Resiliency.
- Odum, H., & Odum, E. (1976). *Energy Basis for Man and Nature*. New York: McGraw-Hill Book Co.

- O'Rourke, D., & Macey, G. P. (2003). Community Environmental Policing: Assessing New Strategies of Public Participation in Environmental Regulation. *Journal of Policy Analysis and Management*, 22(3), 383-414.
- Park, H., & Gebeloff, R. (2011, Jan 28). *Car-Pooling Declines as Driving Becomes Cheaper*. Retrieved from The New York Times:
http://www.nytimes.com/interactive/2011/01/29/us/20110129-nat-CARPOOL.html?ref=us&_r=0
- Pattisson, P. (2013, September 25). *Revealed: Qatar's World Cup 'Slaves'*. Retrieved from The Guardian: <http://www.theguardian.com/world/2013/sep/25/revealed-qatars-world-cup-slaves>
- Pavel, M. P. (2009). Introduction. In M. P. Pavel (Ed.), *Breakthrough Communities: Sustainability and Justice in the Next American Metropolis* (p. xxix). Cambridge, MA: The MIT Press.
- Pearsall, H., & Pierce, J. (2010). Urban sustainability and environmental justice: evaluating the linkages in the public planning/policy discourse. *Local Environment*, 15(6), 569-580.
- Pellow, D. N. (2002). *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: The MIT Press.
- Pendered, D. (2013, May 16). *Atlanta to Combat Food Deserts with Portion of \$30 Million Federal Grant*. Retrieved from Saporta Report:
<http://saportareport.com/atlanta-to-combat-food-deserts-with-portion-of-30-million-federal-grant/>

- Portney, K. E. (2003). *Taking Sustainable Cities Seriously*. Cambridge, MA: MIT Press.
- Quental, N., Lourenço, J. M., & Nunes da Silva, F. (2011). Sustainable development policy: Goals, Targets and political cycles. *Sustainable Development*, 19, 15-29.
- Redclift, M. (2005). Sustainable development (1987-2005): An oxymoron comes of age. *Sustainable Development*, 13, 212-227.
- Redwood, Y., Schulz, A. J., Israel, B. A., Yoshihama, M., Wang, C. C., & Dreuter, M. (2010). Social, Economic, and Political Processes That Create Built Environment Inequalities: Perspectives From Urban African Americans in Atlanta. *Family Community Health*, 33(1), 53-67.
- Reece, E. (2005, April). Death of a Mountain. *Harper's Magazine*, 310(1859), pp. 41-60.
- Rees, W., & Wackernagel, M. (1996). Urban ecological footprints: Why cities cannot be sustainable - and why they are the key to sustainability. *Environmental Impact Assessment Review*, 16, 223-248.
- RepoHistory. (n.d.). *RepoHistory: Entering Buttermilk Bottom*. Retrieved from Solid State Light: <http://www.solidstatelight.com/flash/Repo-Atlanta-front.jpg>
- Rissman, J., Arunachalam, S., BenDor, T., & West, J. J. (2013). Equity and Health Impacts of Aircraft Emissions at the Hartsfield-Jackson Atlanta International Airport. *Landscape and Urban Planning*, 120, 234-247.
- Robert Wood Johnson Foundation. (2014). *Commission to Build a Healthier America: City Maps*. Retrieved from Robert Wood Johnson Foundation: <http://www.rwjf.org/en/about-rwjf/newsroom/features-and-articles/Commission/resources/city-maps.html>

- Roberts, J., & Parks, B. C. (2006). *A Climate of Injustice: Global Inequality, North-South Politics, and Climate Policy*. Cambridge: MIT Press.
- Robillard, K. (2014, Dec 30). *A Streetcar Not Desired*. Retrieved from Politico:
<http://www.politico.com/story/2014/12/a-streetcar-not-desired-113804.html>
- Robinson, P. (2012). Planning for Sustainability: Moving from Plan to Action. In A. Dale, W. T. Dushenko, & P. Robinson (Eds.), *Urban Sustainability: Reconnecting Space and Place* (pp. 83-105). Toronto: University of Toronto Press.
- Rosan, C. D. (2012). Can PlaNYC make New York City "Greener and Greater" for everyone?: Sustainability Planning and the Promise of Environmental Justice. *Local Environment*, 17(9), 959.
- Rumley, M. (2014, August 26). Commentary
- Ryan, C. (2013, August). *Language Use in the United States: 2011*. Retrieved from US Census Bureau: <https://www.census.gov/prod/2013pubs/acs-22.pdf>
- Saito, L., & Truong, J. (2015). The L.A. Live Community Benefits Agreement: Evaluating the Agreement Results and Shifting Political Power in the City. *Urban Affairs Review*, 51(2), 263-289.
- Sanoff, H. (2000). *Community Participation Methods in Design and Planning*. New York: John Wiley & Sons, Inc.
- Saporta, M. (2014, June 18). *Judge approves sale of Morris Brown property to city and Friendship*. Retrieved from Atlanta Business Chronicle:
<http://www.bizjournals.com/atlanta/news/2014/06/18/judge-approves-sale-of-morris-brown-property-to.html?page=all>

