

SPECIAL CONSTRAINTS ON A MUNICIPALITY AND THE POTENTIAL
RELATIONSHIP BETWEEN THESE CONSTRAINTS AND REGIONAL SPRAWL: TAX
BURDENS AND LOWER INCOME HOUSEHOLDS IN WASHINGTON, DC.

By

MATTHEW NEAL HELFANT

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To My Nicole and our Munchkin.

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Abstract of Thesis Presented to the Graduate School
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Matthew Neal Helfant

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Our study explores the potential relationship between structural imbalance in the District of Columbia and sprawl in the region, with a specific focus on comparative local tax burdens. It compares and contrasts sprawl with other regions in the United States, three indexes and other tools, and compares and contrasts tax burdens within the DC Metropolitan Area to discern a potential relationship between the structural imbalance and regional sprawl.

Unlike any other municipality in the United States, the District of Columbia has special constraints imposed on it: Congress, and therefore the federal government, has oversight over all governmental decisions made by the locally elected District of Columbia government. Much of the real property, properties that are owned by the federal government, non-profits, institutions, and embassies, in the District of Columbia, over half by some estimates, are exempt from paying local taxes. This gap has become known as the structural imbalance. We hypothesize that, along with other factors, the structural imbalance may be a disincentive to live in the District of Columbia; especially for low income families; it may very well be an incentive for people to commute from the periphery. Evidence suggests a potential relationship between the structural imbalance of the District of Columbia and sprawl in the region because there is evidence to

suggest that sprawl in the Capital Region is high and there is a tax burden disincentive for low income households to live in the District of Columbia.

CHAPTER 1 INTRODUCTION

Problem Statement: Structural Imbalance

Our study explored the potential relationship between the structural imbalance of the District of Columbia and sprawl in the region, with a specific concentration on comparative tax burdens for the residents of the District versus the citizens of nearby taxing jurisdictions. We focus especially on the impacts on lower income households. Unlike any other municipality in the United States, the District of Columbia has special constraints imposed on it: Congress, and therefore the federal government, has oversight over all governmental decisions made by the locally elected District of Columbia government. Perhaps the most significant governmental actions that Congress exercises oversight over are the raising and appropriation of local revenue. An element that complicates this further is the fact that although residents of the District of Columbia are required to pay federal income taxes, they do not have representation in Congress where decisions are made on how to raise and appropriate their federal tax dollars. Further complicating matters is the fact that much of the real property, properties that are owned by the federal government, non-profits and institutions, and embassies, in the District of Columbia, over half by some estimates, are exempt from paying local taxes. Furthermore, there are many people who live outside the District but work in it. There is a disparity between the funds and resources that the District of Columbia recoups, mostly from federal appropriations, and the funds and resources expended by those who do not pay taxes to the District but use services provided by the District. This disparity has become known as the “structural imbalance” (The United States General Accounting Office, 2003).

As a result of the structural imbalance, more revenue is needed in order to recoup the District’s budget deficits. A tax burden analysis discussed in this paper shows that many

residents pay higher taxes compared with surrounding jurisdictions. Along with other factors, the structural imbalance may be a disincentive to live in the District of Columbia; it may very well be an incentive for people to commute from the periphery. Another disincentive as a result of this is that the District of Columbia Home Rule Act disallows the District of Columbia government to levy a tax on commuters who work in the District but live outside its boundaries. There are other elements that have a relationship with and/or stem from the structural imbalance that may also have an impact on sprawl in the region: lack of voting rights, and a cap on building heights. While these elements may also be a deterrent for people to live in the District and there is further discussion of these elements, this research specifically examines the structural imbalance as it relates to tax burdens. This thesis compares and contrasts sprawl with other regions and compares and contrasts tax burdens in the Washington, DC Metropolitan Area order to discern a potential relationship between the structural imbalance and regional sprawl.

General Background

The District of Columbia is the only national capitol of the industrialized democracies that does not have voting representation in the legislature for its residents (Richards, 1988). The Federal Government has oversight over all local public policy including taxing and spending. Also, the Federal Government uses more of Washington's local resources than it pays for through the appropriations process. All of these elements add up to a special situation for a municipality(The United States General Accounting Office, 2003). There has been little research as to the impact of this situation on how the District government can regulate development and the impact on the region.

There are numerous resources that explore the topic of the District of Columbia's structural imbalance although the topic is not widely known outside of the Capital Region (The United States General Accounting Office, 2003; United States. Congress. Senate. Committee on

Appropriations. Subcommittee on District of Columbia., 2004; Gandhi, 2003). There are newspaper articles; mostly from local publications (The Washington Post Editorial Board; US Fed News, 2006; DeBose, 2003). With ample information about the structural imbalance and with no significant research on how the structural imbalance may impact sprawl in the region, this research can shed some light on the topic. The result of this research can give the planning discipline a deeper understanding of how tax burdens, in this case stemming from something beyond the municipality's control, can impact sprawl in the region surrounding it.

Fiscal Deficit

Unlike any other municipality in the United States, the District of Columbia has obstacles that no other municipalities in the United States face: federal oversight over every aspect of its governmental functions. Congress has oversight over how the District raises and spends local revenue. The federal government and other institutions also use a significant amount of land, over half by some estimates. The owners of this real property are not subject to local taxes, thus putting a fiscal burden on the District. More specifically, on the revenue side, the District loses revenue because of an inability to tax non-resident earnings and tax-exempt property. On the spending side, costs are high due to an expensive labor market and services needs mostly for a high incidence of poverty, services being used by those not paying taxes e.g. foreign government diplomats, the federal government, and other tax exempt users, and services traditionally provided by states such as Medicaid. This all adds up to a deficit between \$500 million and \$1.2 billion annually (The United States General Accounting Office, 2003; United States. Congress. Senate. Committee on Appropriations. Subcommittee on District of Columbia. Subcommittee on District of Columbia., 2004; Fauntroy, 2000).

American Colony

The residents of the District have all the responsibilities of being American citizens with less of the privileges: they pay federal taxes but are not able to elect representatives to help decide how those taxes are levied or spent. These special restraints and others that can be lumped in with the “structural imbalance” may have a profound impact on growth patterns in the region. The structural imbalance can be traced back to the origins of the federal jurisdiction.

Article One of Section Eight of the United States Constitution states that Congress has the power to:

...exercise exclusive legislation in all cases whatsoever, over such District (not exceeding ten miles square) as may, by cession of particular states, and the acceptance of Congress, become the seat of the government of the United States, and to exercise like authority over all places purchased by the consent of the legislature of the state in which the same shall be, for the erection of forts, magazines, arsenals, dockyards, and other needful buildings (United States Constitution Article 1 Section 8).

This gives Congress the authority to control its Capitol and the area that surrounds it. It is debatable whether it means Congress has oversight over all of the District of Columbia because the district encompasses more than ten square miles but to this day Congress has exercised authority and oversight over the entire District of Columbia; not just the “federal enclave”.

Because of this, Congress has played a major role in shaping Washington over the years.

Through appropriations and oversight Congress has limited the role of local government. There is little doubt that this element sets Washington apart from other cities in the United States

(Fauntroy, 2000). The Home Rule Act of 1973, while devolving some powers to the District of Columbia Government such as giving the residents of the District of Columbia the right to elect a

mayor and council, further codifies Congress's right to review legislation and authority over the District's budget¹.

Possible Relationship

We suggest that many of the elements that can be lumped into the structural imbalance may have an impact on sprawl in the region. Many of these elements such as inability to impose a commuter tax, a cap on building height, and high taxes to make up for lost revenue from tax exempt properties may provide incentives for individuals and companies to locate outside of the district. Indeed, one can get the best of both worlds by locating close enough to the District to benefit from the economy that stems from the housing of the federal government but outside the District in order to avoid higher taxes. Not having voting representation in Congress may also be a disincentive to living inside the District of Columbia. Other elements may also be disincentives. For example, there is a high probability that exurban communities like Loudoun County, one of the fastest growing counties with a population above 100,000, benefit from their proximity to the District (United States Census Bureau, 2006). The rapid growth in Loudoun County is considered by many to be unmanaged (Davenport, 2006). The factors involved with the structural imbalance may have a relationship with sprawl in the region, which is high according to three methodologies detailed in this paper (Ewing; et. al., 2002; www.sprawlcity.org, 2000; USA Today, 2001).

Planning Significance of the Problem

Sprawl is an important issue to the Planning profession. Sprawl may become an even more prevalent issue as gas prices continue to soar and awareness of the global climate change phenomenon continues to intensify. The land use patterns associated with sprawl fuel an auto-

¹ The District of Columbia Home Rule Act of 1973; Public Law 93-198; 87 Stat. 777; D.C. Code § 1-201 *passim* Approved December 24, 1973

dependent society. Therefore, studies that can increase the planning profession's knowledge of sprawl and the variables that influence it may be significantly useful.

The desired outcome of the research is to take a look at the relationship between the structural imbalance of the District of Columbia and sprawl in the Capital Region. Exploration of this potential relationship can help planners and policy-makers to better understand if limitations imposed on a municipality that may potentially cause higher tax burdens may have any association with sprawl in the region.

Hypothesis and Overview of Methodology

It is hypothesized that sprawl is high in the Capital Region and that there is a relationship between tax burdens that stem from the structural imbalance of the District of Columbia and sprawl in the region. This author argues high tax burdens and no commuter taxes may be a disincentive to live in the District. Furthermore, high tax burdens may make it especially difficult for low income individuals to live in the District. Therefore, there may be a relationship between both variables, the structural imbalance and regional sprawl.

It is difficult to prove a direct relationship between the structural imbalance and regional sprawl as it would be difficult to control for the various variables involved let alone identify all of them. Instead, this paper tests the hypothesis and explores a potential relationship between sprawl in the region and the structural imbalance focusing on one particular element stemming from the structural imbalance: tax burden. This is done by comparing and contrasting sprawl in the Capital Region with sprawl in the metropolitan areas of state capitals of similar sizes, and comparing tax burdens of the District with the surrounding communities. These comparisons could provide evidence to support the idea that there is a potential relationship between the structural imbalance and regional sprawl with regard to tax burdens. While this methodology may show evidence of such a relationship, the relationship will not be defined. Specifically, the

direction of the relationship will not be defined. Figure 1-1 below shows what the potential relationship may look like.

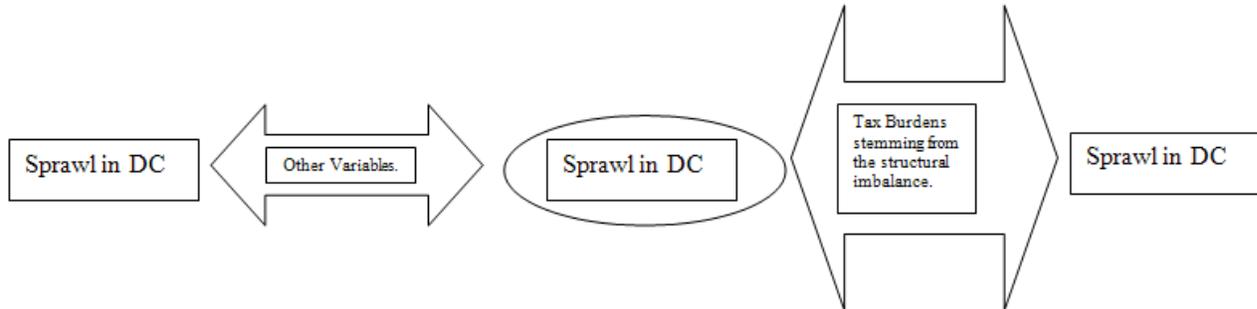


Figure 1-1. Conceptual Model

Key Term: Sprawl

Indeed, sprawl can be an ambiguous term; it cannot be defined succinctly. Therefore, there has to be a definition of the term for the purposes of this paper. Some suggest that definitions can be grouped into six general categories: 1) “By an example” “seen to embody the characteristics of sprawl” such as “Los Angeles”. 2) As “an aesthetic judgment about a general urban development pattern”. 3). As “the cause of an externality” such as auto dependence. 4) As “the consequence or effect of some independent variable” “such as exclusionary zoning”. 5) “As one or more existing patterns of development” such as “low density” and “leapfrogging.” 6) As “a process of development that occurs over some period of time as an urban area expands” (Glaster et. al., 2001). These categories are taken into account by a methodology that is used later in the paper to measure sprawl (Ewing; et. al., 2002).

Study Limitations

There are many intervening variables involved when trying to understand sprawl. Such variables include concurrency regulations, level of autonomy given from the state to the municipality, federal highway money and build out, zoning laws that maintain low density, and

gas prices/taxes. Identifying all the factors is difficult enough: trying to control for them is even more difficult. Without controlling for every variable involved, there is no way that a definitive link can be made, and therefore a conclusive answer will not be the product of this research. The empirical issues involved in identifying and controlling the intervening variables make it difficult to research without significant time and funding. Rather, this research attempts to show the possibility of a relationship between sprawl in the region and the structural imbalance. This can be done by looking by comparing sprawl and tax burdens in the Capital Region with the metropolitan areas of other capitals, specifically, capital cities regions of similar sizes. Another limitation is that a national capital is compared with state capitals. National capitals tend to be very different from state capitals or from other cities in that they tend to house larger governments and more foreign embassies among other attributes.

CHAPTER 2 BACKGROUND AND A REVIEW OF THE LITERATURE

Background and Historical Development

Washington is a city born in the 18th century. Today, it retains its historical character and interweaves it with contemporary style. Washington is a city of old and new. Its midrise buildings on neo-classically laid out baroque streets and monuments to the past are met with contemporary features such as transit that includes a subway. It is a city that is constantly evolving but never losing its sense of history.

The current capital city of the United States of America was not the first capital city; both New York and Philadelphia had that honor previously. Washington was born out of the swamp on the Potomac River. It was placed in a strategic location at the head of navigation at the confluence of this great river as a place to build a city whose primary function was to be the seat of the Federal Government. It was a new city for a new nation.

Pierre Charles L'Enfant

The man many give credit for the vision and planning of Washington is Pierre Charles L'Enfant. L'Enfant was born in Paris in 1754. He was the son of an artist; in fact, L'Enfant descended from a family of artists. He was also a student of the arts at the Royal Academy of Painting and Sculpture. At the time, city planning was considered an art. L'Enfant studied such art as the plan of the City and Park of Versailles. His artistic background was the foundation for his plan for the future American capital (Caemmerer, 1950).

When L'Enfant was just twenty-two years old he was one of the first French officers to offer his services to the cause of American Independence. He fought in the French and Indian War. He also fought in the American Revolution. During this time, he and George Washington formed a close professional relationship. The two of them had considerable correspondence.

Therefore, it was no surprise that Washington called upon his confidant to plan what was to be the city later named for him (Caemmerer, 1950).

On July 9th, 1790 Congress passed the Residence Act, which fixed the seat of government along the Potomac River and authorized President Washington to appoint three Commissioners to survey the area to find a place to put the district. The city was to be ready for occupancy by 1800. By early 1791, President Washington formally asked, and Pierre L' Enfant agreed to proceed with making a survey and maps of the Federal Territory (Kite, 1970).

Birth of Contemporary Development Patterns

By the 1920's Washington was expanding to fill in the district's boundaries and spilling over. Washington was now more of a region than an isolated city. Areas on the periphery other than Alexandria and Arlington were developing. The up-and-coming metropolitan city had developed along streetcar and railroad lines like the other cities of its day. Development was now encroaching out from the traditional core of the city into the rest of the district and into the states of Maryland and Virginia. The automobile would change the development patterns in the years to come but was already leaving its impact. Outside the boundaries of Washington, there was a supposed opportunity for people to live a rural lifestyle and be able to commute to the city. The automobile afforded these people the "opportunity" to not have to live near mass transit anymore. Sprawling development that was less visually manageable occurred (Gutheim, 1976). Unfortunately, for those seeking this kind of lifestyle; they were not alone. The number of people moving out into the suburbs was significant. "Fresh air, physical safety, easy access: all are reduced in proportion to the numbers seeking them. The massive "developments" on the periphery of Washington illustrate this chaotic and frustrating effort to combine urban and rural values" (Gutheim, 1976, p. 100).

