The Aging Baby Boomers: Current and Future Metropolitan Distributions and Housing Policy Implications

U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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The Aging Baby Boomers: Current and Future Metropolitan Distributions and Housing Policy Implications

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EXECUTIVE SUMMARY

In less than a decade, the oldest members of the Baby Boom generation will reach 65 years of age and enjoy longer life expectancies than any previous generation. The aging of this population poses significant challenges because of the sheer size and proportion of this 76-million strong group who were born between 1946 and 1964. In addition to the demographic transformations, household composition and needs are changing. Household size is shrinking while the need for space becomes less important with age. Too much space can be a burden for older people in the United States where low-density suburban single-family housing is the norm. Home maintenance and housing modifications can be complicated and expensive. Accessibility to needed service and recreational resources becomes an issue as the health and faculties of older people deteriorate with age.

The preference of older people in the United States is to "age in place" in their communities despite increasing frailty. *Within* metropolitan areas (in the central cities and suburbs), the elderly that migrate tend to make short-distance moves to smaller or rental units due to dramatic life changes, such as the death of a spouse or disability, rather than economic imperatives that force them to sell their home. At an inter-metropolitan scale (that is, *between* metropolitan areas), long-distance migration destinations in the Sunbelt remain popular because they offer amenities and climates attractive to older people.

This research identifies the changing demographic and housing characteristics of older people within and across U.S. metropolitan areas now and in the coming decades. It considers some of the underlying factors driving this change, particularly with respect to housing choice and demand. This project also briefly assesses the implications for federal housing policies and local government zoning/building regulations of the growing elderly population, the extent of current and future "aging in place," and increasing demands on public expenditures given growing constraints on government budgets.

Specifically, the objectives of this project are to:

a) Describe the current (2000) and recent (1990) spatial distributions and housing situation of the elderly population within and across U.S. metropolitan areas.
b) Identify important relationships between these distributions and elderly housing patterns within and across metropolitan areas and particular socioeconomic (specifically, income, home values, and minority status), environmental (climate), and other urban (size and density of the metropolitan area) characteristics.
c) Project the spatial distributions of older people over the coming decades within and across metropolitan areas in terms of their location within particular parts of metropolitan areas (that is, central cities versus suburban areas) and within particular regions of the United States (for example, Sunbelt versus Snowbelt).
d) Compare the future housing demand of the elderly with the existing (2000) housing stock to identify the gap between current housing and future demand.
e) Briefly consider the implications for federal housing policies and local government zoning/building regulations of these findings.

This research has six main components.

1. A literature review and methodology section, following the introduction to this report. The literature review subsection presents the background for the methodology of the study and provides a basic context for identifying the analytical and public policy contributions of the study within the context of the existing literature and state of

knowledge in the field. The methodology subsection then describes the methods employed in the statistical analysis of this report.

2. The current housing situation of older people is described using U.S. Bureau of the Census Population and Housing long form data using four elderly age groups (aged 55-64, 65-74, 75-84, and 85 and older), and current (2000) and previous (1990) housing patterns by housing types, tenure, and central city versus suburban locations for the 276 U.S. metropolitan areas with available Census data.
3. Based on the metropolitan database generated in Component 2, the housing choice patterns of the four elderly age groups are analyzed using a statistical tool, regression modeling, in order to examine the impact of socioeconomic, environmental, and other urban differences across metropolitan areas. The regression model finds the best fit relationship between housing choice patterns and the socioeconomic, environmental, and other urban variables (such as income, climate, population size, and so on).
4. The spatial distributions of the four elderly population groups are projected for 2010 and 2020 for the 276 metropolitan areas and their central cities and suburbs.
5. Estimated metropolitan housing demand in 2020, based on the population projections, is compared with the existing housing stock surveyed in the 2000 Census, and the gap between future housing demand and the existing housing stock is evaluated.
6. The implications of these findings for specific federal housing policies as well as for local government zoning/building regulations are briefly assessed.

The major analysis and findings of Components 2 to 6 are as follows:

Component 2 describes the elderly population and changes in that population by age group across U.S. Census Regions and across and within metropolitan areas (central cities versus suburbs) using 1990 and 2000 Census data. It also describes elderly homeownership patterns and the housing type choices of elderly owners and renters.

In 2000 there were 59 million elderly people out of a total of 281 million people in the United States. The population size of the elderly age groups decreased with age: there were 24 million people aged 55-64, 18 million aged 65-74, 13 million aged 75-84, and 4 million aged 85 and older. Of this 59 million in 2000, 46 million lived in metropolitan areas. In 1990 18 million elderly people lived in the largest metropolitan areas (with 3 million or more people), and 22 million lived in smaller metropolitan areas (with fewer than 3 million people). By 2000 20 million lived in the largest metropolitan areas, and 26 million lived in smaller metropolitan areas. In relative terms the elderly population in the largest metropolitan areas grew by 12.3 percent between 1990 and 2000, whereas it grew by 14.9 percent in the smaller metropolitan areas, suggesting that the graying of America is more prominent in smaller metropolitan areas.

More than 60 percent of metropolitan elderly residents live in the suburbs of metropolitan areas. More importantly the elderly population in the suburbs has been growing very rapidly. Between 1990 and 2000 the elderly population in central cities grew by only 9.0 percent, while it grew by 17.1 percent in the suburbs.

In general, elderly people are more likely than the average household to be homeowners. There appears to be two types of metropolitan area with growing proportions of elderly people: popular retirement destinations in Sunbelt states such as Florida, Colorado, and California; and small- and medium-sized metropolitan areas in Rustbelt states such as Pennsylvania, New York, and Ohio. Although home ownership rates decrease with age, elderly householders aged 85 and older have a 66.1 percent home

ownership rate, which is only 0.1 percent lower than that of households of all ages. Between 1990 and 2000 the home ownership rate of the elderly increased by about 1 to 2 percent. Older elderly people are becoming more likely to own homes than in the past. In 2000 most elderly homeowners—more than 85 percent—lived in single family housing units. A notable exception is that 7 to 10 percent of elderly owners lived in structures containing 2 to 4 units in the New England and Middle Atlantic Census Divisions (see Appendix A for a list of U.S. states by Census Division). Elderly renters, however, tended to choose more diverse housing types like duplexes and multi-family structures.

Component 3 provides the regression results for elderly metropolitan housing choice in 1990 and 2000. The proportion of suburban owner-occupied units was negatively associated with the minority population percentage in metropolitan areas. The percentage of suburban owner-occupied units, however, was positively associated with the population size of metropolitan areas. In fact, in the 1990 regression, all the variables that were positively associated with the central city ownership rate were negatively associated with the suburban ownership rate. The size of the metropolitan population was negatively associated with the percentages of central city owners and renters. The greater energy required to heat and/or cool homes because of more extreme weather conditions tended to be associated with a higher percentage of households living in central cities.

Median household income and median home price, however, did not explain the cross-sectional aggregate variation of housing decisions related to metropolitan location (central city versus suburb) and tenure (owner versus renter). This was probably due to the conflicting factors of housing price and income level of metropolitan areas. Previous micro empirical studies suggest that holding everything else constant, higher income and lower average home prices are associated with a higher likelihood of owning a home for a given household. In aggregate analyses such as reported here, however, the effect of higher income would be compensated for by the higher level of housing prices, because it is typical that when the median income of the metropolitan area is high, the median home price of the area will be high as well. Because elderly people are likely to have accumulated more wealth over time, their demand for housing, particularly for owner-occupied housing, is likely to increase; at the same time, the small size of the household and its lower mobility and likely greater disability will discourage significant suburban home ownership due to drawbacks associated with the responsibility of maintenance on larger homes and yards. Yet the net effect may not be quite that clear. Nevertheless, as a household ages, the greater requirement to heat and/or cool a housing unit appears to negatively affect the rate of home ownership and to encourage renting. The results also seem to indicate that the decision between living in the central city versus living in the suburbs is less flexible than the decision between renting and owning.

Component 4 describes the metropolitan spatial distribution of the four elderly age groups projected for 2010 and 2020. The number and proportion of elderly people in U.S. metropolitan areas are projected to rise considerably by 2020 (from about 46 million to 73 million—or by approximately 60 percent). The largest age group (the pre-retirement elderly, aged 55-64) is projected to increase most, by about 73 percent. The larger elderly population in the suburbs is projected to increase much more significantly than that in the central cities (with increases of nearly 69 and 45 percent respectively).

The total, central city, and suburban elderly populations in metropolitan areas with fewer than 3 million people are projected to increase more significantly than those in

the very largest metropolitan areas like New York, Los Angeles, and Chicago (those with a population of 3 million or more in 2000). Nevertheless, the projections suggest that elderly people will continue to be a steadily growing presence in the very largest metropolitan areas in the United States during the coming decades.

The distribution of the elderly population shows some important spatial patterns when broken down by U.S. Census Region and Division. Of the four U.S. Census Regions (Northeast, Midwest, South, and West), based on factors such as climate and recreational and other amenities attractive to elderly people, not unexpectedly, the West and South Census Regions are projected to increase most significantly in their total, central city, and suburban elderly populations between 2000 and 2020, followed by the Midwest. The Northeast is projected to have the slowest rate of increase in elderly people. The total projected elderly percentage increases for 2000-2020 are approximately 80 percent in the West, 75 percent in the South, 52 percent in the Midwest, and 27 percent in the Northeast. Certainly, these data reflect the attractiveness of the U.S. Sunbelt for older people as they near and enter their early and full retirement years.

Component 5 contains some metropolitan measures of future (2020) elderly housing demand. Two principal indicators are used: (1) the "gap" ("projected growth")—the absolute number of housing units in metropolitan areas needed to accommodate the increased number of future elderly households if current aging and housing choice patterns continue through 2020; and (2) the "relative gap" ("projected growth rate')—the percentage of the gap with respect to the existing (2000) number of housing units occupied by elderly households. The "gap" is the absolute size of the housing market pressure created by elderly households by 2020. The "relative gap" is the rate of growth in the future housing market by 2020. Clearly, future construction activity in the housing industry is expected to absorb some of the "gap." Because it is difficult to estimate the building capacity of local construction industries, however, this analysis incorporated no explicit consideration of this. It should be understood, therefore, that the "gap" should not be understood as the projected "shortage" of housing units.

Of the 11.5 million unit gap in single family owner-occupied units, the smaller metropolitan areas are expected to face a larger burden, 7.3 million, compared with only 4.2 million for the largest metropolitan areas. Almost three quarters of the gap is found in the suburbs. The gap in suburban single family owner-occupied units is particularly large: 3.5 million units in the largest metropolitan areas and 5.3 million units in the smaller ones—for a total of 8.8 million units. The gap in the central cities of the largest metropolitan areas is quite small: only 0.7 million owner-occupied units and 0.6 million rental units. The central cities in the smaller metropolitan areas, however, are expected to face a gap of 2.2 million owner-occupied units and 0.8 million rental units.

As expected there are significant variations across the United States. The largest gap appears, not surprisingly, in the South Atlantic Division, particularly in Florida. The Pacific and the West South Central Divisions will have the next largest gaps. The East South Central and the New England Divisions will have the smallest gaps. The Mountain Division will have the highest relative gap. The South Atlantic, Pacific, and West South Central Divisions will also have higher relative gaps compared to the national average. In contrast, the New England, Middle Atlantic, East North Central, and East South Central Divisions will have lower relative gaps compared to the national average.

Most of the largest metropolitan areas, and particularly their suburbs, are expected to have large gaps. The notable exceptions are Philadelphia, and the central city of Detroit. Smaller metropolitan areas, such as West Palm Beach, Orlando, Jacksonville, and Tampa-St. Petersburg in Florida, Sacramento and San Diego in California, Austin and San Antonio in Texas, and Charlotte, Greensboro, and Raleigh in North Carolina will have the largest gaps. Other medium sized metropolitan areas, such as Las Vegas, Portland, Indianapolis, Cleveland, Cincinnati, Columbus, Minneapolis, St. Louis, Oklahoma City, Salt Lake City, and Denver will also have large gaps. In the smaller metropolitan areas in the Northeast and Midwest Census Regions, however, the growth pressures are mainly concentrated in the suburbs. Finally, smaller metropolitan areas in Tennessee, West Virginia, Kentucky, and Mississippi will have very small gaps.

These findings combined with the tables and maps are of interest to academic researchers and public policy analysts. The report can be publicized through the websites of the U.S. Department of Housing and Urban Development and the U.S. Census Bureau. The detailed level of the findings is particularly useful for informing national policies as they respond to the impending pressures that the aging Baby Boomers will place on federal programs, as well as state and local policies that must address the local impacts of a graying America in individual metropolitan areas, their central cities, and suburbs. The population and housing trends combined with the "gap" projections and the spatial distributions visible on the maps for metropolitan areas (and their central cities and suburbs) can be used to inform further research on, for example, elderly housing, healthcare, and community support needs in the future.

The research and findings in this report also indicate a need for further research. Additional analysis is necessary that incorporates the significant demographic and socioeconomic diversity of the elderly in terms of characteristics such as gender, marital status, and so on. More detailed research is needed that uses micro (individual) data to examine the effect of such factors as income, household characteristics, regional housing markets, retirement decisions, health, and disability on elderly housing choice.

The projections of the future "gap" in elderly housing units need to be improved by incorporating the capacity of the local construction industry in a nationwide study that includes housing construction starts combined with a measure of housing obsolescence. Given the ongoing nature of urban sprawl, further research is also needed that investigates the current and future elderly demographic patterns in the surrounding (non-metropolitan) counties of metropolitan areas, that is, outside the built-up area.

Indepth quantitative and qualitative case studies are also needed to investigate the challenges and opportunities associated with housing the aging Baby Boomers. Representative metropolitan areas can be selected from categories such as smaller and larger metropolitan areas (and their central cities and suburbs), metropolitan areas in the South and West that are experiencing a large influx of older elderly people, Rustbelt metropolitan areas that are aging due to the out-migration of younger people, and so on.

In conclusion, some policy recommendations related to future elderly housing needs are suggested here within the context of existing federal housing policies and local zoning/building regulations. In particular, HUD needs to continue to monitor local housing costs across the United States in order to keep abreast of rising home values so that its programs for homeowners (many of whom expect to "age in place") take into account variations in housing costs among the more and less expensive metropolitan

housing markets, and to keep up with the increasing demands placed on HUD's programs due to the projected significant elderly population growth in the coming decades. HUD also needs to continue to respond to the increasing demand for funds for home modification assistance for elderly homeowners who desire to "age in place."

The federal government may also want to consider policies that actively encourage elderly homeowners to downsize before they are forced to do so for economic or health reasons. Policies that could be considered include those affecting the taxation of capital gains from the sale of an elderly person's primary residence, and subsidies that encourage elderly homeowners in large suburban homes to move to housing that can more easily meet their needs as they age, such as townhouses and condominium apartments, geared either to the general public or to elderly people in particular.

HUD, in cooperation with local housing authorities or state housing agencies, also needs to attempt to address the long waiting periods for elderly renters who have applied for housing assistance such as the Housing Choice Voucher Program. Long waiting periods can be an especially difficult issue for the elderly. HUD may also want to consider allocating more funding for government-sponsored public housing given that public housing can work better than vouchers for many poor elderly.

Continued and improved close coordination among federal and other agencies concerned with elderly housing issues needs to be a continuous priority as the Baby Boomers age. In addition, given the variations in the findings among central cities versus suburbs and among different regions of the United States, improved federal-state/local institutional arrangements are needed that can further enhance local decision-making in situations where this can facilitate the design and implementation of funding strategies tailored to local needs and priorities. Similarly, the federal government needs to increasingly coordinate its policies with lower levels of government to support further innovations in zoning at a local government level in response to the significant projected suburban "aging in place." The goal should be to encourage higher densities and to reduce transportation difficulties for the elderly in the suburbs, for example, through supporting more mixed-use development and more planned unit developments (PUDs).

The federal government also needs to consider ways to support community information and support networks as they assume an increasingly prominent role. Coordination of efforts ranging from the federal to the community level will be of growing importance. Furthermore, given continued constraints on budgets at all government levels, the federal government needs to work increasingly with the private sector to stimulate the provision of profitable private-sector responses to the future owner and renter demands of the growing elderly population.

With public policy already attempting to respond to the changing dynamics created by the aging of the Baby Boomers, further indepth research is necessary to assess the extent to which existing policies successfully address the elderly population trends identified in this report. Due to the extent of the projected future "aging in place" in the suburbs in particular but also in central cities, some of the most important initiatives that need to be examined are those that focus on allowing elderly homeowners to remain in their own homes as long and as successfully as possible, encouraging elderly homeowners to consider moving to housing that better meets their needs as they age, and providing more affordable housing options for elderly renters.

INTRODUCTION

In less than a decade, the oldest members of the Baby Boom generation will reach 65 years of age and enjoy longer life expectancies than any previous generation. The aging of this population poses significant challenges because of the sheer size and proportions of this 76-million strong group who were born between 1946 and 1964. The number of people aged 65 and older is expected to swell from 35 million or 12 percent of the total population in 2000 to about 70 million (or 20 percent) by 2030.

In addition to the demographic transformations, household composition and needs are changing. Household size is shrinking as the number of older single, divorced, or widowed people and empty nesters increases. The housing requirements of the elderly differ in fundamental ways from those of younger people. The need for space becomes less important with age. Too much space can be a burden for older people in the United States where low-density suburban single-family housing is the norm, in contrast to a tradition of high-density apartment living in Western Europe and Japan. Although elderly people in the United States are the best housed in the world, home maintenance can be a complicated and expensive prospect for an older population. At the same time, accessibility to needed services and recreational resources, such as retail outlets, health facilities, and social events, becomes an issue as the health and faculties of older people deteriorate with age. Moreover, housing modifications to meet the needs of elderly and disabled people can be extremely costly.

This situation represents a serious challenge because elderly people have the lowest rates of residential mobility of any adult group—5 and 6 percent per annum for persons aged 75-84 and 85 and older respectively—compared to 36 percent for persons aged 20-24. The preference of older people in the United States is to "age in place"—the phenomenon of elderly people remaining in their communities despite increasing frailty. Elderly people today expect to remain healthier longer than previous generations and many anticipate working at least on a part-time basis during retirement through choice or economic necessity. *Within* metropolitan areas (in the central cities and suburbs), the elderly that do migrate tend to make short-distance moves to smaller or rental units as a result of dramatic life changes, such as the death of a spouse or disability, rather than economic imperatives that force them to sell their home. At an inter-metropolitan scale (that is, *between* metropolitan areas), long-distance migration destinations in the south and west of the country remain popular because they offer amenities and climates attractive to older people.

This research project identifies the changing demographic and housing characteristics of older people within and across U.S. metropolitan areas now and in the coming decades. It considers some of the underlying factors that are driving this change, particularly with respect to housing choice and demand. This project also briefly assesses the implications for federal housing policies and local government zoning/building regulations of the growing elderly population, the extent of current and future "aging in place," and increasing demands on public expenditures given growing constraints on government budgets. The findings can help inform policies covering such initiatives as reverse mortgages and subsidized home repairs that focus on allowing elderly people to remain in their own homes as long and successfully as possible.

Specifically, the objectives of this project are to:

a) Describe the current (2000) and recent (1990) spatial distributions and housing situation of the elderly population within and across U.S. metropolitan areas.
b) Identify important relationships between these distributions and the housing patterns of older people within and across metropolitan areas and their particular socioeconomic (specifically, income, home values, and minority status), environmental (climate), and other urban (metropolitan size and density) characteristics.
c) Project the spatial distributions of older people over the coming decades within and across metropolitan areas in terms of their location within particular parts of metropolitan areas (that is, central cities versus suburban areas) and within particular regions of the United States (for example, Sunbelt versus Snowbelt).
d) Compare the future housing demand of the elderly with the existing (2000) housing stock to identify the gap between current housing and future demand.
e) Briefly consider the implications for federal housing policies and local government zoning/building regulations of these findings.

This research has six main components.

1. A literature review and methodology section, following the introduction to this report. The literature review subsection presents the background for the methodology of the study and provides a basic context for identifying the analytical and public policy contributions of the study within the context of the existing literature and state of knowledge in the field. The methodology subsection then describes the methods employed in the statistical analysis of this report
2. The housing situation of older people is described using Census Bureau Population and Housing long form data for four elderly age groups (55-64, 65-74, 75-84, and 85 and older) showing current (2000) and previous (1990) housing accommodation patterns by housing type, tenure, and central city versus suburban location.
3. Based on the metropolitan database generated in the second component, the housing choice patterns of the four elderly age groups (55-64, 65-74, 75-84, and 85 and older) are analyzed in order to examine the impact of socioeconomic, environmental, and other urban differences across metropolitan areas. A statistical tool, regression modeling, is employed. Using the Census data, the regression model finds the best fit relationship between housing choice patterns and the socioeconomic, environmental, and other urban variables (such as median income, minority population, climate, population size and density, and so on).
4. The metropolitan spatial distributions of the four elderly age groups (aged 55-64, 65-74, 75-84, 85 and older) are projected for the years 2010 and 2020. Specifically, the elderly population for the 276 U.S. metropolitan areas and the population of their central cities and suburbs are projected for the four elderly age groups. These metropolitan areas lie in the continental United States and Hawaii and have available U.S. Census data.
5. Metropolitan housing demand for 2020 is estimated based on the population projections. The housing demand for 2020 is compared with the existing housing stock surveyed in the 2000 Census. The gap between future housing demand in 2020 and the existing housing stock in 2000 is evaluated.
6. The implications of these findings for specific federal housing policies as well as local government zoning/building regulations are briefly assessed.

1. LITERATURE REVIEW AND METHODOLOGY

Literature Review

This literature review provides a succinct discussion of the scholarly literature on the changing spatial distribution and socioeconomic and housing characteristics of older people within and across the metropolitan areas of the United States now and in the coming decades and the implications of this change for future housing choice and demand. The literature review is intended to serve as a background for the methodology of the statistical and spatial analysis and to provide a useful context for identifying the analytical and policy contributions of the study.

Historically, geographers have produced a substantial literature on the spatial distribution of elderly people. Meanwhile, economists have studied the determinants of housing demand, but without a specific spatial consideration. There has been inadequate cross-fertilization between the two fields, even though it is quite obvious that the housing demand of elderly people needs to be studied by taking into account their spatial distribution and the location of the housing stock, as well as the socioeconomic and other determinants of this group's housing demand.

Although there are many economics studies of elderly people and their housing, most have focused on such topics as individual housing choice without paying much attention to the locational aspects (see, for example, Venti and Wise 1989; Feinstein and McFadden 1989; VanderHart 1994, 1995). Although geographers incorporate the importance of space into their analyses of older people, many have concentrated at macro geographical scales that involve significant internal variations in human and environmental conditions, such as countries, U.S. Census Regions, or states (see, for example, Champion 1992; Rosenberg and Everitt 2002; Watkins 1989), or at the scale of counties (see, for example, Rogerson 1998). But U.S. Census Regions, states, and counties are not functioning units (in terms of such aspects as daily commuting or shopping patterns) and so are less helpful for studying the spatial distribution and housing of the elderly than, for example, the metropolitan scale that represents functioning urban regions. The metropolitan scale of analysis is also important because 77.4 percent of the American elderly (aged 65 and older) lived in metropolitan areas in 2002, up from 59.5 percent in 1960 and 70.9 percent in 1980.

▪ Spatial distribution of the elderly *among* and *within* metropolitan areas

Relatively few researchers have used metropolitan areas as the units of analysis in their empirical studies. In terms of the spatial distribution of older people *among* metropolitan areas in the United States, William Frey, a demographer, used U.S. Census data to identify that nearly three times as many elderly people (aged 65 and older) were living within metropolitan areas than outside them in 1990. Frey (1992) found that, although elderly population growth was high in Sunbelt metropolitan areas during the 1970s and 1980s, metropolitan areas in the Northeast and Midwest experienced an increase in the proportion of elderly people due to a combination of "aging in place" and the selective out-migration of younger people.

Frey and DeVol (2000) determined that the fastest growing metropolitan areas for elderly people during the 1990s were the smaller and medium-sized ones in southern and western states (including, but not necessarily dominated by, Florida and Arizona). Las Vegas topped a list of the fastest growing metropolitan areas that included Myrtle Beach, Las Cruces, Wilmington, Boise, and Denver, as well as Phoenix and Tucson.

Frey (2001) used 2000 U.S. Census data to examine the spatial distribution of the Baby Boomers across the largest metropolitan areas. He identified that, among those metropolitan areas with the greatest shares of Baby Boomers in 2000, there were several that are recognized for having attracted "yuppie" Boomers during the late 1970s and 1980s, such as Seattle, San Francisco, Atlanta, and Washington, D.C. Other metropolitan areas, like Denver and Nashville, were attractive to Baby Boomers because of their fast-growing job markets during the 1990s; in contrast, the cultural and natural amenities of metropolitan areas like Minneapolis and Colorado Springs allowed them to retain or attract Baby Boomers. Frey concluded that the influence of the Baby Boomers is likely to persist in these metropolitan areas because most will "age in place" during retirement.

Contrary to the widely held image of mobile elderly migrants, only about 6 percent of elderly people relocate to a different residential location in any given year; and only 1 percent move to a different state (Frey 1999); and there has not been any significant upward trend in the share of people of retirement age who have moved between states during the past few decades (Haas and Serow 2002). A Del Webb Corporation (1996) survey of the leading edge of the Baby Boomers found that 18 percent reported a desire to move to another state upon retirement; they gave climate and other amenities as the reason for their potential move. A more recent survey commissioned by the American Association of Retired Persons (AARP) found that just 2 in 10 Baby Boomers (21 percent) expect to move to a new geographic area when they retire (Roper Starch Worldwide Inc.1999). The desire to move, however, may not correspond with the ability to move; and the desire to move may not always result in an actual move.

In any event, the 65 and older populations in most communities across the United States will be the result of "aging in place" by existing residents. For example, the fast-growing metropolitan areas in the Sunbelt that attracted professional well-educated workers during their pre-elderly years will later retain these more prosperous senior populations in retirement (Frey 1999). As Longino (1995, 11) put it: "Like boats to a mooring, people are tied to their environments by investments in their property, by the many community contexts in which they find meaning, by friends and family whose proximity they value, by the experiences of the past and by lifestyles that weave these strands together into patterns of satisfying activity."

In terms of the spatial distribution of older people *within* metropolitan areas in the United States, a small number of researchers has examined population shares in central cities versus suburbs (those parts of a metropolitan area outside the central city) for certain metropolitan areas. Stephen Golant (1992) is one of the few geographers to focus his demographic analysis at this intra-metropolitan scale. He used U.S. Census data to identify a trend of increasing "aging in place" in U.S. suburbs. His research counters the common stereotype of aging central city populations that contrast with younger, family-oriented suburban populations—a characterization that was accurate in the immediate post-World War II decades, but is no longer so. This work highlights how the earliest

waves of suburbanites are now aging into their elderly years, and continue to live in owner-occupied homes. Golant (1987) also identified a decline in intra-metropolitan mobility on the part of the elderly, reflecting the significant and growing inertia in the spatial distribution of older people in terms of their preference for remaining in existing single-family homes in the suburbs.

Frey (1999) identified that most older Americans live in suburban areas: 52.5 percent in 1997. Between 1980 and 1997, the number of older suburbanites (65 and older) grew by 51 percent, while the number of older city dwellers increased by only 13 percent. Frey (2003) used U.S. Census data to quantify the number and growth of elderly people in suburban locations across the 102 most populous metropolitan areas of the United States for 1990-2000. He identified that Baby Boomers accounted for 31 percent of the total suburban population in 2000—up from slightly less than 27 percent in 1990. The suburbs with the largest proportions of Boomers were in "high-end" metropolitan areas like San Francisco and Seattle, as well as in university centers such as Ann Arbor, Columbus, and Raleigh-Durham. The suburbs with the fastest growing 55 and older populations were in Sunbelt metropolitan areas like Las Vegas, Phoenix, and Austin. The suburbs with the largest proportions of 55 and older people were located in Rustbelt metropolitan areas like Youngstown and Scranton, and traditional retirement "magnets" like Sarasota and Tucson.

Suburban communities that attracted upper and middle-income families in the middle stages of their life cycle are likely to later retain these people; and they will probably contribute more to their community's tax base than they receive in increased services over time. Within metropolitan areas during the coming decades, the wealthier "yuppie elderly" are expected to locate generally toward the periphery of metropolitan areas (Frey 1999; 2000).

More disadvantaged elderly people will continue to reside closer to the urban core during the coming decades. Central cities and inner ring suburbs in metropolitan areas that have suffered economic and demographic decline in recent decades are expected to house disproportionate numbers of disadvantaged elderly people—the older elderly, widows and widowers, female heads of household, those with incomes at or below the poverty level, and those with relatively high levels of disability (Frey 2000).

Further research is necessary that examines variations in the actual current and projected future intra-metropolitan (central cities versus suburban areas) and inter-metropolitan (Sunbelt versus Snowbelt, for example) distribution of older people in the different regions of the United States. Population projections of the elderly within and across metropolitan areas are particularly needed. This analysis should include all the metropolitan areas in the United States in order to gain a comprehensive current and future picture of the distribution of elderly people. Although involving substantial work, this research needs to include the smaller metropolitan areas, in addition to the very largest metropolitan regions that have already received more attention in the literature (see, for example, Frey 2003 who looked only at the largest U.S. metropolitan areas). This research is necessary to take advantage of the recent availability of more up-to-date socioeconomic data and to incorporate ongoing changes that are differentially affecting metropolitan areas in different regions of the United States, and their central cities and suburbs, now and in the coming decades. The work needs to incorporate trends such as "aging in place" by older homeowners in the suburbs and elderly renters in central cities,

and any recent increases in the number of older people in certain central cities due, for example, to a preference for more central locations and the opportunities created by new condominium developments and gentrification closer to the urban core.

▪ Characteristics of elderly people and metropolitan areas

The socioeconomic characteristics (such as income, employment, gender, marital status, and ethnicity) of older people, as well as environmental (such as climate or recreational amenities), and other urban (such as metropolitan size and density) characteristics need to be taken into account because of their interrelationships with the distribution and housing patterns of older people both within and across metropolitan areas. Although the Baby Boomers have tended to be viewed historically as a single group, they do not represent a homogenous population. There has been greater acknowledgment in the literature recently that the Baby Boomers are characterized by significant socioeconomic diversity (Gee 2002; Golant 1987; Roper Starch Worldwide Inc.1999; Walters 2002a).

In terms of age and gender, for example, there were 20.6 million women compared to only 14.4 million men aged 65 and older in 2000; and the ratio of the elderly male population to the elderly female population falls steadily with age (U.S. Bureau of the Census 2001a, 2001b). Although most attention has been paid in the past to the elderly frail and vulnerable segment, the younger groups, and even those aged 55-64 have been receiving more attention recently. In 1999, 24.7 million men and 30.6 million women were aged 55 and older (U.S. Bureau of the Census 2000). At the same time, however, the growth in the numbers of older groups warrants continued attention. The 85 and older population, for example, is projected to increase from 4.2 million in 2000 to almost 9 million by 2030 (U.S. Department of Health and Human Services 2002).

Baby Boomers and the elderly vary in terms of family, marital, and living situations, as well as the presence of grown children who can provide support in old age. Marital status and gender have implications for household size. Elderly men are more likely than women to be married and living with a spouse. About 30 percent (9.7 million) of the 65 and older population of non-institutionalized older persons lived alone in 2001 (7.4 million women and 2.4 million men); half of older women aged 75 and older live alone (U.S. Department of Health and Human Services 2002). Only 9 percent of men aged 55 and older were widowed compared to 32 percent of women. Due to widowhood and longer life expectancies, elderly women are more likely than older men to live alone. In fact, Frey (2003) identified that the 65 and older population in traditional retirement magnet metropolitan areas like West Palm Beach and Tampa was, in general, older, more likely to be female and living alone.