- Satterthwaite, D. (1999). *The Earthscan Reader in Sustainable Cities*. London: Earthscan.
- Schlosberg, D. (2004). Reconceiving environmental justice: global movements and political theories. *Environmental Politics*, 517-540.
- Schlosberg, D. (2007). *Defining Environmental Justice: Theories, Movements and Nature*. Oxford: Oxford University Press.
- Schmitt, A. (2015, Feb 20). *Atlanta Streetcar's Early Ridership Numbers Disappoint*. Retrieved from Streetsblog USA: <http://usa.streetsblog.org/2015/02/20/atlanta-streetcars-early-ridership-numbers-disappoint/>
- Sen, A. (1992). *Inequality Reexamined*. Cambridge (MA): Harvard University Press.
- Shepherd, G. M. (2011, Dec 16). *Environmental Review Toolkit*. Retrieved from Federal Highway Administration: http://environment.fhwa.dot.gov/projdev/guidance_ej_nepa.asp
- Smith, D., Miles-Richardson, S., Dill, L., & Archie-Booker, E. (2013). Interventions to Improve Access to Fresh Food in Vulnerable Communities: A Review of the Literature. *International Journal on Disability and Human Development*, 12(4), 409-417.
- Smith, K. (2007). *The Carbon Neutral Myth: Offset Indulgences for Your Climate Sins*. Amsterdam: Carbon Trade Watch.
- Smith, N. (2002). New Globalism, New Urbanism: Gentrification as Global Urban Strategy. *Antipode*, 427-450.

- Stanley, A. (2009). Just Space or Spatial Justice? Difference, Discourse and Environmental Justice. *Local Environment: The International Journal of Justice & Sustainability*, 999-1014.
- Stemler, S. (2001). An Overview of Content Analysis. *Practical Assessment, Research & Evaluation*, 17. Retrieved from <http://PAREonline.net/getvn.asp?v=7&n=17>
- Stone, C. N. (1989). *Regime Politics: Governing Atlanta 1946-1988*. University Press of Kansas.
- Stone, C. N. (1989). *Regime politics: Governing Atlanta, 1946-1988*. Lawrence: University Press of Kansas.
- Sturgis, S. (2009, May 9). *Dumping in Dixie: TVA Sends Toxic Coal Ash to Poor Black Communities in Georgia and Alabama*. Retrieved from The Institute for Southern Studies: <http://www.southernstudies.org/2009/05/dumping-in-dixie-tva-sends-toxic-coal-ash-to-poor-black-communities-in-georgia-and-alabama.h>
- Sustainable Atlanta. (2013, Oct). *BETA EcoDistrict FAQ*. Retrieved from Sustainable Atlanta: http://www.sustainableatlanta.org/pdf/ecodistricts_faqs.pdf
- Sustainable Chicago . (2012). *2015 Sustainable Chicago Action Agenda*. Chicago: City of Chicago .
- Sustainable Cities Institute. (2012). *Community Engagement*. Retrieved from Sustainable Cities Institute at the National League of Cities: http://www.sustainablecitiesinstitute.org/view/page.basic/class/tag.topic/community_engagement

- Sustainable DC. (n.d.). *Sustainability DC*. Washington, DC: DC Office of Planning; District Department of the Environment.
- Swanborn, P. (2010). *Case Study Research: What, Why and How?* London: SAGE Publications.
- Taleb, N. N. (2007). *The Black Swan: The Impact of the Highly Improbable*. New York: Random House.
- Teaford, J. C. (2000). Urban Renewal and Its Aftermath. *Housing Policy Debate*, 11(2), 443-465.
- Terando, A. J., Costanza, J., Belyea, C., Dunn, R. R., McKerrow, A., & Collazo, J. A. (2014). The Southern Megalopolis: Using the Past to Predict the Future of Urban Sprawl in the Southeast US. *PLoS ONE*, 9(7).
- The Economist. (2014, Aug 9). *Streetcars and Urban Renewal: Rolling Blunder*. Retrieved from The Economist: <http://www.economist.com/news/united-states/21611123-federal-subsidies-have-inspired-some-silly-transit-projects-rolling-blunder>
- The Exchange Project. (2006). *Real People - Real Stories: Afton, NC (Warren County)*. Chapel Hill: Department of Health Behavior and Health Education, The University of North Carolina at Chapel Hill.
- The Neighborhood Collaborative Group. (2014, Dec 11). Letter to Council Member Andre Dickens, Atlanta. Atlanta, GA.
- Thwaites, K., Mathers, A., & Simkins, I. (2013). *Socially Restorative Urbanism: The Theory, Process and Practice of Experiemics*. London: Routledge.

UNCED. (1992). Agenda 21. *Earth Summit*. Rio de Janeiro: UN Conference on Environment & Development.

UNDP. (2012). *Case Studies of Sustainable Development in Practice: Triple Wins for Sustainable Development*. New York: United Nations Development Programme.

US Census Bureau. (n.d.). *Metropolitan Statistical Area*. Retrieved January 25, 2015, from State & County QuickFacts:

http://quickfacts.census.gov/qfd/meta/long_metro.htm

US DOT. (2015). *I-75 South Metro Lanes*. Retrieved from Georgia Express Lanes:

<http://www.dot.ga.gov/drivesmart/gel/Documents/Map/ProjectMap.pdf>

US EPA. (2010, April 22). *Atlanta Receives Earth Day Brownfields Award from EPA to Support BeltLine in Atlanta*. Retrieved from EPA:

<http://yosemite.epa.gov/opa/admpress.nsf/0/d9cefe32b70605fa8525770d0052da15?OpenDocument>

US EPA. (2012, May 31). *Atlanta Will Get More Time to Complete Sewer*

Upgrades/City, state and federal government reach proposed agreement to extend the deadline to 2027. Retrieved from EPA:

<http://yosemite.epa.gov/opa/admpress.nsf/a21708abb48b5a9785257359003f0231/0d7c29db2b49a1b485257a0f0067c420!OpenDocument>

US EPA. (2013). *Brownfields*. Retrieved from US EPA:

http://www.epa.gov/brownfields/state_tribal/2013_brownfields_state_report_region_4.pdf