Change after World War II

The Post World War II period brought change to the Capital Region. The next major alteration of the landscape in Washington and the vicinity was the construction of the beltway and the subsequent locating and relocating of Federal buildings and institutions outside the District of Columbia boundaries. The main motives for these changes were fear of concentrating highly sensitive bureaus within range of a possible nuclear attack, a yearning for campus like environments, and the same factors that caused residential and commercial development to sprawl: the automobile being a major culprit (Gutheim, 1976).

In 1961 a new plan was issued by the National Capital Planning Commission and the National Capital Regional Planning Council. This plan was called “A Policies Plan for the Year 2000” (Gutheim, 1976, p. 56). It was considered a continuation to the McMillan Plan just as the McMillan Plan was a continuation to the L’Enfant Plan. An evolving city that keeps traditions from the past but never hesitating to keep putting steps forward: the tradition in Washington has been to build on previous plans and not start over. This new plan introduced important new initiatives. Perhaps the most important of the initiatives was in the transportation arena. Proposed were rapid rail and new highways that would better connect the city with communities outside. “Believing that a mass transit system, a modern, rationalized version of the once-thriving system of streetcars and railroads, would meet twentieth century needs, the Year 2000 Plan foresaw the orderly growth of the city occurring in planned secondary town centers developed along these radials, a pattern to be achieved by the strategic location of federal employment” (Gutheim, 1976, p. 56).

Modern Washington

Today Washington has a modern transit system similar to the one proposed by the Year 2000 Plan. The city and surrounding communities combine the modern and traditional. Finding

the right equilibrium has been the focus through the first centuries and will, no doubt, continue to be the focus for the next centuries. As this paper is written, debate is being waged about a possible return of street cars that had their place in the early 20th Century (O'Connell, 2007). Washington's status as capital to the United States ensures that there is much focus in the years to come with regard to planning issues.

Demographics

Washington is a tale of two cities. It is a majority minority city; it is 56.5 percent African American and only 38.4 percent white (United States Census Bureau, 2006). There is considerable wealth in the city but there is also considerable poverty. The median household income is above the national average despite having a poverty rate significantly above the national average (United States Census Bureau, 2004). This pattern can also be seen with regard to education attainment as well. Despite being below the national average with regard to percentage of high school graduates, the number of people who have bachelor's degrees or higher is almost fourteen percent higher than the national average and nearly a quarter of the population has degrees beyond undergraduate coursework (United States Census Bureau, 2000). There is a great divide between those with means and those without.

Economy

The economy of Washington, DC is dominated by the business of running the federal government. As of 2002, the federal government accounts for 27% of the jobs in Washington, D.C. In addition to federal government jobs there are many jobs in industries that exist such as lobbying and issue advocacy. However, Washington has a growing economy that is also diversifying with a declining percentage of federal government jobs over the current and next ten years and a growing percentage of professional and business service employment over the same

period (Whitman & Seigmund, 2005). Despite this trend, the presence of the federal government will continue to be the reason the city exists and the major force behind economic development.

As one would expect with a capital city, especially the capital of the United States, the built environment is dominated by institutional use. An estimation of over half of all lands are owned by the federal government, foreign governments, or tax-exempt organizations (United States. Congress. Senate. Committee on Appropriations. Subcommittee on District of Columbia. , 2004). This land is exempt from local DC taxes. This severely limits the revenue the District of Columbia can raise.

Urban Geography

Despite being the American capital, one cannot deny the European, especially French, inspiration that is prominent. The baroque grid neoclassical layout that L'Enfant had a hand in designing is only part of it. Washington is different from other cities in the United States of the same size for what is missing: skyscrapers. The Washington skyline is similar to Paris; a collection of midrise buildings with a tall narrow symbolic landmark that can be distinctly seen rising above the other structures. Paris has the Eiffel Tower, George Washington has his Monument.

Structural Imbalance

In May of 2003, upon the recommendation of Congresswoman Eleanor Holmes Norton of the District of Columbia, Senator Mary Landrieu of Louisiana, and others, the United States General Accounting Office (GAO), released a report entitled “District of Columbia: Structural Imbalance Management Issues”. In this report, the non-partisan governmental agency assesses whether, and to what extent, the District of Columbia faces a structural imbalance between its revenue capability and the cost of providing adequate levels of public services (The United States General Accounting Office, 2003). This report concludes that there exists “a substantial

structural imbalance, even though considerable uncertainty exists regarding its exact size” (The United States General Accounting Office, 2003, pp. 7-8). Of course before confirming its existence, the term had to be defined. The GAO used two contrasting concepts to define the term for the purposes of the report: current services imbalance and representative services imbalance. “Current services imbalance” is defined by addressing the question “if a jurisdiction were to maintain its current level of services into the future, would it be able to raise the revenues necessary to maintain that level of service under its current taxing policies?” (The United States General Accounting Office, 2003, p. 2). On the other hand, “representative services imbalance” compares and contrasts different “jurisdictions with similar public service responsibilities as a benchmark against which to compare imbalances between the cost of providing public services and revenue raising capacity” and addresses the question “if a jurisdiction were to provide a representative basket of public services with average efficiency, would it be able to generate sufficient revenues from its own taxable resources and federal grants to fund a representative basket of services if its resources were taxed at representative rates?” (The United States General Accounting Office, 2003, p. 3). The GAO used this connotation in order to do its analysis.

A little over a year after the publication of the GAO report there was a Congressional Hearing on the topic. The hearing, not coincidentally, was conducted by the Senate Appropriations District of Columbia Subcommittee whose ranking member at the time was Senator Landrieu. In his testimony at the hearing, then Mayor Anthony Williams highlighted some of the challenges that the structural imbalance imposes on the District. This included the region’s mass transit system, Metro, which has a direct correlation with sprawl and city and regional planning. The Mayor stated the system has an unfunded need of almost one and a half

billion dollars and that “the District has a particularly onerous burden when it comes to Metro because as the Federal Government has pulled back from Metro funding, States have stepped up, and we (District of Columbia Government) do not have access to State tax base to meet those needs” (United States. Congress. Senate. Committee on Appropriations. Subcommittee on District of Columbia., 2004, p. 3).

Legislation: Furthermore, legislation introduced prior to the hearing was mentioned frequently during the hearing even though the hearing had a broader purpose than to discuss the legislation. This bill, “The District of Columbia Fair Federal Compensation Act of 2004” was lauded as a possible remedy, at least in large part, by many. The bill would have provided an 800 million dollar contribution annually from the federal government to the District of Columbia Government; it was not passed.

Sprawl in the Capital Region

Building Heights and Boundaries

Although Washington is a compact city, it is not a dense one. It is different from other cities in the United States of the same size for what is missing: skyscrapers. There is a cap on the heights of buildings. In Washington, a law from 1910 limits the heights of new buildings to no more than 20 feet (6 m) greater than the width of the adjacent street. This is a federal law that is also codified by local law². Figure 2-1, on the next page, shows how small the buildings in Washington are compared to other cities. One other difference that Washington has with other cities is well defined boundaries. Because of its status as the Federal District Washington does not annex any new territory. The boundaries are not likely to ever change. As a result, Washington has a compact urban form: land is not wasted. Sprawling development within the

² The Building Height Act of 1910, codified at D.C. Code § 6-601.05

city boundaries does not happen with perhaps the exception of a few communities east of the Anacostia River (Snyder, 2008). Outside of the boundaries is a different story.

Washington versus the Other Washington

The District of Columbia has a population of around 581,000 according to 2006 estimates (United States Census Bureau, 2006). The land area is just over 61 square miles and almost 9,400 people for each of those square miles according to 2000 census numbers (United States Census Bureau, 2000). For comparison, Seattle, a city of around 582,000 people from 2006 census estimates has a population density of over 6,700 people for each of its 84 square miles from 2000 census numbers (United States Census Bureau, 2006; United States Census Bureau, 2000). Seattle, being a city of similar size population, is less dense than Washington despite having buildings that are taller. The building height cap in Washington, DC essentially restricts the heights of most new buildings to be no more than about 130 ft or about 40 meters. This means that most buildings are no more than about 13 stories. Currently there is debate regarding this limit should change and how much it would hypothetically change if allowed (Schwartzman, 2007). On the contrary, Seattle is a city of much taller buildings. The tallest building in Seattle, the Columbia First Building, is 285 meters or 937 feet tall. There are over 100 buildings in Seattle that are taller than 40 meters (Emporis Corporation, 2008). This fact shows just how compact Washington is; Washington could be a very dense city if its buildings were allowed to be taller. This also suggests that Washington and cities of similar size are not very dense. In contrast, Manhattan dwarfs Washington with a population density more than seven times larger, at around 67,000 people per square mile (United States Census Bureau, 2000; United States Census Bureau, 2006). Figure 2-1 at the end of the chapter illustrates differences in building heights.

Adjacent Communities to Washington

The densities of some of the communities adjacent to Washington are about the same as Washington. The density in Alexandria, Virginia, is just under 8,500 people per square mile as of the 2000 census (United States Census Bureau, 2000). The density in Silver Spring, Maryland, is over 8,100 people per square mile as of the 2000 census (United States Census Bureau, 2000). The density of Falls Church, Virginia, is 5,200 people per square mile as of the 2000 census (United States Census Bureau, 2000). The density in Bethesda, Maryland, is over 4,200 people per square mile as of the 2000 census (United States Census Bureau, 2000).

Without the building height restrictions that the District of Columbia has the skyline in these inner suburb communities is less modest in some places. For example, skyscrapers just across the Potomac River in the unincorporated area known as Rosslyn, which is also known as a district in Arlington, are over 300 ft tall (Emporis Corporation, 2008; United States Census Bureau, 2000). Density is important because one of the main characteristics of sprawl is low density (Ewing R; et al 2002). Table 2-1 below compares the densities in Washington to an example of an inner suburb and an example of an outer suburb.

Table 2-1 Comparative Population Densities of Washington, an Inner, and an Outer Suburb
(United States Census Bureau, 2000)

City	Density
Washington, DC	9,400 persons per sq mile
Inner Suburb: Alexandria, Virginia	8,5000 persons per sq mile
Outer Suburb: Loudoun County, Virginia	326.6 persons per sq mile

Inner and Outer Suburbs

Washington, DC and the surrounding communities that make up the metropolitan statistical area are also considered walkable. A recent study by the Brookings Institute ranks the Washington DC Metropolitan area the most walkable in the United States (Leinberger 2007).

This study is a field study of the number and location of “regional-serving” walkable urban

places in the 30 largest metropolitan areas in the United States. According to the study, the Capitol Region has “the most regional-serving walkable urban places per capita in the country”. The study also concluded that the region also has the “second highest absolute number of walking urban places”. The metropolitan statistical area with the most is New York. The study also states that the metropolitan region has “at least another 10 regional-serving walkable urban places emerging that could reach critical mass over the next five to ten years” (Leinberger 2007).

However, further from Washington, the densities of communities drop dramatically. The communities farther out from the Washington suburbs that are usually designated as exurbs are much less dense than Washington or its inner suburbs. Conversely, growth in the area is very significant. This area is home to some of the fastest recent and current growth in the entire United States.

Loudoun County: An Example of an Outer Suburb

Loudoun County, Virginia, is a prime example of an exurban community on the fringe of the Capital Region. The density of Loudoun, as of the 2000 Census, is 326.6 persons per square mile (United States Census Bureau, 2000). This county has grown by an astounding 58.5 percent between 2000 and 2006 according to US Census estimates; the fastest growing county in the United States among counties that have a population greater than 100,000. In real numbers, Loudoun County has grown by almost 100,000 people in the first six years of the twenty first century (United States Census Bureau, 2000; United States Census Bureau, 2006). Even more astounding, the population of Loudoun County was just over 86,000 in 1990 (United States Census Bureau, 1990). Between 1990 and 2000 the County almost doubled in size (United States Census Bureau, 1990; United States Census Bureau, 2000; United States Census Bureau, 2006).

Unorthodox Development Pattern

Divisions in the Capital Region do not fit the conventional paradigm of “city versus suburbs”; there are both affluent and poor neighborhoods in Washington. The region as a whole has the same mix. There are wealthy and poverty stricken areas in the suburbs. Economic and residential growth have been uneven; they favor one half of the region over the other. The eastern half of the District of Columbia and suburban areas to the east of the District have significant poverty. On the other hand, the western part of the region, including the western part of the District and suburban areas to the west of the District enjoy great affluence. Perhaps a strong force behind this trend is jobs moving westward while low income families tend to stay to the east (The Brookings Institution, 2000). Perhaps this means that places like Loudoun County, while sprawling, are not necessarily a major recipient of relocation of lower income families.

Measurement and Comparison of Sprawl

Sprawl City Index

An index ranked the 100 largest Urbanized Areas in the United States by square miles of sprawl. Urbanized areas are “the reduction of rural land due to the increase of the total size of the land area of the city and its suburbs over a particular period of time”. The Washington, DC, urbanized area is ranked as having the fourth most sprawl in the U.S. (www.sprawlcity.org, 2000). Only the Atlanta, Houston, and New York City urbanized areas have more sprawl according to the index. Of note, this index used the US Census defined areas known as “Urbanized Areas” instead of “Metropolitan Statistical Areas”. Urbanized Areas are defined by the US Census as “the fully developed area of a central city, and its suburbs”. Unlike Metropolitan Statistical areas, Urbanized Areas do not include rural land (www.sprawlcity.org, 2000). If the findings from above are any indication, sprawl may be a serious problem in the Capitol Region.

USA Today Index

Another index used to measure sprawl was developed by USA Today. This index measured 271 metropolitan areas and assigned scores based on two density related measures:

1. Percentage of a metro area's population living in urbanized areas, using the Census Bureau's definition of urbanized: "1,000 or more residents per square mile".
2. Change in the metropolitan population living in urban areas between 1990 and 1999

After their analysis according to the methodology, USA Today declared that Los Angeles was less sprawling than New York, Portland, Oregon. On this index, Washington, DC was ranked as one of the most sprawling: 15th out of 271 metropolitan areas. An argument against this index is is too simplistic. Specifically, that it has a

“total reliance on density as an indicator of sprawl in a way that fails to distinguish development at low suburban densities (as low 1,000 person per square mile, ...) and development at high urban densities(Ewing et al., 2002, p.25). ”.

Despite, arguable flaws, Washington, DC is ranked as a high sprawling city on this index as well.

Ewing Index

An index developed by Reid Ewing for a report for Smart Growth America entitled *Measuring Sprawl and Its Impact 2002* is another index. The Ewing index uses metropolitan regions as defined by the US Census and it measures factors such as residential density, neighborhood mix of jobs; homes and services; strength of activity centers and downtowns; and accessibility of the street network (Ewing et al., 2002). According to this index the Washington, DC metropolitan is the 26th most sprawling out of 83 metropolitan regions. In addition, Washington has a score in the index that, according to the authors, is below average for compactness.

“Measuring Sprawl and its Impact, 2002” is perhaps the best attempt to measure, and therefore compare, sprawl among different cities. In order to measure sprawl, the report first had

to figure out a way to define it. This is no easy task as sprawl is vague term. In order to accomplish this difficult task a comprehensive review of academic and popular literature on the subject was performed by the researchers. As a result of this review an operational definition was developed. The definition has four dimensions:

1. “a population that is widely dispersed in low density development”,
2. “rigidly separated homes, shops, workplaces”,
3. “a lack of well-defined, thriving activity centers, such as downtowns and town centers”
4. “a network of roads marked by huge blocks and poor access”

The researchers state that other features usually associated with sprawl such as “lack of transportation choices” stem from the four dimensions noted (Ewing; et. al., 2002). The authors claim that the study is “the first to create such a multidimensional picture of the sprawl phenomenon” (Ewing; et al., 2002, p.4).