In terms of income, differences are significant and growing within the elderly population who vary in their access to wealth and private pensions. The median income of people aged 65 and older in 2001 was $19,688 for males and $11,313 for females. Older women, in general, have a higher poverty rate than older men. About 3.4 million people aged 65 and older lived below the poverty level in 2001 and another 2.2 million older adults were classified as "near poor" (having an income between the poverty level and 125 percent of this level) (U.S. Department of Health and Human Services 2002). Persons aged 85 and older have the highest poverty rates. Younger married-couple

households with a householder aged 55-64 are more likely to have higher incomes than married couples aged 65 and older (U.S. Bureau of the Census 2000).

The urban elderly poverty rate was 14 percent in 1997. This was almost double the suburban elderly poverty rate of 7.4 percent. City-dwelling older people are less likely to earn more than $25,000 per year and more likely to be less well educated than their suburban counterparts (Frey 1999).

Certainly, education and employment are related to income. Elderly men are more likely than women to have a bachelor's degree or more education; older men are more likely than older women to be employed (U.S. Bureau of the Census 2000). In terms of interstate migration, conventional wisdom is largely accurate. Using 1990 Census data, Clark *et al.* (1996) found that higher levels of education and recent retirement translate into a greater propensity to migrate. Using 2000 Census data in their study of inter-state migration, Frey *et al.* (2000) found that newly retired elderly migrants are more likely to be well-off, well-educated, and married, and in search of high amenity destinations.

At the same time, most Baby Boomers when surveyed say that they expect to work during retirement. A recent survey commissioned by the American Association of Retired Persons (AARP) found that 8 out of 10 said that they planned to work at least part-time during retirement; only 16 percent said that they would not work at all. Just over one third (35 percent) gave the reason for working as interest and enjoyment, about one quarter (23 percent) said it was for the income, 17 percent envisioned starting their own business, and 5 percent expected to work full-time in a new job or career (Roper Starch Worldwide Inc. 1999).

In terms of race and ethnicity, the elderly are predominantly white (non Hispanic). Whites accounted for 82 percent of the 55 and older population in 1999. This proportion varied greatly with age, however: 79 percent for the 55-64 group, 82 percent for the 65-74 group, 86 percent for the 75-84 group, and 85 percent for the 85 and older group (U.S. Bureau of the Census 2000).

Increased racial diversity is expected due, for example, to the rapid increase in the Hispanic elderly population (Golant 2002; Gronvold Hatch 1995; U.S. Bureau of the Census 2001b; Williams and Wilson 2001). Members of minority groups are projected to grow from 16 percent of the 65 and older population in 2000 to 25 percent in 2030 (U.S. Department of Health and Human Services 2002). Little research has focused on the aging of minority populations (Rogerson 1998). It is clear, however, that the elderly who live in central cities in the United States—often in older and poorer quality rental housing—are more likely to be African-American, Hispanic, or Asian than their suburban counterparts. Moreover, these minority elderly typically have the greatest need for services and the fewest resources to pay for them.

In terms of health and disabilities, not surprisingly, older elderly people (those in their 70s and 80s) are in poorer health than the younger elderly (Frey 1999). Nearly 20 percent of people aged 65 and older have significant long-term care needs. In 1997, over 5.8 million (18 percent) of non-institutionalized people aged 65 and older required assistance with everyday activities, and about 1.2 million (3.7 percent) were severely impaired and required assistance with three or more activities of daily living. Many people aged 65 and older are at risk of institutionalization or neglect due to declining health and the loss or absence of support and timely interventions. The risk is greatest for

those with lower incomes (Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century 2002).

Disability affects migration. Even younger households (with a householder aged 55-64) in which the householder or spouse has a work disability are less likely to consider inter-state migration (Clark *et al.* 1996). At the same time, for shorter distances, moderate forms of disability, and certainly major forms of chronic disability, do pressure older people to move. The pressure to move as a result of moderate forms of disability—usually to more or less exclusive care by a family member—occurs when it becomes difficult to carry out everyday household tasks like shopping, cooking, and cleaning. The pressure to move to institutional care occurs when, for example, the older person becomes severely ill (Litwak and Longino 1987).

In terms of the environmental characteristics of metropolitan areas, research on elderly inter-state migration has identified that elderly migrants vary with respect to their destination preferences depending on whether they are "amenity" or "dependency" migrants (Clark *et al.* 1996). "Dependency" migrants are typically forced to move due to deterioration in their health or financial situation or the death of a spouse. In contrast, a number of studies have shown that recent elderly migration has been influenced increasingly by people's preferences for environmental characteristics rather than by economic and job-related requirements.

Based on regression analyses of U.S. Census data, Newbold (1996) found that "amenity" effects were more important in the migration decisions of the young elderly in particular. In fact, a number of studies have found that the importance of destination recreational amenities and climate generally declines in importance as an attraction factor with advancing age (Clark and Hunter 1992; Clark *et al.* 1996).

At the same time, Frey *et al.* (2000) found that "amenity-seeking" migration does continue well beyond retirement age. Important destination characteristics of U.S. states have been identified for retirees. The destination characteristics most often mentioned by elderly "amenity" migrants include scenic beauty, recreational and cultural opportunities, pleasant climate (especially for older migrants), low crime, good hospitals, and a low overall cost of living (Longino *et al.* 2002; Pampel *et al.* 1984; Walters 2002a). Frey *et al.* (2000) also identified that, in addition to the usual Sunbelt retirement "magnet" states, such as Florida and Arizona, that offer attractive recreational amenities and climate, some Snowbelt states like New Jersey and Pennsylvania are attractive destinations because they also offer amenity-related communities (such as the Poconos in northeast Pennsylvania) and are closer to retirees' friends and families.

In terms of other urban characteristics, such as the size of metropolitan areas, like the non-elderly, most elderly people tend to live disproportionately in larger metropolitan areas—those with populations exceeding 1 million. At the same time, older migrants when surveyed perceive that the quality of life will be better outside large cities, but still want to live near a city so that they can access urban amenities relatively easily (Longino 1995). As a result, during the past few decades, the elderly have been more likely to either remain in or move to smaller and non-metropolitan areas, in contrast to the younger population who are more likely to move to larger metropolitan areas in search of economic opportunities. Among smaller metropolitan areas, 6 of the top 10 fastest-growing ones are in Florida, with the remainder comprising a fair number of eastern seaboard metropolitan areas (like Myrtle Beach, South Carolina, and Jacksonville, North

Carolina), as well as some in the West (such as Las Cruces, New Mexico). These smaller metropolitan areas have achieved much of their growth through the in-migration of elderly people as well as the "aging in place" of residents who migrated in their 50s with an eye toward retiring there (Frey 1999).

Certainly great use has been made of the 1990 and 2000 censuses to ascertain the socioeconomic characteristics of older people and the environmental and other urban characteristics of the metropolitan areas within which they reside. Further research is needed that examines these socioeconomic characteristics and the environmental and other urban characteristics within the context of the distribution and housing patterns of older people both within and across metropolitan areas. More research is needed in particular to identify how these characteristics will change during the coming decades within the context of the projected spatial distributions of the elderly population at both intra- and inter-metropolitan scales, and given the implications for housing demand.

▪ Housing demand of elderly people in metropolitan areas

"Housing for the elderly is one of the most crucial issues facing this country into the twenty-first century" (Gilderbloom and Mullins 1995). Previous research on elderly housing indicates that housing choice and demand depend on many factors, including age, household size and composition, life-cycle change, income and assets, and health (Robinson and Moen 2000; VanderHart 1994, 1995; Folts and Muir 2002). Elderly housing choice and demand are also influenced significantly by retirement migration (Longino, *et al.* 2002; Walters 2002b). Although the inter-metropolitan distribution of the elderly and their housing choice and demand patterns will be affected more by retirement migration, the intra-metropolitan distribution of the elderly and their housing is affected more by socioeconomic factors, such as income or marital status. The current location of housing plays one of the most important roles in the housing choice and demand of the elderly, as more prefer to "age in place" in metropolitan areas across the United States (Comman and Kingson 1996; Golant 2002; Perez *et al.* 2001).

Significant attention has been paid in the literature to housing issues affecting the elderly, such as tenure, affordability, and quality (Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century 2002; Folts and Muir 2002; Golant and La Greca 1994a, b, c; National Housing Conference 2001; Pynoos and Liebig 1995; U.S. Department of Housing and Urban Development 1999; VanderHart 1995). The city-dwelling elderly are less likely to be homeowners—72 percent of the central city elderly are owners compared to 85 percent of their suburban counterparts (Frey 1999). But although homeownership varies within the elderly population, most who own their homes expect to "age in place." Golant (2002) predicted that the next two decades will witness an increasingly greater number and share of townhouses, apartment buildings, subdivisions, neighborhoods, communities, towns, and even small cities that will be occupied predominantly by older Americans. Many residents will be long-time homeowners, while others will be older people who purposely choose these areas as destinations because of their reputation as highly desirable places for older adults.

At the same time, housing quality is an issue for older homeowners because most live in older housing (Farnsworth-Riche 2003; U.S. Bureau of the Census 2001b). Millions of elderly households live in housing that is in substandard condition, costs too

much, or fails to accommodate their physical capabilities or assistance needs (U.S. Department of Housing and Urban Development 1999). As might be expected, within metropolitan areas, central cities suffer from the highest rates of physical deficiencies, while the suburbs enjoy the lowest rates (Golant and La Greca 1994a). Black and Hispanic elderly people live in the worst quality housing (Golant and La Greca 1994c). Housing inadequacy is also greater in the U.S. South, for males living alone, and for renters (Markham and Gilderbloom 1998).

In this connection, the number of older, poorer renters is increasing. Currently, more than 16 percent of senior households rent their accommodations, with most (70 percent) living in private market-rate housing rather than government-subsidized or rent-assisted housing. Nevertheless, there are nearly 6 times as many people aged 65 and older with unmet housing needs as are currently served by rent-assisted housing. Waiting lists for many kinds of subsidized housing are long. In addition, the affordable housing stock is in danger of losing significant numbers of units; up to 324,000 Section 8 assisted units in senior properties are at risk of "opting out" (Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century 2002).

The recent availability of up-to-date data will allow further research on current and future housing trends involving tenure and living arrangements within the context of the changing spatial distribution of older people and their particular socioeconomic (including income, employment, gender, marital status, and ethnicity) characteristics within and across metropolitan areas.

Reschovsky (1990) found that the housing arrangements of elderly *renters* are largely in equilibrium with their housing needs; consequently, they benefit little by moving. In contrast, the housing of elderly *homeowners* is more likely to be in substantial disequilibrium with their needs compared to their younger counterparts. To the extent that the cost involved in moving is the major impediment to adjusting to the new demands for housing as a person ages, the policy options for accommodating older people within metropolitan areas can be categorized into two differing, but ultimately potentially compatible, perspectives (Rosenberg and Everitt 2001; Young 1998).

On the one hand, some experts argue that the policy options should include housing older people in age-segregated facilities that are designed specifically to provide supportive environments that meet their particular physical and other needs (Golant 1985; Spitzer *et al.* 2004; Tabbarah *et al.* 2000). Golant (1998) argues that three major forces will lead many aging Baby Boomers to select age-segregated options: 1) growing old successfully will become the norm and age-segregated places will be seen as promoting and strengthening an aging population; 2) high densities of older people will offer economies of scale for healthcare providers which can help keep costs down for these older residents; and 3) older Baby Boomers seeking to feel secure and to maintain their identity in an era of rapid technological and social change will look for more home-centered exchanges and a strong community context in which to conduct them.

On the other hand, other experts argue for "aging in place," the preference of most older people, where the elderly are fully integrated within their local communities. Issues of equity and efficiency have tipped the balance in contemporary public policy in the United States in favor of "aging in place" combined with the provision of age-segregated facilities as needed (Schneider and Sar 1998). Yet in contrast to the greater attention that has been given to assisted-living housing in the literature, little is known about the

potential role of "regular" housing in long-term care policy (Newman 2003). Limited research has been conducted on the housing modification needs of the elderly; in general, men, people who live alone, and persons with poor health have greater needs for housing modifications (Gilderbloom and Markham 1996).

Certainly, current and, in particular, future changes in both the spatial distribution and the socioeconomic and housing characteristics of the elderly population within the context of the available housing stock have implications for federal housing policies and local government zoning/building regulations. Additional research is necessary to assess the extent to which existing policies successfully address these trends now and in the future. At a local level, for example, further assessment is needed of how zoning laws can be modified to facilitate access by a growing elderly suburban population to the kinds of retail, employment, and health facilities frequented by older people (Chapman and Howe 2001; Pollak 1994). Similarly, more attention is needed concerning how building codes can be changed to allow housing modifications to accommodate elderly people who are frail or disabled (Frain and Carr 1996). Further evaluation of existing community information and support networks is also necessary in order to ascertain how best to provide older people with advice about their housing options as they age. At a federal level, additional assessment is needed of housing-related policies as well as how to most effectively coordinate federal and other efforts, including the U.S. Department of Housing and Urban Development's Reverse Mortgage for Seniors program and Section 202 Supportive Housing for the Elderly program (Bolling-Manard 1999; Liebig 1996; Lynch 2001; Mollica 2003; Rasmussen *et al.* 1997; Mayer and Simons 1994; Tinsley 1996; U.S. Senate, Special Committee on Aging 2002).

Further research will allow a better understanding of elderly people's housing demand at the intra-metropolitan and inter-metropolitan level as the "aging in place" of the Baby Boomers and the existing housing stock play a crucial role in shaping changes in housing and urban development planning and policy in the coming decades.

Further research will also provide a clearer picture of the extent to which the housing construction industry and development trends absorb some of the projected gap between current housing and future demand. The capacity of the construction industry varies within and among metropolitan areas. While the future capacity of local construction industries was beyond the scope of this project to project, and no explicit consideration was given to it, this issue is important to address in future research because the outcome of the future housing market in specific metropolitan areas undoubtedly will be influenced by it.

Methodology

▪ Definitions

In this research, an *elderly* person is anyone aged 55 and older. While those aged 55-64 are conventionally pre-retirement age, this is an important group because of early retirement trends and because this group is important due to their influence on housing over the coming decades. In order to distinguish the younger elderly from older elderly, the elderly population is stratified into four 10-year age groups, termed *elderly groups*: 55-64, 65-74, 75-84, and 85 and older. This distinction is useful because the housing

behavior of the elderly may be drastically different depending on age as well as socioeconomic characteristics, such as income, ethnicity, and so on. In some instances, for example in the case of housing figures, data limitations do not permit the use of all of these elderly age groupings. In those instances, the available data and age groups are used. Although the 2000 Census asked whether a respondent was disabled or not, the questions about disabilities are limited. As a result, age will be used as the categorization and most appropriate surrogate for the physical and emotional health of the elderly.

The research uses the U.S. Census and Office of Management and Budget (OMB) definition of MSA (Metropolitan Statistical Area) or CMSA (Consolidated Metropolitan Statistical Area) as the operational definition of *metropolitan areas*. When CMSA definitions are available, such as for many of the largest MSAs, CMSA is used as the operational definition of a *metropolitan area*. In such cases, the name of the largest central city is used to identify the name of the metropolitan area. For example, the Los Angeles-Riverside-Orange County CMSA is referred to in this study as Los Angeles.

Due to changes in the definition and areal extent of metropolitan areas over time, for the historical analysis, this study uses a unit of analysis that is comparable across the entire study period; this is achieved by using a consistent 2000 definition of metropolitan areas for all the decades in the analysis (1990, 2000, 2010, and 2020).

When the definition of a metropolitan area spanned more than one state, this study best approximated the population on the ground by proportionally allocating the data from each state. In addition, this study classifies metropolitan areas into two groups—largest or smaller—depending on whether the total metropolitan population equaled or exceeded three million people or not in 2000. In the 2000 Census, there were 276 metropolitan areas, 14 of which had three or more million people. They are New York, Los Angeles, Chicago, Washington, D.C., San Francisco, Philadelphia, Boston, Detroit, Dallas, Houston, Atlanta, Miami, Seattle, and Phoenix, in descending order of size. The smaller metropolitan areas (with fewer than 3 million people) ranged in size from Minneapolis-St. Paul with a population of nearly 3 million in 2000 to Enid, Oklahoma with fewer than 58,000 people.

For the distinction between the *central city* and the *suburbs*, this research follows the Census and OMB definitions of central city and suburbs for each metropolitan area—the suburbs comprise the non-central city portion of the MSA or CMSA. Again, a consistent 2000 definition of central city and suburbs is used for all decades in the analysis. This is the definition that has been employed by prominent demographic researchers who use the U.S. Census, such as Stephen Golant, Department of Geography and Institute on Aging, University of Florida, as well as John Logan, Director, Lewis Mumford Center for Comparative Urban and Regional Research, University at Albany.

▪ Component 2: Elderly population and housing in 1990 and 2000

The second component of this research describes the current (2000) housing arrangements for the four elderly groups (aged 55-64, 65-74, 75-84, and 85 and older). The data are taken from the 2000 Census long form survey, which is distributed to 1 out of every 6 households. Originally, this research intended to include the PUMS (Public Use Microdata Sample), as well as the Summary Tape File (STF 3). It turned out, however, that the PUMS data do not cover all 276 metropolitan areas in this study.

Moreover, because the 2000 Census STF3 provided more detailed information than the 1990 Census, including housing descriptions broken down by the elderly groups defined in this report, the STF3 data were used exclusively when describing the housing consumption patterns of the elderly in 2000.

Before describing elderly housing consumption, this report describes the regional distribution of elderly people in 1990 and 2000, and highlights the main changes during that 10-year period. First, it describes the elderly population in terms of the regional distribution and the changes that occurred for the United States as a whole (for non-metropolitan areas as well as metropolitan areas). Then, it shifts its focus to the metropolitan areas specifically. It uses several geographic spatial units of analysis: central cities versus suburbs; smaller metropolitan areas versus the largest metropolitan areas; and U.S. Census regional definitions. The U.S. Census regional definitions used in this report are the two commonly used U.S. Census definitions: Census Regions (Northeast, Midwest, South, and West) and Census Divisions (New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South, Mountain, and Pacific). For a more detailed description of the Census Regions and Divisions by state, see Appendix A.

After describing the elderly population, this reports moves on to describe housing consumption patterns. Both the 1990 and 2000 housing patterns of the elderly are analyzed within and across metropolitan areas. Because the data are more detailed as well as more recent for 2000, however, more emphasis is placed on the 2000 patterns. Housing types are classified into 4 groups: single family housing units, multifamily housing units with 2-4 units in a structure, multi-family housing units with 5 units or more (sometimes, further divided into 5-19, 20-49, and 50 or more units in a structure), and mobile homes (including recreational vehicles (RVs) and boats). Housing tenure is divided into owner-occupier versus renter.

The 2000 elderly housing patterns are compared with the 1990 patterns in order to examine the changes that occurred during 1990-2000 and highlight any distinctive trends or changes in elderly housing patterns.

▪ Component 3: Determinants of elderly housing choice

The third component of the research seeks to provide an explanation for variations in the housing choice behavior of elderly people across metropolitan areas using the data generated in the second component. In particular, the research examines how housing tenure and the choice of housing type differ depending on the socioeconomic, environmental, and other urban characteristics of metropolitan areas.

The main methodology used is multiple regression analysis using aggregate measures of the housing, socioeconomic, and other characteristics of metropolitan areas based on Census data. This statistical method is a conventional choice for using Census data to examine the mathematical relationship between a particular (dependent) variable that the analysis seeks to explain (such as, in this report, housing choice, as measured by housing type, tenure, and so on) and several other (independent) variables that are used to explain the variance in the dependent variable; the independent variables in this study include some aggregate measures of the socioeconomic characteristics of the metropolitan areas (such as median income, ratio of minority population, and so on),

environmental variables (such as climate as measured, for example, by yearly heating and cooling days), and other urban variables (such as the size and density of a metropolitan area). This method identifies whether the dependent variable is influenced by each of the independent variables, holding all other independent variables constant. Although it is impossible to establish a definitive cause and effect relationship, multiple regression analysis is widely used to examine the associations between socioeconomic variables. The technique is also a tool for making statistical inferences to test whether the influence of one or more independent variables is statistically significant.

Dummy variables are included in the multiple regression analysis in order to control for regional variations across metropolitan areas depending on their period of urban development and historical background. A dummy variable is a special independent variable that takes the value of either "1" or "0." The reason for including a dummy variable in a multiple regression analysis is to determine the influence on the dependent variable of two separate groups within the same set of independent variables. The regional dummy variables used in this report are based on the U.S. Census Regions, that is, the regional dummy variable takes the value of "1" if the variable is a particular Region, and "0" otherwise (for example, two separate groups of U.S. Census regions could be the Northeast Census Region, "1," and all other Census Regions, "0").

More specifically, this component involves estimating the following regression model for each age group:

- % single family owner occupier households in central cities = f (yearly heating days, yearly cooling days, median income, median home price, ratio of minority population, regional dummy, size of metropolitan area, average density of metropolitan area);
- % single family owner occupier households in suburbs = f (yearly heating days, yearly cooling days, median income, median home price, ratio of minority population, regional dummy, size of metropolitan area, average density of metropolitan area);
- % renter households in central cities = f (yearly heating days, yearly cooling days, median income, median home price, ratio of minority population, regional dummy, size of metropolitan area, average density of metropolitan area);
- % renter households in suburbs = f (yearly heating days, yearly cooling days, median income, median home price, ratio of minority population, regional dummy, size of metropolitan area, average density of metropolitan area);

where the unit of observation is the metropolitan area.

▪ Component 4: Elderly population projections for 2010 and 2020

In this fourth component of the research, the elderly population for the 276 metropolitan areas is projected for 2010 and 2020. The 20-year time horizon was chosen to capture the significant socioeconomic and housing changes as the Baby Boom generation ages, but is not so far into the future to render the projections unreliable.

The U.S. Bureau of the Census (1997) has published age-specific population projections to 2025 for each U.S. state. These state projections use age-race specific fertility rates for births and survival rates for deaths. The internal migration figures are determined using a time-series model of state-to-state migration between 1975 and 1994.

International migration is assumed to be 820,000 per year, and is distributed by state based on the net international migration rate derived from 1990 census data for foreign-born persons who immigrated during the 1985 to 1990 period.

Using these state projections, a "top-down" approach was adopted to project the population for each metropolitan area. The top down approach is convenient for this research, and is more accurate than a "bottom-up" method of projection. By using the state projections and working down to the metropolitan area level, it is not necessary to project internal and international migration patterns for each metropolitan area. Projecting metropolitan level migration involves great inaccuracy because there is less migration data available for the metropolitan level compared to the state level. The Census state population projections, which used the best quality migration data, as well as the age-race specific birth rates and death rates, are the most reliable population projections available. Moreover, the metropolitan population projections obtained by the top-down approach preserve the integrity of the Census Bureau's national and state projections.

The spatial distribution of the elderly groups is determined by applying the ratios obtained in the third component of the research to the statewide age-specific population projections. Specifically, the procedure for projecting the elderly population in the central cities and suburbs for each of the 276 metropolitan areas uses the following notations:

e_t^i : metropolitan elderly population of group i in year t

E_t^i : statewide elderly population of group i in year t

q_t : metropolitan population of all ages in year t

Q_t : statewide population of all ages in year t.

The metropolitan population of the elderly age groups in year 2010 (q_{2000}) is projected based on the following formula:

$$\frac{\frac{q_{2010}}{Q_{2010}}}{\frac{q_{2000}}{Q_{2000}}} = \frac{\frac{q_{2000}}{Q_{2000}}}{\frac{q_{1990}}{Q_{1990}}}$$

This formula assumes that the relative population growth rate of each metropolitan area (the ratio of the growth rate of the metropolitan area to that of the state) between 1990 and 2000 will remain the same in the following decade. All data for 1990 and 2000 are obtained from the 1990 and 2000 Censuses. Q_{2010} (statewide population in 2010) come from the U.S. Bureau of the Census projections. With the aggregate metropolitan population determined, the metropolitan elderly population for each age group i is projected based on the formula:

$$\frac{\dfrac{e^i_{2010}}{E^i_{2010}} \Big/ \dfrac{q_{2010}}{Q_{2010}}}{\dfrac{e^i_{2000}}{E^i_{2000}} \Big/ \dfrac{q_{2000}}{Q_{2000}}} = \frac{\dfrac{e^i_{2000}}{E^i_{2000}} \Big/ \dfrac{q_{2000}}{Q_{2000}}}{\dfrac{e^i_{1990}}{E^i_{1990}} \Big/ \dfrac{q_{1990}}{Q_{1990}}}$$

Again, E^i_{2010}, the statewide elderly population for group i comes from the Census projection. Analogous to the earlier formula, this formula assumes that the relative ratio of the elderly population in the metropolitan area to that of the state will remain the same for the projection period.

Finally, the metropolitan elderly population of group i in 2010 is disaggregated into central city and suburbs in the following way. First, the percentages of the central city and suburban population were calculated for 1990 and 2000 in relation to the total metropolitan population for each metropolitan area. In the metropolitan area where strong suburbanization occurred during that time period, the percentage of the population in the suburbs increased significantly during the 10-year period. The suburban population percentage in 2010 was calculated as the linear projection of the two observed periods. For example, if the suburban population was 40 percent in 1990 and 44 percent in 2000, the suburban population was projected to be 48 percent in 2010. Similarly, if the percentage of the central city population was 60 percent in 1990 and 56 percent in 2000, it was projected to be 52 percent in 2010. The number of elderly people in the central city and suburbs for each metropolitan area for each age group i in 2010 were obtained by multiplying the total projected population of age group i by the new estimate of the central city and suburban population percentages.

This method was devised because the U.S. Census does not provide detailed enough information for 1990. Age group specific population figures are available for each metropolitan area by central city and suburbs in the 2000 Census. But in the 1990 Census, only the marginal distributions by age group or central city-suburbs distribution are available, not the joint distribution between the age group and central city-suburbs distribution together. This method is an attempt use all the available information.

The projection for 2020 is based on the same method used in the projection for 2010 using the projected figures for 2010, as well as the actual Census data for 2000.

▪ Component 5: Forecasting housing demand

Using the figures for the metropolitan elderly population by age group, the fifth step was to forecast housing demand in terms of housing type and tenure for 2010 and 2020. The purpose of this exercise was not to predict the housing market condition for each metropolitan area in the future precisely, which would require a great deal more information; rather, it was to find a reference point so that appropriate policy responses related to housing the aging Baby Boomers can be devised.

To ascertain the future metropolitan housing market situation, two principal indicators are used: the absolute number of housing units to accommodate the increased future elderly households in the local metropolitan areas in 2020, referred to in this report as the "gap" (absolute "projected growth"), and the percentage of the gap with respect to the existing number of housing units, referred to in this report as the "relative gap" ("projected growth rates"). The first indicator was adopted to evaluate the size of the housing pressure created by elderly households. The second indicator reflects relative housing market activity in the future. These two indicators represent the growth potential of housing units in metropolitan areas.

There is no single generally accepted methodology for forecasting housing demand. The most logical and theoretically appealing approach would be to estimate first the housing demand equations for all metropolitan areas, similar to those attempted in Component 3, and then to predict the future housing demand by using the estimated demand functions and future predictions of the independent variables. This methodology, however, requires a significant knowledge base to predict several of the independent variables, such as median income, minority proportion, and so on, for each metropolitan area. Moreover, such methodology will result in a great deal of projection error for each metropolitan area, as the statistically estimated models will undoubtedly have unexplained error terms that do not fit the data perfectly.

For that reason, an alternative, quick and easy, but consistent method was devised that used the population projections produced in Component 4. In Component 4, the elderly population for the individual metropolitan areas, by age group and by residential location, was projected using the U.S. Census age-specific population projections for each state. This top-down approach relies on the more reliable U.S. Census population projections, by assuming that the relative population growth rate of each metropolitan area compared to the state growth rate will remain constant during the projected two decades. Then, from the metropolitan population, the age-specific population for each metropolitan area was projected by assuming that the ratio of each elderly group remained the same during the projection period.

A similar method was applied in the projection of housing demand. In the 1990 Census, housing consumption patterns for each metropolitan area are available by tenure and housing type. From those Census data, the marginal distribution between housing tenure and housing types is available. The 2000 Census has more detailed housing consumption patterns including tenure and housing type by age group. In contrast to the four age groups for which there is population data in the 2000 Census, there are only three age groups in the 2000 Census with housing data, that is, 55-64, 65-74, and 75 and older. In the 2000 Census, there are marginal distributions of housing demand by age group, housing tenure, housing type, and for the central cities and suburbs. Then, from the projection results from Component 4, the total number of households for each metropolitan area can be estimated.

Although the methodology developed here can be used to project housing types by tenure by age group for each metropolitan area, only more aggregated but important indicators that would represent the metropolitan housing market changes in the future are analyzed. Both owner-occupied units and rental units are considered. Because more than 85 percent of owner-occupied units are single family units, however, the projection is done only for the single family owner-occupied units; owner-occupied units in multi-

family structures are not included. In addition to the importance of the share of the single family units in owner-occupied housing units, single family units are the most important housing type in terms of the amount of land use and urban development within metropolitan areas. Because rental units comprise more diverse housing types, however, all four housing types (single family units, 2-4 units in a structure, 5 or more units in a structure, and mobile homes) are separately projected first, and aggregated later.

The number of single family owner occupied housing units in the central city for the total elderly population in a specific metropolitan area was obtained by adding the total single family owner occupied housing units for all elderly age groups in the central city. The single family owner occupied units for age group i in the central city in 2010 were projected by adjusting the single family owner occupied units for age group i in the central city in 2000 by the growth rate of elderly group i between 2000 and 2010. For example, if the elderly population of group i in the central city in a particular metropolitan was projected to grow by 5 percent, and the number of single family owner occupied units was 10,000 in 2000, the number of single family owner occupied units containing elderly group i was estimated to be 10,500. The number of single family owner occupied units in the suburbs was estimated similarly, that is, by adding the estimates for the four elderly groups. This method of disaggregating by the four elderly groups is reasonable because the housing consumption behavior of elderly people changes substantially as they age. The 2020 projection was done in exactly the same way as was done for 2010.

The number of rental units was calculated in an analogous fashion. In addition to disaggregating by elderly age group, the rental units were also disaggregated by the four housing types (single family, 2-4 units in a structure, 5 units or more in a structure, and mobile homes). Each disaggregated projection of rental housing units was done separately and summed to calculate the total rental unit estimates by central city and suburbs separately.

Although housing types by tenure and by age group were projected for each metropolitan area, it was decided to focus on the two most important variables that would indicate metropolitan housing market changes by 2020 compared to the 2000 situation in the central cities and suburbs separately: the "gap" in 2020 is the absolute number of single family owner-occupied units and rental units in central cities and suburbs (compared to the 2000 housing stock) and the "relative gap" represents the percentage of the "gap" in 2020 with respect to the 2000 number of corresponding housing units. As indicated, the "gap" is the absolute number of housing units necessary to accommodate the *increased* number of elderly households in metropolitan areas in 2020. The "relative gaps" refer to growth rates, as these reflect the rates of growth in elderly housing units between 2000 and 2020, if those gaps were realized.