- US EPA. (2013). *Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice and Equitable Development*. Washington, DC: United States Environmental Protection Agency.
- US EPA. (2014, December 19). *Brownfields and Land Revitalization*. Retrieved from US Environmental Protection Agency: <http://www.epa.gov/brownfields/>
- USDA. (2010, December). *Creating Access to Healthy, Affordable Food*. Retrieved from US Department of Agriculture: <https://apps.ams.usda.gov/fooddeserts/AccessHealthyFood.pdf>
- USDA. (2015, March 11). *Food Access Research Atlas*. Retrieved from USDA Economic Research Service: <http://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas.aspx>
- Vale, L. J. (2013). Policy, Planning, and People: Promoting Justice in Urban Development. In N. Carmon, & S. S. Fainstein (Eds.), *Public Housing in the United States: Neighborhood Renewal and the Poor* (pp. 285-306). Philadelphia: University of Pennsylvania Press.
- van Kamp, I., Leidelmeijer, K., Marsman, G., & de Hollander, A. (2003). Urban Environmental Quality and Human Well-being Towards a Conceptual Framework and Demarcation of Concepts; a Literature Review. *Landscape and Urban Planning*, 65, 5-18.
- Waldron, T. (2012, June 12). *Foul Play: Five Cities That Want Taxpayer Money to Finance Pro Sports Stadium Boondoggles*. Retrieved from Think Progress :

<http://thinkprogress.org/economy/2012/06/12/496136/foul-play-five-cities-that-want-taxpayer-money-to-finance-stadium-boondoggles/>

Walker, C. (2014, Jun 23). *Why Don't White People in L.A. Take the Bus?* Retrieved from LA Weekly: <http://www.laweekly.com/informer/2014/06/23/why-dont-white-people-in-la-take-the-bus>

Walker, G. (2009). Beyond Distribution and Proximity: Exploring the Multiple Spatialities of Environmental Justice. *Antipode*, 614-636.

Ward, B. (2005). *Case Studies in Environmental Justice and Public Transit Title VI Reporting*. Tampa: National Center for Transit Research, University of South Florida.

Ward, B. (2013). The Promise of Jobs: Blackmail and Environmental Justice in Flint, Michigan, 1991-1995. *Environmental Justice*, 163-168.

Ware, L., & Davis, T. J. (2012). Ordinary People in an Extraordinary Time: The Black Middle-Class in the Age of Obama. *Howard Law Journal*, 55(2), 533-574.

Warner, K. (2002). Linking local sustainability initiatives with environmental justice. *Local Environment*, 7(1), 35-47.

WCED. (1987). *World Commission on Environment and Development, Our Common Future*. New York: Oxford University Press.

Weber, R. (2002). Extracting Value from the City: Neoliberalism & Urban Redevelopment. *Antipode*, 519-540.

Weiss, E. B. (1992). In Fairness to Future Generations and Sustainable Development. *American University International Law Review*, 19-26.

- Weiss, M. A. (1985). The Origins and Legacy of Urban Renewal. In J. P. Mitchell (Ed.), *Federal Housing Policy & Programs: Past and Present* (pp. 253-276). New Brunswick, NJ: CUPR/Transaction.
- Wheatley, T. (2010, Oct 28). *All you wanted to know about Atlanta's shiny new toy* . Retrieved from Creative Loafing Atlanta: <http://clatl.com/atlanta/atlanta-streetcar-faq/Content?oid=2269459>
- White, H. L. (1998). Race, Class, and Environmental Hazards. In D. Camacho (Ed.), *Environmental Injustices, Political Struggles* (pp. 61-81). Durham, NC: Duke University Press.
- Whitelegg, D. (2000). Going for Gold: Atlanta's Bid for Fame*. *International Journal of Urban and Regional Research*, 801-817.
- Wilbanks, T. J. (2008, May). Enhancing the Resilience of Communities to Natural and Other Hazards: What We Know and What We Can Do. *Natural Hazards Observer*, pp. 10-11.
- Wilkinson, R. G., & Pickett, K. (2009). *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London: Bloomsbury Press.
- Wilson, W. J. (1987). *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: The University of Chicago Press.
- Woodcraft, S., Hackett, T., & Caistor-Arendar, L. (2011). *Design for Social Sustainability: A Framework for Creating Thriving New Communities*. Future Communities.

- Woodson, C. G. (2000). *The Mis-Education of the Negro*. Chicago: The Associated Publishers.
- WSB-TV. (2014, June 18). *Atlanta Mayor, Superintendent in Standoff Over Beltline Funds*. Retrieved from WSB-TV:
<http://www.wsbtv.com/news/news/local/atlanta-mayor-superintendent-standoff-over-beltlin/ngNdG/>
- WSB-TV. (2014, July 28). *Demolition Begins at Friendship Baptist Church*. Retrieved from WSB-TV: <http://www.wsbtv.com/news/news/local/demolition-begins-friendship-baptist-church/ngppH/>
- Zahniser, D. (2008, August 18). *Turf War Over Garden Lot*. Retrieved from Los Angeles Times: <http://articles.latimes.com/2008/aug/18/local/me-farm18>
- Zavestoski, S., & Agyeman, J. (2015). *Incomplete Streets: Processes, Practices and Possibilities*. London: Routledge.
- Zimbalist, A. (2015). *Circus Maximus: The Economic Gamble Behind Hosting the Olympics and the World Cup*. Washington, DC: Brookings Institution Press.
- Zong, J., & Batalova, J. (2015, July 8). *The Limited English Proficient Population in the United States*. Retrieved from Migration Policy Institute:
<http://www.migrationpolicy.org/article/limited-english-proficient-population-united-states>