The sprawl index developed by this research stems from the four dimensions stated in the definition. The four dimensions as defined earlier were restated more specifically into headings:

1. “Residential density”;
2. “Neighborhood mix of jobs, homes, and services”;
3. “Strength of activity centers and downtowns”;
4. “Accessibility of the street network”.

The researchers attached measurable components to each dimension, (e.g. Residential density) includes “the portion of residents living very close together in town centers, as well as simple overall density” (Ewing; et al., 2002). The product of this is a comprehensive list that takes into account several important factors and measures them in numerous ways.

Decentralization of Employment and Sprawl

Another factor that may have a potential relationship with sprawl in Washington is decentralization of employment. Glaeser, et. al. (2001) relates sprawl to the degree of decentralization of employment using data from the Department of Commerce’s Zip Code Business Patterns for 1996 (Glaeser, et al. 2001). Specifically, this report looked at what

percentage of the jobs in the 100 largest metropolitan areas are located within 3 miles of the Central Business District (CBD). The hundred cities were then organized into four categories: 1)

Dense employment metros: those having 25% or more of their employment within three miles of the CBD. 2) **Centralized employment metros:** those having 10-15% of the metropolitan

employment within three miles of the CBD and more than 60% within 10 miles of the CBD. 3)

Decentralized employment metros: those having 10-25% of metro employment within three miles of the CBD and less than 60% of metro employment within ten miles of the CBD. 4)

Extremely decentralized employment metros: those having less than 10 percent of metro employment within three miles of the CBD.

In this index, Washington, DC is placed among the “Decentralized Employment Metros”.

According to the index, only 18.85% of the employment is within 3 miles of the CBD.

Therefore, there is evidence to suggest that there may be a relationship between decentralization of employment and sprawl in the Washington Metropolitan Region.

Commuter Tax and Loss of Revenue

As stated earlier, one of the components of the structural imbalance of the District of Columbia is the inability to levy a commuter tax. This inability may account for some of the gap between revenue and costs, but not all of it because the more significant component is the repayment or lack thereof by the Federal Government. Nevertheless, research has shown two points:

1. Commuters may pay taxes even if they are not directly levied (Shields & Shideler, 2003)
2. The elimination of the commuter tax in New York City may have unfairly worsened the fiscal condition of the city and made regional tax systems more regressive (Chernick & Tkacheva, 2002).

Therefore, Washington, DC may be receiving some revenue from commuters even if

Congress will not let the District levy a commuter tax but at the same time regional tax

systems may be more regressive due to the inability to impose a commuter tax. Future research should look more at the consequences of the District's inability to impose a commuter tax.

Tax Burdens and Sprawl

I argue that tax burdens stemming from the structural imbalance have a potential relationship with sprawl in the Capital Region. The basis of this argument has been suggested by other researchers (Song & Zenou, 2006; Brueckner & Kim, 2003). Two reports in particular document this potential relationship in general terms. "Urban Sprawl and the Property Tax, 2003" and "Property Tax and Urban Sprawl: Theory and Implications for US Cities, 2006" both argue that there is a potential relationship between high tax burdens, at least with regard to property tax, and sprawl.

Brueckner & Kim (2003) explore the links between property taxes and urban sprawl. To do this they use a model that shows that property tax may have a depressing effect on improvements to property and thus reduce population density which in turn can spur the spatial expansion of cities. However, the model they use also shows a countervailing effect from lower dwelling sizes, which in turn increases densities and make cities smaller. Thus, they argue that property tax may be listed as one of many "casual factors" of sprawl. (Brueckner & Kim, 2003). With the case of the District of Columbia, however, the building height cap also artificially depresses improvements, in addition to a higher tax burden doing so. Therefore, while, based on their analysis, the tax burden may be a "casual factor", with regard to property taxes, there may be another factor that makes a stronger push for urban sprawl; a factor that is not covered in the methodology, but is discussed in this paper and should be an element in future research of this topic.

Song & Zenou (2006) also only look at property tax specifically with regard to a potential connection to sprawl. The authors conclude that higher property taxes result in smaller cities. To reach their conclusion, they developed a model that “adopts a log-linear utility function with a variable elasticity of substitution greater than one” that shows that property taxes reduce city size. They tested this model on 448 urbanized areas (Song & Zenou, 2006). Of note, they tested urbanized areas, which were also tested to make up the sprawlcity index referred to but not used in this paper. This paper makes its comparisons using metropolitan areas, the areas compared in the Ewing Index. However, the result of their work also shows a potential link, at least with regard to property taxes, and sprawl. Both journal articles support this author’s argument, at least in part, that high tax burdens have a potential relationship with sprawl.

Historic Preservation tax incentives may also have a potential relationship with sprawl; they may reduce it. Historic structures tend to be in city centers, if tax incentives can reduce the cost to live in them, then choosing to live in a historic structure may be an easier choice financially because it would cost less. It has been argued that “Historic preservation tax incentives can level the playing field for historic properties and reduce sprawl” (Mann, 2002). Perhaps if there is evidence to suggest that tax incentives have a potential relationship with the reduction of sprawl, then the converse may also be true: tax burdens may have a potential relationship with sprawl.

Further, ad valorem taxes may also have a potential relationship with sprawl. It has been argued that regions that rely on ad valorem property taxes to fund services and infrastructure may have more sprawl than those who rely on a broader tax base (Pendall, 1999). This is another example of tax burdens having a relationship with sprawl. Perhaps, limitations on the

District's revenue raising authority may also have a potential relationship with sprawl because they are unable to rely on a broader tax base.

According to Wyatt (2006), tax payers and government officials in the District of Columbia have a significant interest in the relative tax position of the District compared to the surrounding jurisdictions" (Wyatt, Tax Rates and Tax Burdens in the District of Columbia: A Nationwide Comparison 2006, 2007, p. 8). This information is not only important to the stakeholders listed above but it is significantly important to this thesis. This report is an important piece of the puzzle when trying to decipher a relationship between the two key variables of this study: the structural imbalance of the District of Columbia, the dependant variable and sprawl in the region surrounding DC, the independent variable. This is because this report compares and contrasts the tax burdens of residents living in Washington and the surrounding communities. Tax burdens are a key element of the structural imbalance; the structural imbalance forces the District of Columbia to impose higher taxes on its residents because of loss of revenue. This author argues that tax burden, stemming from the structural imbalance, may be a disincentive for people to live in the District of Columbia proper and therefore have a relationship with sprawl in the region.

Tax Burdens and Migration in DC

Some literature has been found about the relationship between tax burdens and migration patterns in Washington. Strauss (1998) argues that tax payers in the middle to low income brackets in Washington have been leaving faster than in suburban Maryland and Virginia and Suburban Maryland is a major beneficiary of net DC migration. Strauss (1998) however, also argues that service efficacy issues may have more influence on migration than tax burdens (Strauss, 1998). While tax burdens stem from the structural imbalance so do service efficacy

issues. Both elements may have a relationship with sprawl. Nevertheless, in the 10 years since the arguments were made by Strauss (1998), public policy could have changed and may lead to different conclusions.

Tax Burdens in Washington

“Tax Rates and Tax Burdens: Washington Metropolitan Area 2006” is an annual exercise by the District of Columbia government that compares the tax burdens of the jurisdictions of the Washington, DC metropolitan area. It is divided into two parts. The first part contains detailed calculations on “tax burden” for the District of Columbia and five inner suburban taxing districts: Montgomery and Prince Georges Counties in Maryland and Arlington and Fairfax Counties and the city of Alexandria in Virginia. While many of these inner suburbs, with the exception of perhaps Fairfax County, have similar densities to the District and therefore probably do not have nearly as much sprawl, the first part of this analysis can help demonstrate whether or not there is a disincentive to live in the district due to a higher tax burden. The analysis contained in the first part includes analysis of what hypothetical families of three would pay at different income levels: \$25,000, \$50,000, \$100,000, and \$150,000. This analysis plugs in factors like whether or not they own a home, and how many cars they own, and therefore is more comprehensive than simply comparing the rates. The second part of this study contains a comparison of statutory tax rates for the entire metropolitan region. This analysis is less reliable than the “tax burden” analysis because it only looks at the rates and not what people actually pay.

Specifically, “Tax Rates and Tax Burdens: Washington Metropolitan Area 2006” is used as a tool in the methodology of this thesis to gain a better understanding about tax burden, an important element stemming from the structural imbalance, and its relationship with developmental patterns in the Capital Region. However, there are limitations to using this resource. Only the first part of the report actually calculates tax burdens. The first part only

includes communities that are closer to Washington. The outer counties of the metropolitan region like Loudoun County are not included in it. There is only a comparison of the tax rates with regard to Loudoun County. Another limitation to using this report is the tax burden analysis, although more accurate than just comparing the rates, does not calculate the tax burden for everybody, just hypothetical families of three at different income levels. Despite these limitations, the report can still help show the relationship between the structural imbalance and development patterns because it can show whether or not there is tax burden either higher or lower in District of Columbia than the surrounding inner suburban communities for at least some people and show the tax rate differences between the District and the rest of the region. Therefore, a potential relationship between tax burdens and sprawl may be established from this data.

Lower Income Vulnerabilities to Sprawl

Lipman (2006) focuses on understanding the housing and transportation constraints and choices of lower to moderate income households. One of the key conclusions that the report makes is that families with incomes ranging from \$20,000 to \$50,000 annually that move far from work to find affordable housing end up spending their savings on transportation. This finding shows how difficult life may be for low to moderate income people to find affordable housing without “driving to qualify”. In general terms, this report states that often low to moderate income families are vulnerable to sprawl. Of note specifically, for this thesis, one of the 28 metropolitan regions studied is the Washington region. The report notes that the Washington region has one of the least affordable housing markets. But, housing at the suburban fringes is especially high cost and lower income families are more likely to live in the central city, and inner suburban neighborhoods where housing costs and other burdens are “somewhat” lower (Lipman, 2006). This somewhat contradicts the theory presented by this researcher: lower

income families in Washington may move to the suburban fringe in order to have a lower cost of living. However, other literature, has shown that factors such as gentrification have pushed lower to moderate income individuals to the fringe in the Capital Region (Williams, 1988; Rice, 2006). Therefore, perhaps, for our purposes, an assumption can be made that lower to moderate income families may be more vulnerable to the pressures of sprawl than others with regard to showing a relationship between the structural imbalance and sprawl.

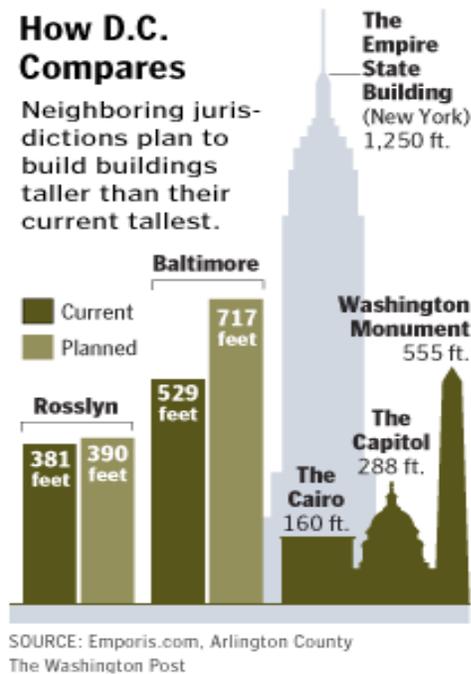


Figure 2-1. Building Height Comparison

CHAPTER 3 METHODOLOGY

Overview of the Methodology

This methodology relies on personal knowledge and experience as a resident and elected official of the District of Columbia plus indexes that measure sprawl, a report that measures tax burdens and additional literature reviewed in this paper. A case study directly linking the structural imbalance with an impact on sprawl in the Capital Region would be complicated because of empirical issues: there are many intervening variables that cannot be controlled. This study will aim to prove the hypothesis and show a potential relationship between sprawl in the Capital Region and the structural imbalance, with specific emphasis on comparative tax burdens stemming from the structural imbalance. This is done by comparing and contrasting sprawl in the Capital Region with sprawl in regions that include state capital cities in other parts of the country, and comparing tax burdens of the District with the surrounding communities in its own region.

The reason why comparisons with other capital cities can help show whether or not sprawl is high in Washington is because capital cities have similar traits. Perhaps, especially for this research, an important trait is that capital cities have significant stock of tax exempt real properties including properties that have government, non-profit, university and other institutional uses that are exempt from local taxes (Adam, 2003). Foreign embassies are also exempt from local taxes. Foreign embassies are common for obvious reasons in Washington, but not very common in state capitals. Therefore, comparison with other national capitals may provide more insight. However, this author did not find data that can sufficiently be used to make those comparisons. The state capital region comparisons could suggest whether there is a potential relationship between the structural imbalance and regional sprawl with regard to tax

burdens. As this study is preliminary, more research will need to be done in the future in order to make stronger conclusions.

Data Analysis/Procedures Followed

Data is analyzed using three separate sprawl indexes in order to compare sprawl in the Washington, DC region with other strategically chosen regions. After this analysis, the first observation is made: whether or not sprawl, according to the three indexes is higher than it should be in the Washington, DC region when compared to state capital metropolitan areas of other regions. After the first observation, the tax burden analysis will be looked at. The tax burden in Washington, DC is compared with the tax burdens in other jurisdictions within the region. This will allow the research to examine whether or not tax burdens stemming from the structural imbalance may be a factor in where people choose to live in the region. At this time, if there is evidence to suggest, according to the three sprawl indexes, that sprawl in the Washington Region is higher than it should be compared to state capitals of other regions and if there is evidence to suggest, according to the tax burden analysis, that tax burdens are a factor for development patterns, then it will noted that there may be a potential relationship between the structural imbalance and sprawl in the Capital Region with regard to tax burdens stemming from the structural imbalance.

Index Comparison Role

Three Indexes are used as a vehicle to compare and contrast Washington, DC with other capital regions. Comparing the Washington, DC metropolitan statistical area with state capitals can show if sprawl in the Capital Region is comparable to other capitals. Comparing the Washington, DC MSA with MSA's of state capitals that are close in population size can make the comparisons an even more valuable tool because it controls for factors that stem from the size of the populations. Specifically, the reason why comparisons to state capital cities is made

is because capital cities tend to have more tax exempt real property's such as properties owned and used by the government, non-profit agencies, and institutional uses such as universities (Adam, 2003). To control for regional factors, the MSA comparison is extended to include state capital MSA's with the closest populations from 6 regions: the South, Midwest, Northeast, Mountain West, Southwest, and the Far West. The cities are listed on the next page.

South- Austin, Texas
Midwest- St. Paul, Minnesota
Northeast- Boston, Massachusetts
Mountain West- Denver Colorado
Southwest- Phoenix, Arizona
Far West- Sacramento, California

If, after making comparisons between Washington and the six state capitals above, Washington is among the most sprawling, then there would be evidence to suggest that Washington has significant sprawl.

The Tax Burden Analysis's Role

Noted earlier, the District of Columbia Government annually publishes a tax burden comparison reports entitled "Tax Rates and Burdens: Washington Metropolitan Area, 2006". This report compares and contrasts the tax burden among jurisdictions in the region. The findings in this report are used to show if tax burden, a central issue stemming from the structural imbalance and the focus of this thesis, may play a role in determining development patterns across the region. In other words, if there is evidence to suggest that there is a tax burden that is higher in the District of Columbia than in surrounding communities as a result of the analysis performed by the author of the report, than it is evidence to suggest that tax burden stemming from the structural imbalance may be a disincentive to living in the District and therefore there may be potential relationship between the structural imbalance and sprawl in the region. If, after making the sprawl index comparisons, there is evidence to suggest that there is significant sprawl

in Washington, and after reviewing the report on tax burdens, there is evidence to suggest that there are higher relative tax burdens in Washington than in the surrounding jurisdictions, then it will be noted that there may be a basis to suggest that there may be a potential relationship between the structural imbalance and regional sprawl stemming from tax burdens.