The methodology adopted in this report to forecast central city and suburban housing demand for single family owner occupied housing and rental units relied on several heroic assumptions. Hence, interpretations of the results should be made cautiously. The first crucial assumption was that the average household size would remain the same during 2000-2020, so that the growth rate of the population would be exactly same as the growth rate of households. In this twenty year time period, however, there may be substantial changes in family structure and household formation. Because

there are no strong *a priori* predictions on this matter, however, it was decided not to bias the forecast in a particular direction.

A more serious bias was introduced due to the fact that housing unit price changes over time were not considered. In the future, there may be both absolute and relative housing price changes. Absolute housing price means the price of housing in general (compared to the price of all other goods). If the absolute price of housing rises in the future, housing consumption would be expected to decline, because households would switch some of their demand away from housing (the "substitution effect"). Because elderly people tend to over-consume housing (having, for example, accumulated more wealth to be able to purchase homes as compared to younger people), the elderly population would be particularly sensitive to the rising price of housing. There may be other factors that compensate for the substitution effect. If housing prices appreciate, home ownership by elderly people may tend to rise because they use housing as an investment vehicle to retain wealth. Previous literature has predicted that housing consumption would decline as the absolute housing price increases. Those results, however, are not specific to elderly households, and it is possible that the housing consumption behavior of elderly households may be different to that of younger households.

The relative housing price refers to the relative prices among different housing types and tenure. Higher relative prices for single family homes would be expected to increase the demand for multiunit housing structures. Similarly, higher prices for owner-occupied units would be expected to encourage demand for more rental units. Within a particular metropolitan area, therefore, the relative price of housing between owner-occupied units and rental units will be effective in adjusting the demand for owner-occupied housing versus rental units.

Because the methodology implicitly assumes that there are no price effects, it is likely that the changes will be exaggerated somewhat in the forecasts. Certainly, if housing units increase by 100 percent during 2000-2020, it will drive up housing prices (in absolute terms as well as in the higher rate of increase in suburban single family units). It would be reasonable, therefore, to interpret that higher growth rates in a particular metropolitan area will accompany rising housing prices, and that, as a result, the growth rate will likely be smaller than projected in this study.

Finally, when the "gaps" are discussed, changes in the housing market to accommodate increased (or decreased) housing demand due to socioeconomic changes (for example, number of people, fertility rate, income, education, and so on) of the non-elderly population are ignored. In other words, the housing market for non-elderly people in metropolitan areas is not explicitly considered. Clearly, this is a rather unrealistic assumption, because the non-elderly and elderly housing markets are not completely separate, but operate within an overall integrated housing environment.

2. ELDERLY POPULATION AND HOUSING IN 1990 AND 2000

This component describes the elderly population and changes in that population by age group across U.S. Census Regions and metropolitan areas, and also within metropolitan areas (central cities versus suburbs) using 1990 and 2000 Census data. It also describes elderly homeownership patterns as well as the housing type choices of elderly owners and renters.

The findings of Component 2 can be summarized as follows. Of the 281 million people in the United States in 2000, 59 million were elderly. Of these elderly, 46 million lived in metropolitan areas. In 1990 18 million elderly people lived in the largest metropolitan areas (such as New York and Los Angeles, with 3 million or more people), and 22 million lived in smaller metropolitan areas (with fewer than 3 million people, ranging from Minneapolis-St. Paul with nearly 3 million in 2000 to Enid, Oklahoma with fewer than 58,000 people). In 2000 20 million lived in the largest metropolitan areas, and 26 million lived in smaller metropolitan areas. In relative terms, the elderly population in the largest metropolitan areas grew by 12.3 percent, whereas it grew by 14.9 percent in the smaller metropolitan areas, suggesting that the graying of America is more prominent in smaller metropolitan areas. This pattern is consistent for all four elderly age groups.

More than 60 percent of metropolitan residents lived in suburbs. More importantly, the elderly population in the suburbs has been growing very rapidly. Between 1990 and 2000, the elderly population in central cities grew by only 9 percent, while it grew by just over 17 percent in the suburbs.

In general, elderly people are more likely than the average household to be homeowners. There appears to be two types of metropolitan area with growing proportions of elderly people: popular retirement destinations in Sunbelt states such as Florida, Colorado, and California; and small- and medium-sized metropolitan areas in Rustbelt states such as Pennsylvania, New York, and Ohio. Although home ownership rates decrease as a person ages, nevertheless, elderly households aged 85 and older had a 66.1 percent home ownership rate in 2000, which was only 0.1 percent lower than that of households of all ages. Between 1990 and 2000, the home ownership rate of the elderly increased about 1 to 2 percentage points. In particular, older elderly people are becoming more likely to own homes than in the past. In 2000 most elderly homeowners—more than 85 percent—lived in single family housing units. A notable exception is that 7 to 10 percent of elderly owners lived in structures containing 2 to 4 units in the New England and Middle Atlantic Census Divisions (see Appendix A for a list of U.S. states by Census Division). Elderly renters, however, tended to choose more diverse housing types like duplexes, multi-family housing structures, and mobile homes.

Total U.S. Population

Table 2.1 shows the total U.S. population, percentage (proportion of each age group's share of the total population by Census Region), and percentage change in the population of elderly people by Census Region and age group for 1990-2000. In 1990 out of a total U.S. population of 249 million, 21 million were in the age group 55-64, 18 million were aged 65-74, 10 million were aged 75-84, and 3 million were 85 years and older. These

age groups represent 8.5 percent, 7.3 percent, 4.0 percent, and 1.2 percent of the total population respectively. By 2000, the total U.S. population had increased to 281 million—by approximately 13 percent.

During 1990-2000, the populations of all four elderly groups increased. By 2000, the population of the four elderly groups had increased to 24 million, 18 million, 12 million, and 4 million respectively. In terms of percentage change, the four groups increased by 14.8 percent, 1.6 percent, 22.9 percent, and 37.6 percent respectively between 1990 and 2000. Except for the 65-74 year olds, the increase was substantial. The smaller increase of this age group was due to the relatively smaller size of the population of this age group due to the low fertility rates during World War II.

The relative proportion of the elderly age groups to the total population changed to 8.6 percent, 6.5 percent, 4.4 percent, and 1.5 percent by 2000. Except for the 64-74 year old group, the proportions of the elderly groups compared to the total U.S. population increased during the 10-year period. Because the total U.S. population grew by 13.2 percent, while the absolute size of the 65-74 age group increased by only 1.6 percent, the result was a decrease in the proportion of this elderly age group.

The population of 55-64 year olds increased by 14.8 percent, which was slightly higher than that of the U.S. population. The most striking fact is that the older elderly age groups increased substantially. The 75-84 year olds increased by 22.9 percent while the 85 and older group increased by a dramatic 37.6 percent.

Table 2.1 also shows how the elderly population is not distributed evenly across Census Regions (see Appendix A for a list of U.S. states by Census Region). In particular, the West has a substantially lower proportion of elderly people compared to the United States as a whole. In 1990 the 55-64 year old group was particularly under-represented in the West. In contrast, this age group was over-represented in the Northeast. In general, the West and South had the strongest rates of growth in elderly people between 1990 and 2000, while the Northeast and Midwest grew quite slowly. For example, the total elderly population increased by 22.2 percent in the West, while the growth rate in the Northeast was only 4.5 percent.

An examination of the distribution of the elderly population by Census Division reveals a few more interesting patterns (Table 2.2). The Middle Atlantic Division had a substantially higher elderly proportion (23.1 percent) compared to the national average (20.3 percent) in 1990, while the South Central and the Pacific Divisions had lower proportions than the national average. The pattern remained more or less the same in 2000. While the national population increased by 13.2 percent between 1990 and 2000, the growth rate in the Northeast and Midwest Divisions was less than 7 percent, presumably due to interregional migration to the Sunbelt during that decade. In contrast, the elderly population of the Mountain Division increased by 33.0 percent while that in the South Atlantic Division increased by 18.8 percent. The South Central and the Pacific Divisions increased by more than the national average, but less rapidly than the growth rate in the two fastest growing Divisions.

By examining the age and spatial distributions simultaneously, several other interesting patterns emerge (Table 2.1). For the 55-64 year old group, the population change among Census Regions can be classified into two groups: the fast-growing South, West, and Pacific versus the slow-growing Northeast and Midwest. Looking at Census Divisions (Table 2.2) for the 65-74 year old group, the increase in the Mountain Division

is remarkable (21.5 percent), whereas that in the Pacific Division is not impressive (1.6 percent). For the 75-84 year old group, the Pacific Division as well as the Mountain and South Atlantic Divisions recorded the highest growth rates for 1990-2000, while this pattern was similar for those aged 85 and older (Table 2.2). This may reflect the fact the different age groups have different inter-regional migration patterns—as people age, their choice of migration destinations also change.

Metropolitan Population

Tables 2.3 and 2.4 show the elderly population in metropolitan areas by Census Region and Division respectively in 1990 and 2000. These tables show very similar patterns to those in Tables 2.1 and 2.2, suggesting that the age and regional distributions of the elderly population groups in metropolitan areas are not particularly different to the overall U.S. situation.

In 1990 of the 198 million people living in metropolitan areas, 91 million lived in the largest metropolitan areas like New York, Los Angeles, and Chicago (with a population of 3 million or more), while 107 million lived in smaller metropolitan areas with fewer than 3 million people. In the largest metropolitan areas, 37.9 percent lived in the central cities and 62.1 percent lived in the suburbs, whereas in the smaller metropolitan areas, 40.8 percent lived in central cities and 59.2 percent lived in the suburbs. In 2000 of the 226 million residents in metropolitan areas, 104 million lived in the largest metropolitan areas and 122 million lived in the smaller metropolitan areas. In the largest metropolitan areas, 36.2 percent lived in central cities and 63.8 percent lived in the suburbs, whereas in the smaller metropolitan areas, 39.1 percent lived in central cities and 60.9 percent lived in the suburbs. In both the largest and smaller metropolitan areas between 1990 and 2000, growth rates in the suburbs were much higher (17.0 percent in the largest metropolitan areas and 17.2 percent in the smaller metropolitan areas) than those in central cities (9.3 percent in the largest metropolitan areas and 8.6 percent in the smaller metropolitan areas).

There were 40 million elderly people living in metropolitan areas in the United States in 1990. This figure increased to 46 million by 2000—corresponding to a 13.7 percent increase. Compared to the growth rate of the total U.S. population (14.1 percent), the growth rate of the elderly population actually decreased. Nevertheless, the growth rate of the older elderly age groups increased much faster than that of the population as a whole. The 75-84 group increased by 23.4 percent, while the 85 and older group increased by 40.0 percent.

In 1990 18 million elderly people lived in the largest metropolitan areas, and 22 million lived in the smaller metropolitan areas. By 2000, these figures had increased to 20 million and 26 million respectively. In relative terms, the elderly population in the largest metropolitan areas increased by 12.3 percent, whereas it increased by 14.9 percent in the smaller metropolitan areas, suggesting that the "graying of America" is more prominent in small- and medium-sized metropolitan areas. This pattern is consistent for all four elderly age groups.

Figures 2.1 and 2.2 show the percentage of people aged 65 and older in 1990 and 2000 respectively. Overall, the two maps exhibit a similar pattern. First, two types of metropolitan area appear to have a high percentage of people aged 65 and older:

(1) metropolitan areas that are attractive to retiree migrants, located in Florida, Colorado, and western states; (2) metropolitan areas, typically located in Rustbelt states, such as Pennsylvania, New York and Ohio, that lost young migrants during this decade.

Figure 2.3 shows the percentage change in the 65 and older population between 1990 and 2000. The increase in the proportion of elderly people is less prominent in Florida. The growth is more prominent in southern and western states, such as California, Texas, New Mexico, Arizona, and Louisiana.

Table 2.5 shows the U.S. population in metropolitan areas, broken down by central cities and suburbs. In 1990 approximately 80 percent of the total population (226 out of 281 million) resided in metropolitan areas in the United States. Within metropolitan areas, about 40 percent lived in central cities, whereas about 60 percent lived in the suburbs. The proportion living in metropolitan areas increased slightly (by less than 0.4 percent) between 1990 and 2000. At the same time, the proportion of suburbanites increased to 62.2 percent. During this ten year period, the metropolitan population increased by 13.9 percent, which is slightly higher than the growth rate for the total U.S. population (13.2 percent). While the population in central cities grew by only 9.0 percent, the growth rate in the suburbs was 17.1 percent.

Tables 2.6, 2.7, and 2.8 show the total metropolitan population, occupied housing units, and available housing units, broken down by central cities and suburbs, Census Divisions, and size of metropolitan area (largest versus smaller). In the central cities, the share of the population in all Census Divisions is lower than the share of occupied housing units, and the share of occupied housing units is lower than the share of available housing units. These figures may reflect two factors. First, the size of households is smaller in central cities compared to in the suburbs. Second, the housing markets in suburban areas are tighter (that is, vacancy rates are lower) than in central cities. Overall, the importance of the suburbs in terms of both people and housing stock increased between 1990 and 2000.

The data in the tables show wide variations between the elderly population living in central cities and suburbs across Census Divisions. This is likely due to regional variations in the size of central cities within metropolitan areas, as well as the extent to which extensive annexation was carried out by central cities during the historical growth of these metropolitan areas. In general, the proportion of people living in central cities in the New England, South Atlantic, Middle Atlantic, and Pacific Divisions is lower than that in the South Central and Mountain Divisions.

Home Ownership

Table 2.9a shows home ownership rates by elderly age group and Census Region. In general, the home ownership rate of the elderly population would be considered to be high. The average home ownership rate of the United States as a whole is 66.2 percent. This compares with the homeownership rates of the elderly age groups: 79.8 percent, 81.3 percent, 77.3 percent, and 66.1 percent respectively. The homeownership rate is highest for the 65-74 year olds, and declines moderately with age. Yet even the oldest age group, 85 and older, has a home ownership rate of 66.1 percent, which is about the same as the national average. This indicates that elderly people are, in general, more likely to be homeowners than younger households. This probably reflects the fact that older

households have more assets accumulated over time so that home ownership is more feasible. Also, these data may reflect the unwillingness of elderly households to reduce their housing consumption as they get older—preferring instead to "age in place."

Home ownership rates vary substantially across Census Regions and Divisions. The Midwest Region, South Atlantic Division, and East South Central Division have the highest homeownership rates, whereas the Pacific Division has the lowest rate—the difference is more than 10 percentage points. Such difference, however, is far less prominent for the older elderly population groups. In the Pacific Division, the home ownership rates for the 85 and older group is 65.3 percent. The exceptionally high elderly ownership rate may indicate that elderly households keep their home as an asset, because housing values have been increasing rapidly in this area.

Between 1990 and 2000, home ownership rates increased. In 1990 the home ownership rate for the United States was 64.2 percent; it increased to 66.2 percent by 2000. The increase in home ownership was universal across all Census Regions and Divisions. Although the increase was most prominent in the Mountain Division, the regional difference in the increase in home ownership rates ranged from 0.8 percent in the Middle Atlantic Division to 3.7 percent in the Mountain Division. During that decade, the home ownership rate of elderly people also increased, and was more pronounced for the older elderly groups. The increase was only 0.1 percent for the 55-64 year old group, but it was 2.5 percent for the 65-74 age group, and 4.3 percent for those aged 75 years and older. This finding indicates that older elderly people are becoming more willing to own homes than in the past.

The home ownership rates were generally higher in non-metropolitan areas than in metropolitan areas in 2000 (Table 2.9b). The difference was quite substantial, and was true for all age groups. For the 55-64 year olds, the rate of home ownership in metropolitan areas was 78.4 percent, while it was 85.0 percent in non-metropolitan areas. For the 65-74 year old group, the rates were 79.9 percent versus 85.9 percent, and for the 75-84 year olds, the rates were 76.0 percent versus 81.5 percent. Even those aged 85 and older had rates of 64.0 percent versus 72.9 percent. Overall, there was a 6 to 8 percentage point difference between the home ownership rates of metropolitan households and non-metropolitan households for each age group. This is probably a reflection of the fact that home values are higher in metropolitan areas relative to household incomes. Moreover, residents in metropolitan areas typically are more mobile and so may be more likely to be renters, holding everything else constant.

The home ownership rates in central cities are typically much lower than those in the suburbs (Table 2.10). In 1990 the homeownership rate in central cities was only 54.2 percent, whereas the rate in the suburbs was 74.2 percent. During the period 1990-2000, home ownership rates increased in both central cities and suburbs. The gain in the suburbs (2.0 percent), however, was greater than that in the central cities (1.1 percent).

The changes in home ownership rates also differed substantially across U.S. Census Divisions. For example, in the Mountain and Pacific Divisions, the home ownership rates in both central cities and suburbs increased substantially (from 56.4 percent in 1990 to 59.3 percent in 2000 in central cities, and from 73.9 percent in 1990 to 77.9 percent in 2000 in the suburbs). In contrast, in the Middle Atlantic Division, the ownership rate in central cities declined during that time period, from 49.1 percent in 1990 to 48.8 percent in 2000, while that in the suburbs increased by 0.4 percent, from

75.6 percent in 1990 to 76.0 percent in 2000. In the West South Central Division, the home ownership rate in central cities increased during this period, while the rate in the suburbs declined (Table 2.10)

Housing Type Choice

The Tables 2.11a, 2.11b, and 2.11c show the percentage of different housing types occupied by owner occupier households broken down by Census Division and elderly group (55-64, 65-74, and 75 and older) in 2000. These were the three elderly groups defined by the Census; there was no distinction made between those aged 75-84 and 85 and older. The housing types are classified into 6 categories: single family house (1 unit in structure), 2-4 units in a structure, 5-19 units in a structure, 20-49 units in a structure, 50 or more units in a structure, and other types of units such as mobile homes, boats, and recreational vehicles (RVs). The overwhelming majority of owner-occupier households lived in single family housing units in 2000. Of those owners aged 55-64, 87.1 percent lived in single family houses. Although the proportion decreases with age, the decline is rather minor: the proportion decreases to 85.2 percent for the 65-74 age group, and 83.1 percent for the 75 and older group. In the Northeast and Midwest Census Regions, the proportion living in other types of housing, such as mobile homes, was relatively small compared to those in the South and West Census Regions.

Table 2.12a, 2.12b, and 2.12c show the percentage of different housing types occupied by renter households broken down by Census Division and elderly group for 2000. Renters occupied much more diverse types of housing than owners. Among the 55-64 year olds, only 31.2 percent of renter households lived in single family units, while 21.0 percent lived in structures with 2-4 units, 20.3 percent lived in structures with 5-19 units, 8.5 percent lived in structures with 20-49 units, 14.3 percent lived in structures with 50 or more units, and 4.7 percent lived in other types of units like mobile homes.

The proportion of elderly renters living in this last category of housing varied substantially across Census Regions and Divisions. In the Northeast Region, less than 1.5 percent of elderly households lived in other types of structures like mobile homes, but in the East South Central Division, more than 10 percent lived in such structures. In contrast, the percentage of households living in structures with 2 to 4 units was 8.3 percent in the New England Division and 7.0 percent in the Middle Atlantic Division, while this proportion was less than 2 percent in all other Divisions except for the East North Central Division (2.8 percent). The share of owners living in structures with 5-9 units was in the range of 0.4 percent (East South Central and West South Central Divisions) to 1.9 percent (New England Division). The percentage of owners living in larger structures (with 50 or more units) is typically lower throughout the United States.

The proportion of renters living in single family units decreases substantially as households ages. While 31.2 percent of 55-64 year olds lived in single family units in 2000, the comparable figures for the 65-74 age group was 26.5 percent, and 21.1 percent for the 75 and older group. This reflects the fact that as households age, they may favor structures with more units (presumably high rise, high density buildings). While only 14.3 percent of renter households in the 55-64 year old group lived in structures with 50 or more units, the proportion increases to 21.5 percent for the 65-74 year old group, and to 32.4 percent for the 75 and older group.

Table 2.1: The elderly by Census Region and age group: Total and percentage 1990, 2000; Percent change 1990-2000

Census Region	All Elderly		55-64		65-74		75-84		85+		Total U.S.
	Population	% of tot.U.S. pop.	Population	% of tot.U.S pop.	Population	% of tot.U.S. pop.	Population	% of tot.U.S pop.	Population	% of tot.U.S. pop.	Population
1990											
United States	52,389,754	21.06%	21,147,923	8.50%	18,106,558	7.28%	10,055,108	4.04%	3,080,165	1.24%	248,709,873
Northeast [a]	11,652,552	22.93%	4,657,396	9.17%	4,030,369	7.93%	2,254,978	4.44%	709,809	1.40%	50,809,229
Midwest [b]	12,902,191	21.62%	5,153,061	8.64%	4,386,270	7.35%	2,522,997	4.23%	839,863	1.41%	59,668,632
South [c]	18,017,685	21.09%	7,293,503	8.54%	6,263,477	7.33%	3,468,683	4.06%	992,022	1.16%	85,445,930
West [d]	9,817,326	18.60%	4,043,963	7.66%	3,426,442	6.49%	1,808,450	3.43%	538,471	1.02%	52,786,082
2000											
United States	59,266,437	21.06%	24,274,684	8.63%	18,390,986	6.54%	12,361,180	4.39%	4,239,587	1.51%	281,421,906
Northeast	12,179,653	22.73%	4,807,371	8.97%	3,768,272	7.03%	2,665,551	4.97%	938,459	1.75%	53,594,378
Midwest	13,806,492	21.44%	5,547,417	8.61%	4,247,710	6.60%	2,947,070	4.58%	1,064,295	1.65%	64,392,776
South	21,281,015	21.23%	8,842,748	8.82%	6,711,853	6.70%	4,295,868	4.29%	1,430,546	1.43%	100,236,820
West	11,999,277	18.99%	5,077,148	8.03%	3,663,151	5.80%	2,452,691	3.88%	806,287	1.28%	63,197,932
Percentage Change 1990-2000											
United States	13.13%		14.79%		1.57%		22.93%		37.64%		13.15%
Northeast	4.52%		3.22%		-6.50%		18.21%		32.21%		5.48%
Midwest	7.01%		7.65%		-3.16%		16.81%		26.72%		7.92%
South	18.11%		21.24%		7.16%		23.85%		44.21%		17.31%
West	22.23%		25.55%		6.91%		35.62%		49.74%		19.72%

[a] New England and Middle Atlantic Divisions.
[b] East North Central and West North Central Divisions.
[c] South Atlantic, East South Central, and West South Central Divisions.
[d] Mountain and Pacific Divisions.

Table 2.2: The elderly by Census Division and age group: Total and percentage 1990, 2000; Percent change 1990-2000

Census Division	55-64		65-74		75-84		85+		Total U.S.
	Population	% of tot.U.S. pop.	Population	% of tot.U.S. pop.	Population	% of tot.U.S. pop.	Population	% of tot.U.S. pop.	Population
1990									
United States	21,147,923	8.50%	18,106,558	7.28%	10,055,108	4.04%	3,080,165	1.24%	248,709,873
New England[1]	1,141,447	8.64%	1,001,877	7.59%	574,173	4.35%	194,253	1.47%	3,206,943
Middle Atlantic[2]	3,515,949	9.35%	3,028,492	8.05%	1,680,805	4.47%	515,556	1.37%	7,602,286
East North Central[3]	3,644,496	8.68%	3,066,266	7.30%	1,694,588	4.03%	538,530	1.28%	2,008,942
West North Central[4]	1,508,565	8.54%	1,320,004	7.47%	828,409	4.69%	301,333	1.71%	7,659,690
South Atlantic[5]	3,833,450	8.80%	3,452,118	7.92%	1,867,573	4.29%	514,717	1.18%	3,566,853
East South Central[6]	1,335,892	8.80%	1,107,016	7.29%	636,917	4.20%	186,003	1.23%	5,176,284
West South Central[7]	2,124,161	7.95%	1,704,343	6.38%	964,193	3.61%	291,302	1.09%	6,702,793
Mountain[8]	1,069,809	7.83%	914,548	6.70%	476,677	3.49%	132,600	0.97%	3,658,776
Pacific[9]	2,974,154	7.60%	2,511,894	6.42%	1,331,773	3.40%	405,871	1.04%	39,127,306
2000									
United States	24,274,684	8.63%	18,390,986	6.54%	12,361,180	4.39%	4,239,587	1.51%	281,421,906
New England	1,233,775	8.86%	948,285	6.81%	689,939	4.96%	253,405	1.82%	13,922,517
Middle Atlantic	3,573,596	9.01%	2,819,987	7.11%	1,975,612	4.98%	685,054	1.73%	39,671,861
East North Central	3,900,163	8.64%	2,956,079	6.55%	2,027,635	4.49%	698,470	1.55%	45,155,037
West North Central	1,647,254	8.56%	1,291,631	6.71%	919,435	4.78%	365,825	1.90%	19,237,739
South Atlantic	4,725,197	9.13%	3,686,234	7.12%	2,420,833	4.68%	780,345	1.51%	51,769,160
East South Central	1,567,201	9.21%	1,159,253	6.81%	722,254	4.24%	249,918	1.47%	17,022,810
West South Central	2,550,350	8.11%	1,866,366	5.94%	1,152,781	3.67%	400,283	1.27%	31,444,850
Mountain	1,510,376	8.31%	1,111,051	6.11%	699,879	3.85%	218,916	1.20%	18,172,295
Pacific	3,566,772	7.92%	2,552,100	5.67%	1,752,812	3.89%	587,371	1.30%	45,025,637

Percentage Change 1990-2000									
United States	14.8%		1.6%		22.9%		37.6%		13.2%
New England	8.1%		-5.3%		20.2%		30.5%		5.4%
Middle Atlantic	1.6%		-6.9%		17.5%		32.9%		5.5%
East North Central	7.0%		-3.6%		19.7%		29.7%		7.5%
West North Central	9.2%		-2.15%		11.0%		21.4%		8.9%
South Atlantic	23.3%		6.85%		29.6%		51.6%		18.8%
East South Central	17.3%		4.7%		13.4%		34.4%		12.2%
West South Central	20.1%		9.5%		19.6%		37.4%		17.8%
Mountain	41.2%		21.5%		46.8%		65.1%		33.0%
Pacific	19.9%		1.6%		31.6%		44.7%		15.1%

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[2] New Jersey, New York, Pennsylvania.
[3] Indiana, Illinois, Michigan, Ohio, Wisconsin.
[4] Iowa, Kansas, Minnesota, Missouri, Nebraska, N. Dakota, S. Dakota.
[5] Delaware, D.C., Florida, Georgia, Maryland, N. Carolina, S. Carolina, Virginia, W. Virginia.
[6] Alabama, Kentucky, Mississippi, Tennessee.
[7] Arkansas, Louisiana, Oklahoma, Texas.
[8] Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming.
[9] Alaska, California, Hawaii, Oregon, Washington.

Table 2.3: The elderly in metropolitan areas by Census Region: Total and percentage 1990, 2000; Percent change 1990-2000

Census Region	All Elderly		55-64		65-74		75-84		85+		Total U.S.
	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	metro. pop.
1990											
United States	40,209,774	20.30%	16,492,095	8.33%	13,876,752	7.01%	7,543,534	3.81%	2,297,394	1.16%	198,036,869
Northeast	10,472,120	22.82%	4,217,320	9.19%	3,611,688	7.87%	2,011,138	4.38%	631,975	1.38%	45,893,709
Midwest	8,806,914	20.28%	3,641,728	8.39%	2,991,353	6.89%	1,643,055	3.78%	530,778	1.22%	43,423,240
South	12,597,376	20.05%	5,178,503	8.24%	4,378,121	6.97%	2,365,582	3.77%	675,170	1.07%	62,822,269
West	8,333,364	18.16%	3,454,544	7.53%	2,895,590	6.31%	1,523,759	3.32%	459,471	1.00%	45,897,651
2000											
United States	45,734,481	20.24%	18,876,421	8.35%	14,108,439	6.24%	9,532,318	4.22%	3,217,303	1.42%	225,981,679
Northeast	10,908,275	22.45%	4,309,898	8.87%	3,367,088	6.93%	2,390,703	4.92%	840,586	1.73%	48,585,525
Midwest	9,556,055	20.09%	3,933,115	8.27%	2,923,583	6.15%	2,005,498	4.22%	693,859	1.46%	47,558,581
South	15,136,955	20.19%	6,336,929	8.45%	4,743,187	6.33%	3,057,650	4.08%	999,189	1.33%	74,961,716
West	10,133,196	18.47%	4,296,479	7.83%	3,074,581	5.60%	2,078,467	3.79%	683,669	1.25%	54,875,857
Percentage Change 1990-2000											
United States	13.74%		14.46%		1.67%		26.36%		40.04%		14.11%
Northeast	4.16%		2.20%		-6.77%		18.87%		33.01%		5.87%
Midwest	8.51%		8.00%		-2.27%		22.06%		30.72%		9.52%
South	20.16%		22.37%		8.34%		29.26%		47.99%		19.32%
West	21.60%		24.37%		6.18%		36.40%		48.79%		19.56%

Table 2.4: The elderly in metropolitan areas by Census Division: Total and percentage 1990, 2000; Percent change 1990-2000

Census Division	All Elderly		55-64		65-74		75-84		85+		Total U.S.
	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	Metro. pop.	% of tot. U.S. metro. pop.	metro. pop.
1990											
United States	40,209,774	20.30%	16,492,095	8.33%	13,876,752	7.01%	7,543,534	3.81%	2,297,394	1.16%	198,036,869
New England	2,019,729	21.64%	796,778	8.54%	690,492	7.40%	396,874	4.25%	135,586	1.45%	9,332,882
Middle Atlantic	8,452,391	23.12%	3,420,542	9.36%	2,921,196	7.99%	1,614,264	4.42%	496,389	1.36%	36,560,827
East North Central	6,601,209	20.48%	2,743,224	8.51%	2,261,015	7.02%	1,215,903	3.77%	381,067	1.18%	32,228,193
West North Central	2,205,705	19.70%	898,504	8.03%	730,338	6.52%	427,152	3.82%	149,711	1.34%	11,195,047
South Atlantic	7,360,854	21.73%	2,912,554	8.60%	2,626,287	7.75%	1,426,533	4.21%	395,480	1.17%	33,870,813
East South Central	1,774,594	20.40%	747,499	8.59%	600,747	6.91%	329,687	3.79%	96,661	1.11%	8,697,398
West South Central	3,461,928	17.09%	1,518,450	7.50%	1,151,087	5.68%	609,362	3.01%	183,029	0.90%	20,254,058
Mountain	1,824,389	18.35%	760,579	7.65%	644,776	6.48%	328,100	3.30%	90,934	0.91%	9,944,448
Pacific	6,508,975	18.10%	2,693,965	7.49%	2,250,814	6.26%	1,195,659	3.33%	368,537	1.03%	35,953,203
Large metros[1]	17,778,791	19.54%	7,457,246	8.20%	6,033,343	6.63%	3,281,906	3.61%	1,006,297	1.11%	90,966,623
Smaller metros[2]	22,430,983	20.95%	9,034,849	8.44%	7,843,409	7.33%	4,261,628	3.98%	1,291,097	1.21%	107,070,246
2000											
United States	45,734,481	20.24%	18,876,421	8.35%	14,108,439	6.24%	9,532,318	4.22%	3,217,303	1.42%	225,981,679
New England	2,172,224	21.90%	852,247	8.59%	657,565	6.63%	484,551	4.89%	177,861	1.79%	9,918,224
Middle Atlantic	8,736,051	22.59%	3,457,651	8.94%	2,709,523	7.01%	1,906,152	4.93%	662,725	1.71%	38,667,301
East North Central	7,115,321	20.28%	2,925,782	8.34%	2,185,196	6.23%	1,499,267	4.27%	505,076	1.44%	35,084,676
West North Central	2,440,734	19.57%	1,007,333	8.08%	738,387	5.92%	506,231	4.06%	188,783	1.51%	12,473,905
South Atlantic	8,877,304	21.84%	3,602,908	8.86%	2,800,075	6.89%	1,869,648	4.60%	604,673	1.49%	40,645,268
East South Central	2,033,301	20.57%	868,867	8.79%	636,166	6.44%	396,039	4.01%	132,229	1.34%	9,885,843
West South Central	4,226,350	17.30%	1,865,154	7.63%	1,306,946	5.35%	791,963	3.24%	262,287	1.07%	24,430,605
Mountain	2,545,094	18.73%	1,089,389	8.02%	795,730	5.86%	505,482	3.72%	154,493	1.14%	13,587,504
Pacific	7,588,102	18.38%	3,207,090	7.77%	2,278,851	5.52%	1,572,985	3.81%	529,176	1.28%	41,288,353