Appendix

SELECTED NPU MAPS WITH BROWNFIELDS

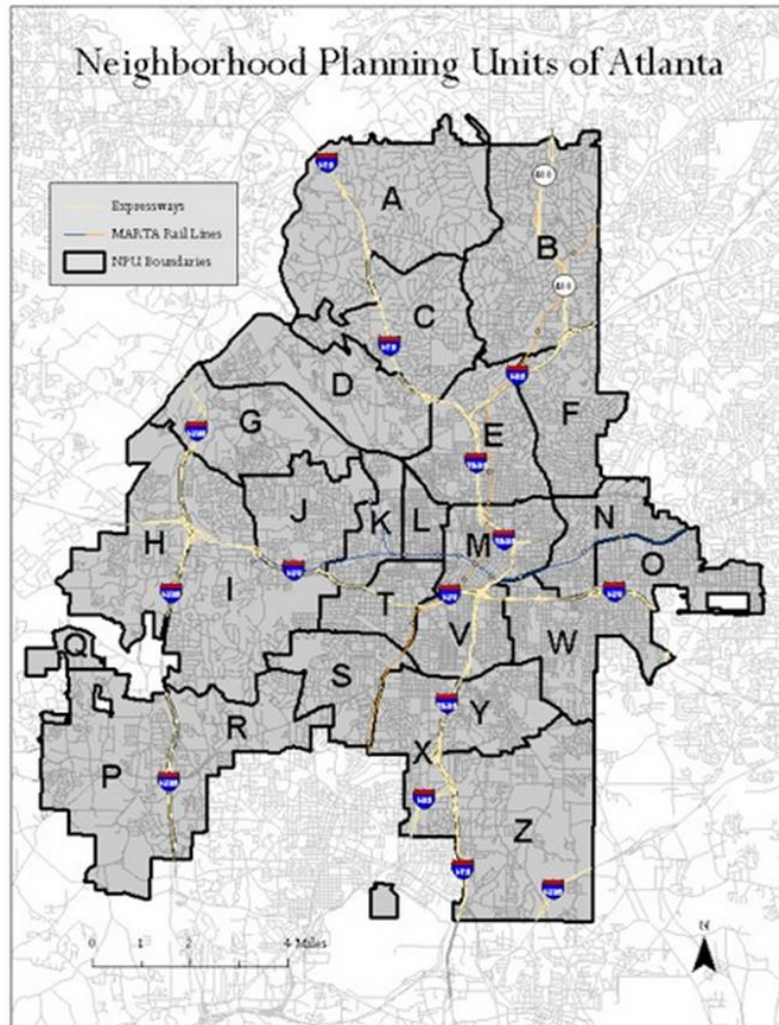


Figure 13: Atlanta NPU Map
(Atlanta Office of Planning, 2015).