CHAPTER 4 FINDINGS AND RESULTS

As a result of the tax burden analysis comparisons there is evidence to suggest that the tax burden in Washington, DC may play a role in development patterns in the region. The results of Part I of the report show that among Washington and the “inner suburbs” of Montgomery and Prince Georges County in Maryland and Arlington and Fairfax Counties and the City of Alexandria in Virginia, Washington has the highest overall tax burden for a hypothetical household of three with an income of 25,000 dollars. As those with the lowest income may be the most vulnerable, there may be significant disincentive for low income residents to live within the boundaries of the District of Columbia (Lipman, 2006; Rice, 2006; Brueckner & Kim, 2003; Song & Zenou, 2006). Therefore, it is arguable that there is a potential relationship between the structural imbalance of the District of Columbia and sprawl in the region because there is evidence to suggest that sprawl in the Capital Region is high and there is a tax burden disincentive for low income households to live in the District of Columbia. The degree and extent of this relationship is the subject of speculation and analysis in this thesis and should be the subject of future research that has the time and resources to look deeper into the issue.

Ewing Index Comparisons

The Ewing Index, duplicated in Appendix B, rates the Washington, DC MSA with a 90.8 overall score which places it as the 26th most sprawling region overall among 83 other regions. Washington, DC earned a Connectivity Score of 98, a Centeredness Score of 97.8, a Mixed Use score of 78.7, and a Density score of 106.9. Scores that are lower indicate more sprawl. The average score for each factor is 100. This means that metro areas that have scores above 100 are more compact than average. Therefore, according to the Ewing Index, Washington is less

compact than average. Interestingly, the Houston PMSA has a slightly higher score and, therefore, according to the Ewing Index is less sprawling. Houston is by far the largest city in the United States that does not employ zoning codes.

Table 4-1. Ewing Index Capital City Comparisons. Ewing Index Chart of Washington and Selected State Capital City Metropolitan Regions

Metropolitan Area	Overall Score
Washington DC	90.8
Minneapolis-Saint Paul	95.9
Sacramento	101.9
Austin	110.3
Phoenix	110.9
Denver	125.2
Boston	126.9

Lower numbers indicate more sprawl. Adapted from (Ewing; et. al., 2002).

To control for regional factors, the MSA comparison is extended to include state capital MSA's with the closest populations from 6 regions: the South, Midwest, Northeast, Mountain West, Southwest, and the Far West. Table 3-1 above compares the cities from each of the regions and Washington with regard to the overall score in the index.

South

Representing the South is Austin. The population of Austin as of the 2006 US Census Estimates is 709,893. This makes Austin the 16th largest city in the country. By comparison, Washington, DC has a population according to the same estimates of 581,530 people and currently ranks 24th. The population of the Austin MSA according to 2007 estimates is almost 1.6 million. The population of the Washington, DC MSA is much larger despite Austin's city population being larger. The population of the Washington, DC MSA is roughly 5.3 million. On the Ewing Methodological scale Austin is 59th with an overall score of 110.3.

Midwest

Minneapolis represents the Midwest region. The population of Minneapolis is smaller than Washington, DC by over 200,000 people. When you add Minneapolis's "Twin City" sister

and compare the Minneapolis-St. Paul- Bloomington MSA to the Washington, DC MSA you actually have a much larger disparity between the two: the Washington, DC MSA has roughly a two million person advantage. On the Ewing Methodological Chart the Minneapolis-St. Paul- Bloomington MSA is 38th out of 83 with an overall sprawl score of 95.9 roughly 5 points separates Minneapolis and Washington. Therefore, according to the Ewing Index, the Minneapolis-St. Paul- Bloomington MSA is a little less sprawling than the Washington, DC MSA. Since the difference is minimal and Washington is significantly larger whether you are comparing the size of the city or the MSA, region may not play a significant role in determining sprawl.

Northeast

Representing the Northeast is Boston. The populations of the Boston and Washington, DC MSA's are relatively close; the Boston MSA has less than a million less people than the Washington, DC MSA. In addition, less than ten thousand people separate the two with regard to city population; this time Boston has more people. Therefore, a comparison may work well. The Boston MSA has a low sprawl ranking according to the Ewing Index; it has a ranking of 77 out of 83 with an overall score of 126.9.

Mountain West and Southwest

Both Denver, representing the Mountain West, and Phoenix, representing the Southwest, share a common characteristic: they are the largest cities for hundreds of miles. Denver's city population is less than twenty thousand less than Washington's; Denver's MSA population, however, is only slightly less than half of the Washington MSA's. Phoenix's city population is among the largest in the country: its population is ranked number five with just over one and a half million people. Both MSA's are ranked as among the least sprawling among the 83 regions.

Denver is ranked 72nd with a score of 125.2 overall. Phoenix is ranked almost as low sprawling with a ranking of 61st and an overall score of 110.9.

Far West

Representing the Far West is Sacramento. California’s capital city is certainly not the largest city for hundreds of miles, but its size is somewhat similar to Washington. Sacramento’s city population is slightly more than four hundred and fifty thousand which is over one hundred and thirty less than Washington. When it comes to comparing the Metropolitan Statistical Areas the difference is more striking: the Sacramento MSA has a population of less than half of Washington’s. The Ewing Index ranking for the Sacramento MSA is 46th with an overall score of 102.6. Therefore, according to this index, the Sacramento MSA is somewhat less sprawling than Washington.

Sprawl City Index Comparison

In the Sprawl City Index, duplicated in Index B, the Washington, DC region is ranked fourth out of 100 urbanized areas. This index states that Washington has 450.1 square miles of growth in its urbanized area. Only three urbanized areas are ranked as having more: Atlanta, Houston, and New York. Of the six capital city regions, Washington is ranked first. Table 3-2 below shows where each is ranked.

Table 4-2. Sprawl City Index Capital City Comparisons

Urbanized Area	Square Miles of Growth in Urbanized Area
Washington DC	450.1
Phoenix	353.6
Minneapolis-Saint Paul	341.6
Boston	226.8
Austin	187.4
Denver	166.0
Sacramento	89.7

Higher numbers indicate more sprawl. Adapted from (www.sprawlcity.org, 2000).

USA Today Index Comparison

In the USA Today Index, duplicated in Index B, the Washington, DC region is ranked as the 15th most sprawling region among 271 metropolitan areas. The rankings in this index are based on two density related measures. In this index, one of the capital cities was ranked as more sprawling than Washington: Austin, Texas. Nevertheless, Washington is still ranked among the most sprawling among the six capital cities compared. Table 3-3 below shows where each is ranked.

Table 4-3. USA Today Index Capital City Comparisons

Metropolitan Area	Sprawl Index Score
Austin	413
Washington DC	261
Phoenix	216
Denver	199
Minneapolis-Saint Paul	140
Boston	127
Sacramento	116

Higher numbers indicate more sprawl. Adapted from (USA Today, 2001).

Of critical significance, all the state capitals, representing all regions of the country, have lower sprawl in their regions according to two out of the three indexes. In the other index, Washington has the second most sprawl among the regions compared. Therefore, there is evidence that suggests that Washington has more sprawl in its region than other capital cities in the United States. Of note DC is special in that it is a national capital and the comparisons are with state capitals; entities that do not completely share the same characteristics. While this evidence is far from suggesting that there is an impact on sprawl in the Capital Region stemming from the structural imbalance, it may suggest that the Washington, DC MSA has more sprawl, according to the two of the three, than the other capital cities in the comparison and is among the most sprawling in all three indexes.

Tax Burden Comparison Analysis

As noted previously, “Tax Rates and Tax Burdens: Washington Metropolitan Area 2006” makes comparisons of tax burdens between the District of Columbia and five communities close by: Montgomery and Prince Georges Counties in Maryland and Arlington and Fairfax Counties and the city of Alexandria in Virginia. The analysis contained in this report includes analysis of what hypothetical families of three would pay at different income levels: \$25,000, \$50,000, \$100,000, and \$150,000. This analysis plugs in factors such as whether or not they own a home, and how many cars they own, and therefore is more comprehensive than simply comparing the rates. According to the tax burden analysis, at the \$25,000 income level, Washington has the highest overall tax burden. This tax burden is found to be \$567 more than the lowest tax burden which is located in Prince George’s County and over \$300 more than the average tax burden for the area studied. At the \$50,000 income level, the hypothetical household of three actually pays the least among the jurisdictions studied. For the final three income levels, the District is statistically in the middle (Wyatt, Tax Rates and Tax Burdens: Washington Metropolitan Area 2006, 2007). These results show that among Washington and the “inner suburbs” included in this part of the report, Washington has the highest overall tax burden for a hypothetical household of three with an income of 25,000 dollars. As those with the lowest income may be the most vulnerable, there may be significant disincentive for low income residents to live within the boundaries of the District of Columbia.

However, as previously stated, there are many limitations to this analysis. This part of the report that makes this analysis only includes communities that are closer to Washington. The outer counties of the metropolitan region like Loudoun County are not included in it. Another, limitation to using this report is the tax burden analysis, although more accurate than just comparing the rates, does not calculate the tax burden for everybody, just hypothetical families

of three at different income levels. Despite these limitations, this report can still help show a potential relationship between the structural imbalance and development patterns because it can show whether or not there is tax burden either higher or lower in District of Columbia than the surrounding inner suburban communities for at least some people. Therefore, arguably, a potential relationship may be established from this data.

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

As previously stated, there is evidence to suggest a potential relationship between the structural imbalance of the District of Columbia and sprawl in the region because there is evidence to suggest that sprawl in the Capital Region is high and there is a tax burden disincentive for low income households to live in the District of Columbia. The degree and extent of this relationship is the subject of speculation and analysis in this thesis and should be the subject of future research.

The results of the three Sprawl Index Comparisons enable this researcher to make the observation that the Washington, DC region may have more sprawl than other capital cities of similar sizes in different regions. As a result of the tax burden analysis comparisons there is evidence to suggest that the tax burden in Washington, DC may play a role in development patterns in the region. “Tax Rates and Burdens: Washington Metropolitan Area, 2006” shows that among Washington and the “inner suburbs” of Montgomery and Prince Georges County in Maryland and Arlington and Fairfax Counties and the City of Alexandria in Virginia, Washington has the highest overall tax burden for a hypothetical household of three with an income of 25,000 dollars. As those with the lowest income may be the most vulnerable, there is evidence to suggest that there may be significant disincentive for low income residents to live within the boundaries of the District of Columbia (Lipman, 2006; Rice, 2006; Brueckner & Kim, 2003; Song & Zenou, 2006). Therefore, there is evidence to suggest that there may be a potential relationship between the structural imbalance and sprawl with regard to tax burdens.

There are other elements that may have potential relationship with and/or stem from the structural imbalance that may also have an impact on sprawl in the region: lack of voting rights, and a cap on building heights. While these elements may also be a deterrent for people to live in

the District and there has been further discussion of these elements, this research has specifically examined the structural imbalance as it relates to tax burdens.

Planning Implications

As noted earlier, sprawl is an important issue to the Planning profession. Sprawl may become an even more prevalent issue as gas prices continue to soar and awareness of the global climate change phenomenon continues to intensify. The land use patterns associated with sprawl fuel an auto-dependent society. Therefore, studies that can increase the planning profession's knowledge of sprawl and the variables that influence it may be significantly useful.

The desired outcome of the research is to take a look at the relationship between the structural imbalance of the District of Columbia and sprawl in the Capital Region. Exploration of this potential relationship can help to better understand if limitations imposed on a municipality that may potentially cause higher tax burdens may have any association with sprawl in the region.

Furthermore, the sprawl in Washington may have led to decentralized employment. As noted earlier, a study shows that only 18.85% of the employment is within 3 miles of the CBD. Therefore, many people may drive to work. Perhaps, many lower income individuals drive from where they live in the eastern part of the region where it is less expensive to live to the western part of the region where many of the employment centers are located. Whether this is a cause of sprawl or a symptom of it is for other research to explore. However, this is a concrete problem with a potential relationship to sprawl in the Capital Region.

Car dependence may be a result of people living far from work. Car dependency may be considered a tax if one looks at the costs involved. It has been suggested that car ownership may cost around \$6,000 a year to own a car when the cost of car payments, and related costs such as fuel, maintenance, and insurance are factored in (Lewyn, 2002). That figure is nearly a quarter

of the total income, before taxes, for a household earning \$25,000 per year. While many middle to high income residents may be able to afford their commutes, lower income residents are burdened tremendously.

Recommendations

New Look At Zoning

Recently, Donald Shoup weighed in on possible zoning regulation revisions for the District of Columbia that would be the first significant changes in 50 years (Shoup, 2008). He stated that 50 years ago was when the zoning regulations were put into place in Washington. According to Shoup, back then it was assumed that in the future almost everybody in the city would have a car. However, as he notes, as of the 2000 census, 37 percent of households do not own a car. Therefore, he recommends that the zoning regulations, and especially, the off street parking regulations, should be reduced. Shoup ends the article by commending the District of Columbia Office of Planning for recommending just that (Shoup, 2008). Perhaps it is not only time for adjustments to be made in the District of Columbia but also in the other communities that make up the region. Planning for a more compactly built environment may increase the population density in places where it is appropriate so that there can be less density in areas where it is less appropriate. The planning offices of those communities, especially those on the outer periphery, should look into making similar changes.

Future Research

Further research into this topic should include more economic analysis, more residential surveys, and Geographic Information Systems analysis. More specifically, further research can use these tools in order to study the variables looked into in this thesis, sprawl and tax burden; and the variables explored but not analyzed such as the building heights cap and voting rights, and lack of autonomy. Tax burdens, the building heights cap, lack of voting rights, and

lack of autonomy may not only have a potential relationship with sprawl but they also may have a potential relationship with poverty. Other research can also look into other variables involved that may not stem directly from the structural imbalance but may have a potential relationship with the development patterns in the region such as housing costs, the interstate highway, concurrency, NIMBYism, and zoning that mandates low density among numerous other variables. Research following those general guidelines may shed more light on this important subject.

Regional Planning

Calthorp & Fulton (2001) argue that one of the greatest ways to combat sprawl is more planning at the regional level. While there are regional planning organizations that plan for this region, it may be more difficult to coordinate planning for this region because three "state" jurisdictions are involved, but more significantly, because of the lack of autonomy that the District of Columbia government has. Perhaps the District government will be given more autonomy in the future. That may be the best way to help alleviate this problem.

In the absence of the District of Columbia being given more autonomy, the governments of the adjacent jurisdictions and the outer suburbs can attempt to reduce sprawl by giving incentives for developers to do more infill projects and disincentivising development projects that are on the fringe. These jurisdictions, especially, the outer suburban ones, can do a better job to encourage smarter and more responsible growth. Perhaps, all of these jurisdictions can work together on regional solutions. Perhaps, tax incentives for affordable housing in historically preserved structures may be a way to recycle old housing stock in Washington and the inner, older suburbs and help lower income residents live closer to the city center. Perhaps, also, a program like this can reduce sprawl as suggested earlier in this paper. It may be most effective if it is coordinated at the regional level. Of course a program like this would also

reduce revenue that the District takes in. However, if the program has success and draws more residents to the city or at least curtails sprawl then reductions in revenue from property taxes due to exemptions can be made up with additions to revenue from income taxes and other economic development that may occur as a result of a successful program.