Large metros	19,970,049	19.29%	8,491,209	8.20%	6,034,832	5.83%	4,052,220	3.91%	1,391,788	1.34%	103,529,059
Smaller metros	25,764,432	21.04%	10,385,212	8.48%	8,073,607	6.59%	5,480,098	4.48%	1,825,515	1.49%	122,452,620
Percentage Change 1990-2000											
United States	13.74%		14.46%		1.67%		26.36%		40.04%		14.11%
New England	7.55%		6.96%		-4.77%		22.09%		31.18%		6.27%
Middle Atlantic	3.36%		1.08%		-7.25%		18.08%		33.51%		5.76%
East North Central	7.79%		6.65%		-3.35%		23.30%		32.54%		8.86%
West North Central	10.66%		12.11%		1.10%		18.51%		26.10%		11.42%
South Atlantic	20.60%		23.70%		6.62%		31.06%		52.90%		20.00%
East South Central	14.58%		16.24%		5.90%		20.13%		36.80%		13.66%
West South Central	22.08%		22.83%		13.54%		29.97%		43.30%		20.62%
Mountain	39.50%		43.23%		23.41%		54.06%		69.90%		36.63%
Pacific	16.58%		19.05%		1.25%		31.56%		43.59%		14.84%
Large metros	12.33%		13.87%		0.02%		23.47%		38.31%		13.81%
Smaller metros	14.86%		14.95%		2.93%		28.59%		41.39%		14.37%

[1] 3 million people or more
[2] fewer than 3 million people

Table 2.5: Population in metropolitan areas by location (central cities versus suburbs) and percentage change 1990-2000

		Total	Central Cities	Suburbs
1990	**Metro. population**	198,391,586	78,324,658	120,062,932
	% of tot. metro. pop.		39.5%	60.5%
2000	**Metro. population**	225,981,477	85,372,608	140,604,877
	% of tot. metro. pop.		37.8%	62.2%
% Change 1990-2000		13.9%	9.0%	17.1%

Table 2.6: Population in metropolitan areas by Census Division, location (central cities versus suburbs), and size: 1990 and 2000

Census Division	1990					2000				
	Total	Central Cities		Suburbs		Total	Central Cities		Suburbs	
	metro. pop.	Metro. pop.	% of tot. metro. pop.	Metro. pop.	% of tot. metro. pop.	metro. pop.	Metro. pop	% of tot. metro. pop.	Metro. pop.	% of tot. metro. pop.
United States	198,391,586	78,328,654	39.5%	120,062,932	60.5%	225,981,281	85,385,196	37.8%	140,596,515	62.2%
New England	9,431,005	3,037,846	32.2%	6,424,111	68.1%	9,917,826	3,037,846	30.6%	6,880,410	69.4%
Middle Atlantic	36,548,170	13,780,222	37.7%	23,262,319	63.6%	38,667,301	13,780,222	35.6%	24,887,079	64.4%
East North Central	32,519,672	12,744,079	39.2%	19,992,803	61.5%	35,084,676	12,744,079	36.3%	22,340,597	63.7%
West North Central	11,193,566	4,986,429	44.5%	6,500,419	58.1%	12,473,905	4,986,429	40.0%	7,487,476	60.0%
South Atlantic	33,870,470	11,070,018	32.7%	23,706,272	70.0%	40,645,268	11,070,018	27.2%	29,575,250	72.8%
East South Central	8,697,398	4,099,527	47.1%	4,779,348	55.0%	9,885,843	4,099,527	41.5%	5,786,316	58.5%
West South Central	20,254,058	12,710,173	62.8%	9,181,082	45.3%	24,430,605	12,710,173	52.0%	11,720,432	48.0%
Mountain	9,939,884	6,482,453	65.2%	4,906,579	49.4%	13,587,504	6,482,453	47.7%	7,105,051	52.3%
Pacific	35,937,363	16,474,449	45.8%	21,309,999	59.3%	41,288,353	16,474,449	39.9%	24,813,904	60.1%
Large metros[1]	90,952,741	34,515,298	37.9%	56,437,443	62.1%	103,529,060	37,480,101	36.2%	66,048,959	63.8%
Smaller metros[2]	107,438,845	43,813,356	40.8%	63,625,489	59.2%	122,452,221	47,905,095	39.1%	74,547,556	60.9%

[1] 3 million people or more
[2] fewer than 3 million people

Table 2.7: Occupied housing units in metropolitan areas by Census Division, location (central cities versus suburbs), and size: 1990, 2000

Census Division	1990					2000				
	Total	Central Cities		Suburbs		Total	Central Cities		Suburbs	
	metro. pop.	Metro.pop.	% of tot. metro. pop.	Metro.pop.	% of tot. metro. pop.	metro. pop.	Metro.pop.	% of tot. metro. pop.	Metro.pop.	% of tot. metro. pop
United States	73,348,479	29,972,712	40.9%	43,375,767	59.1%	84,304,885	32,744,921	38.8%	51,541,709	61.1%
New England	3,522,160	1,206,993	34.3%	2,360,041	67.0%	3,823,286	1,206,993	31.6%	2,616,293	68.4%
Middle Atlantic	13,559,106	5,271,656	38.9%	8,439,434	62.2%	14,502,438	5,271,656	36.4%	9,230,782	63.6%
East North Central	12,072,775	4,948,587	41.0%	7,286,856	60.4%	13,365,079	4,948,587	37.0%	8,416,492	63.0%
West North Central	4,256,649	2,019,206	47.4%	2,380,010	55.9%	4,848,374	2,019,206	41.6%	2,829,168	58.4%
South Atlantic	12,912,320	4,470,340	34.6%	8,913,184	69.0%	15,703,547	4,470,340	28.5%	11,233,207	71.5%
East South Central	3,266,754	1,660,676	50.8%	1,729,839	53.0%	3,854,933	1,660,676	43.1%	2,194,257	56.9%
West South Central	7,311,744	4,737,001	64.8%	3,170,000	43.4%	8,830,328	4,737,001	53.6%	4,075,072	46.1%
Mountain	3,712,548	2,494,062	67.2%	1,735,489	46.7%	5,030,755	2,494,062	49.6%	2,536,693	50.4%
Pacific	12,734,423	5,936,400	46.6%	7,360,914	57.8%	14,346,145	5,936,400	41.4%	8,409,745	58.6%
Large metros	33,125,306	13,005,129	39.3%	20,120,177	60.7%	37,505,543	13,949,624	37.2%	23,555,919	62.8%
Smaller metros	40,223,173	16,967,583	42.2%	23,255,590	57.8%	46,799,342	18,795,297	40.2%	27,985,790	59.8%

Table 2.8: Available housing units in metropolitan areas by Census Division, location (central cities versus suburbs), and size: 1990, 2000

Census Division	1990					2000				
	Total	Central Cities		Suburbs		Total	Central Cities		Suburbs	
	metro.pop.	Metro.pop.	% of tot. metro. pop.	Metro.pop.	% of tot. metro. pop.	metro.pop.	Metro.pop.	% of tot. metro. pop.	Metro.pop.	% of tot. metro. pop.
United States	80,080,607	32,851,420	41.0%	47,229,187	59.0%	90,812,960	35,404,567	39.0%	55,401,955	61.0%
New England	3,833,748	1,287,443	33.6%	2,561,369	66.8%	4,065,082	1,287,443	31.7%	2,777,639	68.3%
Middle Atlantic	14,641,782	5,717,136	39.0%	9,113,859	62.2%	15,599,292	5,717,136	36.6%	9,882,156	63.4%
East North Central	12,850,048	5,379,496	41.9%	7,658,129	59.6%	14,220,222	5,379,496	37.8%	8,840,726	62.2%
West North Central	4,583,955	2,166,373	47.3%	2,543,752	55.5%	5,138,969	2,166,373	42.2%	2,972,596	57.8%
South Atlantic	14,507,424	4,941,354	34.1%	10,048,493	69.3%	17,336,588	4,941,354	28.5%	12,395,234	71.5%
East South Central	3,562,106	1,816,533	51.0%	1,879,667	52.8%	4,202,482	1,816,533	43.2%	2,385,949	56.8%
West South Central	8,293,726	5,150,640	62.1%	3,562,019	42.9%	9,596,440	5,150,640	53.7%	4,439,362	46.3%
Mountain	4,175,679	2,690,097	64.4%	1,960,728	47.0%	5,467,214	2,690,097	49.2%	2,777,117	50.8%
Pacific	13,632,139	6,255,495	45.9%	7,901,171	58.0%	15,186,671	6,255,495	41.2%	8,931,176	58.8%
Large metros	35,959,621	14,995,878	41.7%	21,705,009	60.4%	39,929,521	14,995,878	37.6%	24,933,643	62.4%
Smaller metros	44,120,986	20,408,689	46.3%	25,524,178	57.9%	50,883,439	20,408,689	40.1%	30,468,312	59.9%

Table 2.9a: Home ownership rates by elderly age group and Census Division: 1990 and 2000

Census Division	1990				2000			
	55-64	65-74	75+	All Ages	55-64	65-74	75+	All Ages
United States	79.7%	78.8%	70.4%	64.2%	79.8%	81.3%	74.7%	66.2%
New England	78.3%	73.0%	60.6%	63.1%	78.0%	76.5%	67.1%	64.9%
Middle Atlantic	73.5%	71.0%	60.5%	60.7%	72.6%	73.8%	67.1%	61.5%
East North Central	82.4%	80.2%	70.7%	67.7%	82.8%	82.9%	74.7%	69.9%
West North Central	84.8%	82.6%	71.5%	69.2%	84.7%	84.5%	73.5%	71.1%
South Atlantic	81.6%	82.0%	75.6%	66.8%	82.4%	84.7%	79.8%	69.1%
East South Central	82.8%	82.1%	76.3%	69.6%	83.4%	84.5%	79.7%	71.2%
West South Central	81.4%	82.4%	77.1%	63.3%	81.0%	83.8%	78.9%	65.5%
Mountain	81.4%	82.2%	74.7%	64.3%	82.2%	84.8%	78.3%	68.0%
Pacific	75.7%	76.9%	68.9%	57.1%	75.0%	77.7%	73.7%	58.7%

Table 2.9b: Home ownership rates by elderly age group in 2000: Metropolitan versus non-metropolitan

Location	55-64	65-74	75-84	85+
Metropolitan areas	78.4%	79.9%	76.0%	64.0%
Non-metropolitan areas	85.0%	85.9%	81.5%	72.9%

Table 2.10: Metropolitan homeownership rates by Census Division, location (central cities versus suburbs), and size: 1990 and 2000

Census Division	1990		2000	
	Central Cites	Suburbs	Central Cities	Suburbs
United States	54.2%	74.2%	55.3%	76.2%
New England	47.8%	72.5%	48.8%	73.7%
Middle Atlantic	49.1%	75.6%	48.2%	76.0%
East North Central	56.1%	76.6%	56.5%	78.3%
West North Central	57.9%	76.9%	59.1%	79.5%
South Atlantic	53.3%	73.5%	54.9%	75.9%
East South Central	55.8%	77.0%	56.7%	78.4%
West South Central	56.0%	75.7%	56.9%	74.0%
Mountain	56.4%	73.9%	59.3%	77.9%
Pacific	50.4%	63.7%	52.3%	65.8%
Large metros	46.3%	68.9%	47.3%	71.4%
Smaller metros	54.6%	74.4%	55.7%	75.9%

Table 2.11a: Percentage of owner occupied housing types by owners aged 55-64 by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	87.1%	2.6%	1.1%	0.5%	0.9%	7.8%
New England	84.7%	8.3%	1.9%	0.7%	0.7%	3.7%
Middle Atlantic	84.8%	7.0%	1.3%	0.8%	2.7%	3.6%
East North Central	90.2%	2.8%	1.0%	0.4%	0.6%	5.0%
West North Central	91.5%	1.2%	0.5%	0.2%	0.3%	6.2%
South Atlantic	84.3%	1.2%	1.6%	0.8%	1.3%	10.8%
East South Central	87.0%	0.7%	0.4%	0.1%	0.1%	11.8%
West South Central	88.6%	0.8%	0.4%	0.1%	0.2%	9.9%
Mountain	85.1%	1.3%	1.0%	0.3%	0.3%	12.1%
Pacific	87.7%	1.8%	1.5%	0.7%	0.9%	7.4%
Metropolitan	87.9%	3.1%	1.4%	0.6%	1.2%	5.8%
Non-metropolitan	84.4%	0.9%	0.3%	0.1%	0.0%	14.4%

Table 2.11b: Percentage of owner occupied housing types by owners aged 65-74 by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	85.2%	3.0%	1.3%	0.7%	1.3%	8.4%
New England	83.1%	9.3%	1.8%	0.7%	0.8%	4.2%
Middle Atlantic	83.9%	7.8%	1.2%	0.7%	2.7%	3.7%
East North Central	88.7%	3.4%	1.2%	0.6%	0.8%	5.2%
West North Central	91.2%	1.6%	0.7%	0.3%	0.6%	5.6%
South Atlantic	80.6%	1.6%	2.3%	1.7%	2.3%	11.6%
East South Central	88.6%	0.9%	0.4%	0.1%	0.1%	9.9%
West South Central	89.1%	0.8%	0.4%	0.1%	0.3%	9.3%
Mountain	81.4%	1.4%	1.2%	0.4%	0.4%	15.1%
Pacific	84.0%	2.0%	1.6%	0.7%	1.0%	10.6%
Metropolitan	85.2%	3.7%	1.7%	1.0%	1.7%	6.8%
Non-metropolitan	85.4%	1.0%	0.3%	0.1%	0.1%	13.1%

Table 2.11c: Percentage of owner occupied housing type by owners aged 75 and older by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	83.1%	3.8%	1.6%	1.3%	2.2%	7.9%
New England	80.6%	11.5%	1.8%	0.8%	1.4%	3.8%
Middle Atlantic	82.4%	8.7%	1.2%	0.8%	3.5%	3.4%
East North Central	87.2%	4.3%	1.5%	0.9%	1.4%	4.6%
West North Central	90.4%	2.1%	1.1%	0.8%	1.3%	4.4%
South Atlantic	75.5%	2.2%	2.9%	3.4%	4.8%	11.2%
East South Central	90.4%	1.1%	0.5%	0.2%	0.4%	7.3%
West South Central	90.8%	1.1%	0.4%	0.2%	0.5%	7.1%
Mountain	79.2%	2.0%	1.4%	0.8%	1.1%	15.4%
Pacific	79.7%	2.4%	2.1%	1.1%	1.5%	13.2%
Metropolitan	81.7%	4.6%	2.1%	1.7%	2.9%	7.0%
Non-metropolitan	87.2%	1.4%	0.4%	0.2%	0.1%	10.6%

Table 2.12a: Percentage of renter occupied housing type by renters aged 55-64 by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	31.2%	21.0%	20.3%	8.5%	14.3%	4.7%
New England	17.5%	37.6%	22.1%	8.6%	12.8%	1.4%
Middle Atlantic	16.3%	25.2%	18.9%	13.6%	24.7%	1.3%
East North Central	28.7%	25.1%	23.8%	7.5%	12.1%	2.7%
West North Central	36.6%	20.0%	19.4%	9.1%	10.5%	4.4%
South Atlantic	38.2%	16.8%	21.6%	5.1%	9.9%	8.5%
East South Central	42.5%	19.9%	17.6%	3.5%	6.3%	10.3%
West South Central	42.9%	16.1%	16.4%	5.1%	13.1%	6.5%
Mountain	34.3%	16.3%	19.7%	7.6%	13.7%	8.4%
Pacific	35.1%	16.9%	20.8%	10.1%	13.4%	3.6%
Metropolitan	27.7%	21.4%	22.1%	9.4%	16.4%	3.1%
Non-metropolitan	49.0%	19.4%	11.3%	3.9%	3.4%	13.1%

Table 2.12b: Percentage of renter occupied housing type by renters aged 65-74 and older by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	26.5%	19.4%	18.7%	9.8%	21.5%	4.1%
New England	13.5%	30.9%	20.4%	11.0%	22.9%	1.4%
Middle Atlantic	14.0%	21.7%	17.4%	13.9%	31.7%	1.3%
East North Central	23.8%	21.2%	21.8%	9.3%	21.4%	2.5%
West North Central	29.2%	20.7%	18.7%	11.0%	17.3%	3.1%
South Atlantic	34.1%	16.1%	18.8%	6.4%	17.3%	7.3%
East South Central	40.0%	20.3%	16.3%	4.7%	10.9%	7.8%
West South Central	41.1%	17.5%	14.4%	5.6%	15.4%	5.9%
Mountain	29.6%	15.0%	17.6%	9.6%	20.5%	7.7%
Pacific	28.3%	15.2%	20.2%	11.6%	20.8%	3.9%
Metropolitan	22.9%	19.2%	19.8%	10.5%	24.9%	2.7%
Non-metropolitan	43.1%	20.3%	13.3%	6.8%	6.2%	10.3%

Table 2.12c: Percentage of renter occupied housing type by renters aged 75 and older by Census Division: 2000

Census Division	1 unit in structure; detached or attached	2 to 4 units in structure	5 to 19 units in structure	20 to 49 units in structure	50 or more units in structure	Mobile home, boat, RV, van, etc.
United States	21.1%	16.5%	15.7%	11.3%	32.4%	3.0%
New England	13.1%	25.2%	17.4%	12.4%	31.0%	1.0%
Middle Atlantic	13.4%	18.7%	15.0%	12.9%	39.0%	1.0%
East North Central	18.1%	16.5%	18.5%	11.7%	33.4%	1.8%
West North Central	19.4%	18.3%	16.7%	16.0%	27.9%	1.7%
South Atlantic	26.9%	13.0%	15.6%	8.1%	30.9%	5.5%
East South Central	35.8%	18.0%	13.9%	6.1%	20.0%	6.1%
West South Central	34.7%	16.8%	11.2%	7.7%	25.3%	4.3%
Mountain	22.6%	11.9%	13.7%	10.6%	35.5%	5.7%
Pacific	21.4%	12.3%	16.0%	12.5%	34.2%	3.6%
Metropolitan	17.5%	15.6%	16.0%	11.3%	37.5%	2.1%
Non-metropolitan	36.2%	20.0%	14.5%	11.3%	11.3%	6.7%

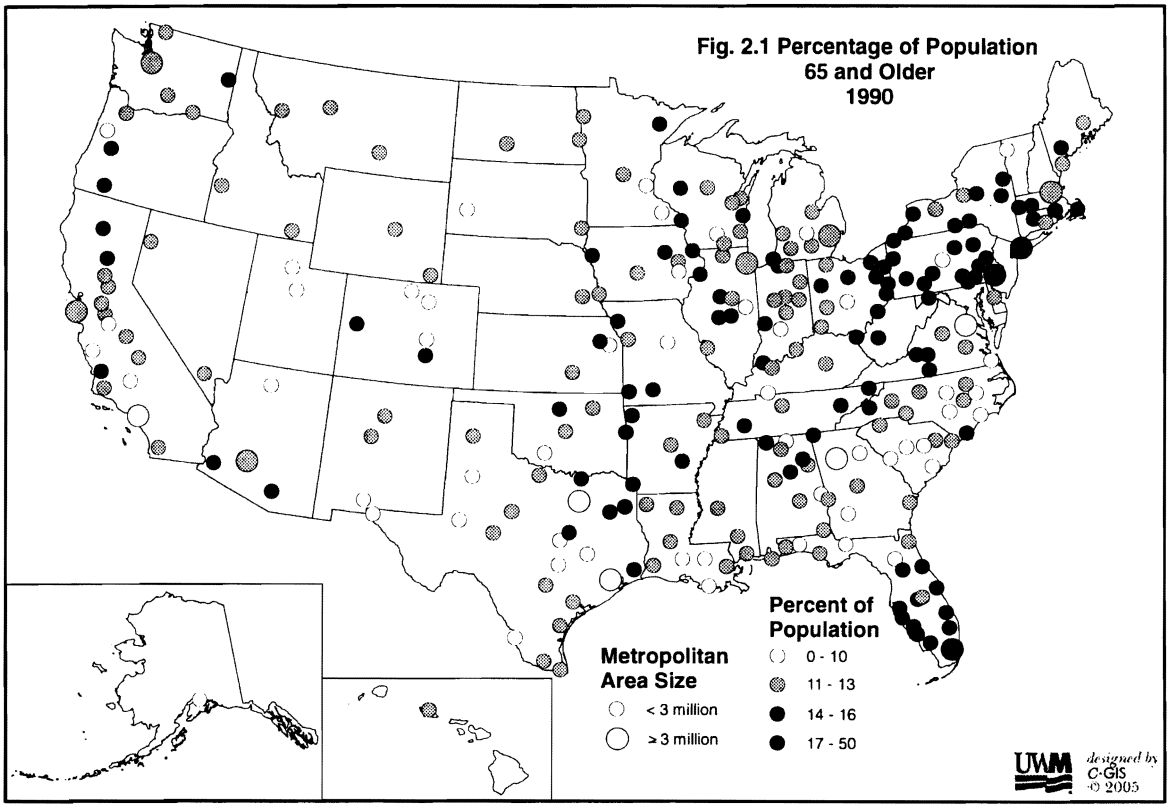
Fig. 2.1 Percentage of Population
65 and Older
1990
Percent of
Population
0 - 10
11 - 13
14 - 16
17 - 50
Metropolitan
Area Size
< 3 million
≥ 3 million
UWM
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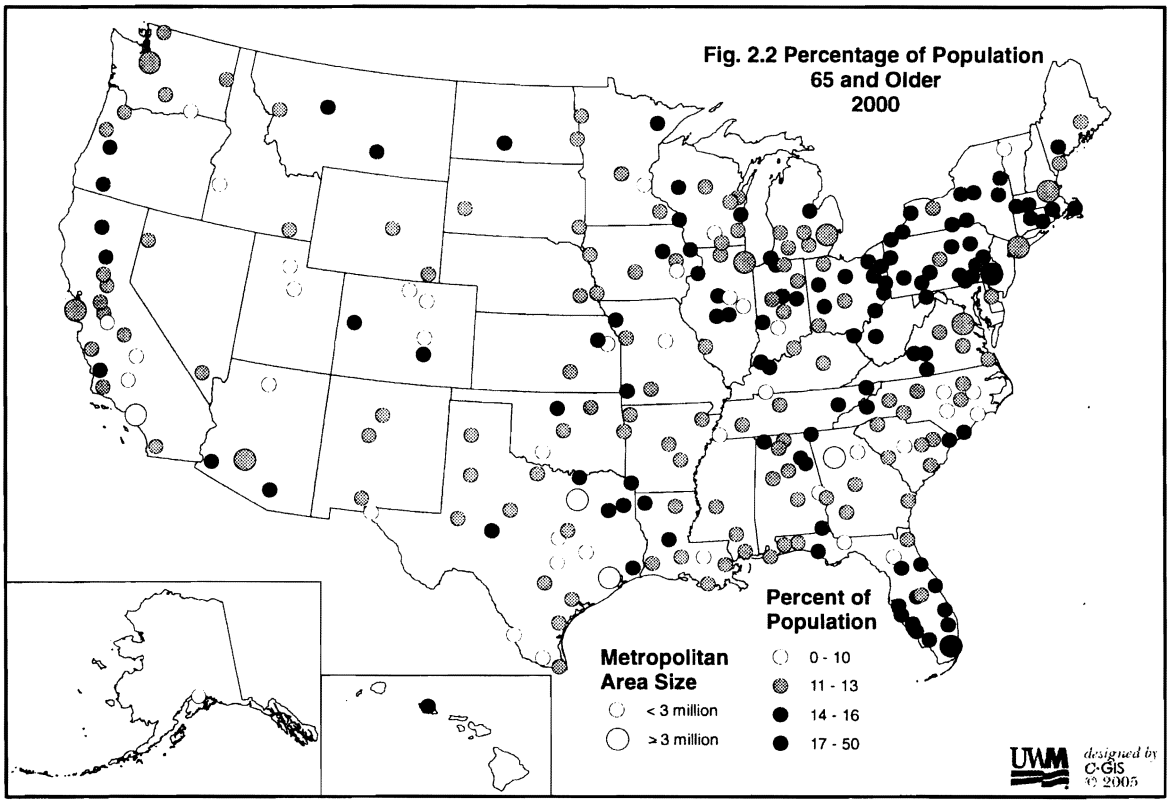
Fig. 2.2 Percentage of Population
65 and Older
2000
Percent of
Population
0 - 10
11 - 13
14 - 16
17 - 50
Metropolitan
Area Size
< 3 million
≥ 3 million
UWM
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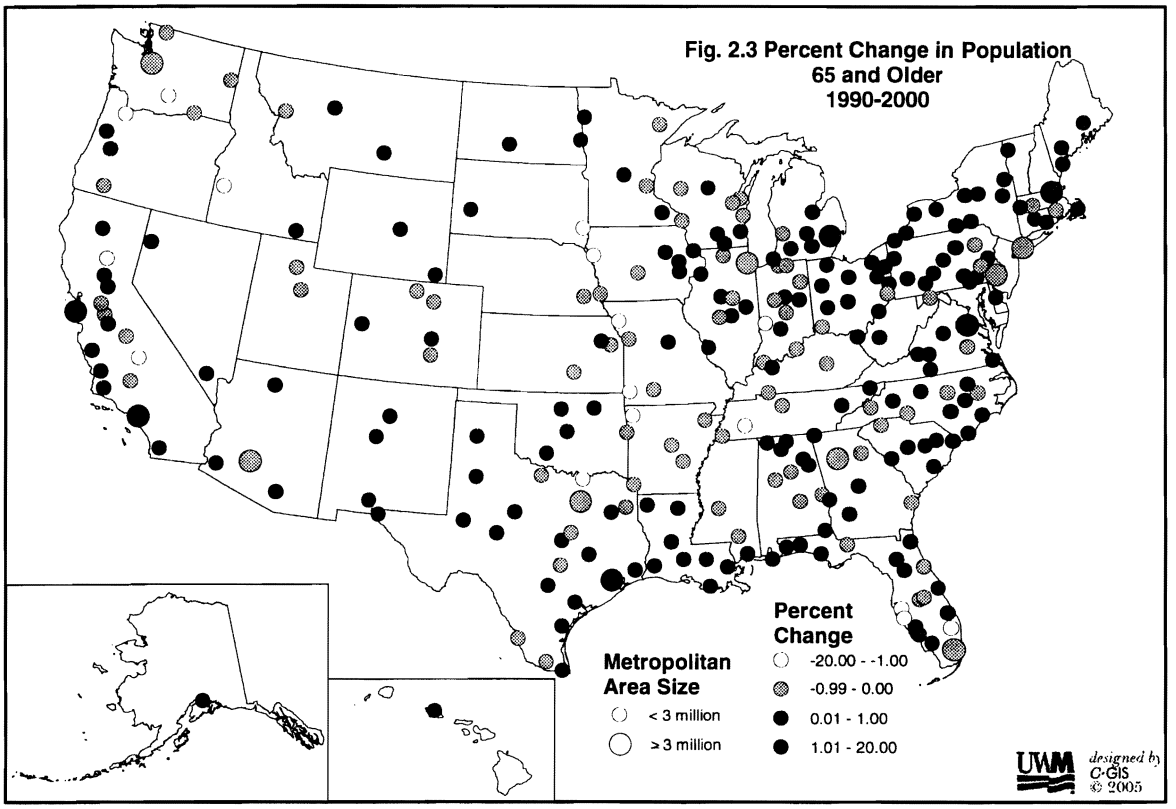
Fig. 2.3 Percent Change in Population
65 and Older
1990-2000
Percent
Change
-20.00 - -1.00
-0.99 - 0.00
0.01 - 1.00
1.01 - 20.00
Metropolitan
Area Size
< 3 million
≥ 3 million
UWM
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3. DETERMINANTS OF ELDERLY HOUSING CHOICE

This component discusses the multiple regression results for elderly housing choice across metropolitan areas. As described in the Methodology, multiple regression analysis is a conventional choice for using Census data to examine the mathematical relationship between a particular (dependent) variable that the analysis seeks to explain (such as, in this report, housing choice, as measured by housing type, tenure, and so on) and several other (independent) variables that are used to explain the variance in the dependent variable; the independent variables in this study include some aggregate measures of the socioeconomic characteristics of the metropolitan areas (such as median income, ratio of minority population, and so on), environmental variables (such as climate as measured, for example, by yearly heating and cooling days), and other urban variables (such as the size and density of a metropolitan area). This method identifies whether the dependent variable is influenced by each of the independent variables, holding all other independent variables constant. Although it is impossible to establish a definitive cause and effect relationship, multiple regression analysis is widely used to examine the associations between socioeconomic variables. The technique is also a tool for making statistical inferences to test whether the influence of one or more independent variables is statistically significant.

The number of observations in the 1990 regression models was 245, while the number of observations increased to 261 in the 2000 models. These different numbers reflect the fact that some data were not available for all metropolitan areas in both years. In the 1990 regressions there are four dependent variables: the percentage of households living in central cities who are owners; the percentage of households in central cities who are renters; the percentage of households living in the suburbs who are owners; and the percentage of households living in the suburbs who are renters. In the 2000 regressions, the four dependent variables from the 1990 regressions were estimated separately for the four age groups (aged 55-64, 65-74, 75-84, 85 and older), making 16 separate estimated regression models. It is preferable to run the regressions by the age groups because housing consumption patterns may be closely related to the age of householders. This was not possible in the 1990 models, however, because the data were not available disaggregated by age group. The 2000 models were run for the four age groups.

The independent variables include regional dummies utilizing the definitions of U.S. Census Regions (see Appendix A for a list of U.S. states by Census Division). The Midwest Region is taken as the base because that Region most closely approximates the national average in terms of the proportion of elderly people and their distribution between central cities and suburbs. DV1 (Dummy Variable 1) refers to the Northeast Census Region (New England and Middle Atlantic Census Divisions), DV2 refers to the South Census Region (South Atlantic, East South Central, and West South Central Divisions), and DV3 refers to the West Census Region (Mountain and Pacific Divisions). The MINORITY variable refers to the minority proportion of the population in the metropolitan area. MINCOME refers to the median household income of the metropolitan area. Log(pop) refers to the logarithm of metropolitan population. MHOMEVAL indicates median home values in the metropolitan areas. Log(den) refers to the logarithm of population density of the metropolitan areas. HEATING and COOLING are the number of heating and cooling degree days in the metropolitan area.

These are indicators of the heating and cooling requirements of a metropolitan area—which capture both extremes of temperature between seasons and home heating and cooling costs. To calculate the heating degree days for a particular day, the day's average temperature is found by adding the day's high and low temperatures and dividing by two. If the number is above 65, that day is not a heating degree day. If the number is less than 65 for any day, it is subtracted from 65 to find the number of heating degree days. Cooling degree days are calculated in a similar way.