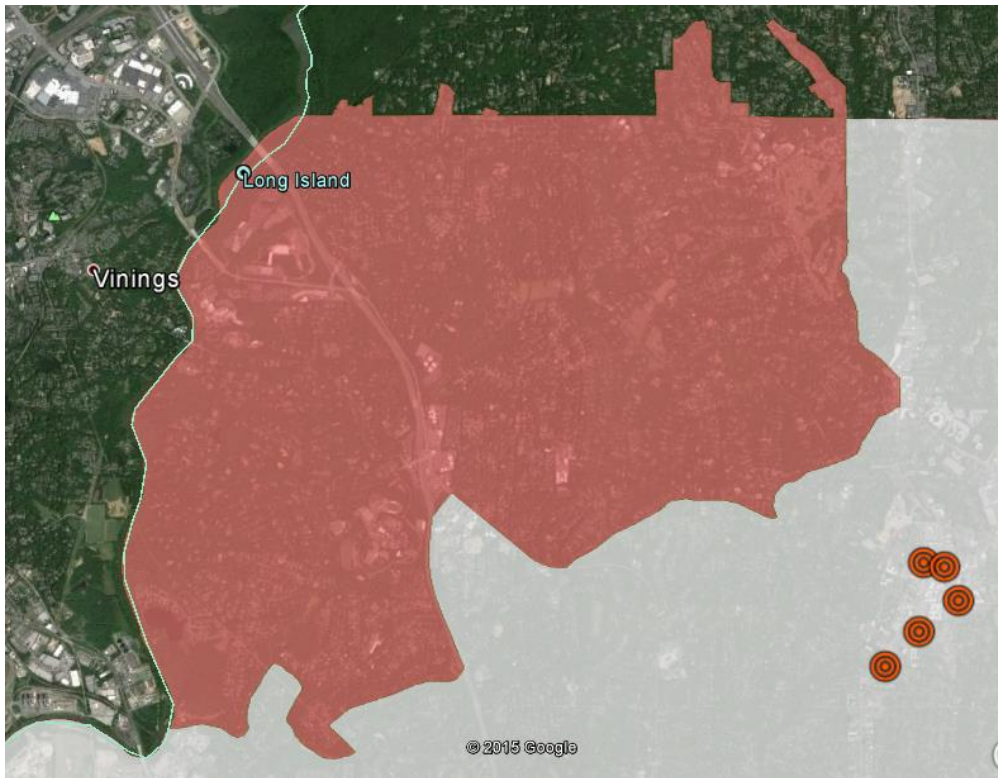


Figure 14: NPU A
White population: 91%



= Known Brownfield



Figure 15: NPU B
White population: 75%



= Known Brownfield

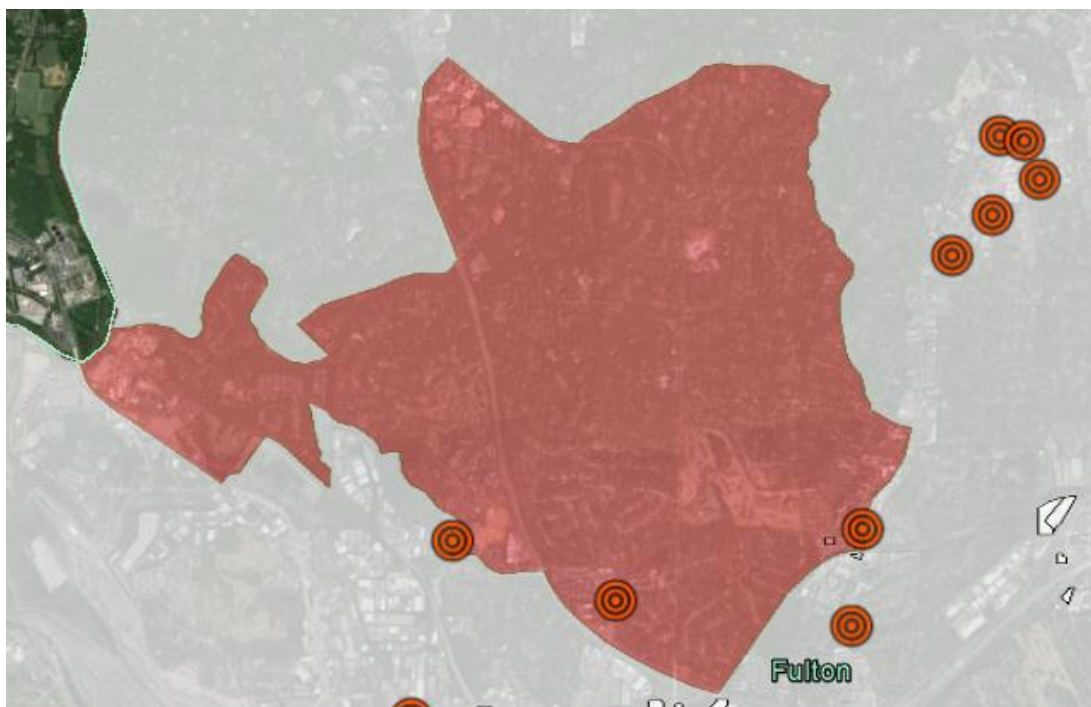


Figure 16: NPU C
White Population: 84%



= Known Brownfield