Something that may supplement regional planning coordination well is planning at the neighborhood level. In 1975 a new entity called the Advisory Neighborhood Commission (ANC) was created in Washington. The ANC is made up of 37 local commissions comprised of 299 single member districts. The commissions take up local issues, mostly planning issues, such as zoning, traffic device placement, and parking. It is the job of the commissions to make recommendations to the mayor, city council, and other applicable government agencies on these issues. The commissions hold regular, usually monthly, meetings with their constituents to discuss the issues before making formal recommendations. The recommendations made are to carry “great weight” (Office of the District of Columbia Auditor, 2001). Entities like the Advisory Neighborhood Commission can help municipal governments make decisions based on input from local community leaders and, therefore, better planning decisions may come as a result. Better planning decisions may lead to more density, successful redevelopment, and more attractive neighborhoods, and therefore a potential reduction in sprawl. Perhaps, communities on the periphery can adopt this program that Washington has had for years.

APPENDIX A
GERMAIN SECTIONS OF THE DC HOME RULE ACT

Public Law 93-198; 87 Stat. 777; D.C. Code § 1-201 *passim*
Approved December 24, 1973, as amended

ADVISORY NEIGHBORHOOD COMMISSIONS

SEC. 738. [D.C. Code 1-251] (a) The Council shall by act divide the District into neighborhood commission areas and, upon receiving a petition signed by at least 5 per centum of the registered qualified electors of a neighborhood commission area, shall establish for that neighborhood an elected advisory neighborhood commission. In designating such neighborhoods, the Council shall consider natural geographic boundaries, election districts, and divisions of the District made for the purpose of administration of services.

(b) Elections for members of each advisory neighborhood commission shall be nonpartisan, and shall be administered by the Board of Elections and Ethics. Advisory neighborhood commission members shall be elected from single-member districts within each neighborhood commission area by the registered qualified electors of such district.

(c) Each advisory neighborhood commission--

(1) may advise the District government on matters of public policy including decisions regarding planning, streets, recreation, social services programs, health, safety, and sanitation in that neighborhood commission area;

(2) may employ staff and expend, for public purposes within its neighborhood commission area, public funds and other funds donated to it; and

(3) shall have such other powers and duties as may be provided by act of the Council.

(d) In the manner provided by act of the Council, in addition to any other notice required by law, timely notice shall be given to each advisory neighborhood commission of requested or proposed zoning changes, variances, public improvements, licenses, or permits of significance to neighborhood planning and development within its neighborhood commission area for its review, comment, and recommendation.

(e) In order to pay the expenses of the advisory neighborhood commissions, enable them to employ such staff as may be necessary, and to conduct programs for the welfare of the people in a neighborhood commission area, the District government shall allot funds to the advisory neighborhood commissions out of the general revenues of the District. The funding apportioned to each advisory neighborhood commission shall bear the same ratio to the full sum allotted as the population of the neighborhood bears to the population of the District. The Council may authorize additional methods of financing advisory neighborhood commissions.

(f) The Council shall by act make provisions for the handling of funds and accounts by each advisory neighborhood commission and shall establish guidelines with respect to the employment of persons by each advisory neighborhood commission, which shall include fixing the status of such employees with respect to the District government, but all such provisions and guidelines shall be uniform for all advisory neighborhood commissions and shall provide that decisions to employ and discharge employees shall be made by the advisory neighborhood commission. These provisions shall conform to the extent practicable to the regular budgetary, expenditure and auditing procedures and the personnel merit system of the District.

(g) The Council shall have authority, in accordance with the provisions of this Act, to legislate with respect to the advisory neighborhood commissions established in this section.

(h) The foregoing provisions of this section shall take effect only if agreed to in accordance with the provisions of section 703(a) of this Act [uncodified].

AGREEMENTS WITH UNITED STATES

SEC. 731. [D.C. Code 1131.1] (a) To prevent duplication and to promote efficiency and economy, an officer or employee of:

(1) The United States government may provide services to the District of Columbia government; and

(2) The District of Columbia government may provide services to the United States government.

(b) (1) Services under this section shall be provided under an agreement:

(A) Negotiated by officers and employees of the 2 governments; and

(B) Approved by the Director of the Office of Management and Budget and the Mayor of the District of Columbia.

(2) Each agreement shall provide that the cost of providing the services shall be borne in the way provided in subsection (c) of this section by the government to which the services are provided at rates or charges based on the actual cost of providing the services.

(3) To carry out an agreement made under this subsection, the agreement may provide for the delegation of duties and powers of officers and employees of:

(A) The District of Columbia government to officers and employees of the United States government; and

(B) The United States government to officers and employees of the District of Columbia government.

(c) In providing services under an agreement made under subsection (b) of this section:

(1) Costs incurred by the United States government may be paid from appropriations available to the District of Columbia government officer or employee to whom the services were provided; and

(2) Costs incurred by the District of Columbia government may be paid from amounts available to the United States government officer or employee to whom the services were provided.

(d) When requested by the Director of the United States Secret Service Division, the Chief of the Metropolitan Police shall assist the Secret Service and the United States Secret Service Uniformed Division on a non-reimbursable basis in carrying out their protective duties under section 302 to title 3 and section 3056 of title 18 [of the U.S.C.].

ENACTMENT OF APPROPRIATIONS BY CONGRESS

SEC. 446. [D.C. Code 47-304] The Council, within fifty calendar days after receipt of the budget proposal from the Mayor, and after public hearing, shall by act adopt the annual budget for the District of Columbia government. Any supplements thereto shall also be adopted by act by the Council after public hearing. Such budget so adopted shall be submitted by the Mayor to the President for transmission by him to the Congress. Except as provided in section 445A(b), section 467(d), section 471(c), section 472(d)(2), section 475(e)(2), section 483(d), and section 490(f), (g), and (h)(3) [D.C. Code 43-1691(b), 47-326.1(d), 47-327(c), 47-328(d)(2), 47-330.1(e)(2), 47-331.2(d), and subsections (f), (g), and (h)(3) of 47-334], no amount may be obligated or expended by any officer or employee of the District of Columbia government unless such amount has been approved by Act of Congress, and then only according to such Act. Notwithstanding any other provision of this Act, the Mayor shall not transmit any annual budget or amendments or supplements thereto, to the President of the United States until the completion of the budget procedures contained in this Act. After the adoption of the annual budget for a fiscal year (beginning with the annual budget for fiscal year 1995), no reprogramming of amounts in the budget may occur unless the Mayor submits to the Council a request for such reprogramming and the Council approves the request, but only if any additional expenditures provided under such request for an activity are offset by reductions in expenditures for another activity.

REIMBURSABLE APPROPRIATIONS FOR THE DISTRICT

Sec. 722. [Uncodified] (a) The Secretary of the Treasury is authorized to advance to the District of Columbia the sum of \$750,000, out of any money in the Treasury not otherwise appropriated, for use (1) in the paying the expenses of the Board of Education (including compensation of the members thereof), and (2) in otherwise carrying into effect the provisions of this Act.

(b) The full amount expended out of the money advanced pursuant to this section shall be reimbursed to the United States, without interest, during the second fiscal year which begins after the effective date of title IV [January 2, 1975], from the general fund of the District.

TITLE VI -- RESERVATION OF CONGRESSIONAL AUTHORITY

RETENTION OF CONSTITUTIONAL AUTHORITY

SEC. 601. [D.C. Code 1-206] Notwithstanding any other provision of this Act, the Congress of the United States reserves the right, at any time, to exercise its constitutional authority as legislature for the District, by enacting legislation for the District on any subject, whether within or without the scope of legislative power granted to the Council by this Act, including legislation to amend or repeal any law in force in the District prior to or after enactment of this Act and any act passed by the Council.

LIMITATIONS ON THE COUNCIL

SEC. 602. [D.C. Code 1-233] (a) The Council shall have no authority to pass any act contrary to the provisions of this Act except as specifically provided in this Act, or to--

(1) impose any tax on property of the United States or any of the several states;

(2) lend the public credit for support of any private undertaking;

(3) enact any act, or enact any act to amend or repeal any Act of Congress, which concerns the functions or property of the United States or which is not restricted in its application exclusively in or to the District;

(4) enact any act, resolution, or rule with respect to any provision of title 11 of the District of Columbia Code (relating to organization and jurisdiction of the District of Columbia courts);

(5) impose any tax on the whole or any portion of the personal income, either directly or at the source thereof, of any individual not a resident of the District (the terms "individual" and "resident" to be understood for the purposes of this paragraph as they are defined in section 4 of title I of the District of Columbia Income and Franchise Tax Act of 1947[, approved July 16, 1947 (61 Stat. 332; D.C. Code 47-1801.4)]);

(6) enact any act, resolution, or rule which permits the building of any structure within the District of Columbia in excess of the height limitations contained in section 5 of the Act of June 1, 1910 [An Act To regulate the height of buildings in the District of Columbia (36 Stat. 453)] (D.C. Code, sec. 5-405), and in effect on the date of enactment of this Act [December 24, 1973];

(7) enact any act, resolution, or regulation with respect to the Commission on Mental Health;

(8) enact any act or regulation relating to the United States District Court for the District of Columbia or any other court of the United States in the District other than the District courts, or relating to the duties or powers of the United States Attorney or the United States Marshal for the District of Columbia;

(9) enact any act, resolution, or rule with respect to any provision of title 23 of the District of Columbia Code (relating to criminal procedure), or with respect to any provision of any law codified in title 22 or 24 of the District of Columbia Code (relating to crimes and treatment of prisoners), or with respect to any criminal offense pertaining to articles subject to regulation under chapter 32 of title 22 during the forty-eight full calendar months immediately following the day on which the members of the Council first elected pursuant to this Act take office; or

(10) enact any act, resolution, or rule with respect to the District of Columbia Financial Responsibility and Management Assistance Authority established under section 101(a) of the District of Columbia Financial Responsibility and Management Assistance Act of 1995 [, approved April 17, 1995 (109 Stat. 100; D.C. Code 47-391.1(a))].

(b) Nothing in this Act shall be construed as vesting in the District government any greater authority over the National Zoological Park, the National Guard of the District of Columbia, the Washington Aqueduct, the National Capital Planning Commission, or, except as otherwise specifically provided in this Act, over any federal agency, than was vested in the Commissioner [Mayor] prior to the effective date of title IV [District Charter] of this Act [January 2, 1975].

(c) (1) Except acts of the Council which are submitted to the President in accordance with the Budget and Accounting Act, 1921 [Chapter 11 of Title 31, United States Code], any act which the Council determines, according to section 412(a) [D.C. Code 1-229(a)], should take effect immediately because of emergency circumstances, and acts proposing amendments to title IV of this Act [District Charter] and except as provided in section 462(c) and section 472(d)(1) [D.C. Code 47-322(c) and 47-328(d)(1)], the Chairman of the Council shall transmit to the Speaker of the House of Representatives, and the President of the Senate, a copy of each act passed by the Council and signed by the Mayor, or vetoed by the Mayor and repassed by two-thirds of the Council present and voting, each act passed by the Council and allowed to become effective by the Mayor without his signature, and each initiated act and act subject to referendum which has been ratified by a majority of the registered qualified electors voting on the initiative or referendum. Except as provided in paragraph (2) [of this subsection,] such act shall take effect upon the expiration of the 30-calendar-day period (excluding Saturdays, Sundays, and holidays, and any day on which neither House is in session because of an adjournment sine die, a recess of more than three days, or an adjournment of more than three days) beginning on the day such act is transmitted by the Chairman to the Speaker of the House of Representatives and the President of the Senate, or upon the date prescribed by such act, whichever is later, unless during such 30-day period, there has been enacted into law a joint resolution disapproving such act. In any case in which any such joint resolution disapproving such an act has, within such 30-day period, passed both Houses of Congress and has been transmitted to the President, such resolution, upon becoming law, subsequent to the expiration of such 30-day period, shall be deemed to have repealed such act, as of the date such resolution becomes law. The provisions of section 604 [D.C. Code 1-207], except subsections (d), (e), and (f) of such section, shall apply with respect to any joint resolution disapproving any act pursuant to this paragraph.

(2) In the case of any such act transmitted by the Chairman with respect to any act codified in title 22, 23, or 24 of the District of Columbia Code, such act shall take effect at the end of the 60-day period beginning on the day such act is transmitted by the Chairman to the Speaker of the

House of Representatives and the President of the Senate unless, during such 60-day period, there has been enacted into law a joint resolution disapproving such act. In any case in which any such joint resolution disapproving such an act has, within such 60-day period, passed both Houses of Congress and has been transmitted to the President, such resolution, upon becoming law subsequent to the expiration of such 60-day period shall be deemed to have repealed such act, as of the date such resolution becomes law. The provisions of section 604 [D.C. Code 1-207], relating to an expedited procedure for consideration of joint resolutions, shall apply to a joint resolution disapproving such act as specified in this paragraph.

(3) The Council shall submit with each Act transmitted under this subsection an estimate of the costs which will be incurred by the District of Columbia as a result of the enactment of the Act in each of the first 4 fiscal years for which the Act is in effect, together with a statement of the basis for such estimate.

BUDGET PROCESS; LIMITATIONS ON BORROWING AND SPENDING

SEC. 603. [D.C. Code 47-313] (a) Nothing in this act shall be construed as making any change in existing law, regulation, or basic procedure and practice relating to the respective roles of the Congress, the President, the federal Office of Management and Budget, and the Comptroller General of the United States in the preparation, review, submission, examination, authorization, and appropriation of the total budget of the District of Columbia government.

(b)(1) No general obligation bonds (other than bonds to refund outstanding indebtedness) or Treasury capital project loans shall be issued during any fiscal year in an amount which would cause the amount of principal and interest required to be paid both serially and into a sinking fund in any fiscal year on the aggregate amounts of all outstanding general obligation bonds and such Treasury loans, to exceed 17 percent of the District revenues (less any fees or revenues directed to servicing revenue bonds, any revenues, charges, or fees dedicated for the purposes of water and sewer facilities described in section 490(a) [D.C. Code 47-334] (including fees or revenues directed to servicing or securing revenue bonds issued for such purposes), retirement contributions, revenues from retirement systems, and revenues derived from such Treasury loans and the sale of general obligation or revenue bonds) which the Mayor estimates, and the District of Columbia Auditor certifies, will be credited to the District during the fiscal year in which the bonds will be issued. Treasury capital project loans include all borrowings from the United States Treasury, except those funds advanced to the District by the Secretary of the Treasury under the provisions of title VI of the District of Columbia Revenue Act of 1939[, approved July 26, 1939 (P.L. 76-225; 53 Stat. 1118)].

(2) Obligations incurred pursuant to the authority contained in the District of Columbia Stadium Act of 1957[, approved September 7, 1957] (71 Stat. 619; D.C. Code, title 2, chapter 17, subchapter II) [D.C. Code 2-321 through 2-330], obligations incurred by the agencies transferred or established by sections 201 [Amendment to the District of Columbia Redevelopment Act of 1945] and 202 [D.C. Code 5-102], whether incurred before or after such transfer or establishment, and obligations incurred pursuant to general obligation bonds of the District of Columbia issued prior to October 1, 1996, for the financing of Department of Public Works, Water and Sewer Utility Administration capital projects, shall not be included in determining the

aggregate amount of all outstanding obligations subject to the limitation specified in the preceding paragraph.