The results of the regression analyses can be summarized as follows. The proportion of suburban owner-occupied units was negatively associated with the minority population percentage in metropolitan areas. The percentage of suburban owner-occupied units, however, was positively associated with the population size of metropolitan areas. In fact, in the 1990 regression, all the variables that were positively associated with the central city ownership rate were negatively associated with the suburban ownership rate. The size of the metropolitan population was negatively associated with the percentages of central city owners and renters. The greater energy required to heat and/or cool homes because of more extreme weather conditions in a metropolitan area tended to be associated with a higher percentage of households living in central cities.

The median level of household income and median home price, however, did not explain the cross-sectional aggregate variation of housing decisions related to metropolitan location (central city versus suburb) and tenure (owner versus renter). This was probably due to the conflicting factors of housing price and income level of metropolitan areas. Previous micro empirical studies suggest that, holding everything else constant, higher income and lower average home prices are associated with a higher likelihood of owning a home for a given household. In aggregate analyses such as reported here, however, the effect of higher income would be compensated for by the higher level of housing prices, because it is typical that when the median income of the metropolitan area is high, the median home price of the area will be high as well. Because elderly people are likely to have accumulated more wealth over time, their demand for housing, particularly for owner-occupied housing, is likely to increase; at the same time, the small size of the household and its lower mobility and likely greater disability will discourage significant suburban home ownership due to drawbacks associated with the responsibility of maintenance on larger homes and yards. Yet the net effect may not be quite that clear. Nevertheless, as a household ages, the higher requirement to heat and/or cool a housing unit appears to negatively affect the rate of home ownership and to encourage renting. The results also seem to indicate that the decision between living in the central city versus living in the suburbs is less flexible than the decision between renting and owning.

1990 Regressions

Table 3.1 shows the regression results for 1990. Four dependent variables are listed in the first row, and two columns are associated with each dependent variable and its regression estimation. The column labeled "coefficient" represents the estimated coefficients, while the column labeled "p-value" represents the p-value of the coefficient in the corresponding t-test. For each regression model, the adjusted R-squared statistic, F statistic of the regression model, and the p-value of the F-test of the whole model are

shown. When a particular independent variable was insignificant, a step-wise regression was performed (by removing one variable at a time beginning with the least significant variable). The results reported here represent the model with the highest adjusted *R*-squared statistic of the step-wise regression.

All four models were significant at the 1 percent significance level. Although in general, the values of the adjusted *R*-squared statistic were low, it would be unreasonable to expect a high degree of fitness across U.S. metropolitan areas with diverse characteristics. Not surprisingly, the regional dummy variables were significant in all four models, reflecting the regional variations reported in Component 2. The models were attempted using regional dummy variables featuring both the nine U.S. Census Divisions and the four U.S. Census Regions. Although the models using the Census Divisions generally had a better goodness-of-fit, the models using the Census Regions were reported instead because the more disaggregated Census Division regional dummy variables tended to take away a substantial portion of the explanatory power of the models. For example, the weather variables were closely correlated with the Census Region regional dummy variables.

For owner households in central cities, the metropolitan area was likely to have a higher proportion of owners living in central cities, if the percentage of the minority population was higher in the metropolitan area, if the size of the metropolitan area was smaller (in population), and if the heating and cooling requirements of the local climate were greater. The signs of the estimated coefficients for the regression model were consistent with typical expectations. Because minority populations tend to be heavily concentrated in central cities, home ownership in central cities is expected to be related positively to the minority population percentage. As the size (population) of a metropolitan area increases, a lower percentage of households would be expected to own homes in central cities. Because housing units in central cities tend to have smaller floor space, higher cooling and heating requirements in an area are positively associated with high home ownership in central cities.

Another consolation for the validity of the regression result is the fact that the estimated coefficients for suburban owners are exactly the opposite to those of central city owners. Namely, the percentage of households owning in the suburbs is negatively associated with the minority population proportion, positively associated with the size (population) of the metropolitan area, and negatively associated with the cooling and heating days. This implies that the locational choice—between central city and suburbs—is quite substitutable among owner-occupier householders. In other words, those factors that appear to promote suburban home ownership in the regressions tend to discourage central city home ownership.

The median household income and density of the metropolitan area were insignificant. Although high median home values were not significant in the regression models for owners, they were significant for renters. More specifically, higher home values were associated with a higher percentage of renter households both in central cities and suburbs. Certainly, at an individual household level, higher home values and lower incomes would discourage home ownership in a specific metropolitan area. The results reported here point out a different phenomenon, that is, those variables do not have a statistically significant effect *across* metropolitan areas. In a metropolitan area with a higher median household income, the home price will be driven up as well. The

net effect of these two variables does not create statistically significant change in the *aggregate* home ownership rate across metropolitan areas.

The weather variables—the number of heating days and cooling days—were significant in all four of the regression models. Higher heating and cooling days tended to be associated with a greater preference for central city locations compared to suburban locations. This is an expected result, because higher energy requirements would make suburban housing choices more expensive (because the houses in suburban areas are typically larger).

Larger metropolitan (population) size, predictably, was associated with a lower preference for central city locations and a greater preference for suburban locations by both owners and renters. A higher minority population proportion in the metropolitan area was associated with more central city owners and renters and with fewer suburban owners. The effect of the minority population proportion on suburban renters was statistically insignificant. This may be a reflection of the strong preference of minorities (for various reasons related to lower housing prices, suburban exclusionary zoning, and so on) to locate in central cities, either as owners or renters.

In general, the 1990 regression results are consistent with the existing literature on residential location and home ownership. Some of the most notable results gleaned from the regressions are: First, central city ownership and suburban ownership have completely opposite signs for virtually all variables. That is to say, whatever variable is *positively* associated with the percentage of owner households in *central cities* tends to be *negatively* associated with the percentage of owner households in the *suburbs*. Second, the level of home price is an important determinant for rental choice in both central cities and suburbs, but neither home price nor income is an important determinant for home ownership. In fact, a $10,000 increase in the median home value of a metropolitan area was associated with 0.5 percent increase in the percentage of central city renters and 0.3 percent increase in the percentage of suburban renters.

2000 Regressions

Because the data for the 2000 Census are more comprehensive, it was possible to run the regression models for the four elderly age groups. So in addition to housing tenure (owners versus renters) and residential location (central cities versus suburbs), used in the 1990 regressions, the 2000 regressions could also separate out the four elderly age groups. Table 3.2 reports the estimation results of the regression models for 2000.

The regional dummy variables were mostly significant except that they were not significant for suburban home ownership for the 55-64 year old age group. This indicates that for this age group, home ownership was a ubiquitous attraction across the United States. In general, the significance and size of the coefficient estimates of the regional dummies decreased as the elderly groups became older. This finding indicates that as householders age, their housing choice become more related to age and other household characteristics and less related to different regional characteristics across the United States.

In 2000, the minority variable (the percentage of the minority population in the metropolitan area) continued to be significant over housing choice, independent of the householder's age group. The influence of the minority variable, however, was not

straightforward, as in the 1990 results. As in the 1990 models, for the 55-64 year old group, a higher minority proportion was associated with a higher proportion of owners in central cities, and a lower proportion of suburban owners and renters. This finding may reflect the fact that minority home ownership is mostly concentrated in central cities. For the 65-74, 75-84, and 85 and older age groups, however, the proportion of minority population was *negatively* associated with central city home ownership. This contradicts the other findings. One possible explanation may be that a higher proportion of minorities may discourage suburban empty nesters from moving back into the central city from the suburbs. In the 1990 models, in which all elderly groups were aggregated, a higher minority proportion in a metropolitan area was positively associated with central city home ownership rates and negatively associated with suburban home ownership rates.

Large metropolitan area size (population) was positively associated with both the percentage of central city renters and the percentage of suburban renters. In the 2000 models (with the four elderly age groups), however, some interesting changes by age group were observed. Namely, the effect of metropolitan population size on the percentage of renter households diminishes as households become older. In addition, the effect is much greater on central city renters compared to suburban renters. In the 1990 models, larger metropolitan population size is negatively associated with central city renters.

Higher home values affect tenure and residential location in a complicated way. Higher home values are consistently associated with a higher percentage of central city renters for all age groups. But higher home values have no effect on central city owners, except the youngest elderly age group. Higher home values seem to discourage suburban home ownership by the 55-64 year old group, but to encourage it in the older groups. The effect diminishes with age. This may be due to the fact that older households keep a large amount of their wealth invested in their suburban home in a tight housing market as long as possible. This implies that rising home prices may induce more homebound aging—"aging in place"—particularly in the suburbs.

Higher median household income was generally negatively associated with the percentage of central city renters and owners. The effect also seemed to weaken with increasing age. Similarly, higher median income was negatively associated with suburban owners and suburban renters. A possible explanation for this finding is that higher household incomes enable younger households to occupy more units with the result that elderly people are displaced by the higher housing prices.

Population density discourages suburban locations in general, but not in the 85 and older age group. Higher heating and cooling requirements seem to be related to lower home ownership, but the impact of this variable tended to increase as householders became older. This makes sense because suburban housing tends to have a larger amount of space to heat and/or cool. The very old, potentially with some disability, may not want to keep the larger space, however. The effect of the weather variables—heating and cooling degree days—was not significant for central city owners and renters, but was negatively associated with suburban owners and renters. For the older age groups, the weather variables become significant. Moreover, the size of the coefficients generally became larger, implying that, all else held constant, older households are increasingly less likely to own or rent their housing units.

Table 3.1: Regression results for 1990

	Central City Owners		Central City Renters		Suburban Owners		Suburban Renters	
	coefficient	**p-value**	**coefficient**	**p-value**	**coefficient**	**p-value**	**coefficient**	**p-value**
(Constant)	36.769	0.000	31.472	0.001		0.070	-1.922	0.780
DV1	13.855	0.000	5.837	0.004	-16.032	0.000	-2.429	0.088
DV2	10.309	0.000	4.473	0.015	-9.027	0.001	-3.233	0.013
DV3	10.892	0.000	4.108	0.076	-7.755	0.022	-3.689	0.021
MINORITY	20.794	0.019	27.028	0.000	-47.606	0.000		
Log(pop)	-8.760	0.000	-6.514	0.000	9.398	0.000	4.206	0.000
MHOMEVAL			5.48E-05	0.020			3.17E-05	0.057
MINCOME								
Log(den)								
HEATING	3.501E-03	0.000	1.917E-03	0.006	-3.595E-03	0.001	-9.880E-04	0.040
COOLING	0.006	0.000	0.003	0.013	-0.006	0.003	-0.002	0.076
Adjusted *R*-squared statistic	0.239		0.177		0.247		0.231	
F statistic	11.965		6.389		11.137		10.192	
p-value	0.000		0.000		0.000		0.000	
Number of observations	245		245		245		245	

Table 3.2: Regression results for 2000

	Central City Owners		Central City Renters		Suburban Owners		Suburban Renters	
	coefficient	**p-value**	**coefficient**	**p-value**	**coefficient**	**p-value**	**coefficient**	**p-value**
Age 55-64								
(Constant)	0.172	0.000	0.235	0.189	0.231	0.000	0.122	0.000
DV1	-0.010	0.000	-0.412	0.000			-0.015	0.000
DV2	-0.008	0.000	-0.240	0.000			-0.010	0.000
DV3			-.252	0.000			-1.279E-02	0.000
MINORITY	2.036E-02	0.000			-1.994E-02	0.010	-1.787E-02	0.021
Log(pop)			0.207	0.000			0.009	0.000
MHOMEVAL	9.13E-08	0.005	3.099E-06	0.000	-4.214E-08	0.070		
MINCOME	-5.753E-07	0.000	-2.056E-05	0.000			-4.651E-07	0.001
Log(den)					-8.483E-03	0.000	-1.476E-02	0.000
HEATING					-5.433E-06	0.000	-4.527E-06	0.000
COOLING					-9.75E-06	0.000	-4.276E-06	0.009
Adjusted *R*-squared statistic	0.282		0.315		0.175		0.290	
F statistic	21.485		21.026		12.101		12.864	
p-value	0.000		0.000		0.000		0.000	
Age 65-74								
(Constant)	0.272	0.000	0.223	0.257	0.261	0.000	0.106	0.000
DV1	-0.026	0.000	-0.351	0.000	-0.021	0.000	-0.035	0.000
DV2	-0.010	0.009	-0.221	0.000	-0.011	0.012	-0.017	0.000
DV3	-9.088E-03	0.048	-0.227	0.000	-2.664E-02	0.000	-2.587E-02	0.000
MINORITY	-4.204E-02	0.001			-8.794E-02	0.000	-3.306E-02	0.000
Log(pop)			0.102	0.006			0.009	0.000
MHOMEVAL			3.082E-06	0.000	1.549E-07	0.021	7.100E-08	0.056
MINCOME	-1.400E-06	0.000	-2.109E-05	0.000	-1.603E-06	0.000	-1.009E-06	0.000
Log(den)			.108	0.060			-9.295E-03	0.008

HEATING	-6.763E-06	0.000	3.282E-05	0.059	-7.956E-06	0.000	-1.167E-06	0.055
COOLING	-8.00E-06	0.002	6.43E-05	0.040				
Adjusted *R*-squared statistic	0.410		0.318		0.373		0.412	
F statistic	26.905		14.196		23.184		21.352	
p-value	0.000		0.000		0.000		0.000	
Age 75-84								
(Constant)	0.261	0.000	0.636	0.000	0.163	0.000	0.080	0.000
DV1	-0.027	0.000	-0.341	0.000	-0.026	0.000	-0.043	0.000
DV2	-0.014	0.001	-0.183	0.000	-0.011	0.012	-0.016	0.000
DV3	-1.918E-02	0.000	-0.223	0.000	-3.085E-02	0.000	-3.705E-02	0.000
MINORITY	-7.650E-02	0.000	-0.258	0.025	-9.669E-02	0.000	-4.982E-02	0.000
Log(pop)			0.081	0.003	0.007	0.030	0.007	0.003
MHOMEVAL			2.143E-06	0.000	2.123E-07	0.001		
MINCOME	-1.265E-06	0.000	-1.514E-05	0.000	-1.540E-06	0.000	-5.828E-07	0.001
Log(den)								
HEATING	-9.106E-06	0.000			-7.097E-06	0.000		
COOLING	-1.35E-05	0.000						
Adjusted *R*-squared statistic	0.323		0.250		0.356		0.554	
F statistic	18.800		13.440		19.057		55.096	
p-value	0.000		0.000		0.000		0.000	
Age 85+								
(Constant)	0.070	0.000	0.346	0.000	0.047	0.000	0.007	0.431
DV1	-0.008	0.000	-0.121	0.000	-0.008	0.000	-0.017	0.000
DV2	-0.004	0.010	-0.068	0.000	-0.002	0.073	-0.004	0.055
DV3	-6.083E-03	0.001	-9.520E-02	0.000	-7.400E-03	0.000	-1.462E-02	0.000
MINORITY	-2.711E-02	0.000	-0.181	0.002	-2.396E-02	0.000	-2.185E-02	0.000

Log(pop)							0.004	0.002
MHOMEVAL	-	-	1.022E-06	0.000	7.27E-08	0.000		
MINCOME	-2.560E-07	0.000	-4.376E-06	0.001	-3.828E-07	0.000		
Log(den)								
HEATING	-2.845E-06	0.000			-1.721E-06	0.000	1.514E-06	0.027
COOLING	-4.01E-06	0.000	1.759E-05	0.023			2.836E-06	0.023
Adjusted *R*-squared statistic	0.222		0.156		0.286		0.523	
F statistic	11.649		7.875		15.931		41.861	
p-value	0.000		0.000		0.000		0.000	
Number of observations	261							

4. ELDERLY POPULATION PROJECTIONS FOR 2010 AND 2020

Component 4 of the research describes the spatial distribution among and within metropolitan areas of the four elderly age groups projected for 2010 and 2020, as compared to the 2000 distributions.

The findings of Component 4 can be summarized as follows. In general, as the Baby Boomers age during the coming decades, the number and proportion of elderly people (55 and older) living in metropolitan areas in the United States is projected to rise considerably between 2000 and 2020 (from almost 46 million to just over 73 million—a percentage increase of approximately 60 percent). The largest age group (the pre-retirement elderly group, aged 55-64) is projected to increase most, by about 73 percent. As would be expected, the larger elderly population in the suburbs is projected to increase much more significantly than that in the central cities (with percentage increases of nearly 69 percent and nearly 45 percent respectively).

The total, central city, and suburban elderly populations in metropolitan areas with fewer than 3 million people are projected to increase more significantly than those in the very largest metropolitan areas like New York, Los Angeles, and Chicago (those with a population of 3 million or more in 2000). Nevertheless, the projections suggest that elderly people will continue to be a steadily growing presence in the very largest metropolitan areas in the United States during the coming decades.

The distribution of the elderly population shows some important spatial patterns when broken down by Census Regions and Divisions for the United States (see Appendix A for a list of U.S. states by Census Region and Census Division). In general, of the four U.S. Census Regions (Northeast, Midwest, South, and West), based on factors such as climate and recreational and other amenities attractive to elderly people, not unexpectedly, the West and South Census Regions are projected to increase most significantly in their total, central city, and suburban elderly populations between 2000 and 2020, followed by the Midwest. The Northeast is projected to have the slowest rate of increase in elderly people during this period. The total projected elderly percentage increases for 2000-2020 are approximately 80 percent in the West, followed closely by 75 percent in the South, with 52 percent in the Midwest, and only 27 percent in the Northeast. Certainly, these data reflect the attractiveness of the Sunbelt for older people in the United States as they near and enter their early and full retirement years.

Projected Population Patterns Among and Within Metropolitan Areas

With the aging of the Baby Boomers, in general, the number and proportion of elderly people (55 and older) living in metropolitan areas in the United States is projected to rise considerably between 2000 and 2020. The largest age group (the pre-retirement elderly group, aged 55-64) is projected to increase most. As would be expected, the larger elderly population in the suburbs is projected to increase much more significantly than that in the central cities.

Specifically, Table 4.1 shows the current and projected populations of the four elderly age groups, with percentage change over time, for the metropolitan areas as a whole, and broken down by central cities and suburbs. The elderly population living in

metropolitan areas is projected to rise appreciably between 2000 and 2020—from 45.7 million or 20.2 percent of the total metropolitan population in 2000 to 73.3 million or 28.3 percent of the total metropolitan population by 2020. The percentage increase in this population during the twenty-year period is projected to be significant—60.3 percent overall (with a slightly higher percentage increase projected between 2000 and 2010 compared to that between 2010 and 2020). The largest elderly age group, that is, the pre-retirement 55-64 year olds, is projected to increase most—by 73.3 percent, followed by the 65-74 year olds (65.6 percent), then the 85 and older group (56.5 percent), and finally the 75-84 year olds (27.9 percent) (Table 4.1). Certainly, the projections indicate that the elderly population will continue to be a significant and growing presence in the metropolitan areas across the United States into the coming decades.

In the central cities between 2000 and 2020, the elderly population is projected to increase from 16.3 million or 7.2 percent of the total metropolitan population to 23.6 million or 9.1 percent of the total metropolitan population; the percentage increase in the elderly central city population is projected to be 44.7 percent overall during 2000-2020. As would be expected, in the suburbs, the larger elderly population is projected to increase more significantly—from 29.4 million or 13.0 percent of the total metropolitan population in 2000 to 49.7 million or 19.2 percent of the total metropolitan population by 2020; the percentage increase in the suburban elderly population during this period is projected to be quite significant—68.9 percent overall (Table 4.1). These projections reflect both the preference of older people in the United States to "age in place" in both central cities and suburbs despite increasing frailty, and the already significant proportion of elderly people living in suburban communities.

Projected Population Patterns by Size of Metropolitan Areas

Overall, the total elderly population in the metropolitan areas with fewer than 3 million people is projected to increase more significantly than that in the very largest metropolitan areas (with a population of 3 million or more). Higher percentage increases are also projected for the central cities and suburbs of metropolitan areas with fewer than 3 million people. Nevertheless, the projections suggest that elderly people will continue to be a steadily growing presence in the very largest metropolitan areas in the United States into the coming decades.

More specifically, Tables 4.2a and 4.2b show the current and projected populations for the four elderly age groups with percentage change over time, for the metropolitan areas as a whole, and for the central cities and suburbs, broken down by the total population size of the metropolitan areas, into the two size groups: largest (greater than or equal to 3 million people) and smaller (fewer than 3 million people).

Table 4.2a shows these data for those metropolitan areas with a population of 3 million or more in 2000: New York, Los Angeles, Chicago, Washington, D.C., San Francisco, Philadelphia, Boston, Detroit, Dallas, Houston, Atlanta, Miami, Seattle, and Phoenix. Between 2000 and 2020, the elderly population living in these fourteen largest metropolitan areas is projected to rise from 20.0 million or 8.8 percent of the total metropolitan population to 30.6 million or 11.8 percent of the total metropolitan population. The percentage increase in this population for 2000-2020 is projected to be 53.3 percent overall; again, the large pre-retirement (aged 55-64) elderly group is

projected to increase most—by 72.5 percent, followed by the 65-74 year olds (52.9 percent), then the 85 and older group (50.3 percent), and finally the 75-84 year olds (14.7 percent) (Table 4.2a). In contrast to the situation for the metropolitan areas as a whole (Table 4.1) and for the group of metropolitan areas with populations of fewer than 3 million (Table 4.2b), the percentage change in the populations of the largest metropolitan areas is projected to be slightly higher between 2010 and 2020 compared to between 2000 and 2010 (Table 4.2a). These projections suggest that elderly people will continue not only to be a presence but also a steadily growing one in the very largest metropolitan areas in the United States into the coming decades.

In the central cities of these very largest metropolitan areas between 2000 and 2020, the elderly population is projected to rise from 6.9 million or 3.1 percent of the total metropolitan population to 9.5 million or 3.7 percent of the total metropolitan population; the percentage increase in this elderly central city population during this time is projected to be 36.7 percent overall.

Figures 4.1 and 4.2 are maps showing the spatial distribution of the projected central city population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. All of the very largest metropolitan areas (with 3 million or more people) across the United States show positive growth rates of between 1 and 62 percent in the central cities for this pre- or early retirement group for 2000-2010 (Figure 4.1). During 2010-2020, the projected growth rates are slower for many of the central cities of these large metropolitan areas in the Snowbelt, and even with negative rates of change in some, namely Boston, Detroit, Philadelphia, and Washington, D.C. (Figure 4.2). Atlanta and Miami are also projected to experience negative growth rates during that time.

Overall, relatively weaker growth is projected for many central cities of the largest metropolitan areas for the 2000-2010 period for the 65-74 and 75-84 age groups, with relatively stronger growth during 2010-2020 (although Philadelphia's negative rate of change for 2010-2020 "bucks the trend") (Figures 4.3, 4.4, 4.5, and 4.6). In contrast, and similar to the 55-64 age group, the growth rates of the most elderly group (85 and older) in the central cities of the largest metropolitan areas is expected to be slower during the 2010-2020 (Figures 4.7 and 4.8). While a particular concern in general for central cities in terms of the associated slower growth in sales and property taxes from the 55-64 year olds in particular (who are more likely to contribute more than they receive in city expenditures), a similar trend of slower growth for the 55-64 and 85 and older age groups is also projected for suburban areas between 2010 and 2020 (see below).

As would be expected, however, the suburban elderly population of the largest metropolitan areas is projected to rise more strongly than that in their central cities between 2000 and 2020—from 13.0 million or 5.8 percent of the population to 21.1 million or 8.1 percent of the population; the percentage increase in the suburban elderly population in the largest metropolitan areas is projected to be relatively high during this time period—62.1 percent overall (Table 4.2a). The already large number and proportion of elderly people living in the suburbs of these metropolitan areas are, of course, driving this trend.

The maps in Figures 4.9 and 4.10 show the spatial distribution of the projected suburban population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. All of the very largest metropolitan areas (with 3

million or more people) across the United States show relatively strong growth of between 26 and 505 percent in the suburbs for this pre- or early retirement group for 2000-2010 (Figure 4.9). During 2010-2020, while continuing to experience growth, the growth rate is projected to be relatively slower for many of the suburbs of these large metropolitan areas (Figure 4.10). Relatively weaker growth is projected for these largest metropolitan areas for the 2000-2010 period for the 65-74 and 75-84 age groups, with relatively stronger growth during 2010-2020 (Figures 4.11, 4.12, 4.13, and 4.14). Like the 55-64 year olds, however, the growth rates of the most elderly group (85 and older) in these suburbs are expected to be slower during the 2010-2020 (Figures 4.15 and 4.16). The suburbs of the largest metropolitan areas such as Miami and Atlanta, however, show stronger projected rates of growth relative to the surrounding smaller metropolitan areas, reflecting the continued attractiveness of the suburbs of these larger metropolitan areas for the very elderly.

Table 4.2b shows these data for the metropolitan areas with a population of fewer than 3 million in 2000; these metropolitan areas ranged in size from Minneapolis-St. Paul with a population of nearly 3 million in 2000 to Enid, Oklahoma with fewer than 58,000 people. Between 2000 and 2020, the elderly population living in these metropolitan areas is projected to rise from 25.8 million or 11.4 percent of the total metropolitan population to 42.7 million or 16.5 percent of the total metropolitan population. Between 2000 and 2020, the percentage increase in this population is projected to be 65.7 percent overall; again, the large pre-retirement (aged 55-64) elderly group is projected to increase most—by 73.9 percent, followed by the 65-74 year olds (75.1 percent), then the 85 and older group (61.2 percent), and finally the 75-84 year olds (37.6 percent) (Table 4.2b). Clearly, these projections suggest that the presence of elderly people can be expected to be of growing significance for the metropolitan areas across the United States into the coming decades.

In the central cities of these smaller metropolitan areas between 2000 and 2020, the elderly population is projected to rise from 9.4 million or 4.2 percent of the total metropolitan population to 14.1 million or 5.4 percent of the total metropolitan population; the percentage increase in this elderly central city population is projected to be 50.6 percent overall during that time. Again, as would be expected, the suburban elderly population of these metropolitan areas is projected to rise more strongly—from 16.4 million or 7.3 percent of the total metropolitan population in 2000 to 28.6 million or 11.0 percent of the total metropolitan population by 2020; the percentage increase in the suburban elderly population in these smaller metropolitan areas is projected to be quite high—74.2 percent overall (Table 4.2b). As already mentioned, the large number and proportion of the elderly already living in U.S. suburbs are driving this trend.

The maps in Figures 4.1 and 4.2 show the spatial distribution of the projected central city population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. The smaller metropolitan areas all show relatively strong growth in their central cities for this pre- or early retirement group for 2000-2010 (Figure 4.1). The central cities of smaller Sunbelt metropolitan areas like Fort Pierce, Florida and Las Vegas, Nevada have some of the highest growth rates. During 2010-2020, the projected growth is visibly slower or even negative for many of the central cities of the smaller metropolitan areas in the Snowbelt, and even further south in Tennessee and in a number of surrounding states (Figure 4.2). Relatively weaker growth is projected for

the 2000-2010 period for the 65-74 and 75-84 age groups, with relatively stronger growth during 2010-2020 (Figures 4.3, 4.4, 4.5, and 4.6). Again, like the 55-64 year olds, the growth rates of the most elderly group (85 and older) in these central cities are expected to be slower during the 2010-2020 (with Tennessee again standing out with negative rates of change for the central cities of its smaller metropolitan areas) (Figures 4.7 and 4.8).

Figures 4.9 and 4.10 show the spatial distribution of the projected suburban population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. All of the smaller metropolitan areas show relatively strong growth in their suburbs for this pre- or early retirement group for 2000-2010 (Figure 4.9). During 2010-2020, while continuing to experience growth, the growth rate is projected to be relatively slower for many of the suburbs of these metropolitan areas (Figure 4.10). Relatively weaker growth is projected for the 2000-2010 period for the 65-74 and 75-84 age groups, with relatively stronger growth during 2010-2020 (Figures 4.11, 4.12, 4.13, and 4.14). Again, like the 55-64 year olds, the growth rates of the most elderly group (85 and older) in these suburbs are expected to be slower during the 2010-2020 (Figures 4.15 and 4.16). In addition, Tennessee and a number of states in the southeast of the United States show negative projected rates of change for the suburbs of some smaller metropolitan areas.

Projected Population Patterns by U.S. Census Region and Division

The distribution of the elderly population shows some important spatial patterns when broken down by Census Regions and Divisions for the United States (see Appendix A for a list of U.S. states by Census Region and Census Division). In general, of the four U.S. Census Regions (Northeast, Midwest, South, and West), based on factors such as climate and recreational and other amenities attractive to elderly people, not unexpectedly, the South contained the largest number and percentage of the current (2000) and projected (2010 and 2020) elderly metropolitan population; the next largest Census Region was the Northeast, followed closely by the West and Midwest. The West and South Census Regions are projected to increase most significantly between 2000 and 2020, followed by the Midwest. The Northeast is projected to have the slowest rate of increase during this period.

Tables 4.3a, 4.3b, and 4.3c show the specifics of the current and projected populations for the four elderly age groups with percentage change over time, for the metropolitan areas as a whole, and for the central cities and suburbs, broken down by U.S. Census Region and Census Division.

▪ Projected metropolitan spatial patterns

Table 4.3a shows the current and projected populations of the four elderly age groups, with percentage change over time, for the metropolitan areas as a whole by U.S. Census Region and Division. Of the four U.S. Census Regions, the attractiveness of the South to elderly people has resulted in this Census Region containing the largest number and percentage of the current and projected elderly metropolitan population: 15.1 million (6.7 percent of the total metropolitan population) in 2000 and projected to increase

significantly—to 26.6 million (10.2 percent of the total metropolitan population) by 2020. The Northeast had 10.9 million elderly people or 4.8 percent of the total metropolitan population in 2000, projected to increase to 14.9 million or 5.4 percent by 2020; the West had 10.1 million or 4.5 percent in 2000, projected to rise to 18.3 million or 7.1 percent by 2020; and the Midwest had 9.6 million or 4.2 percent in 2000, projected to rise to 14.6 million or 5.6 percent of the total metropolitan population by 2020.

Again, not surprisingly, the U.S. Census Regions with the largest projected percentage increases in their elderly populations between 2000 and 2020 were those most attractive to pre-retirees and retirees: the West (80.4 percent), followed closely by the South (75.4 percent). The Midwest had the third highest projected increase (52.3 percent), while the Northeast had the lowest projected increase (27.4 percent). Of the elderly age groups, the largest age group, the pre-retirement, 55-64 year olds, is projected to increase most—by 92.9 percent in the West, 84.2 percent in the South, 62.5 percent in the Midwest, and 47.4 percent in the Northeast (Table 4.3a). Certainly, these data reflect the attractiveness of the Sunbelt for older people in the United States as they near and enter their early and full retirement years.

An examination of the regional distribution of elderly people across the United States by U.S. Census Division provides more detail but corresponds with the overall distribution identified by Census Region (Table 4.3a). In 2000 the Census Divisions with the largest elderly populations were the South Atlantic Division with 8.9 million and the Middle Atlantic Division with 8.7 million. The elderly population projections for 2020 for these two Divisions are 16.0 and 11.1 million respectively. The South Atlantic Division includes retiree magnet states like Florida and South Carolina. The Middle Atlantic Division comprises New Jersey, New York, and Pennsylvania, and contains some of the very largest metropolitan areas in the country. In addition, some metropolitan areas in these Snowbelt states remain attractive destinations because they offer amenity-related communities (such as the Poconos in northeast Pennsylvania) and are closer to retirees' friends and families.