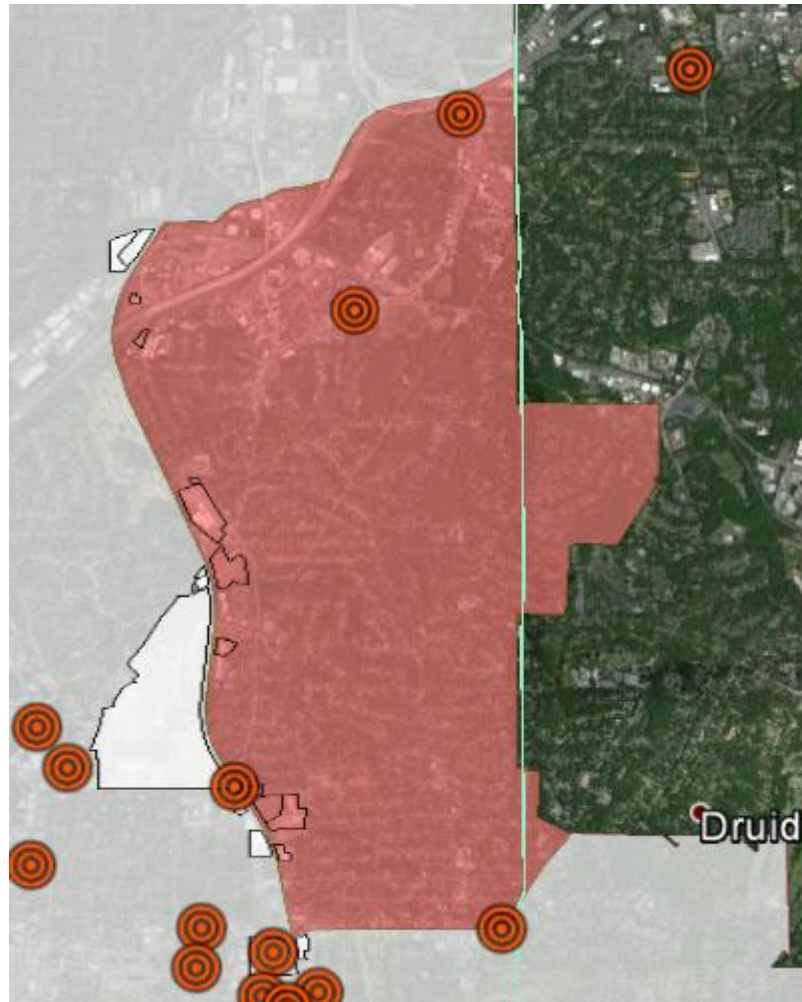


Figure 17: NPU F
White population 80%



= Known Brownfield

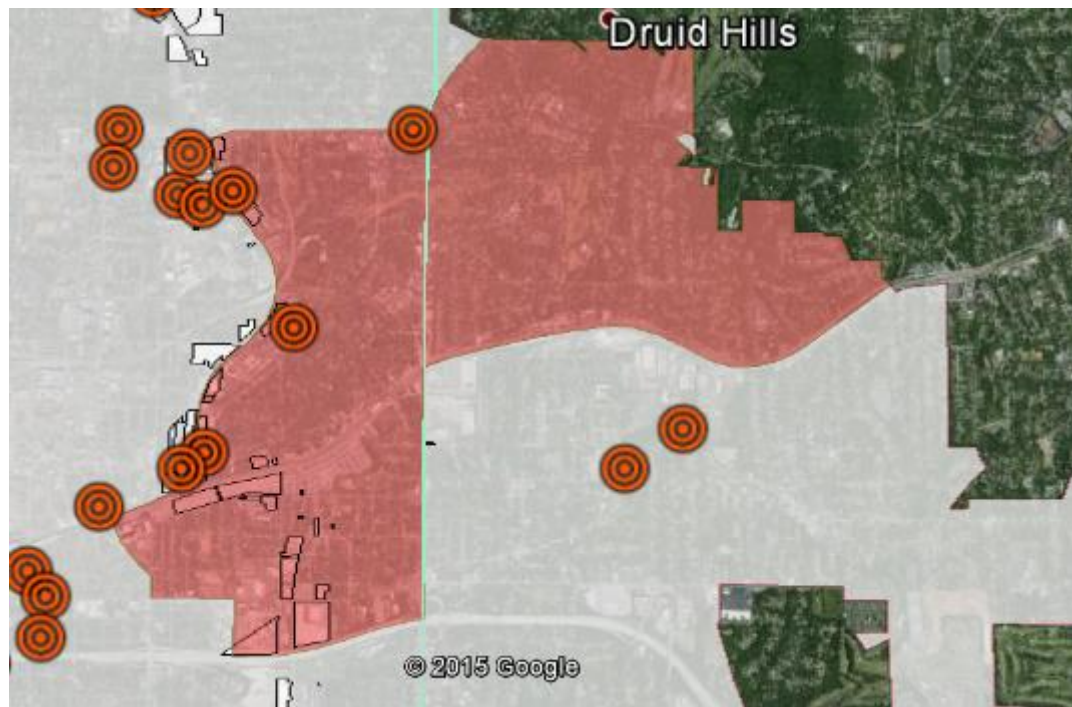


Figure 18: NPU N
White Population 80%



= Known Brownfield

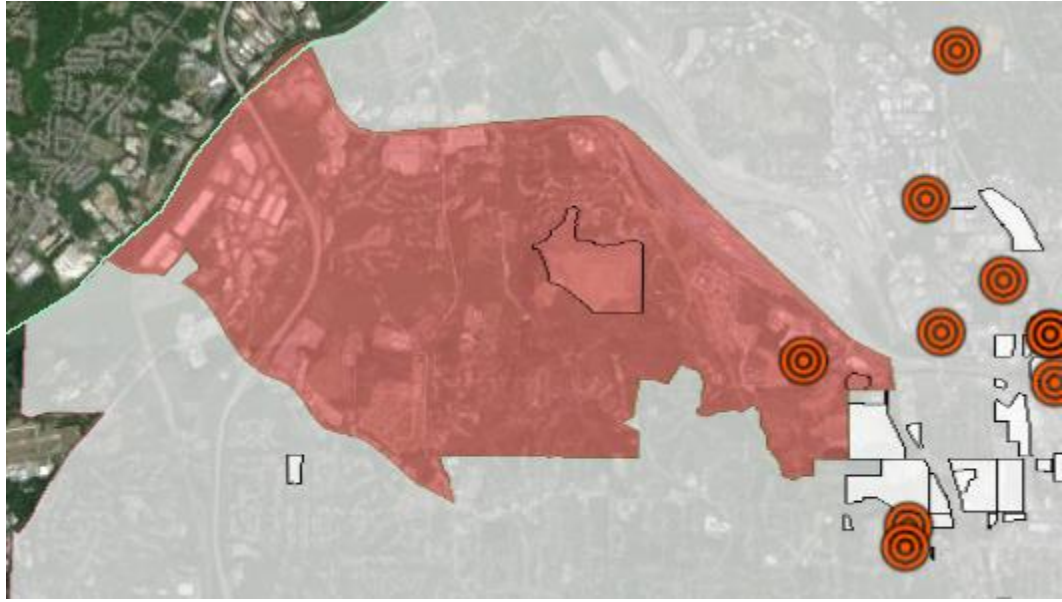
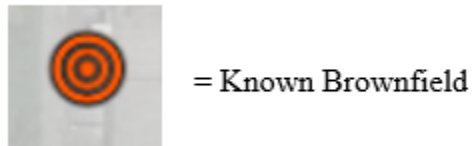