(3) The 17 percent limitation specified in paragraph (1) [of this subsection] shall be calculated in the following manner:

(A) Determine the dollar amount equivalent to 17 percent of the District revenues (less any fees or revenues directed to servicing revenue bonds, any revenues, charges, or fees dedicated for the purposes of water and sewer facilities described in section 490(a) [D.C. Code 47-334(a)] (including fees or revenues directed to servicing or securing revenue bonds issued for such purposes), retirement contributions, revenues from retirement systems, and revenues derived from such Treasury loans and the sale of general obligation or revenue bonds) which the Mayor estimates, and the District of Columbia Auditor certifies, will be credited to the District during the fiscal year for which the bonds will be issued;

(B) Determine the actual total amount of principal and interest to be paid in each fiscal year for all outstanding general obligation bonds (less the allocable portion of principal and interest to be paid during the year on general obligation bonds of the District of Columbia issued prior to October 1, 1996, for the financing of Department of Public Works, Water and Sewer Utility Administration capital projects) and such Treasury loans;

(C) Determine the amount of principal and interest to be paid during each fiscal year over the term of the proposed general obligation bond or such Treasury loan to be issued; and

(D) If in any one fiscal year the sum arrived at by adding subparagraphs (B) and (C) [of this paragraph] exceeds the amount determined under subparagraph (A) [of this paragraph], then the proposed general obligation bond or such Treasury loan in subparagraph (C) [of this paragraph] cannot be issued.

(c) Except as provided in subsection (f) [of this section], the Council shall not approve any budget which would result in expenditures being made by the District government, during any fiscal year, in excess of all resources which the Mayor estimates will be available from all funds available to the District for such fiscal year. The budget shall identify any tax increases which shall be required in order to balance the budget as submitted. The Council shall be required to adopt such tax increases to the extent its budget is approved.

(d) Except as provided in subsection (f) [of this section], the Mayor shall not forward to the President for submission to Congress a budget which is not balanced according to the provision of subsection 603(c) [subsection (c) of this section].

(e) Nothing in this Act shall be construed as affecting the applicability to the District government of the provisions of section 3679 of the Revised Statutes of the United States (31 U.S.C. 1341), the so-called Anti-Deficiency Act [D.C. Code 1341, 1342, and 1349 to 1351 and subchapter II of Chapter 15 of Title 31, United States Code].

(f) In the case of a fiscal year which is a control year (as defined in section 305(4) of the District of Columbia Financial Responsibility and Management Assistance Act of 1995[, approved April 17, 1995 (109 Stat. 152; D.C. Code 47-393(4))], the Council may not approve, and the Mayor may not forward to the President, any budget which is not consistent with the financial plan and budget established for the fiscal year under subtitle A of title II of such Act [subpart B of subchapter VII of Chapter 3 of Title 47 of the D.C. Code].

CONGRESSIONAL ACTION ON CERTAIN DISTRICT MATTERS

SEC. 604. [D.C. Code 1-207] (a) This section is enacted by Congress--

(1) as an exercise of the rulemaking power of the Senate and the House of Representatives, respectively, and as such these provisions are deemed a part of the rule of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of resolutions described by this section; and they supersede other rules only to the extent that they are inconsistent therewith; and

(2) with full recognition of the constitutional right of either House to change the rule (so far as relating to the procedure of that House) at any time, in the same manner and to the same extent as in the case of any other rule of that House.

(b) For the purpose of this section, "resolution" means only a joint resolution, the matter after the resolving clause of which is as follows: "That the approves/disapproves of the action of the District of Columbia Council described as follows:", the blank spaces therein being appropriately filled, and either approval or disapproval being appropriately indicated; but does not include a resolution which specifies more than 1 action.

(c) A resolution with respect to Council action shall be referred to the Committee on the District of Columbia of the House of Representatives, or the Committee on the District of Columbia of the Senate, by the President of the Senate or the Speaker of the House of Representatives, as the case may be.

(d) If the Committee to which a resolution has been referred has not reported it at the end of 20 calendar days after its introduction, it is in order to move to discharge the Committee from further consideration of any other resolution with respect to the same Council action which has been referred to the Committee.

(e) A motion to discharge may be made only by an individual favoring the resolution, is highly privileged (except that it may not be made after the Committee has reported a resolution with respect to the same action), and debate thereon shall be limited to not more than 1 hour, to be divided equally between those favoring and those opposing the resolution. An amendment to the motion is not in order, and it is not in order to move to reconsider the vote by which the motion is agreed to or disagreed to.

(f) If the motion to discharge is agreed to or disagreed to, the motion may not be renewed, nor may another motion to discharge the Committee be made with respect to any other resolution with respect to the same action.

(g) When the Committee has reported, or has been discharged from further consideration of, a resolution, it is at any time thereafter in order (even though a previous motion to the same effect has been disagreed to) to move to proceed to the consideration of the resolution. The motion is highly privileged and is not debatable. An amendment to the motion is not in order, and it is not in order to move to reconsider the vote by which the motion is agreed to or disagreed to.

(h) Debate on the resolution shall be limited to not more than 10 hours, which shall be divided equally between those favoring and those opposing the resolution. A motion further to limit debate is not debatable. An amendment to, or motion to recommit, the resolution is not in order, and it is not in order to move to reconsider the vote by which the resolution is agreed to or disagreed to.

(i) Motions to postpone made with respect to the discharge from Committee or the consideration of a resolution, and motions to proceed to the consideration of other business, shall be decided without debate.

(j) Appeals from the decisions of the chair relating to the application of the rules of the Senate or the House of Representatives, as the case may be, to the procedure relating to a resolution shall be decided without debate.

APPENDIX B
TAX BURDEN CHARTS

Table B-1. Summary of average major tax burdens for selected Washington Metropolitan area jurisdictions and the District of Columbia Calendar year 2006

Income (\$)	Tax burdens		Percent of income	
	Area Average	District Of Columbia	Area Average	District Of Columbia
Overall burden				
25,000	2,769	3,088	11.1%	12.4%
50,000	4,476	4,052	9.0%	8.1%
75,000	7,404	6,986	9.9%	9.3%
100,000	9,729	9,482	9.7%	9.5%
150,000	14,628	15,027	9.8%	10.0%
Individual income				
25,000	219	510	0.9%	2.0%
50,000	1,556	1,579	3.1%	3.2%
75,000	3,108	3,228	4.1%	4.3%
100,000	4,788	5,139	4.8%	5.1%
150,000	8,195	9,224	5.5%	6.1%
Real estate				
25,000	1,805	1,805	7.2%	7.2%
50,000	1,921	1,431	3.8%	2.9%
75,000	2,625	2,124	3.5%	2.8%
100,000	3,060	2,554	3.1%	2.6%
150,000	3,912	3,393	2.6%	2.3%

Table B-1. Continued

Sales and use					
25,000	499	547	2.0%	2.2%	
50,000	737	823	1.5%	1.6%	
75,000	1,108	1,252	1.5%	1.7%	
100,000	1,230	1,404	1.2%	1.4%	
150,000	1,752	2,025	1.2%	1.3%	
Automobile					
25,000	246	226	1.0%	0.9%	
50,000	262	218	0.5%	0.4%	
75,000	563	382	0.8%	0.5%	
100,000	650	386	0.7%	0.4%	
150,000	770	386	0.5%	0.3%	

Tables Produced by Government of District of Columbia: Office of Revenue Analysis
 (Wyatt, Tax Rates and Tax Burdens: Washington Metropolitan Area 2006, 2007)

APPENDIX C
SPRAWL INDEXES

Table C-1 Ewing Index Sprawl Scores for 83 Metropolitan Regions Source: (Ewing, et al. 2002)

Metropolitan Region	Overall Sprawl Score	Street Connectivity Score	Centeredness Score	Mixed Use Score	Density Score
Riverside—San Bernardino, CA PMSA	14.2	80.5	41.4	41.5	93.5
Greensboro—Winston-Salem—High Point, NC MSA	46.8	66.3	69.1	46.7	74.2
Raleigh—Durham, NC MSA	54.2	80.8	77.2	39.5	76.2
Atlanta, GA MSA	57.7	57	82.3	73.7	84.5
Greenville—Spartanburg, SC MSA	58.6	62.1	98.5	50.4	71.9
West Palm Beach—Boca Raton—Delray Beach, FL MSA	67.7	104.7	53.9	54.7	94
Bridgeport—Stamford—Norwalk—Danbury, CT NECMA	68.4	80.7	94.8	137.5	92.5
Knoxville, TN MSA	68.7	75.5	97.8	62.9	71.2
Oxnard—Ventura, CA PMSA	75.1	106.5	55.5	139.4	103.9
Fort Worth—Arlington, TX PMSA	77.2	97.5	73.9	89.1	90.3
Gary—Hammond, IN PMSA	77.4	100.5	61.2	123.7	86.4
Rochester, NY MSA	77.9	37.2	120.7	82.3	91.4
Dallas, TX PMSA	78.3	90.2	81.1	82.6	99.5
Vallejo—Fairfield—Napa, CA PMSA	78.4	109.7	40.9	116.3	97.4
Detroit, MI PMSA	79.5	93	63	102.5	97.3
Syracuse, NY MSA	80.3	52.6	124.9	72	85.8
Newark, NJ PMSA	81.3	115.4	82.2	120.4	118.9
Little Rock—North Little Rock, AR MSA	82.3	88.2	105.9	68.3	77.5
Albany—Schenectady—Troy, NY MSA	83.3	73.2	98.5	89.3	82.9
Hartford—New Britain—Middletown—Bristol, CT NEC	85.2	59.6	84.6	119.4	86.3
Oklahoma City, OK MSA	85.6	69.1	95.6	101.3	84.5
Tampa—St. Petersburg—Clearwater, FL MSA	86.3	133.6	51.9	80	93.6
Birmingham, AL MSA	88	104	112.5	62.2	77.1
Baton Rouge, LA MSA	90.1	76.2	106.2	95.9	80.8
Worcester—Fitchburg—Leominster, MA NECMA	90.5	74.5	122.7	82.3	81.2
Washington, DC—MD—VA MSA	90.8	98	97.8	78.7	106.9
Columbus, OH MSA	91.1	97.2	101.5	76.5	91.5
Jacksonville, FL MSA	91.6	104.6	102.1	72.9	85.6
Kansas City, MO—KS MSA	91.6	88.8	89	100	90.9

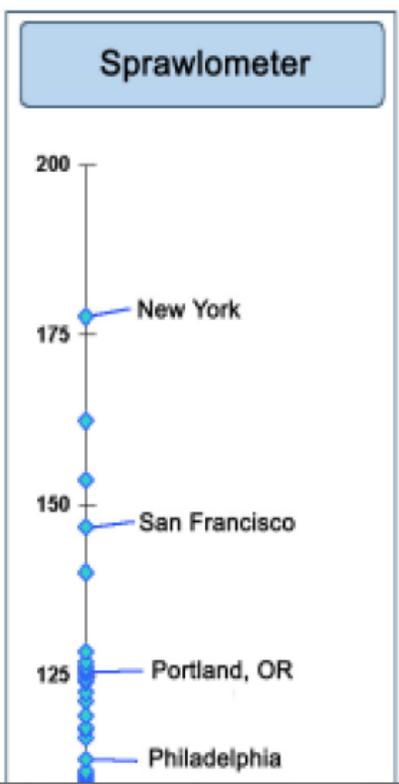


Table C-1. Continued

Cleveland, OH PMSA	91.8	66.8	100.9	107.4	99.7
Memphis, TN—AR—MS MSA	92.2	76.5	104.2	97	88.9
Houston, TX PMSA	93.3	95.6	87	110.1	95.3
Indianapolis, IN MSA	93.7	84.5	102.4	96.2	89.3
Columbia, SC MSA	94.2	79.5	147.3	67.1	74.6
St. Louis, MO—IL MSA	94.5	106	76.2	107.4	90.3
Grand Rapids, MI MSA	95.2	63.7	110.3	115.7	82.7
Norfolk—Virginia Beach—Newport News, VA MSA	95.6	113.1	82	87.2	95
Minneapolis—St. Paul, MN—WI MSA	95.9	87.7	107.8	94.7	94.7
Cincinnati, OH—KY—IN PMSA	96	85.4	110.2	95.8	88.8
Orlando, FL MSA	96.4	120.6	103.5	60.8	93.8
Anaheim—Santa Ana, CA PMSA	97.1	136.4	72.1	121.5	128.8
Oakland, CA PMSA	98.8	133.4	57.6	106.3	116.6
Tulsa, OK MSA	99.1	96.2	115	88	82.7
Seattle, WA PMSA	100.9	117.1	98	79.4	103.6
Los Angeles—Long Beach, CA PMSA	101.8	123.3	72.4	123.1	151.5
San Diego, CA MSA	101.9	106	74.4	105.4	113.4
Sacramento, CA MSA	102.6	98.4	87.4	110.9	99.1
Las Vegas, NV MSA	104.7	108.8	99.8	80.1	110
Akron, OH PMSA	105.9	84.2	119.5	118.7	86.8
Tacoma, WA PMSA	105.9	111.2	122.7	85.6	90.8
Pittsburgh, PA PMSA	105.9	124.2	104.5	86.8	90.4
New Haven—Waterbury—Meriden, CT NECMA	107	86.5	78.9	144.3	91.6
Toledo, OH MSA	107.2	77.6	112.2	119.6	91.3
San Antonio, TX MSA	107.8	103	108.4	100.6	95
Fort Lauderdale—Hollywood—Pompano Beach, FL PMSA	108.4	137.2	75	94.7	113.9
Tucson, AZ MSA	109.1	88	106.4	121.8	90.4
San Jose, CA PMSA	109.7	125.2	93.9	96.6	124.8
Wichita, KS MSA	110.1	78.6	131.4	113.1	84.4
Austin, TX MSA	110.3	94.4	115.8	111.9	89
Fresno, CA MSA	110.3	73	112.6	130.1	93.5
Salt Lake City—Ogden, UT MSA	110.9	117	93.8	103.2	99.5

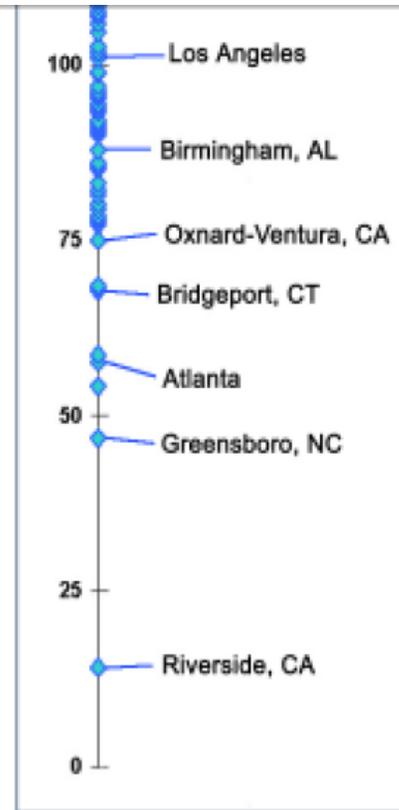


Table C-1. Continued

Metropolitan Region	Overall Sprawl	Street Connectivity	Centeredness	Mixed Use	Density
Phoenix, AZ MSA	110.9	107.2	92.6	116	106.8
Philadelphia, PA—NJ PMSA	112.6	113	95.9	119.5	114.7
Baltimore, MD MSA	115.9	105.2	115.6	106.8	104.3
El Paso, TX MSA	117.2	102.3	119.5	103.4	100.1
Milwaukee, WI PMSA	117.3	93.9	117.7	117.9	101.4
Buffalo, NY PMSA	119.1	70.6	135.2	124.7	102.1
Chicago, IL PMSA	121.2	134.9	85.8	115.1	142.9
Springfield, MA NECMA	122.5	87.3	148.6	115.7	86.3
Allentown—Bethlehem—Easton, PA—NJ MSA	124	131	91.7	133.4	86.2
Colorado Springs, CO MSA	124.4	96.7	135.2	119	91.2
Albuquerque, NM MSA	124.5	117.8	124	103.7	97
Denver, CO PMSA	125.2	125.7	108.9	115.7	103.7
New Orleans, LA MSA	125.4	138.6	123.7	80.4	105.9
Miami—Hialeah, FL PMSA	125.7	136.4	92.7	104.7	129.1
Portland, OR PMSA	126.1	128	121.8	102.3	101.3
Boston—Lawrence—Salem—Lowell—Brockton, MA	126.9	119.1	109.4	124.4	113.6
Omaha, NE—IA MSA	128.4	104.6	132.3	119.3	96.4
Honolulu, HI MSA	140.2	114.3	167.3	84.3	116.5
San Francisco, CA PMSA	146.8	139.8	128.6	107.3	155.2
Providence—Pawtucket—Woonsocket, RI NECMA	153.7	135.9	140.3	140.5	99.1
Jersey City, NJ PMSA	162.3	166.8	98.7	172.9	195.7
New York, NY PMSA	177.8	154.9	144.6	129.8	242.5