The U.S. Census Divisions with the fewest elderly people in 2000 were the East South Central Division with 2.0 million and New England with 2.2 million. The elderly population projections for 2020 for these two Divisions are 2.4 and 2.8 million respectively. In contrast to other parts of the South of the United States, the East South Central Division, comprising Alabama, Kentucky, Mississippi, and Tennessee, has not traditionally been one of the top magnet regions for retirees. New England is not a top retirement magnet due to factors such as climate and relatively high cost of living.

The Divisions with the largest projected increases in elderly people between 2000 and 2020 are the Mountain Division with 107.8 percent (from 2.5 million in 2000 to 5.3 million by 2020) and the West South Central Division with 92.3 percent (4.2 million in 2000 to 8.1 million by 2020). The Mountain Division includes states with warmer climates attractive to retirees such as Arizona, Nevada, New Mexico, and Utah as well as states attractive to early and active retirees such as Colorado. The attractiveness of the West South Central Division may reflect the lower cost of living in states like Arkansas, Louisiana, and Oklahoma, and the opportunities for continued employment during pre- or early retirement in states like Texas.

The Divisions with the smallest projected percentage increases in elderly people between 2000 and 2020 form a band of states from the Northeast to the South: the New

England Division with 28.0 percent, the Middle Atlantic Division with 27.3, and the East South Central Division with 18.7 percent. The lower projected growth rates across these Divisions reflect the fact that the states in this group in the Northeast are part of the Snowbelt, while the more southerly states in this group, such as Mississippi, are not typically high on the list of top retiree magnets.

Similar spatial patterns emerge by considering the projections broken down by the four elderly age groups. The Mountain (105.4 percent), West South Central (97.2 percent), and South Atlantic (93.1 percent) Divisions are projected to be most attractive to the pre-retirement, 55-64, age group. These Divisions include top early retiree magnets such as Arizona and Nevada in the Mountain Division and Florida and South Carolina in the South Atlantic Division. Similarly, the Divisions that are projected to be most attractive to the 65-75 age group are the Mountain (119.1 percent) and West South Central (100.7 percent) Divisions; as is the case for the 75-84 year olds (79.2 percent and 74.7 percent respectively) and the 84 and older group (159.8 percent and 69.3 percent respectively) (Table 4.3a).

Reflecting the spatial patterns for the U.S. Census Regions, the slowest growing Division between 2000 and 2020 is projected to be East South Central (comprising Alabama, Kentucky, Mississippi, and Tennessee) for all elderly age groups: aged 55-64 (19.6 percent), 65-74 (29.6 percent), 75-84 (7.6 percent), with a projected decline for the 85 and older group (-6.0) (Table 4.3a).

▪ Projected central city spatial patterns

Table 4.3b shows the current and projected populations of the four elderly age groups, with percentage change over time, for the central cities of U.S. metropolitan areas by Census Region and Division. Similar to the situation for the U.S. Census Regions, the South contained the largest number and percentage of the current and projected elderly central city population: 5.4 million (2.4 percent of the total metropolitan population) in 2000 and projected to increase significantly—to 8.0 million (3.1 percent of the total metropolitan population) by 2020. In contrast to the situation for the U.S. Census Regions (where the Northeast had the next largest total elderly population), the West contained the next largest current and projected elderly central city population: 4.1 million or 1.8 percent of the total metropolitan population in 2000, projected to increase to 2.2 million or 2.7 percent by 2020. The Northeast and Midwest had relatively similar elderly central city population numbers and percentages: 3.5 million or 1.5 percent in 2000, projected to rise to 4.2 million or 1.6 percent by 2020 for the Northeast; and 3.3 million or 1.5 percent in 2000, projected to rise to 4.5 million or 1.7 percent of the total metropolitan population by 2020 for the Midwest.

Again, the U.S. Census Regions with the largest projected percentage increases in elderly central city populations between 2000 and 2020 were those most attractive to early retirees and retirees: the West (68.8 percent), followed by the South (49.3 percent). The Midwest had the third highest projected increase (33.6 percent), while the Northeast had the lowest projected increase (19.7 percent). Similarly, of the elderly age groups, the largest age group, the pre-retirement, 55-64 year olds, is projected to increase most in the central cities—by 80.2 percent in the West, 51.5 percent in the South, 41.8 percent in the Midwest, and 40.8 percent in the Northeast (Table 4.3b).

The current and projected regional distributions of elderly people in the central cities across the United States by U.S. Census Division is similar to that for the U.S. Census Regions; the large South Atlantic and Middle Atlantic Divisions contain the highest current and projected numbers and percentages of central city elderly people, while the U.S. Census Divisions with the fewest elderly people in central cities in 2000 and 2020 are the East South Central and New England Divisions (Table 4.3b). Similarly, the Divisions with the largest projected percentage increases in elderly people in central cities between 2000 and 2020 are the Mountain and the West South Central Divisions; the Divisions with the smallest projected percentage increases in elderly people in central cities between 2000 and 2020 again form a band of states from New England through the Middle Atlantic to the East South Central Division (Table 4.3b). Similar spatial patterns to the U.S. Census Regions emerge by considering the Division projections broken down by the four elderly age groups.

The maps in Figures 4.1 and 4.2 show the spatial distribution of the projected central city population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. While most of the metropolitan areas show relatively strong growth in their central cities for this pre- or early retirement group for 2000-2010, a somewhat bi-coastal pattern of relatively stronger growth is evident with the West Coast and Southeast appearing more dominant (Figure 4.1). During 2010-2020, the projected growth is visibly slower or even negative for many of the central cities of these metropolitan areas although the stronger West Coast and Southeast growth patterns remain (Figure 4.2). Relatively weaker growth is projected for the 2000-2010 period for the 65-74 age group, with relatively stronger growth during 2010-2020 when the bi-coastal West Coast and South east growth patterns are again quite prominent (Figures 4.3 and 4.4). Similarly, weaker growth is projected for the 2000-2010 period for the 75-84 year old group, with relatively stronger growth during 2010-2020 when a Southeast growth pattern becomes more prominent (Figures 4.5 and 4.6). Like the 55-64 year olds, the growth rates of the most elderly group (85 and older) in these central cities is expected to be slower during 2010-2020, although this most elderly group shows relatively stronger growth in the Southeast and Mountain states during 2000-2010 (Figures 4.7 and 4.8).

▪ Projected suburban spatial patterns

Table 4.3c shows the current and projected populations of the four elderly age groups, with percentage change over time, for the suburbs of U.S. metropolitan areas by Census Region and Division. Again, similar to the situation for the central cities (Table 4.3b), although with significantly higher figures, the South contained the largest number and percentage of the current and projected elderly suburban population: 9.8 million (4.3 percent of the total metropolitan population) in 2000 and projected to increase significantly—to 18.5 million (7.2 percent of the total metropolitan population) by 2020, followed by the West with 6.0 million or 2.7 percent of the total metropolitan population in 2000, projected to increase to 11.3 million or 4.4 percent by 2020. Again, the Northeast and Midwest had more similar elderly suburban population numbers and percentages: 7.4 million or 3.3 percent in 2000, projected to rise to 9.7 million or 3.8 percent by 2020 for the Northeast; and 6.2 million or 2.8 percent in 2000, projected to

increase more strongly to 10.1 million or 3.9 percent of the total metropolitan population by 2020 for the Midwest.

The U.S. Census Regions with the largest projected percentage increases in elderly suburban populations between 2000 and 2020 were those most attractive to elderly people: the South (89.8 percent), followed by the West (88.5 percent). The Midwest had the third highest projected increase (62.3 percent), while the Northeast had the lowest projected increase (31.1 percent). Similarly, of the elderly age groups, the largest age group, the pre-retirement, 55-64 year olds, is projected to increase most in the suburbs—by 101.0 percent in the West, 100.7 percent in the South, 72.5 percent in the Midwest, and 50.5 percent in the Northeast (Table 4.3c). The current and projected regional distributions of elderly people in the suburbs across the United States by Census Division are similar to that for the Census Regions and for the central cities (Table 4.3b).

The maps in Figures 4.9 and 4.10 show the spatial distribution of the projected suburban population by size of metropolitan area for the 55-64 year old group for 2000-2010 and 2010-2020 respectively. All of the suburban areas of metropolitan areas show relatively strong growth for this pre- or early retirement group for 2000-2010; the South and West stand out as having quite a number of metropolitan areas with projected strong growth for their suburbs (Figure 4.9). During 2010-2020, while continuing to experience growth, the growth rate is projected to be relatively slower for many metropolitan area suburbs; much of the southern section of the United States, especially Florida and California—again a bi-coastal pattern—exhibits a spatial distribution with relatively stronger growth in the suburbs of metropolitan areas (Figure 4.10). Relatively weaker growth is projected for the 2000-2010 period for the 65-75 and 75-84 age groups in the suburbs of these metropolitan areas, with relatively stronger growth during 2010-2020; during 2010-2020, the relatively stronger growth in the suburbs of metropolitan areas in the South and West is quite evident (Figures 4.11, 4.12, 4.13, and 4.14). Like the 55-64 year olds, the growth rates of the most elderly group (85 and older) in these suburbs is expected to be slower during the 2010-2020; the period of stronger growth during 2000-2010 is most evident in the suburbs of the metropolitan areas in the South and West (Figures 4.15 and 4.16).

Table 4.1: Current and projected metropolitan elderly age groups

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Elderly metro. pop.	% of tot. metro. pop.	Elderly metro. pop.	% of tot. metro. pop	Elderly metro.pop.	% of tot. metro. pop	% change	% change	% change
Metropolitan Areas									
55-64	18,876,421	8.35%	27,738,425	11.53%	32,705,188	12.61%	46.95	17.91	73.26
65-74	14,108,439	6.24%	16,067,569	6.68%	23,360,932	9.01%	13.89	45.39	65.58
75-84	9,532,318	4.22%	9,937,595	4.13%	12,288,351	4.70%	4.25	22.65	27.86
85+	3,217,303	1.42%	4,429,659	1.84%	5,035,278	1.94%	37.68	13.67	56.51
Total Elderly	45,734,481	20.24%	58,173,247	24.17%	73,289,749	28.26%	27.20	25.99	60.25
Central Cities									
55-64	6,452,183	2.86%	8,977,680	3.73%	9,983,825	3.85%	39.14	11.21	54.74
65-74	5,016,687	2.22%	5,479,693	2.28%	7,525,120	2.90%	9.23	37.33	50.00
75-84	3,557,918	1.57%	3,599,170	1.50%	4,343,861	1.67%	1.16	20.69	22.09
85+	1,281,702	0.57%	1,694,631	0.70%	1,845,443	0.71%	32.22	8.90	43.98
Total Elderly	16,308,490	7.22%	19,751,174	8.21%	23,598,248	9.10%	21.11	19.48	44.70
Suburbs									
55-64	12,424,238	5.50%	18,760,745	7.80%	22,721,363	8.76%	51.00	21.11	82.88
65-74	9,091,752	4.02%	10,587,876	4.40%	15,835,812	6.11%	16.46	49.57	74.18
75-84	5,974,400	2.64%	6,338,425	2.63%	7,944,490	3.06%	6.09	25.34	32.98
85+	1,935,601	0.86%	2,735,028	1.14%	3,189,835	1.23%	41.30	16.63	64.80
Total Elderly	29,425,991	13.02%	38,422,073	15.97%	49,691,501	19.16%	30.57	29.33	68.87

Table 4.2a: Current and projected metropolitan elderly age groups: Largest metropolitan areas (3 million people or more)*

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Elderly large metro.pop.	% of tot. metro. pop.	Elderly large metro.pop.	% of tot. metro. pop.	Elderly Large metro.pop.	% of tot. metro. pop.	% change	% change	% change
Metropolitan Areas (≥3 mil.)									
55-64	8,491,209	3.76	12,233,709	5.08	14,648,176	5.65	44.07	19.74	72.51
65-74	6,034,832	2.67	6,632,056	2.76	9,224,756	3.56	9.90	39.09	52.86
75-84	4,052,220	1.79	3,948,432	1.64	4,646,444	1.79	-2.56	17.68	14.66
85+	1,391,788	0.62	1,829,658	0.76	2,091,808	0.81	31.46	14.33	50.30
Total Elderly	19,970,049	8.84	24,643,855	10.24	30,611,183	11.80	23.40	24.21	53.29
Central Cities (in metro. areas ≥3 mil.)									
55-64	2,871,242	1.27	3,897,541	1.62	4,422,339	1.70	35.74	13.46	54.02
65-74	2,110,950	0.93	2,193,583	0.91	2,862,939	1.10	3.91	30.51	35.62
75-84	1,441,451	0.64	1,339,207	0.56	1,503,450	0.58	-7.09	12.26	4.30
85+	517,087	0.23	646,817	0.27	697,644	0.27	25.09	7.86	34.92
Total Elderly	6,940,730	3.07	8,077,148	3.36	9,486,371	3.66	16.37	17.45	36.68
Suburbs (in metro. areas ≥3 mil.)									
55-64	5,619,967	2.49	8,336,168	3.46	10,225,837	3.94	48.33	22.67	81.96
65-74	3,923,882	1.74	4,438,473	1.84	6,361,817	2.45	13.11	43.33	62.13
75-84	2,610,769	1.16	2,609,2	1.08	3,142,994	1.21	-0.06	20.46	20.39
85+	874,701	0.39	1,182,841	0.49	1,394,164	0.54	35.23	17.87	59.39
Total Elderly	13,029,319	5.77	16,566,707	6.88	21,124,812	8.14	27.15	27.51	62.13

* New York, Los Angeles, Chicago, Washington, D.C., San Francisco, Philadelphia, Boston, Detroit, Dallas, Houston, Atlanta, Miami, Seattle, and Phoenix metropolitan areas.

Table 4.2b: Current and projected metropolitan elderly age groups: Smaller metropolitan areas (fewer than 3 million people)*

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Elderly smaller metro. pop.	% of tot. metro. pop.	Elderly smaller metro. pop.	% of tot. metro. pop.	Elderly smaller metro. pop.	% of tot. metro. pop.	% change	% change	% change
Metropolitan Areas (<3 mil.)									
55-64	10,385,212	4.60	15,504,716	6.44	18,057,012	6.96	49.30	16.46	73.87
65-74	8,073,607	3.57	9,435,513	3.92	14,136,176	5.45	16.87	49.82	75.09
75-84	5,480,098	2.43	5,989,162	2.49	7,541,908	2.91	9.29	25.93	37.62
85+	1,825,515	0.81	2,600,000	1.08	2,943,470	1.13	42.43	13.21	61.24
Total Elderly	25,764,432	11.40	33,529,392	13.93	42,678,566	16.45	30.14	27.29	65.25
Central Cities (in metro. areas <3 mil.)									
55-64	3,580,941	1.58	5,080,139	2.11	5,561,486	2.14	41.87	9.48	55.31
65-74	2,905,737	1.29	3,286,110	1.37	4,662,181	1.80	13.09	41.88	60.45
75-84	2,116,467	0.94	2,259,963	0.94	2,740,412	1.06	6.78	21.26	29.48
85+	764,615	0.34	1,047,814	0.44	1,147,799	0.44	37.04	9.54	50.11
Total Elderly	9,367,760	4.15	11,674,026	4.85	14,111,878	5.44	24.62	20.88	50.64
Suburbs (in metro. areas <3 mil.)									
55-64	6,804,271	3.01	10,424,577	4.33	12,495,526	4.82	53.21	19.87	83.64
65-74	5,167,870	2.29	6,149,403	2.56	9,473,995	3.65	18.99	54.06	83.32
75-84	3,363,631	1.49	3,729,199	1.55	4,801,496	1.85	10.87	28.75	42.75
85+	1,060,900	0.47	1,552,187	0.64	1,795,671	0.69	46.31	15.69	69.26
Total Elderly	16,396,672	7.26	21,855,366	9.08	28,566,688	11.01	33.29	30.71	74.22

* Ranging from Minneapolis-St. Paul with 2,968,806 to Enid, Oklahoma with 57,813 in 2000.

Table 4.3a: Current and projected elderly age groups, total metropolitan, by U.S. Census Region

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Elderly metro. pop	% of tot. metro. pop.	Elderly metro. pop	% of tot. metro. pop.	Elderly metro. pop	% of tot. metro. pop.	% change	% change	% change
REGION 1: NORTHEAST									
55-64	4,309,898	1.91	5,772,097	2.40	6,353,474	2.45	33.93	10.07	47.42
65-74	3,367,088	1.49	3,384,543	1.41	4,125,448	1.59	21.89	22.52	21.89
75-84	2,390,703	1.06	2,184,246	0.91	2,323,364	0.90	-8.64	6.37	2.82
85+	840,586	0.37	1,046,135	0.43	1,096,516	0.42	24.45	4.82	30.45
Total Elderly	10,908,275	4.83	12,387,019	5.15	14,898,800	5.36	13.56	12.20	27.42
Division 1: New England[1]									
55-64	852,247	0.38	1,158,711	0.48	1,243,761	0.48	35.96	7.34	45.94
65-74	657,565	0.29	677,597	0.28	822,770	0.32	3.05	7.29	0.61
75-84	484,551	0.21	448,850	0.19	481,579	0.19	-7.37	7.29	0.61
85+	177,861	0.08	231,787	0.10	231,847	0.09	30.32	0.03	30.35
Total Elderly	2,172,224	0.96	2,516,944	1.05	2,779,956	1.07	15.87	10.45	27.98
Division 2: Middle Atlantic[2]									
55-64	3,457,651	1.53	4,613,386	1.92	5,109,713	1.97	33.43	10.76	47.78
65-74	2,709,523	1.20	2,706,946	1.12	3,302,677	1.27	-0.10	22.01	21.89
75-84	1,906,152	0.84	1,735,396	0.72	1,841,785	0.71	-8.96	6.13	-3.38
85+	662,725	0.29	814,348	0.34	864,669	0.33	22.88	6.18	30.47
Total Elderly	8,736,051	3.87	9,870,075	4.10	11,118,844	4.29	12.98	12.65	27.28
REGION 2: MIDWEST									
55-64	3,933,115	1.74	5,586,280	2.32	6,389,840	2.46	42.03	14.38	62.46
65-74	2,923,583	1.29	3,238,670	1.35	4,721,883	1.82	10.78	45.80	61.51
75-84	2,005,498	0.89	2,064,663	0.86	2,441,077	0.94	2.95	18.23	21.72
85+	693,859	0.31	931,763	0.39	999,441	0.39	34.29	7.26	44.04
Total Elderly	9,556,055	4.23	11,821,376	4.91	14,552,241	5.61	23.71	23.10	52.28

Division 3: East North Central[3]									
55-64	2,925,782	1.29	4,064,472	1.69	4,571,062	1.76	38.92	12.46	56.23
65-74	2,185,196	0.97	2,373,974	0.99	3,393,518	1.31	8.64	42.95	55.30
75-84	1,499,267	0.66	1,523,213	0.63	1,767,240	0.68	1.60	16.02	17.87
85+	505,076	0.22	688,391	0.29	749,688	0.29	36.29	8.90	48.43
Total Elderly	7,115,321	3.15	8,650,051	3.59	10,481,507	4.04	21.57	21.17	47.31
Division 4: West North Central[4]									
55-64	1,007,333	0.45	1,521,808	0.63	1,818,779	0.70	51.07	19.51	80.55
65-74	738,387	0.33	864,696	0.36	1,328,364	0.51	17.11	53.62	79.9
75-84	506,231	0.22	541,450	0.22	673,837	0.26	6.96	24.45	33.11
85+	188,783	0.08	243,371	0.10	249,753	0.10	28.92	2.62	32.30
Total Elderly	2,440,734	1.08	3,171,325	1.32	4,070,733	1.57	29.93	28.36	66.78
REGION 3: SOUTH									
55-64	6,336,929	2.80	9,783,524	4.07	11,674,185	4.50	54.39	19.32	84.22
65-74	4,743,187	2.10	5,782,331	2.40	8,701,522	3.35	21.91	50.48	83.45
75-84	3,057,650	1.35	3,508,982	1.46	4,526,978	1.75	14.76	29.01	48.05
85+	999,189	0.44	1,466,023	0.61	1,651,753	0.64	46.72	12.67	65.31
Total Elderly	15,136,955	6.70	20,540,859	8.54	26,554,437	10.24	35.70	29.28	75.43
Division 5: South Atlantic[5]									
55-64	3,602,908	1.59	5,558,799	2.31	6,957,531	2.68	54.29	25.16	93.11
65-74	2,800,075	1.24	3,342,975	1.39	5,254,846	2.03	19.39	57.19	87.67
75-84	1,869,648	0.83	2,047,958	0.85	2,717,063	1.05	9.54	32.67	45.32
85+	604,673	0.27	908,013	0.38	1,083,334	0.42	50.17	19.31	79.16
Total Elderly	8,877,304	3.93	11,857,745	4.93	16,012,774	6.17	33.57	35.04	80.38
Division 6: East South Central[6]									
55-64	868,867	0.38	1,285,833	0.53	1,039,073	0.40	47.99	-19.19	19.59
65-74	636,166	0.28	770,101	0.32	824,173	0.32	21.05	7.02	29.55
75-84	396,039	0.18	455,934	0.19	426,085	0.16	15.12	-6.55	7.59
85+	132,229	0.06	172,173	0.07	124,393	0.05	30.21	-27.75	5.93
Total Elderly	2,033,301	0.90	2,684,041	1.12	2,413,723	0.93	32.00	-10.07	18.71

Division 7: West South Central[7]									
55-64	1,865,154	0.83	2,938,892	1.22	3,677,581	1.42	57.57	25.13	97.17
65-74	1,306,946	0.58	1,669,255	0.69	2,622,503	1.01	27.72	57.11	100.66
75-84	791,963	0.35	1,005,090	0.42	1,383,830	0.53	26.91	37.68	74.73
85+	262,287	0.12	385,836	0.16	444,027	0.17	47.10	15.08	69.29
Total Elderly	4,226,350	1.87	5,999,073	2.49	8,127,940	3.13	41.94	35.49	92.32
REGION 4: WEST[4]									
55-64	4,296,479	1.90	6,596,524	2.74	8,287,689	3.20	53.53	25.64	92.89
65-74	3,074,581	1.36	3,662,026	1.52	5,812,080	2.24	19.11	58.71	89.04
75-84	2,078,467	0.92	2,179,704	0.91	2,896,933	1.12	4.87	32.90	39.38
85+	683,669	0.30	985,739	0.41	1,287,568	0.50	44.18	30.62	88.33
Total Elderly	10,133,196	4.48	13,423,993	5.58	18,284,271	7.05	32.48	36.21	80.44
Division 8: Mountain[8]									
55-64	1,089,389	0.48	1,837,419	0.76	2,237,088	0.86	68.67	21.75	105.35
65-74	795,730	0.35	1,078,638	0.45	1,743,680	0.67	35.55	61.66	119.13
75-84	505,482	0.22	633,413	0.26	905,566	0.35	25.31	42.97	79.15
85+	154,493	0.07	261,727	0.11	401,420	0.15	69.41	53.37	159.83
Total Elderly	2,545,094	1.13	3,811,197	1.58	5,287,754	2.04	49.75	38.74	107.76
Division 9: Pacific[9]									
55-64	3,207,090	1.42	4,759,106	1.98	6,050,602	2.33	48.39	27.14	88.66
65-74	2,278,851	1.01	2,583,388	1.07	4,068,400	1.57	13.36	57.48	78.53
75-84	1,572,985	0.70	1,546,291	0.64	1,991,367	0.77	-1.70	28.78	26.60
85+	529,176	0.23	724,012	0.30	886,149	0.34	36.82	22.39	67.46
Total Elderly	7,588,102	3.36	9,612,796	3.99	12,996,517	5.01	26.68	35.20	71.27

[a] New England and Middle Atlantic Divisions.
[b] East North Central and West North Central Divisions.
[c] South Atlantic, East South Central, and West South Central Divisions.
[d] Mountain and Pacific Divisions.

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[2] New Jersey, New York, Pennsylvania.

[3] Indiana, Illinois, Michigan, Ohio, Wisconsin.
[4] Iowa, Kansas, Minnesota, Missouri, Nebraska, N. Dakota, S. Dakota.
[5] Delaware, D.C., Florida, Georgia, Maryland, N. Carolina, S. Carolina, Virginia, W. Virginia.
[6] Alabama, Kentucky, Mississippi, Tennessee.
[7] Arkansas, Louisiana, Oklahoma, Texas.
[8] Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming.
[9] Alaska, California, Hawaii, Oregon, Washington.

Table 4.3b: Current and projected elderly age groups, central cities, by U.S. Census Region

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Central city population	% of tot. metro. pop.	Central city population	% of tot. metro. pop.	Central city population	% of tot. metro. pop.	% change	% change	% change
REGION 1: NORTHEAST									
55-64	1,368,596	0.61	1,772,344	0.74	1,927,175	0.74	29.50	8.74	40.82
65-74	1,067,190	0.47	1,039,338	0.43	1,200,694	0.46	-2.61	15.53	12.51
75-84	762,385	0.34	666,855	0.28	689,219	0.27	-12.53	3.36	-9.59
85+	283,336	0.13	337,794	0.14	349,065	0.13	19.22	3.34	23.20
Total Elderly	3,481,507	1.54	3,816,328	1.59	4,166,151	1.61	9.62	9.17	19.67
Division 1: New England									
55-64	230,880	0.10	299,167	0.12	304,031	0.12	29.58	1.63	31.68
65-74	189,028	0.08	184,102	0.08	213,078	0.08	-2.61	15.74	12.72
75-84	146,770	0.06	129,800	0.05	133,134	0.05	-11.56	2.57	-9.29
85+	55,671	0.02	69,432	0.03	67,585	0.03	24.72	-2.66	21.40
Total Elderly	622,349	0.28	682,500	0.28	717,827	0.28	9.67	5.18	15.34
Division 2: Middle Atlantic									
55-64	1,137,716	0.50	1,473,177	0.61	1,623,144	0.63	29.58	1.63	31.68
65-74	878,162	0.39	855,236	0.36	987,615	0.38	-2.61	15.74	12.72
75-84	615,615	0.39	537,054	0.22	556,085	0.21	-12.76	3.55	-9.67
85+	227,665	0.10	268,362	0.11	281,480	0.11	17.88	4.89	23.64
Total Elderly	2,859,158	1.27	3,133,828	1.30	3,448,324	1.33	9.61	10.04	20.61
REGION 2: MIDWEST									
55-64	1,284,707	0.57	1,715,225	0.71	1,821,682	0.70	33.51	6.21	41.80
65-74	1,030,625	0.46	1,078,911	0.45	1,477,383	0.57	4.69	36.93	43.35
75-84	745,625	0.33	726,800	0.30	810,366	0.31	-2.51	11.50	8.70
85+	273,066	0.12	343,669	0.14	343,956	0.13	25.86	0.08	25.96
Total Elderly	3,333,893	1.48	3,864,606	1.61	4,453,387	1.72	15.92	15.24	33.58

Division 3: East North Central									
55-64	921,360	0.41	1,191,164	0.49	1,237,272	0.48	29.28	3.87	34.29
65-74	739,779	0.33	753,613	0.31	998,620	0.39	1.87	32.51	34.99
75-84	528,244	0.23	501,530	0.21	540,875	0.21	-5.06	7.84	2.39
85+	187,712	0.08	236,962	0.10	240,628	0.09	26.24	1.55	28.19
Total Elderly	2,377,095	1.05	2,683,269	1.11	3,017,395	1.16	12.88	12.45	26.94
Division 4: West North Central									
55-64	363,347	0.16	524,061	0.22	584,410	0.23	44.23	11.52	60.84
65-74	290,846	0.13	325,298	0.14	478,762	0.18	11.85	47.18	64.61
75-84	217,251	0.10	225,271	0.09	269,492	0.10	3.69	19.63	24.05
85+	85,354	0.04	106,707	0.04	103,328	0.04	25.02	-3.17	21.06
Total Elderly	956,798	0.42	1,181,337	0.49	1,435,991	0.55	23.47	21.56	50.08
REGION 3: SOUTH									
55-64	2,122,773	0.94	3,002,888	1.25	3,215,393	1.24	41.46	7.08	51.48
65-74	1,680,040	0.74	1,931,596	0.80	2,658,241	1.02	14.97	37.62	58.23
75-84	1,152,401	0.51	1,282,282	0.53	1,551,451	0.60	11.27	20.99	34.63
85+	407,643	0.18	562,035	0.23	582,943	0.22	37.87	3.72	43.01
Total Elderly	5,362,857	2.37	6,778,800	2.82	8,008,027	3.09	26.40	18.13	49.33
Division 5: South Atlantic									
55-64	888,424	0.39	1,226,941	0.51	1,350,791	0.52	38.10	10.09	52.04
65-74	727,426	0.32	799,398	0.33	1,131,032	0.44	9.89	41.49	55.48
75-84	518,760	0.23	539,355	0.22	669,086	0.26	3.97	24.05	28.98
85+	183,595	0.08	258,776	0.11	280,606	0.11	40.95	8.44	52.84
Total Elderly	2,318,205	1.03	2,824,470	1.17	3,431,515	1.32	21.84	21.49	48.02
Division 6: East South Central									
55-64	324,897	0.14	436,253	0.18	307,195	0.12	34.27	-29.58	-5.45
65-74	264,561	0.12	294,231	0.12	277,137	0.11	11.21	-5.81	4.75
75-84	183,500	0.08	195,024	0.08	162,114	0.06	6.28	-16.87	-11.65
85+	66,196	0.03	79,729	0.03	50,458	0.02	20.44	-36.71	-23.78
Total Elderly	839,154	0.37	1,005,237	0.42	796,903	0.31	19.79	-20.72	-5.03

Division 7: West South Central									
55-64	909,452	0.40	1,339,694	0.56	1,557,407	0.60	47.31	16.25	71.26
65-74	688,053	0.30	837,967	0.35	1,250,072	0.48	21.79	49.18	81.69
75-84	450,141	0.20	547,904	0.23	720,251	0.28	21.72	31.46	60.01
85+	157,852	0.07	223,529	0.09	251,880	0.10	41.61	12.68	59.57
Total Elderly	2,205,498	0.98	2,949,094	1.23	3,779,608	1.46	33.72	28.16	71.38
REGION 4: WEST									
55-64	1,676,107	0.74	2,487,223	1.03	3,019,576	1.16	48.39	21.40	80.15
65-74	1,238,832	0.55	1,429,848	0.59	2,188,803	0.84	15.42	53.08	76.68
75-84	897,637	0.40	923,233	0.38	1,192,826	0.46	2.85	29.20	32.89
85+	317,657	0.14	451,134	0.19	569,479	0.22	42.02	26.23	79.27
Total Elderly	4,130,233	1.83	5,291,439	2.20	6,970,683	2.69	28.11	31.74	68.77
Division 8: Mountain									
55-64	483,101	0.21	759,769	0.32	866,834	0.33	57.27	14.09	79.43
65-74	362,407	0.16	457,777	0.19	692,778	0.27	26.32	51.34	91.16
75-84	251,103	0.11	296,147	0.12	399,352	0.15	17.94	34.85	59.04
85+	83,855	0.04	133,376	0.06	183,668	0.07	59.06	37.71	119.03
Total Elderly	1,180,466	0.52	1,647,069	0.68	2,142,632	0.83	39.53	30.09	81.51
Division 9: Pacific									
55-64	1,193,006	0.53	1,727,455	0.72	2,152,741	0.83	44.80	24.62	80.45
65-74	876,425	0.39	972,072	0.40	1,496,026	0.50	10.91	53.90	70.70
75-84	646,534	0.29	627,086	0.26	793,473	0.31	-3.01	26.53	22.73
85+	233,802	0.10	317,758	0.13	385,811	0.15	35.91	21.42	65.02
Total Elderly	2,949,767	1.31	3,644,370	1.51	4,828,051	1.86	23.55	32.48	63.68