Figure 19: NPU G
Black Population: 94%



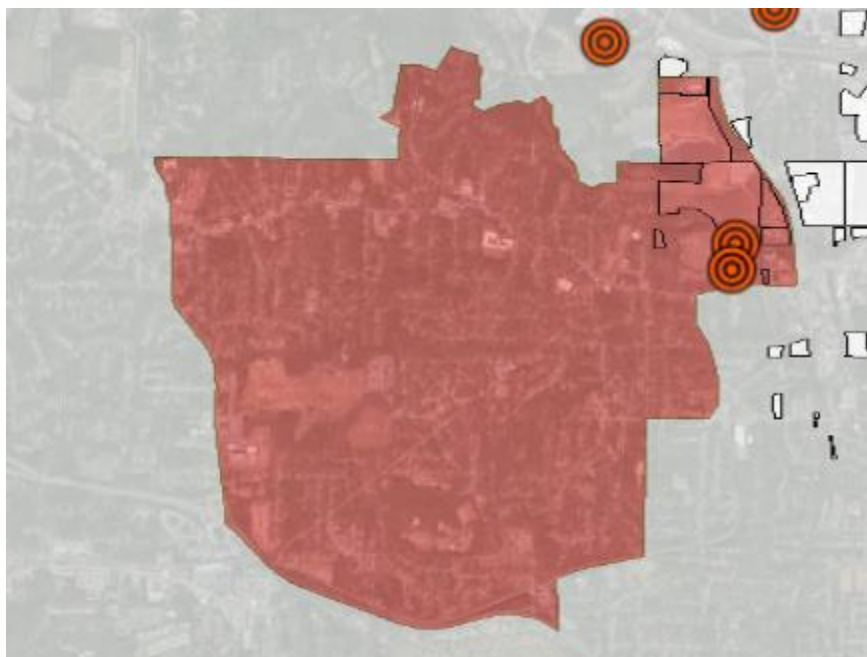


Figure 20: NPU J
Black Population 96%



= Known Brownfield

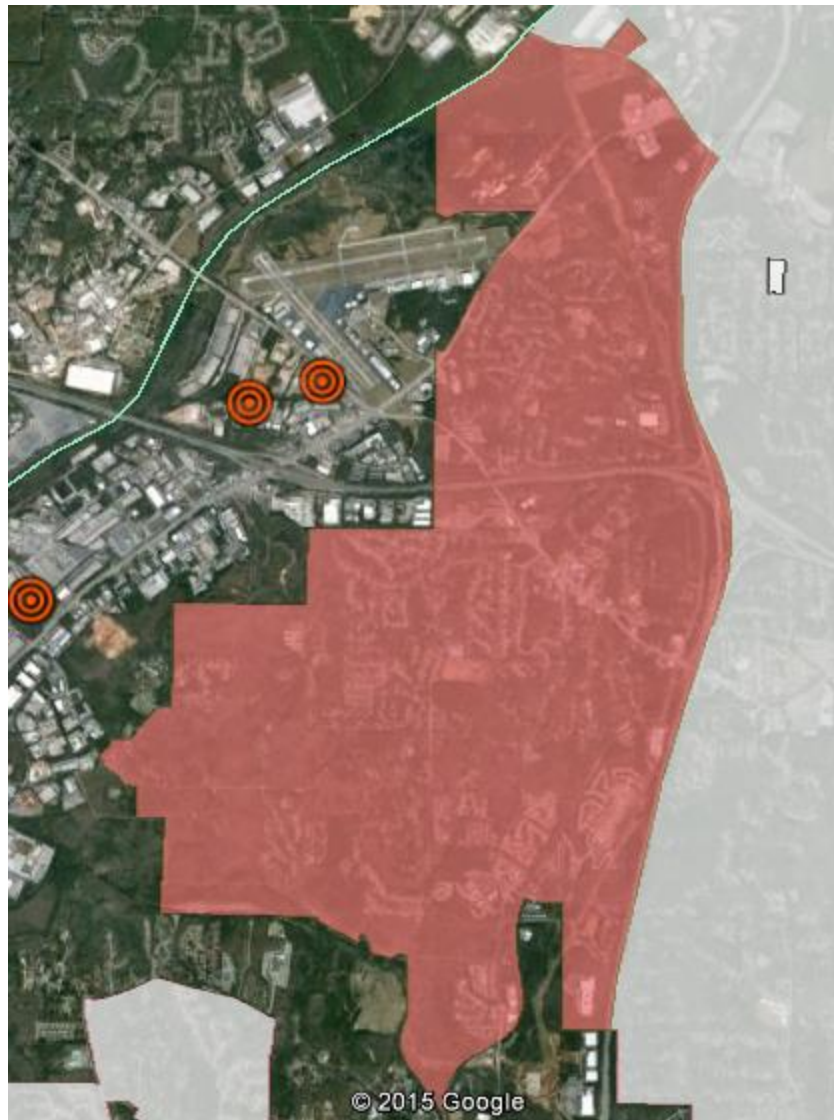


Figure 21: NPU H
Black population 92%



= Known Brownfield

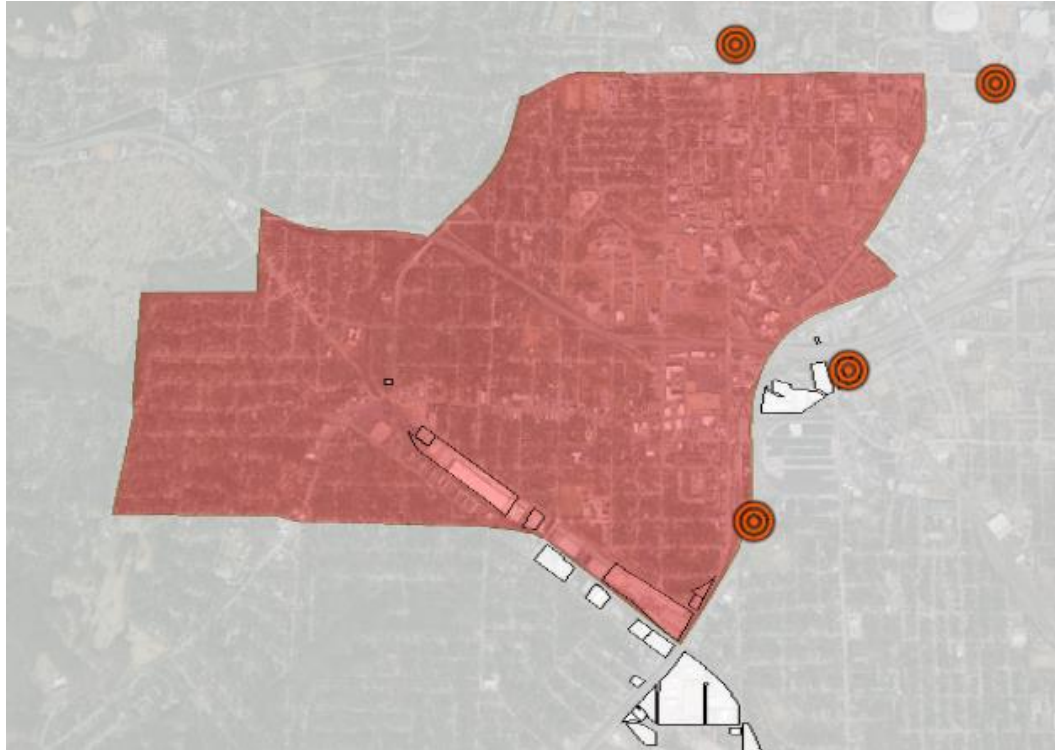