Table C-2. 100 Largest U.S. Urbanized Areas ranked by square miles of sprawl (1970-1990)
 Source: (www.sprawlcity.org, 2000)

Urbanized Area (ranked by amount of sprawl)	Square Miles of Sprawl (growth in land area)
1. Atlanta, GA	701.7
2. Houston, TX	638.7
3. New York City-N.E. New Jersey	541.3
4. Washington, DC-MD-VA	450.1
5. Philadelphia, PA	412.4
6. Los Angeles, CA	393.8
7. Dallas-Fort Worth, TX	372.4
8. Tampa-St.Petersburg-Clearwater, FL	358.7
9. Phoenix, AZ	353.6
10. Minneapolis-Saint Paul, MN	341.6
11. San Diego, CA	309.5
12. Oklahoma City, OK	307.7
13. Chicago, IL - N.W. Indiana	307.3
14. Baltimore, MD	282.9
15. Kansas City, MO-KS	268.6
16. Saint Louis, MO-IL	267.6
17. Orlando, FL	262.9
18. Detroit, MI	247.4
19. Boston, MA	226.8
20. Norfolk-Virginia Beach-Newport News, VA	221.4
21. San Antonio, TX	215.1
22. San Francisco-Oakland, CA	193.1
23. Austin, TX	187.4
24. Pittsburgh, PA	181.7
25. Cincinnati, OH-KY	176.6
26. Seattle, WA	174.8
27. Birmingham, AL	174.2
28. West Palm Beach-Boca Raton, FL	170.2
29. Denver, CO	166.0
30. Richmond, VA	158.1
31. Jacksonville, FL	156.4
32. Charleston, SC	151.7
Table C-2 Continued	
33. Riverside-San Bernardino, CA	150.4
34. Memphis, TN	145.5

35. Jackson, MS	144.7
36. Tucson, AZ	141.8
37. Chattanooga, TN-GA	140.1
38. Nashville, TN	140.0
39. Charlotte, NC	136.0
40. Knoxville, TN	132.7
41. Tulsa, OK	124.3
42. Portland-Vancouver, OR-WA	121.2
43. Fort Lauderdale-Hollywood-Pompano, FL	114.9
44. Albuquerque, NM	111.4
45. Hartford-Middletown, CT	110.8
46. Columbus, OH	110.4
47. Las Vegas, NV	109.9
48. Raleigh, NC	105.4
49. Tacoma, WA	104.1
50. Little Rock-North Little Rock, AR	103.9
51. El Paso, TX-NM	101.0
52. Baton Rouge, LA	100.9
53. Columbia, SC	95.6
54. Miami-Hialeah, FL	94.0
55. Ogden, UT	91.9
56. McAllen-Edinburg-Mission, TX	91.6
57. Sacramento, CA	89.7
58. Pensacola, FL	88.9
59. Indianapolis, IN	87.7
60. Colorado Springs, CO	86.6
61. New Orleans, LA	86.1
62. New Haven-Meriden, CT	80.4
63. Wilmington, DE-NJ-MS-PA	78.0
64. Greenville, SC	77.2
65. Grand Rapids, MI	77.0
66. Rochester, NY	74.3
67. Louisville, KY-IN	72.2
68. Buffalo-Niagara Falls, NY	71.8
69. Harrisburg, PA	71.4
70. Salt Lake City, UT	69.8
Table C-2 Continued	67.4
71. Flint, MI	

72. Springfield, MA-CT	64.1
73. San Jose, CA	61.2
74. Mobile, AL	60.5
75. Albany-Schenectady-Troy, NY	58.2
76. Milwaukee, WI	55.5
77. Providence-Pawtucket, RI-MA	54.6
78. Worcester, MA-CT	54.3
79. Akron, OH	53.6
80. Fresno, CA	53.6
81. Shreveport, LA	52.2
82. Des Moines, IA	50.6
83. Dayton, OH	49.2
84. Oxnard-Ventura, CA	45.6
85. Allentown-Bethlehem-Easton, PA	43.6
86. Omaha, NE-IA	41.8
87. Bakersfield, CA	41.1
88. Wichita, KS	39.4
89. Youngstown-Warren, OH	38.7
90. Syracuse, NY	37.4
91. Spokane, WA	35.8
92. Trenton, NJ-PA	30.4
93. Toledo, OH-MI	27.9
94. Stockton, CA	27.0
95. Lansing-East Lansing, MI	25.3
96. Corpus Christi, TX	25.2
97. Honolulu, HI	23.7
98. Scranton-Wilkes-Barre, PA	20.4
99. Bridgeport-Milford, CT	11.9
100. Cleveland, OH	- 10.2
Total	14,545.2
Average Urbanized Area (mean of values in column)	145.5

* Land Area Data derived from U.S. Census Bureau's 1970 and 1990 reports on Urbanized Land Area.

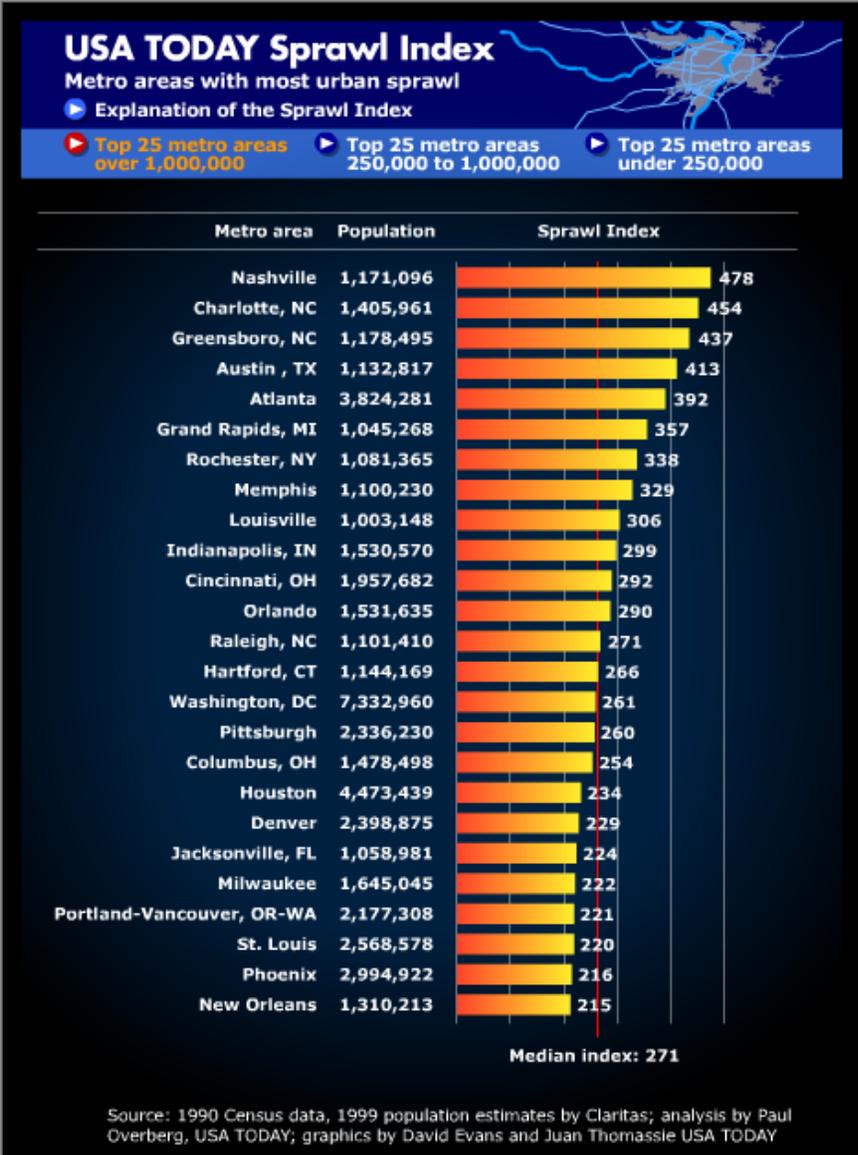


Figure C-1. USA Today Sprawl Index Top 25 Sprawling Regions

Table C-3. USA Today Sprawl Index for Other Regions

Metro area	Sprawl index score	Pop. in 1999	Pop. % in urbanized areas in 1999	Rank	Change from 1990-99	Rank
Ocala, Fla.	536	245,541	31.40%	267	-10.10%	269
San Luis Obispo, Calif.	528	237,170	21.50%	271	-7.20%	257
Johnstown, Pa.	504	235,213	30.50%	268	-5.40%	236
Charlottesville, Va.	501	150,961	47.80%	241	-7.30%	260
Sumter, S.C.	481	107,295	51.70%	218	-8.00%	263
Lima, Ohio	480	153,867	42.40%	255	-4.70%	225
Nashville	478	1,171,096	53.00%	211	-9.00%	267
Terre Haute, Ind.	477	148,376	49.20%	233	-5.80%	244
New London, Conn.-R.I.	474	282,048	50.50%	228	-6.00%	246
Little Rock, Ark.	474	560,035	54.10%	206	-9.00%	268
Boise City, Idaho	473	405,007	52.70%	214	-7.20%	259
Bellingham, Wash.	471	159,493	44.30%	251	-4.50%	220
Saginaw, Mich.	469	401,279	50.60%	227	-5.70%	242
Jackson, Mich.	469	156,597	49.30%	231	-5.50%	238
Utica, N.Y.	468	291,615	47.70%	242	-4.70%	226
Athens, Ga.	466	139,732	53.80%	208	-7.20%	258
Knoxville, Tenn.	464	663,880	49.20%	232	-5.30%	232
Springfield, Mo.	463	307,824	55.30%	199	-8.10%	264
Portland, Maine	457	232,708	51.40%	220	-5.40%	237
Benton Harbor, Mich.	455	159,862	34.50%	266	-3.50%	189
Parkersburg, W.Va.-Ohio	455	149,905	37.90%	261	-3.60%	194
Charlotte, N.C.	454	1,405,961	56.30%	193	-7.40%	261
Fort Wayne, Ind.	452	483,652	51.50%	219	-5.30%	233
Yuma, Ariz.	451	134,532	58.20%	181	-12.40%	270
Punta Gorda, Fla.	450	135,815	56.10%	194	-7.20%	256
Williamsport, Pa.	450	116,744	46.50%	246	-3.90%	204
York, Pa.	450	375,635	40.50%	257	-3.60%	193
Merced, Calif.	448	201,676	35.10%	265	-3.20%	183
Lexington, Ky.	446	453,450	51.70%	217	-4.90%	229
Jackson, Tenn.	445	101,463	55.00%	200	-5.80%	245
Danville, Va.	441	107,739	48.10%	239	-3.80%	202
Wausau, Wis.	437	123,748	47.90%	240	-3.60%	197
Naples, Fla.	437	209,017	57.60%	184	-7.10%	253
Greensboro, N.C.	437	1,178,495	51.30%	223	-4.20%	214
Wilmington, N.C.	435	222,793	55.90%	196	-5.50%	239
Mobile, Ala.	433	536,301	58.60%	178	-7.10%	255
Lakeland, Fla.	431	462,884	54.80%	201	-5.00%	230
Sheboygan, Wis.	423	110,580	55.90%	195	-4.80%	228
Burlington, Vt.	418	168,896	54.20%	205	-4.20%	213
Fort Myers, Fla.	417	403,863	61.30%	165	-6.80%	252
Austin, Texas	413	1,132,817	62.00%	163	-6.60%	250
Lancaster, Pa.	408	458,907	44.50%	250	-2.90%	158
Baton Rouge, La.	402	578,445	64.60%	151	-6.70%	251
Lynchburg, Va.	401	209,178	49.10%	234	-3.00%	167
Wheeling, W.Va.-Ohio	401	152,124	51.40%	221	-3.20%	180
Goldsboro, N.C.	399	112,688	55.40%	198	-3.80%	201
Sharon, Pa.	393	121,848	42.60%	254	-2.40%	139
Atlanta	392	3,824,281	67.40%	130	-7.60%	262
Bangor, Maine	391	87,936	62.30%	160	-5.10%	231

Table C-3. Continued

Salinas, Calif.	391	376,814	66.70%	137	-7.10%	254
Beaumont, Texas	388	375,954	61.30%	164	-4.70%	224
Elkhart, Ind.	388	173,805	60.50%	171	-4.30%	217
Appleton, Wis.	384	346,380	65.90%	144	-5.60%	240
Lafayette, Ind.	384	172,920	59.40%	172	-4.20%	212
Savannah, Ga.	382	287,349	70.30%	116	-8.70%	266
Huntsville, Ala.	381	343,820	59.10%	175	-3.90%	206
Barnstable, Mass.	381	152,220	48.20%	237	-2.60%	144
Asheville, N.C.	379	215,427	55.70%	197	-3.20%	182
Gainesville, Fla.	379	206,306	65.80%	145	-5.30%	234
Tallahassee, Fla.	378	274,806	63.70%	155	-4.60%	223
Reading, Pa.	378	357,387	53.70%	209	-3.00%	169
Syracuse, N.Y.	378	732,039	51.00%	225	-2.70%	153
Kalamazoo, Mich.	378	446,939	54.70%	202	-3.10%	176
Fort Smith, Ark.-Okla.	377	195,636	52.20%	216	-2.90%	161
Madison, Wis.	375	428,149	63.60%	156	-4.50%	219
Sherman, Texas	372	103,883	56.60%	191	-3.20%	181
Columbia, S.C.	370	517,411	68.30%	127	-5.70%	243
Evansville, Ind.-Ky.	370	291,396	62.90%	159	-4.10%	211
Myrtle Beach, S.C.	369	178,658	39.80%	259	-1.70%	110
Shreveport, La.	366	378,708	65.20%	148	-4.40%	218
Kokomo, Ind.	364	100,114	57.10%	187	-3.10%	177
Greenville, S.C.	363	926,654	42.20%	256	-1.60%	107
Huntington, W.Va.-Ky.-Ohio	361	313,439	52.90%	212	-2.60%	149
Pensacola, Fla.	360	405,930	69.50%	119	-5.60%	241
Grand Rapids, Mich.	357	1,045,268	62.20%	161	-3.60%	196
Hickory, N.C.	357	325,596	23.70%	270	-1.00%	87
Bakersfield, Calif.	354	636,736	54.20%	204	-2.60%	150
Owensboro, Ky.	353	91,330	66.60%	138	-4.30%	215
Altoona, Pa.	352	130,310	56.90%	188	-2.90%	164
Albany, Ga.	350	118,442	72.70%	103	-6.10%	247
Houma, La.	346	195,114	35.70%	264	-0.90%	82
Chattanooga, Tenn.-Ga.	345	452,198	67.10%	135	-4.00%	210
Jackson, Miss.	345	432,626	69.70%	118	-4.70%	227
Binghamton, N.Y.	342	247,060	58.20%	180	-2.90%	162
Scranton, Pa.	342	611,758	59.00%	177	-3.00%	165
Lafayette, La.	340	378,517	37.30%	262	-0.80%	78
Daytona Beach, Fla.	340	471,864	67.20%	133	-3.90%	207
Pine Bluff, Ark.	339	81,087	69.30%	123	-4.30%	216
Youngstown, Ohio	339	589,432	58.50%	179	-2.90%	160
Rochester, N.Y.	338	1,081,365	56.80%	190	-2.60%	148
Glens Falls, N.Y.	333	121,753	47.20%	245	-1.00%	88
Pueblo, Colo.	333	136,188	79.00%	68	-8.40%	265
Jacksonville, N.C.	333	142,644	65.30%	147	-3.40%	186
Cumberland, Md.-W.Va.	332	97,543	52.80%	213	-1.90%	119
Melbourne, Fla.	331	470,027	76.60%	82	-6.50%	249
Memphis, Tenn.-Ark.-Miss.	329	1,100,230	76.60%	81	-6.40%	248
Alexandria, La.	325	126,953	63.40%	157	-3.00%	168
Biloxi, Miss.	323	352,155	73.10%	101	-4.50%	222
Birmingham, Ala.	323	913,565	71.10%	114	-4.00%	209