Table 4.3c: Current and projected elderly age groups, suburbs, by U.S. Census Region

Age group	2000		2010		2020		2000-10	2010-20	2000-2020
	Suburban population	% of tot. metro. pop.	Suburban population	% of tot. metro. pop.	Suburban population	% of tot. metro. pop.	% change	% change	% change
REGION 1: NORTHEAST									
55-64	2,941,302	1.30	3,999,753	1.66	4,426,299	1.71	35.99	10.66	50.49
65-74	2,299,898	1.02	2,345,205	0.97	2,924,754	1.13	1.97	24.71	27.17
75-84	1,628,318	0.72	1,517,391	0.63	1,634,145	0.63	-6.81	7.69	0.36
85+	557,250	0.25	697,023	0.29	725,479	0.29	27.11	5.52	34.13
Total Elderly	7,426,768	3.29	8,570,691	3.56	9,732,649	3.75	15.40	13.56	31.05
Division 1: New England									
55-64	621,367	0.27	859,544	0.36	939,730	0.36	38.33	9.33	51.24
65-74	468,537	0.21	493,495	0.21	609,692	0.24	5.33	23.55	30.13
75-84	337,781	0.15	319,050	0.13	348,445	0.13	-5.55	9.21	3.16
85+	122,190	0.05	162,355	0.07	164,262	0.06	32.87	1.17	34.43
Total Elderly	1,549,875	0.69	1,834,444	0.76	2,062,129	0.8	18.36	12.41	33.05
Division 2: Middle Atlantic									
55-64	2,319,935	1.03	3,140,209	1.30	3,486,569	1.34	35.36	11.03	50.29
65-74	1,831,361	0.81	1,851,710	0.77	2,315,062	0.89	1.11	25.02	26.41
75-84	1,290,537	0.57	1,198,342	0.50	1,285,700	0.50	-7.14	7.29	-0.37
85+	435,060	0.19	545,986	0.23	583,189	0.22	25.50	6.81	34.05
Total Elderly	5,876,893	2.60	6,736,247	2.80	7,670,520	2.96	14.62	13.87	30.52
REGION 2: MIDWEST									
55-64	2,648,408	1.17	3,871,055	1.61	4,568,159	1.76	46.17	18.01	72.49
65-74	1,892,958	0.84	2,159,759	0.90	3,244,500	1.25	14.09	50.23	71.40
75-84	1,260,003	0.56	1,337,863	0.56	1,630,710	0.63	6.18	21.89	29.42
85+	420,793	0.19	588,093	0.24	655,485	0.25	39.76	11.46	55.77
Total Elderly	6,222,162	2.75	7,956,770	3.31	10,098,854	3.89	27.88	26.92	62.30

Division 3: East North Central									
55-64	921,360	0.41	1,191,164	0.49	1,237,272	0.48	29.28	3.87	34.29
65-74	739,779	0.33	753,613	0.31	998,620	0.39	1.87	32.51	34.99
75-84	528,244	0.23	501,530	0.21	540,875	0.21	-5.06	7.84	2.39
85+	187,712	0.08	236,962	0.10	240,628	0.09	26.24	1.55	28.19
Total Elderly	2,377,095	1.05	2,683,269	1.11	3,017,395	1.16	12.88	12.45	26.94
Division 4: West North Central									
55-64	643,986	0.28	997,747	0.41	1,234,369	0.48	54.93	23.72	91.68
65-74	447,541	0.20	539,397	0.22	849,602	0.33	20.52	57.51	89.84
75-84	288,980	0.13	316,180	0.13	404,345	0.16	9.41	27.88	39.92
85+	103,429	0.05	136,664	0.06	146,425	0.06	32.13	7.14	41.57
Total Elderly	1,483,936	0.66	1,989,988	0.83	2,634,742	1.02	34.10	32.40	77.55
REGION 3: SOUTH									
55-64	4,214,156	1.86	6,780,636	2.82	8,458,792	3.26	60.90	24.75	100.72
65-74	3,063,147	1.36	3,850,735	1.60	6,043,281	2.33	25.71	56.94	97.29
75-84	1,905,249	0.84	2,226,700	0.93	2,975,527	1.15	16.87	33.63	56.18
85+	591,546	0.26	903,988	0.38	1,068,810	0.41	52.82	18.23	80.68
Total Elderly	9,774,098	4.33	13,762,059	5.72	18,546,410	7.15	40.80	34.76	89.75
Division 5: South Atlantic									
55-64	2,714,484	1.20	4,331,858	1.80	5,606,740	2.16	59.58	29.43	106.55
65-74	2,072,649	0.92	2,543,577	1.06	4,123,815	1.59	22.72	62.13	98.96
75-84	1,350,888	0.60	1,508,603	0.63	2,047,977	0.79	11.67	35.75	51.60
85+	421,078	0.19	649,237	0.27	802,727	0.31	54.18	23.64	90.64
Total Elderly	6,559,099	2.90	9,033,275	3.75	12,581,259	4.85	37.72	39.28	91.81
Division 6: East South Central									
55-64	543,970	0.24	849,580	0.35	731,878	0.28	56.18	-13.85	34.54
65-74	371,605	0.16	475,870	0.20	547,036	0.21	28.06	14.95	47.21
75-84	212,539	0.09	260,910	0.11	263,971	0.10	22.76	1.17	24.20
85+	66,033	0.03	92,445	0.04	73,935	0.03	40.00	-20.02	11.97
Total Elderly	1,194,147	0.53	1,678,805	0.70	1,616,819	0.62	40.59	-3.69	35.40

Division 7: West South Central									
55-64	955,702	0.42	1,599,198	0.66	2,120,174	0.82	67.33	32.58	121.84
65-74	618,893	0.27	831,288	0.35	1,372,431	0.53	34.32	65.10	121.76
75-84	341,822	0.15	457,186	0.19	663,579	0.26	33.75	45.14	94.13
85+	104,435	0.05	162,307	0.07	192,147	0.07	55.41	18.39	83.99
Total Elderly	2,020,852	0.89	3,049,979	1.27	4,348,332	1.68	50.93	42.57	115.17
REGION 4: WEST									
55-64	2,620,372	1.16	4,109,301	1.71	5,268,114	2.03	56.82	28.20	101.04
65-74	1,835,749	0.81	2,232,177	0.93	3,623,277	1.40	21.59	62.32	97.37
75-84	1,180,830	0.52	1,256,471	0.52	1,704,108	0.66	6.41	35.63	44.31
85+	366,012	0.16	534,605	0.22	718,090	0.28	46.06	34.32	96.19
Total Elderly	6,002,963	2.66	8,132,554	3.38	11,313,588	4.36	35.48	39.11	88.47
Division 8: Mountain									
55-64	606,288	0.27	1,077,650	0.45	1,370,253	0.53	77.75	27.15	126.01
65-74	433,323	0.19	620,861	0.26	1,050,903	0.41	43.28	69.27	142.52
75-84	254,379	0.11	337,266	0.14	506,214	0.20	32.58	50.09	99.00
85+	70,638	0.03	128,351	0.05	217,752	0.08	81.70	69.65	208.26
Total Elderly	1,364,628	0.60	2,164,128	0.90	3,145,122	1.21	58.59	45.33	130.47
Division 9: Pacific									
55-64	2,014,084	0.89	3,031,651	1.26	3,897,860	1.50	50.52	28.57	93.53
65-74	1,402,426	0.62	1,611,316	0.67	2,572,374	0.99	14.89	59.64	83.42
75-84	926,451	0.41	919,205	0.38	1,197,893	0.46	-0.78	30.32	29.30
85+	295,374	0.13	406,254	0.17	500,338	0.19	37.54	23.16	69.39
Total Elderly	4,638,335	2.05	5,968,426	2.48	8,168,466	3.15	28.68	36.86	76.11