Figure 22: NPU T
Black population: 95%



= Known Brownfield

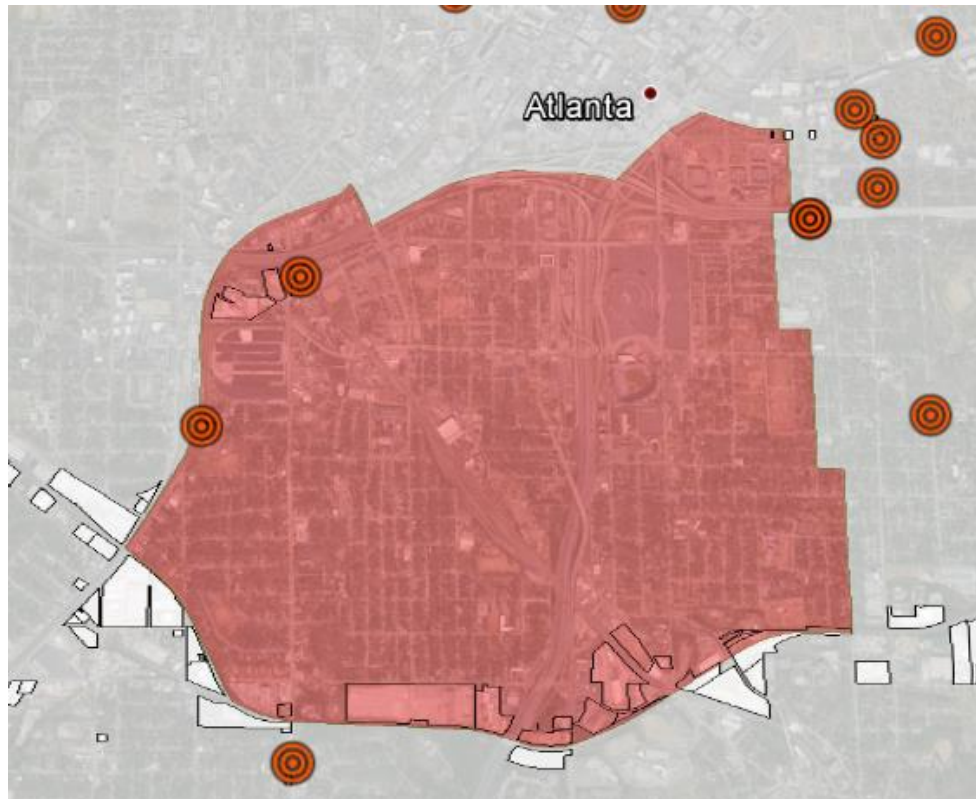


Figure 23: NPU V
Black Population: 89%



= Known Brownfield

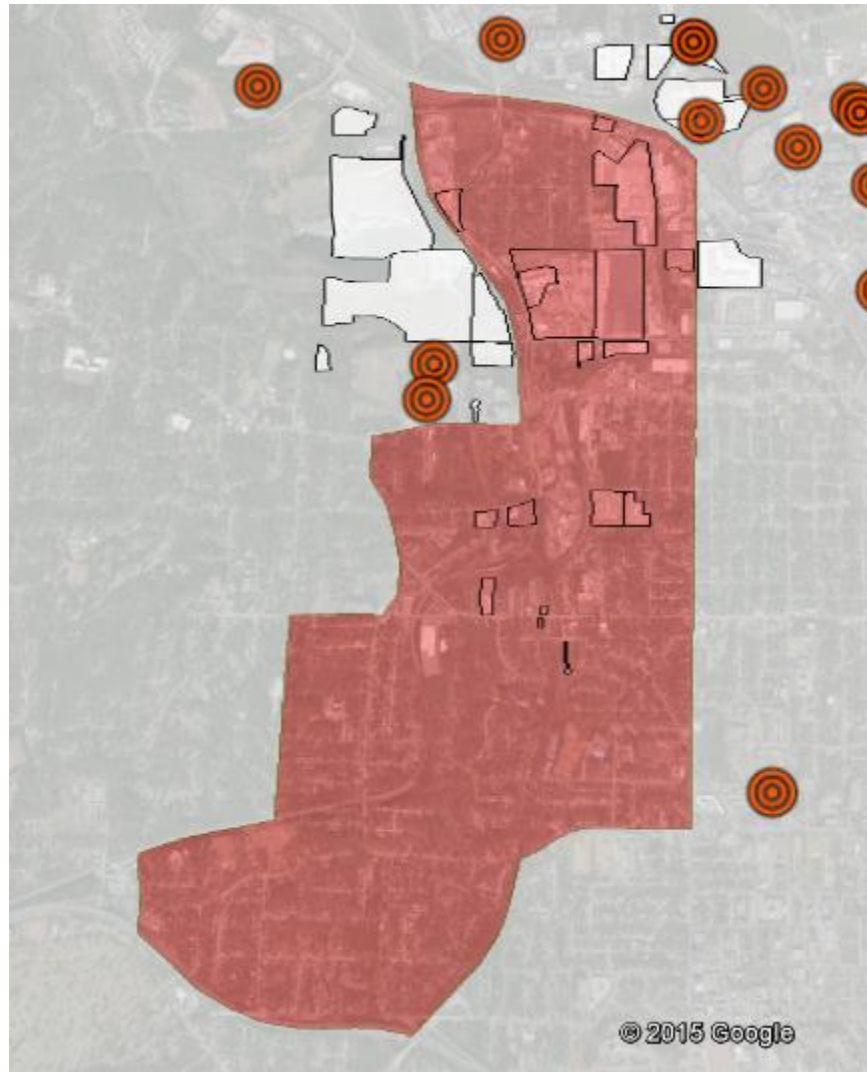


Figure 24: NPU K
Black Population: 89%



= Known Brownfield