Table C-3. Continued

Rockford, Ill.	322	358,704	75.80%	87	-5.40%	235
Montgomery, Ala.	322	323,675	69.20%	124	-3.70%	198
Anniston, Ala.	320	117,136	57.40%	186	-2.30%	134
Florence, S.C.	319	125,609	47.50%	243	-0.70%	76
Springfield, Ill.	319	203,833	63.70%	153	-3.00%	166
Duluth, Minn.-Wis.	316	235,929	50.70%	226	-1.10%	90
Harrisburg, Pa.	316	617,166	49.30%	230	-1.00%	86
Dover, Del.	315	125,058	45.50%	248	-0.50%	67
Greenville, N.C.	309	128,300	83.30%	38	-14.20%	271
Louisville, Ky.-Ind.	306	1,003,148	76.00%	85	-4.50%	221
Macon, Ga.	306	322,093	63.70%	154	-2.70%	152
Albany, N.Y.	305	870,412	57.90%	182	-2.00%	123
Grand Junction, Colo.	304	114,585	74.20%	99	-3.90%	205
Modesto, Calif.	303	428,970	60.80%	168	-2.30%	135
Dubuque, Iowa	301	87,732	71.20%	113	-3.40%	188
Wichita, Kan.	300	549,636	67.70%	129	-3.10%	171
Texarkana, Texas-Ark.	299	123,453	53.60%	210	-1.00%	89
Indianapolis	299	1,530,570	69.40%	121	-3.20%	178
Steubenville, Ohio-W.Va.	297	133,476	48.30%	236	-0.40%	61
Tyler, Texas	296	170,615	52.20%	215	-0.90%	81
Augusta, Ga.-S.C.	295	460,338	67.00%	136	-2.90%	159
Cincinnati-Hamilton, Ohio-Ky.-Ind.	292	1,957,682	75.70%	89	-3.80%	203
Orlando, Fla.	290	1,531,635	74.20%	98	-3.50%	192
Erie, Pa.	286	275,737	63.10%	158	-2.10%	128
Rocky Mount, N.C.	285	147,210	38.50%	260	0.80%	25
Mansfield, Ohio	285	174,320	44.10%	252	0.40%	33
Richmond, Va.	284	964,695	76.90%	76	-4.00%	208
Lewiston, Maine	284	90,417	72.70%	105	-3.20%	179
La Crosse, Wis.-Minn.	282	122,061	66.10%	141	-2.50%	141
Las Cruces, N.M.	278	171,270	59.20%	173	-1.50%	105
Monroe, La.	277	147,187	75.30%	90	-3.40%	187
Des Moines, Iowa	277	440,560	72.50%	107	-3.00%	170
Stockton, Calif.	275	550,351	64.70%	150	-2.00%	125
Fayetteville, Ark.	275	278,016	36.40%	263	2.60%	12
Fresno, Calif.	272	888,903	59.20%	174	-1.40%	98
Joplin, Mo.	272	149,911	45.00%	249	0.90%	23
Raleigh, N.C.	271	1,101,410	59.00%	176	-1.20%	95
Visalia, Calif.	271	359,156	29.20%	269	8.80%	2
State College, Pa.	269	133,141	49.60%	229	0.20%	40
Spokane, Wash.	268	412,358	74.80%	93	-3.10%	175
Canton, Ohio	268	402,104	61.20%	167	-1.40%	101
Eau Claire, Wis.	268	144,180	57.80%	183	-1.00%	85
Hartford, Conn.	266	1,144,169	66.10%	140	-2.00%	126
Johnson City, Tenn.-Va.	265	464,210	51.10%	224	0.10%	41
Roanoke, Va.	265	227,408	76.80%	80	-3.40%	185
Janesville, Wis.	263	151,322	40.20%	258	5.70%	5
Yakima, Wash.	263	215,705	47.20%	244	1.30%	19
Washington-Baltimore, Md.-Va.-W.Va.	261	7,332,960	78.30%	71	-3.50%	190

Table C-3. Continued

Pittsburgh	260	2,336,230	71.00%	115	-2.60%	145
Dothan, Ala.	255	134,980	46.50%	247	3.30%	8
Columbus, Ohio	254	1,478,498	72.40%	108	-2.60%	146
Chico, Calif.	254	198,077	43.70%	253	10.90%	1
Pittsfield, Mass.	253	82,636	62.20%	162	-1.10%	91
Lansing, Mich.	253	449,545	60.70%	169	-0.90%	84
Decatur, Ala.	252	143,653	49.10%	235	1.60%	17
Lake Charles, La.	251	181,438	69.30%	122	-2.10%	129
McAllen, Texas	250	534,615	67.30%	132	-1.90%	118
Dayton, Ohio	247	945,669	72.10%	109	-2.40%	138
Columbia, Mo.	247	130,574	66.40%	139	-1.70%	108
Tulsa, Okla.	245	783,728	66.00%	143	-1.50%	102
Albuquerque, N.M.	244	682,848	81.30%	49	-3.60%	195
Medford, Ore.	244	174,918	48.10%	238	5.10%	6
Bloomington, Ind.	241	115,627	64.80%	149	-1.20%	92
St. Joseph, Mo.	238	97,300	75.20%	91	-2.60%	147
Iowa City, Iowa	237	103,232	72.70%	106	-2.10%	131
Allentown, Pa.	237	618,269	67.80%	128	-1.70%	109
Reno, Nev.	237	319,386	81.10%	53	-3.30%	184
Houston-Galveston- Brazoria	234	4,473,439	80.20%	60	-3.10%	174
Fort Collins, Colo.	232	235,091	56.90%	189	0.10%	43
St. Cloud, Minn.	231	163,298	51.30%	222	3.30%	9
Peoria, Ill.	231	344,948	70.20%	117	-1.80%	114
Denver-Boulder-Greeley	229	2,398,875	84.60%	30	-3.80%	199
Santa Fe, N.M.	225	143,386	54.40%	203	1.00%	22
Jacksonville, Fla.	224	1,058,981	79.20%	67	-2.80%	157
Milwaukee-Racine	222	1,645,045	81.30%	50	-3.10%	172
Elmira, N.Y.	222	91,612	69.10%	126	-1.30%	96
Portland-Salem, Ore.-Wash.	221	2,177,308	72.70%	104	-1.90%	117
Sarasota, Fla.	221	557,303	87.40%	21	-3.80%	200
St. Louis, Mo.-Ill.	220	2,568,578	79.30%	65	-2.70%	155
Florence, Ala.	220	137,612	53.90%	207	2.40%	13
Phoenix	216	2,994,922	86.50%	25	-3.50%	191
New Orleans	215	1,310,213	82.50%	42	-3.10%	173
Seattle-Tacoma-Bremerton	210	3,457,616	80.30%	59	-2.70%	151
Charleston, W.Va.	209	253,008	65.40%	146	-0.40%	63
Detroit-Ann Arbor-Flint	208	5,472,317	80.80%	54	-2.70%	154
Hattiesburg, Miss.	205	112,544	60.70%	170	0.30%	35
Boston-Worcester- Lawrence, Mass.-N.H.	205	5,662,136	76.80%	78	-2.10%	127
Minneapolis-St. Paul	203	2,856,786	79.90%	63	-2.50%	140
Amarillo, Texas	202	210,292	81.90%	46	-2.70%	156
Fort Walton Beach, Fla.	200	174,175	76.80%	79	-1.90%	121
Topeka, Kan.	200	165,557	80.40%	58	-2.50%	142
Grand Forks, N.D.-Minn.	199	99,382	57.50%	185	2.20%	14
Sacramento-Yolo	199	1,691,695	76.20%	83	-1.90%	116
Corpus Christi, Texas	197	390,241	75.80%	86	-1.70%	111
Panama City, Fla.	196	148,422	79.90%	64	-2.20%	132
Redding, Calif.	196	164,908	56.50%	192	6.00%	4

Table C-3. Continued

Toledo, Ohio	194	609,243	78.10%	72	-1.90%	122
Sioux Falls, S.D.	185	165,275	71.90%	110	-0.70%	75
Muncie, Ind.	182	116,324	73.00%	102	-0.80%	80
Philadelphia, Pa.- Wilmington, Del.-Atlantic City, N.J.	178	5,993,578	81.90%	45	-2.20%	133
San Antonio	176	1,559,558	83.20%	39	-2.40%	137
Buffalo, N.Y.	175	1,146,556	79.00%	69	-1.60%	106
Tucson, Ariz.	172	800,472	84.70%	29	-2.50%	143
South Bend, Ind.	171	258,713	93.50%	8	-2.90%	163
Dallas-Fort Worth	171	4,888,326	81.30%	51	-1.90%	120
Gadsden, Ala.	170	104,326	71.60%	112	-0.30%	58
Clarksville, Tenn.-Ky.	169	202,665	61.30%	166	6.50%	3
Yuba City, Calif.	168	137,775	64.00%	152	1.80%	16
Tampa	167	2,281,537	83.30%	37	-2.10%	130
Rapid City, S.D.	164	87,925	74.70%	95	-0.50%	69
Davenport, Iowa-Ill.	162	357,960	74.80%	92	-0.60%	70
Champaign, Ill.	162	167,570	67.20%	134	0.70%	28
Longview, Texas	161	210,534	69.10%	125	0.30%	36
Las Vegas, Nev.-Ariz.	159	1,367,114	80.50%	56	-1.50%	103
Eugene, Ore.	158	316,356	67.40%	131	0.70%	27
Auburn-Opelika, Ala.	157	101,903	66.10%	142	2.00%	15
Great Falls, Mont.	154	78,833	80.60%	55	-1.40%	99
Columbus, Ga.-Ala.	153	272,153	83.10%	40	-1.80%	113
Rochester, Minn.	151	117,605	69.40%	120	0.40%	31
Cleveland-Akron	151	2,910,733	83.40%	36	-1.80%	115
Richland, Wash.	151	184,513	76.80%	77	-0.70%	74
West Palm Beach, Fla.	150	1,038,254	89.90%	14	-2.30%	136
Waco, Texas	146	204,796	76.00%	84	-0.40%	62
Springfield, Mass.	143	575,299	88.50%	19	-2.00%	124
Kansas City, Mo.-Kan.	141	1,751,214	79.90%	62	-0.80%	79
Providence, R.I.-Mass.	138	1,122,337	85.80%	26	-1.70%	112
Wichita Falls, Texas	136	137,314	74.70%	97	0.20%	39
Decatur, Ill.	135	113,185	81.20%	52	-0.90%	83
Brownsville, Texas	132	332,512	75.70%	88	0.00%	44
Tuscaloosa, Ala.	129	161,726	71.80%	111	1.50%	18
Lawrence, Kan.	125	94,151	80.00%	61	-0.40%	64
Bloomington, Ill.	121	143,758	73.70%	100	1.10%	21
Victoria, Texas	118	83,275	74.80%	94	0.90%	24
Green Bay, Wis.	118	216,602	82.60%	41	-0.70%	77
Fayetteville, N.C.	117	284,702	87.00%	23	-1.20%	94
Norfolk, Va.-N.C.	116	1,547,085	90.30%	12	-1.50%	104
Charleston, S.C.	116	544,103	77.80%	74	0.10%	42
Odessa, Texas	113	247,274	89.90%	13	-1.40%	100
Cedar Rapids, Iowa	113	183,726	80.50%	57	-0.20%	56
Bismarck, N.D.	112	91,845	79.30%	66	0.00%	46
Chicago, Ill.-Gary, Ind.- Kenosha, Wis.	112	8,853,199	89.90%	15	-1.30%	97
Billings, Mont.	110	126,821	77.90%	73	0.30%	37
Missoula, Mont.	107	89,589	74.70%	96	2.80%	11

Table C-3. Continued

Killeen, Texas	104	303,363	77.50%	75	0.60%	29
Fort Pierce, Fla.	104	302,089	81.90%	44	-0.30%	60
El Paso, Texas	97	713,257	95.40%	4	-1.20%	93
Cheyenne, Wyo.	96	79,067	84.30%	31	-0.40%	65
Oklahoma City, Okla.	94	1,045,728	81.70%	47	-0.10%	47
Waterloo, Iowa	88	120,743	87.10%	22	-0.50%	66
Abilene, Texas	87	122,192	89.60%	16	-0.60%	71
Lubbock, Texas	84	229,417	84.20%	32	-0.20%	52
New York-Long Island, N.Y.- N.J.-Conn.-Pa.	82	20,196,774	91.50%	10	-0.70%	72
Provo, Utah	80	340,913	83.60%	35	0.00%	45
Los Angeles-Riverside- Orange Co.	78	15,954,560	94.30%	5	-0.70%	73
Casper, Wyo.	78	63,251	85.20%	27	-0.20%	51
Honolulu, Hawaii	77	872,757	78.80%	70	4.20%	7
Omaha, Neb.-Iowa	77	699,385	85.00%	28	-0.20%	49
Pocatello, Idaho	75	75,257	82.00%	43	0.40%	32
Bryan, Texas	75	134,242	88.10%	20	-0.20%	55
San Angelo, Texas	74	103,197	86.60%	24	-0.20%	50
Miami-Fort Lauderdale	69	3,630,497	98.30%	1	-0.50%	68
Santa Barbara, Calif.	66	397,596	88.50%	18	-0.20%	48
San Diego	66	2,798,201	93.80%	7	-0.30%	59
Sioux City, Iowa-Neb.	63	120,505	84.10%	33	0.50%	30
San Francisco-Oakland- San Jose	62	6,898,680	93.40%	9	-0.20%	53
Lawton, Okla.	60	112,982	83.70%	34	0.80%	26
Salt Lake City, Utah	60	1,281,817	97.60%	3	-0.20%	57
Fargo, N.D.-Minn.	58	169,446	81.60%	48	3.10%	10
Anchorage, Alaska	56	256,711	97.80%	2	-0.20%	54
Colorado Springs, Colo.	55	498,097	89.10%	17	0.20%	38
Lincoln, Neb.	45	237,337	90.50%	11	0.40%	34
Laredo, Texas	26	193,273	93.90%	6	1.10%	20

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BIOGRAPHICAL SKETCH

Matthew Neal Helfant was born in New Jersey and moved to Florida at a young age. He did his undergraduate studies at University of Central Florida, graduating with a B.A. in History and Political Science. After graduation he moved to Washington, DC. In Washington he worked for one of the two “shadow” Senators representing the District of Columbia and served as an Advisory Neighborhood Commissioner in the Tenleytown Neighborhood. After Washington, he moved to Iowa to work on Florida Senator and Governor Bob Graham’s campaign for the Presidency. After that campaign he continued campaign work and then went back to school for a M.S. in Political Science at Florida State University. After graduation he moved back to Washington and worked for a lobbying firm. He moved from Washington to Denver to work on another campaign before deciding to go back to school to pursue a M.A. in Urban and Regional Planning at the University of Florida.