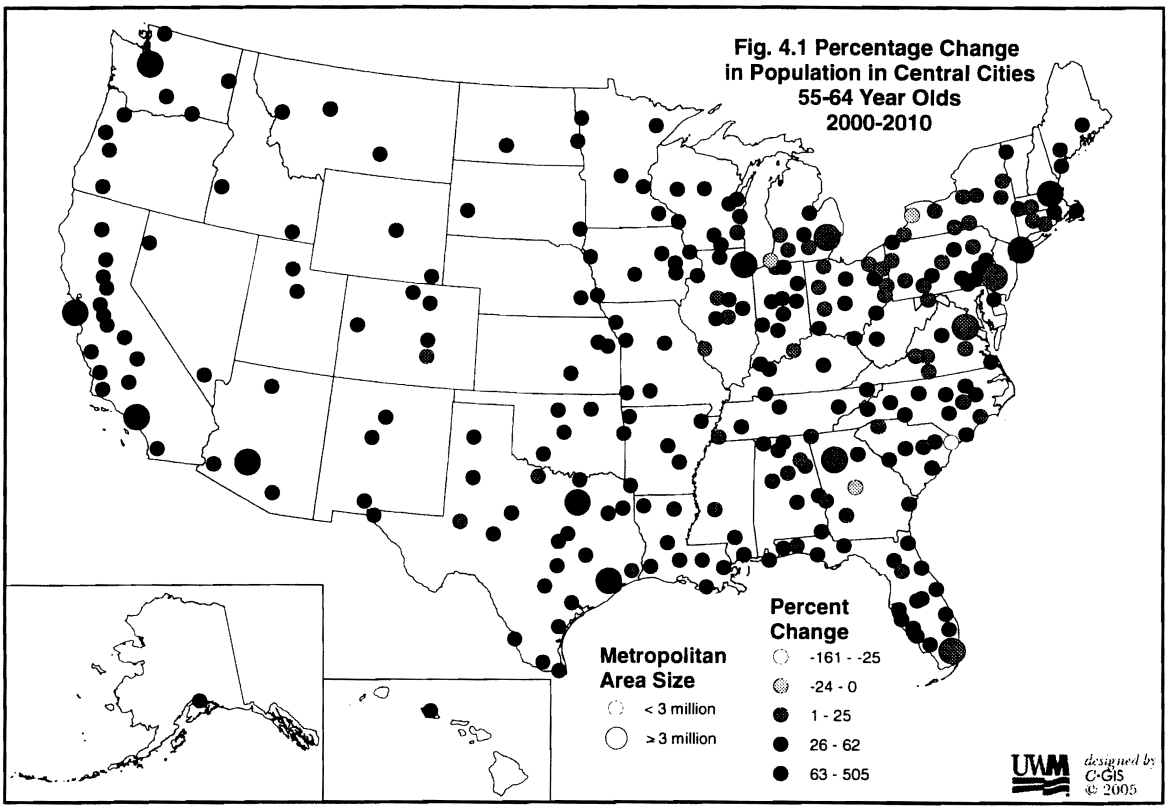
Fig. 4.1 Percentage Change
in Population in Central Cities
55-64 Year Olds
2000-2010
Percent
Change
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1 - 25
26 - 62
63 - 505
Metropolitan
Area Size
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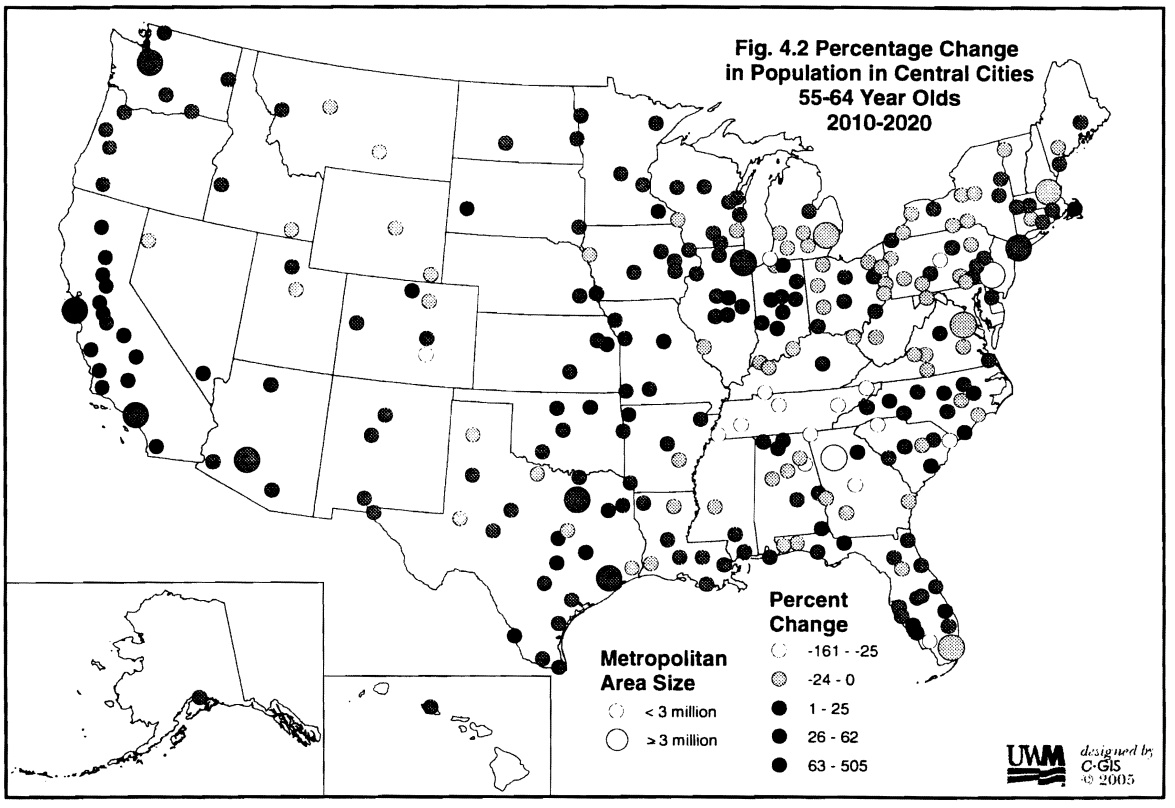
Fig. 4.2 Percentage Change
in Population in Central Cities
55-64 Year Olds
2010-2020
Percent
Change
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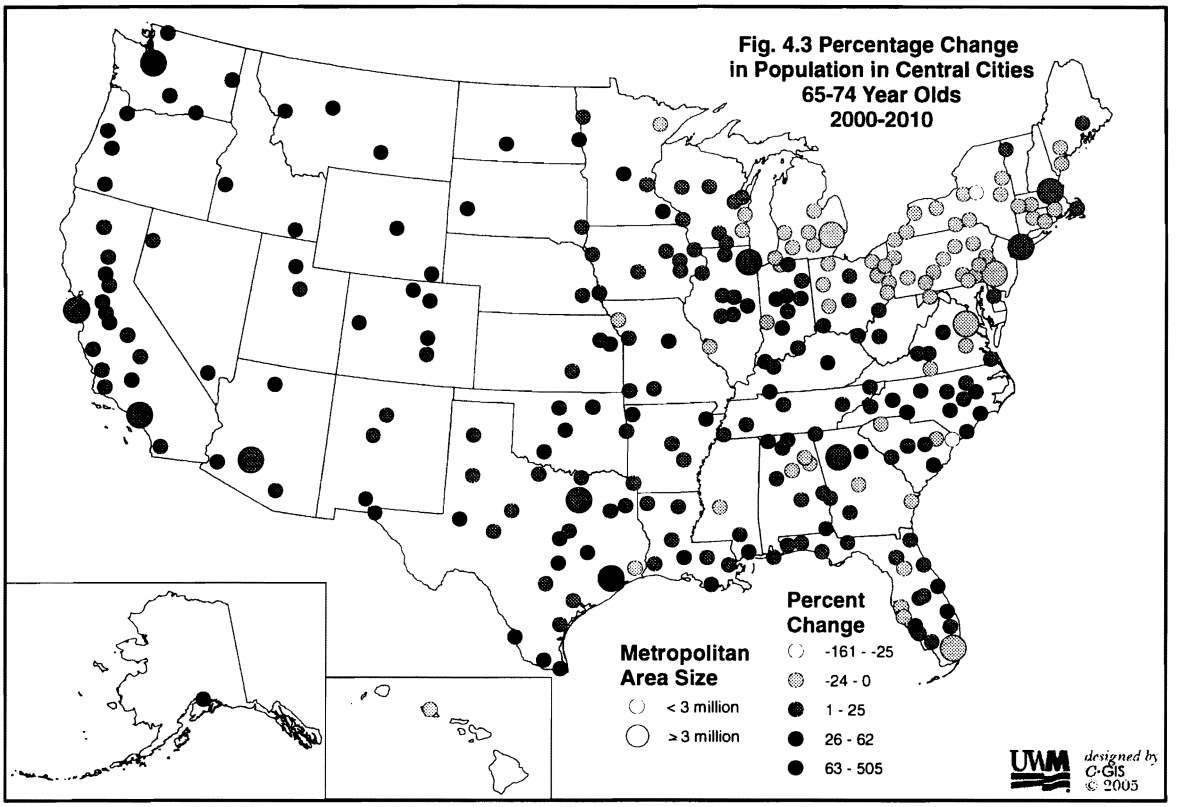
Fig. 4.3 Percentage Change
in Population in Central Cities
65-74 Year Olds
2000-2010
Percent
Change
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1 - 25
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63 - 505
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Area Size
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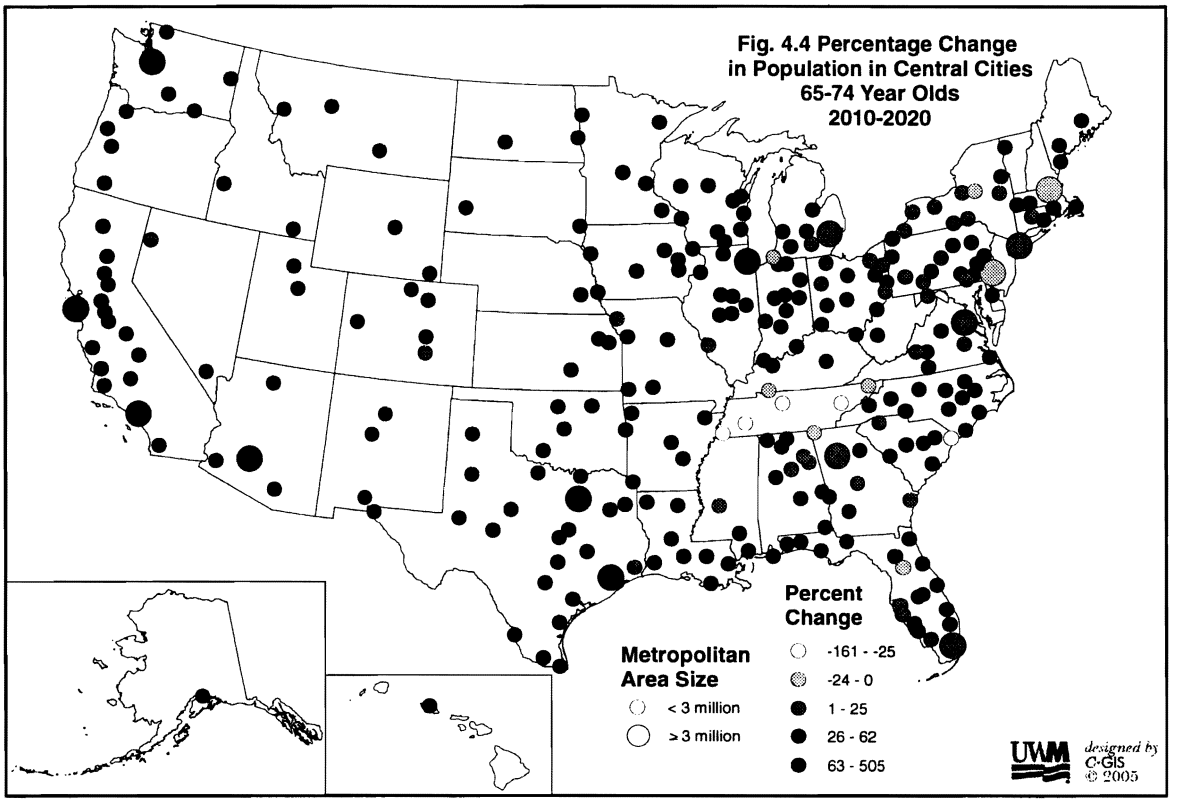
Fig. 4.4 Percentage Change
in Population in Central Cities
65-74 Year Olds
2010-2020
Percent
Change
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1 - 25
26 - 62
63 - 505
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Area Size
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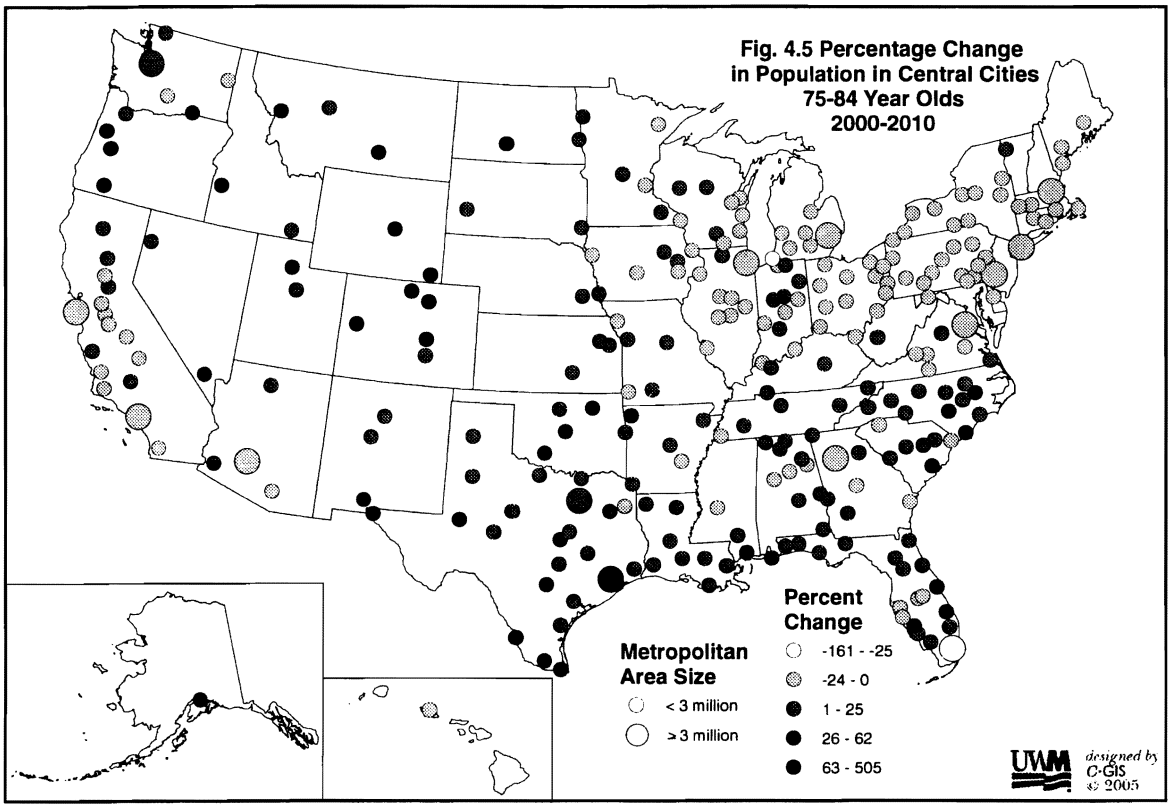
Fig. 4.5 Percentage Change
in Population in Central Cities
75-84 Year Olds
2000-2010
Percent
Change
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1 - 25
26 - 62
63 - 505
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Area Size
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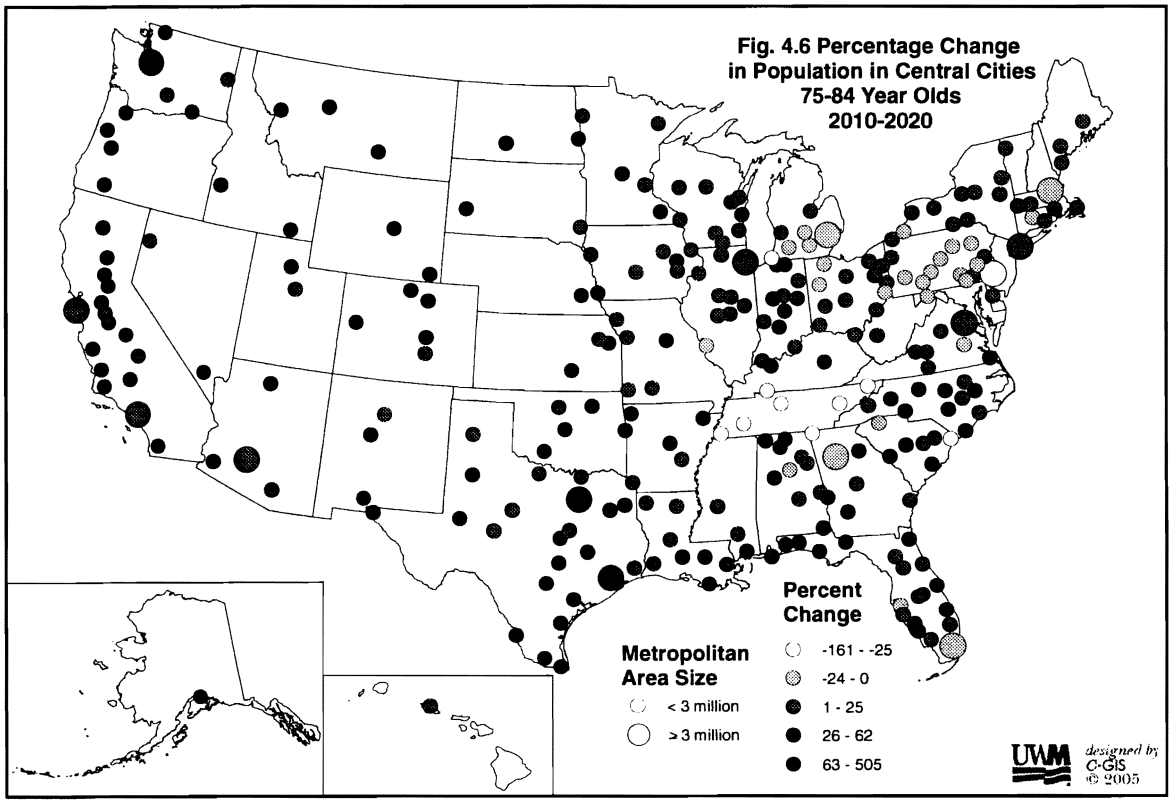
Fig. 4.6 Percentage Change
in Population in Central Cities
75-84 Year Olds
2010-2020
Percent
Change
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26 - 62
63 - 505
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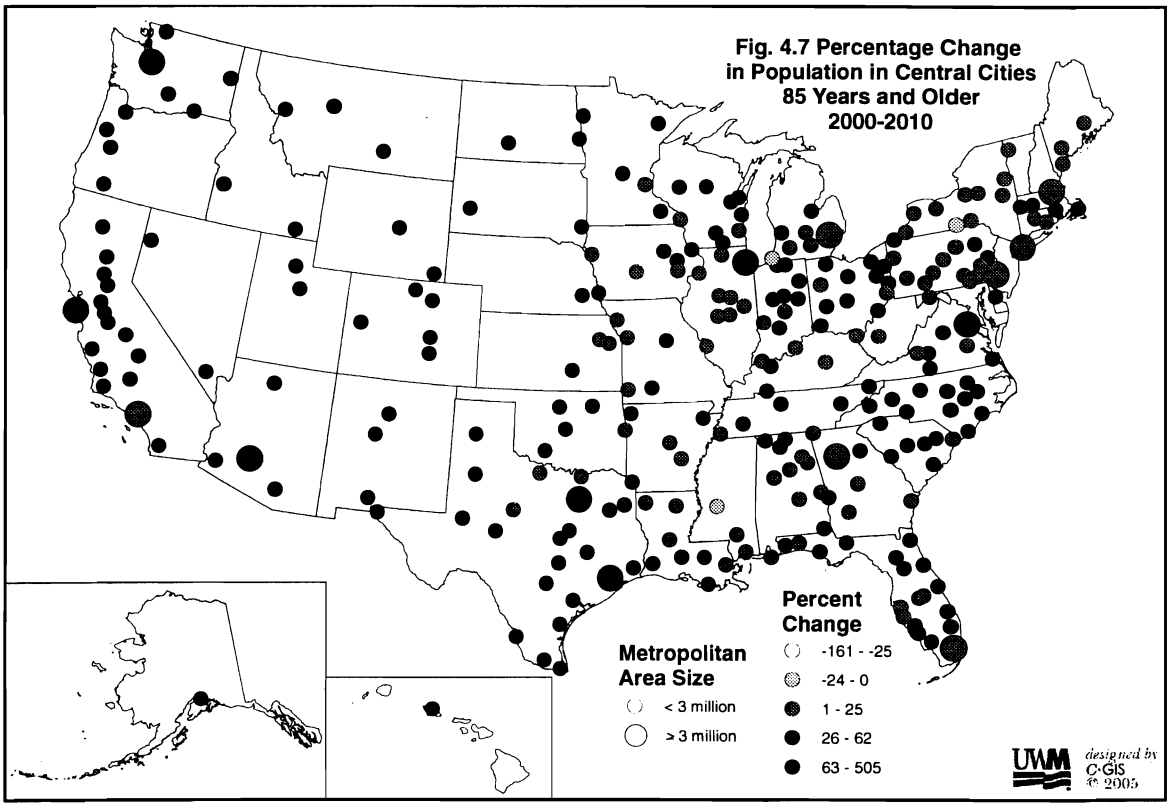
Fig. 4.7 Percentage Change
in Population in Central Cities
85 Years and Older
2000-2010
Percent
Change
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1 - 25
26 - 62
63 - 505
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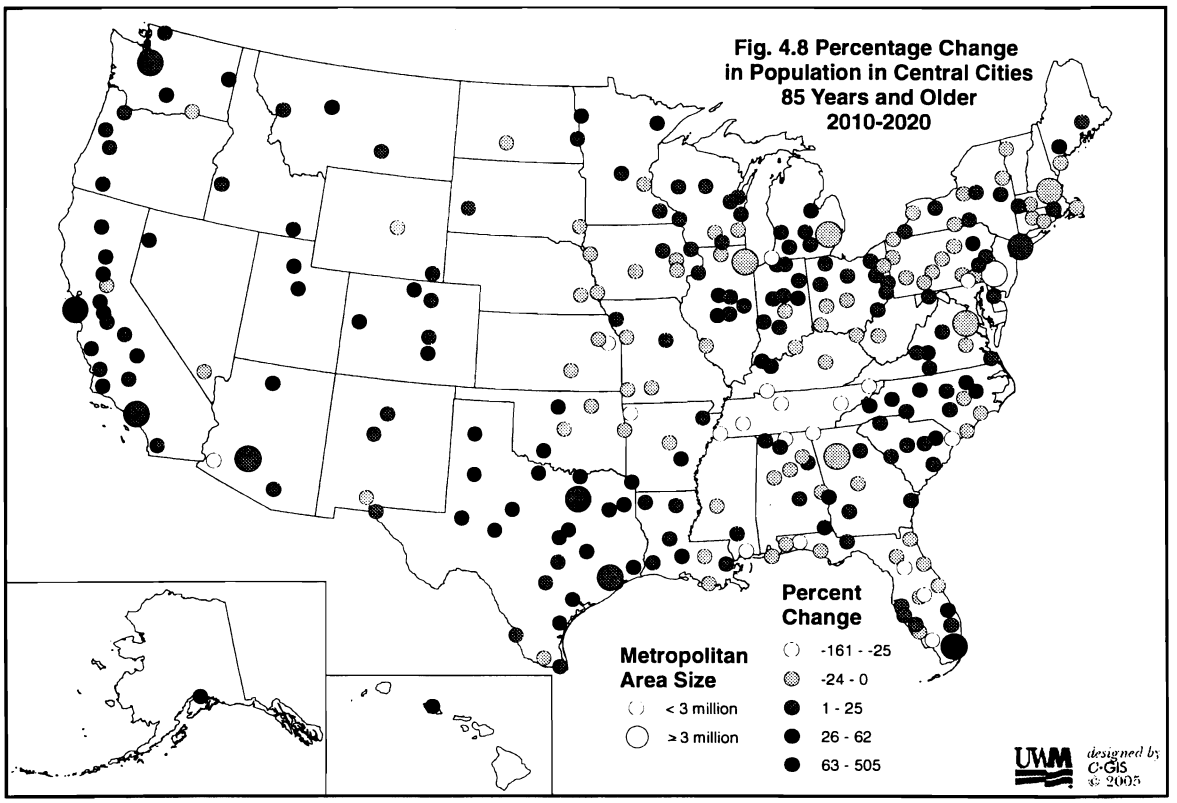
Fig. 4.8 Percentage Change
in Population in Central Cities
85 Years and Older
2010-2020
Percent
Change
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1 - 25
26 - 62
63 - 505
Metropolitan
Area Size
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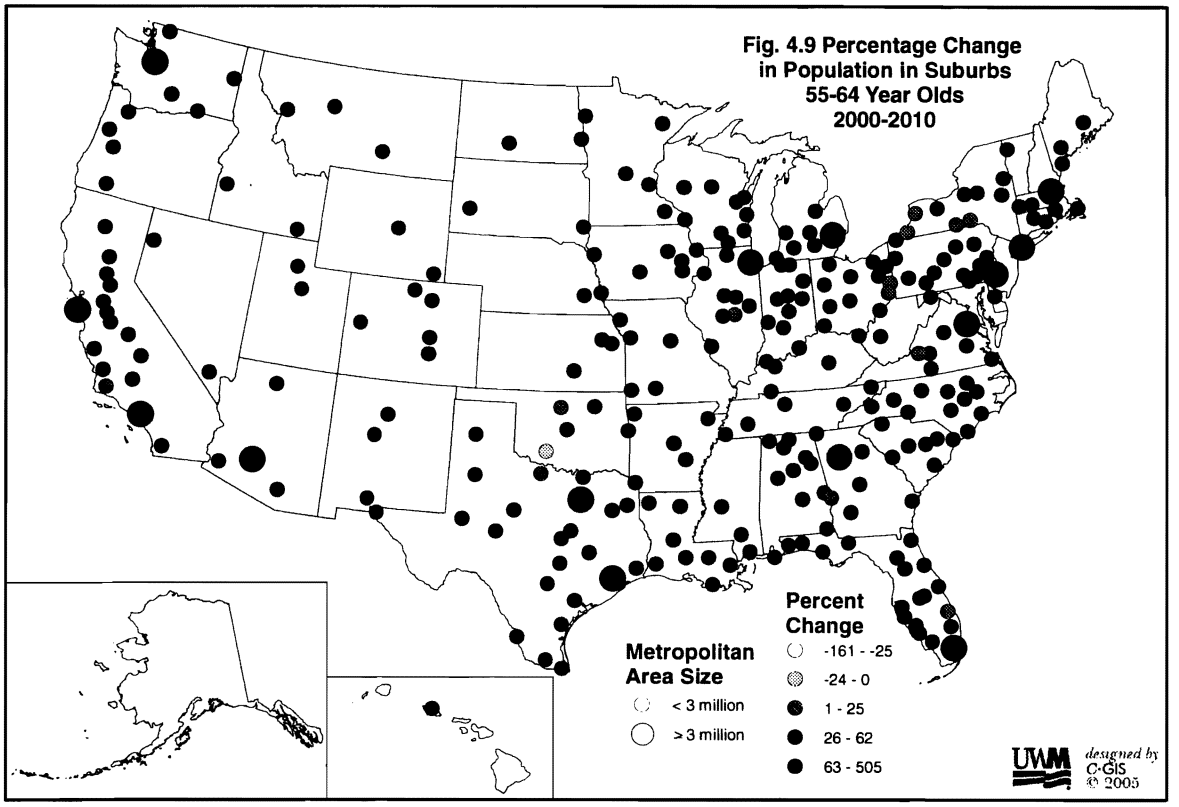
Fig. 4.9 Percentage Change
in Population in Suburbs
55-64 Year Olds
2000-2010
Percent
Change
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1 - 25
26 - 62
63 - 505
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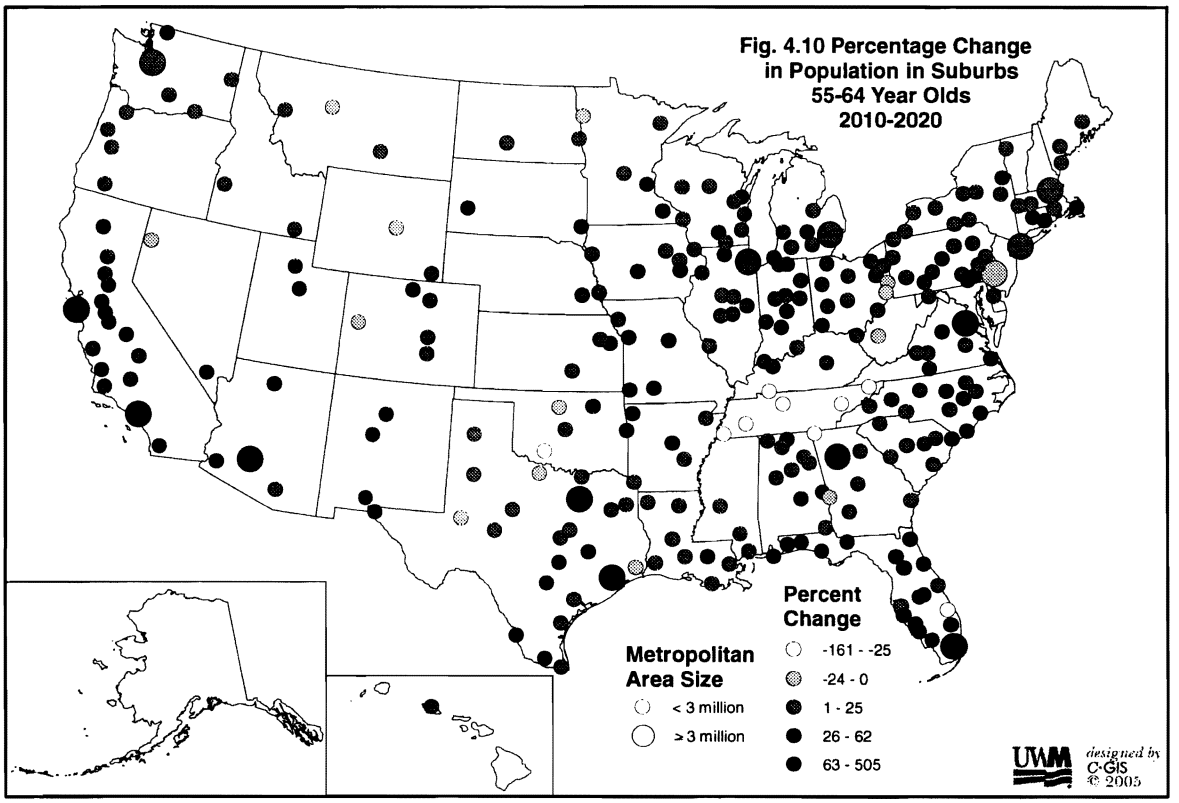
Fig. 4.10 Percentage Change
in Population in Suburbs
55-64 Year Olds
2010-2020
Percent
Change
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63 - 505
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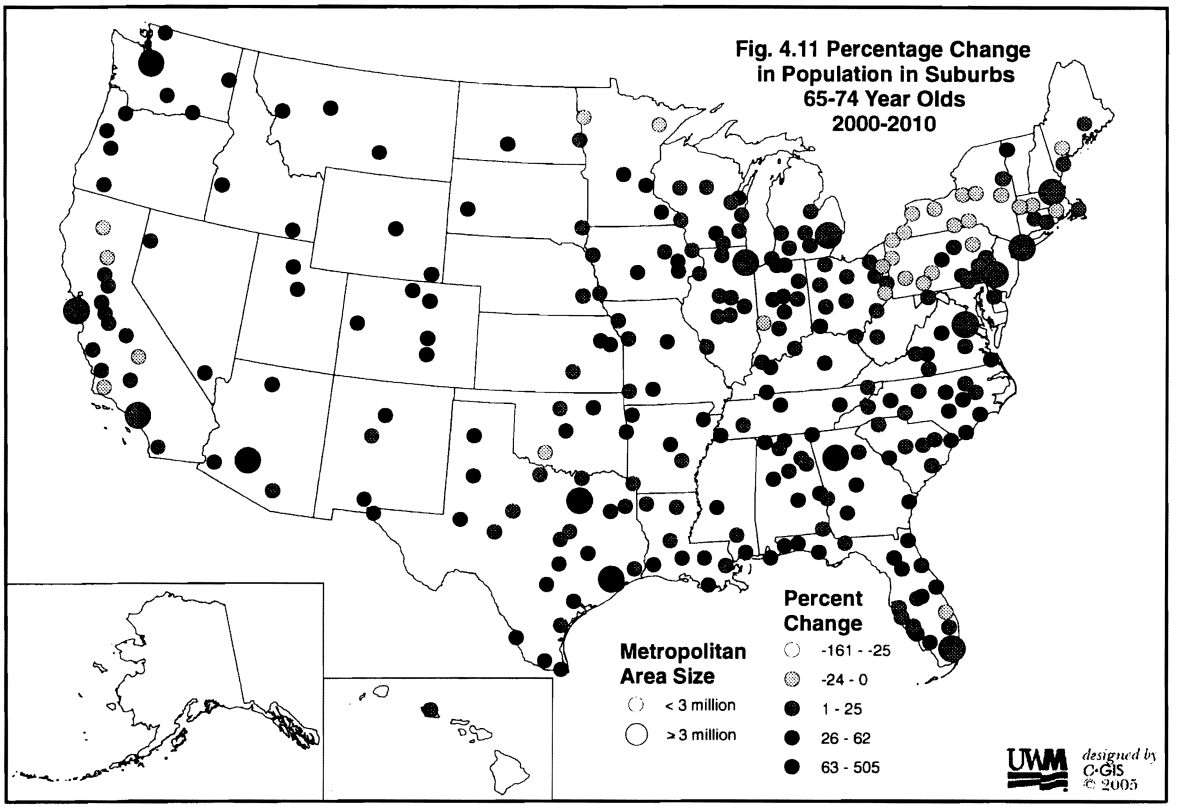
Fig. 4.11 Percentage Change
in Population in Suburbs
65-74 Year Olds
2000-2010
Percent
Change
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1 - 25
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Area Size
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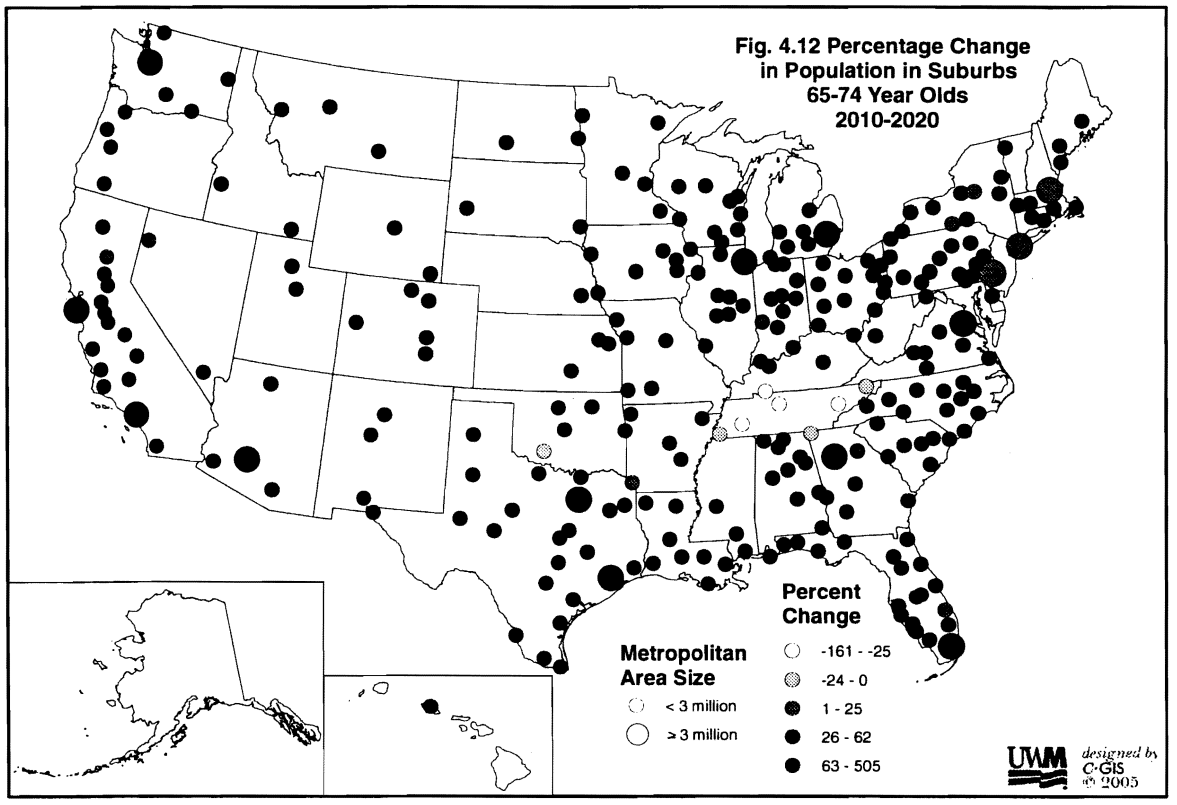
Fig. 4.12 Percentage Change
in Population in Suburbs
65-74 Year Olds
2010-2020
Percent
Change
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1 - 25
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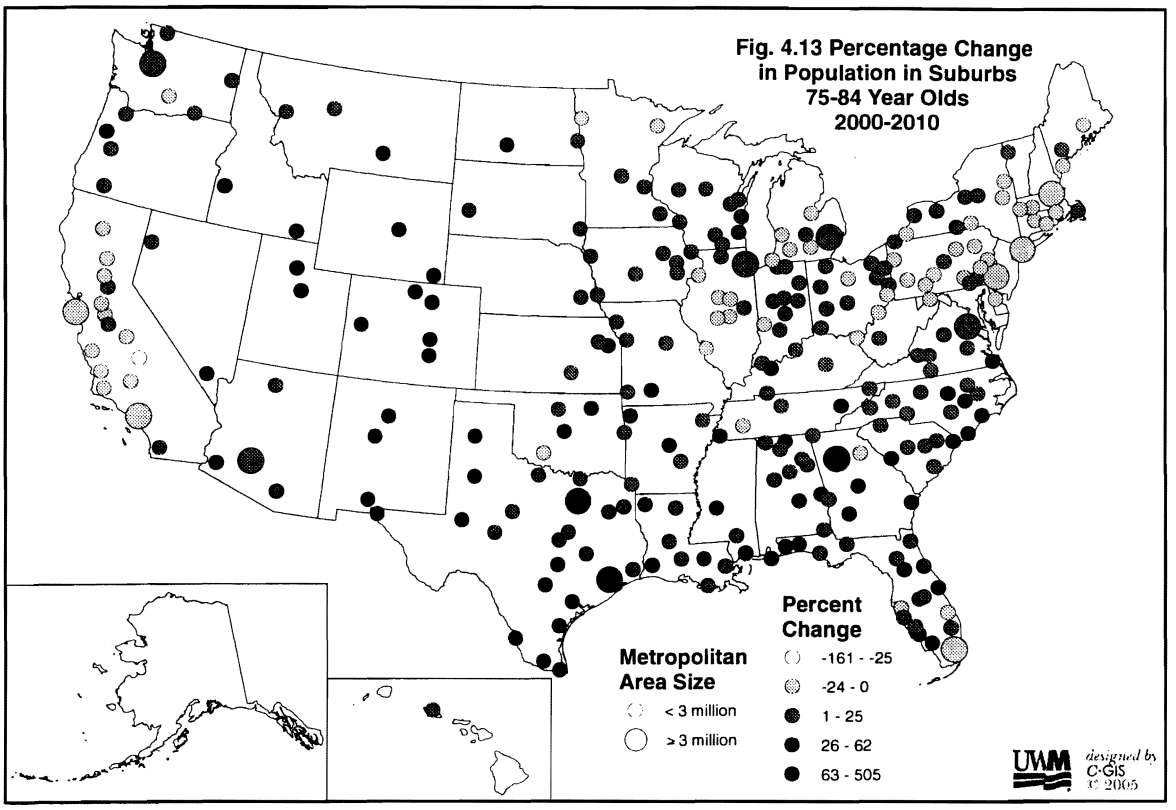
Fig. 4.13 Percentage Change
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75-84 Year Olds
2000-2010
Percent
Change
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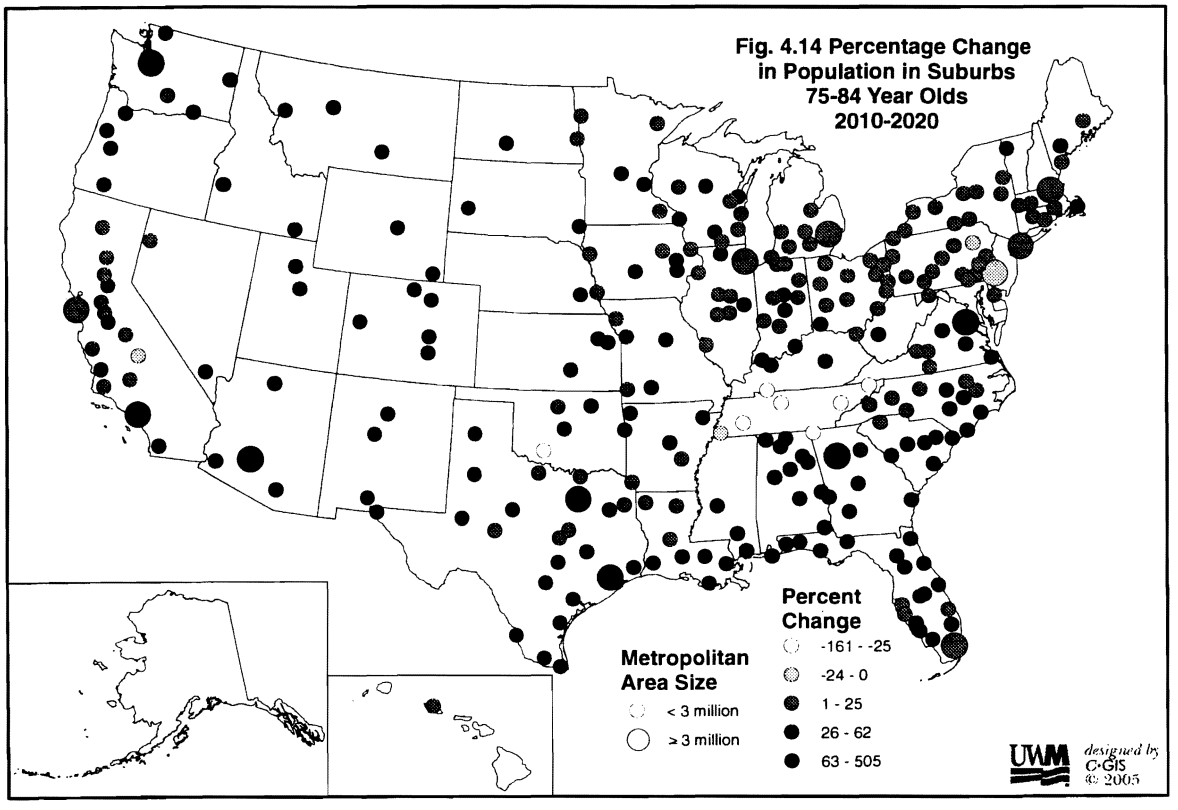
Fig. 4.14 Percentage Change
in Population in Suburbs
75-84 Year Olds
2010-2020
Percent
Change
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26 - 62
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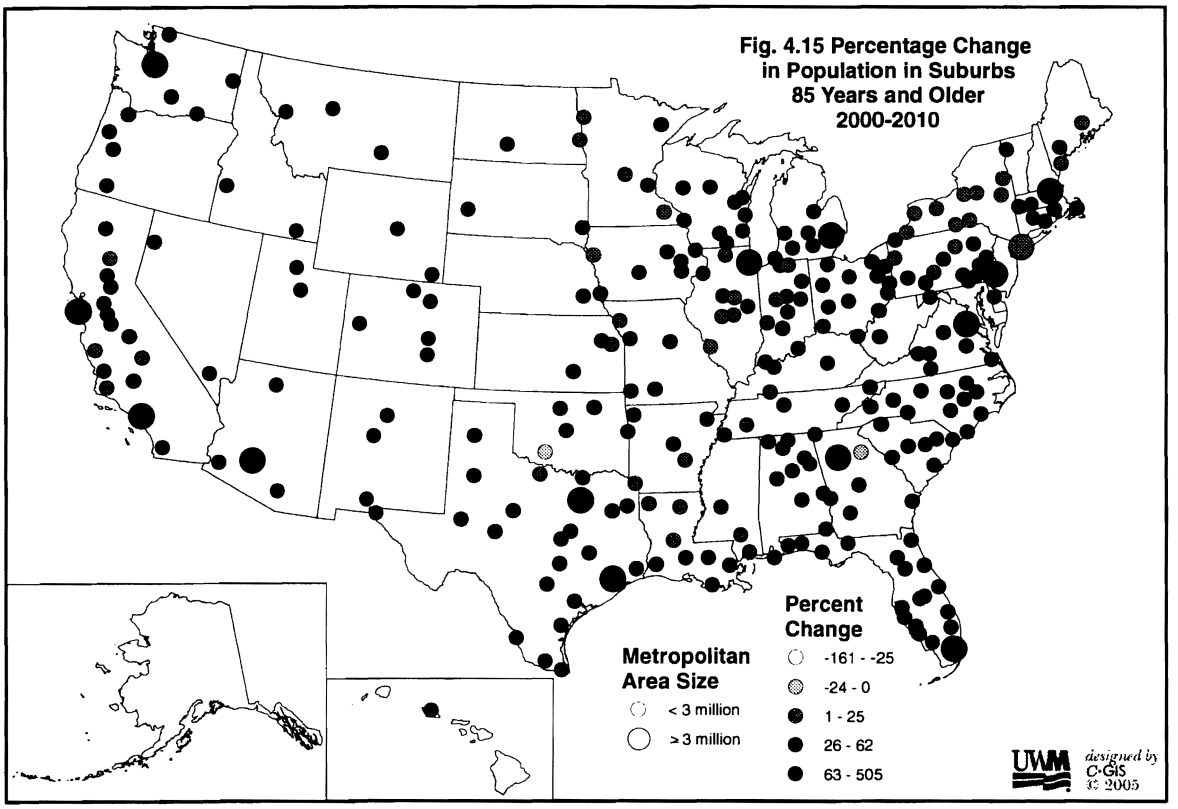
Fig. 4.15 Percentage Change
in Population in Suburbs
85 Years and Older
2000-2010
Percent
Change
-161 - -25
-24 - 0
1 - 25
26 - 62
63 - 505
Metropolitan
Area Size
< 3 million
> 3 million
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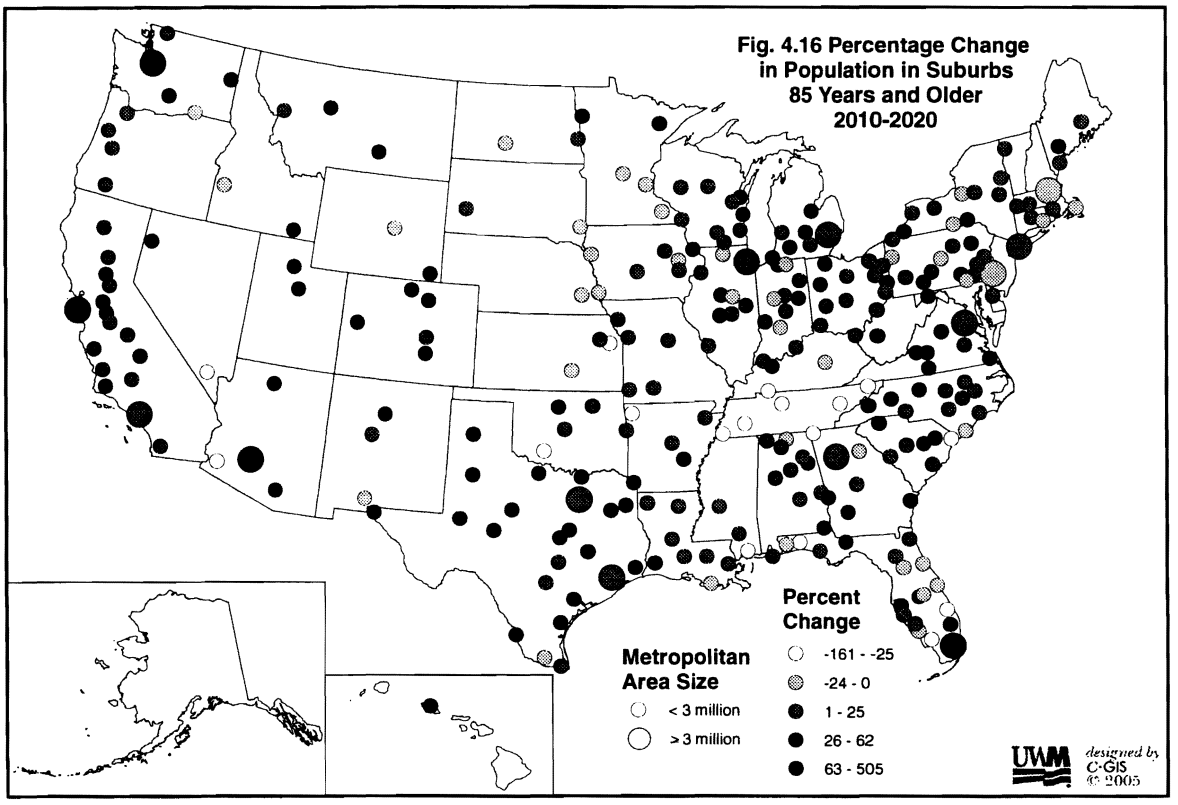
Fig. 4.16 Percentage Change
in Population in Suburbs
85 Years and Older
2010-2020
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5. FORECASTING HOUSING DEMAND

The primary purpose of this component was to produce some metropolitan measures of future (2020) housing demand for the elderly population (rather than to predict precisely the housing market conditions for each metropolitan area). In order to ascertain the future metropolitan housing market situation, two principal indicators are used: (1) the "gap" ("projected growth")—the absolute number of housing units in the metropolitan areas needed to accommodate the increased number of future elderly households if current aging and housing choice patterns continue through 2020; and (2) the "relative gap" ("projected growth rate")—the percentage of the gap with respect to the existing (2000) number of housing units occupied by elderly households. The "gap" is the absolute size of the housing market pressure created by elderly households by 2020. The "relative gap" is the rate of growth in the future housing market by 2020. These two indicators represent the growth potential in the number of housing units in metropolitan areas.

The findings of Component 5 can be summarized as follows. Of the 2020 "gap" of 11.5 million single family owner-occupied units, the smaller metropolitan areas are expected to face a larger burden—7.3 million, whereas the gap for the largest metropolitan areas will be only 4.2 million. Almost three quarters of the gap is found in the suburbs. The gap in single family owner-occupied units in the suburbs is particularly large: 3.5 million units in the largest metropolitan areas and 5.3 million units in the smaller metropolitan areas—representing a total of 8.8 million units. The gap in the central cities of the largest metropolitan areas is quite small: only 0.7 million owner-occupied units and 0.6 million rental units. The central cities in the smaller metropolitan areas, however, are expected to face a gap of 2.2 million owner-occupied units and 0.8 million rental units.

As expected, there are significant variations across the United States. The largest gap appears, not surprisingly, in the South Atlantic Division, particularly in Florida. The Pacific and the West South Central Divisions will have the next largest gaps. The East South Central and the New England Divisions will have the smallest gaps.

The Mountain Division will have the highest "relative gap." The South Atlantic, Pacific, and West South Central Divisions will also have higher relative gaps compared to the national average. In contrast, the New England, Middle Atlantic, East North Central, and East South Central Divisions will have lower relative gaps compared to the national average.

Most of the largest metropolitan areas, and particularly their suburbs, are expected to have large gaps. The notable exceptions are Philadelphia, and the central city of Detroit. Smaller metropolitan areas, such as West Palm Beach, Orlando, Jacksonville, and Tampa-St. Petersburg in Florida, Sacramento and San Diego in California, Austin and San Antonio in Texas, and Charlotte, Greensboro, and Raleigh in North Carolina will have the largest gaps. Other medium-sized metropolitan areas, such as Las Vegas, Portland, Indianapolis, Cleveland, Cincinnati, Columbus, Minneapolis-St. Paul, St. Louis, Oklahoma City, Salt Lake City, and Denver will also have large gaps. In the smaller metropolitan areas in the Northeast and Midwest Census Regions, however, the growth pressures are mainly concentrated in the suburbs. Finally, the smaller metropolitan areas in Tennessee, West Virginia, Kentucky, and Mississippi will have very small gaps.

2020 "Gap" by Census Division and Metropolitan Size

Table 5.1 shows the "gap" in the number of single family owner-occupied units and rental units by Census Division and metropolitan size in 2020. The gap for central cities and suburbs is also shown so that the spatial nature of the housing pressures created by the growing elderly population in the coming decades can be examined. By 2020, 11.5 million additional housing units will be needed for elderly single family owners; 3.3 million units will be needed for elderly renters. Because multi-family owner-occupied units were not considered, which comprise about 15 percent of the 2000 owner-occupied housing stock, the gap by 2020 could reach 16.8 million housing units. A comparison with the 90.8 million available housing units in 2000 shows that the gap will be substantial by 2020. It should be noted that the gap represents only the elderly population as defined in this report, not the total U.S. population; moreover, changing housing behavior due to rising housing prices was not considered in the projection process.

Of the 11.5 million unit of gap in single family owner-occupied units, the smaller metropolitan areas are expected to face a larger burden—7.3 million, whereas the gap for the largest metropolitan areas will be only 4.2 million. For rental units, the gap will be more evenly distributed. Of the 3.3 million unit gap for all metropolitan areas, 1.5 million units will be in the largest metropolitan areas, and 1.8 million units will be in the smaller metropolitan areas. In 2000 the number of available housing units in all metropolitan areas was 91 million, of which the largest metropolitan areas had 40 million units, or 44 percent. In contrast, the share of the gap in owner-occupied housing units in the largest metropolitan areas will be only 36.5 percent for single family units, and 45 percent for rental units.

In terms of the differences between central cities and suburbs, the majority of the growth burden will be placed on the suburbs. Combining the owner and rental units together, the gap for the suburbs will be 10.6 million units, while the gap for the central cities will be only 4.2 million units. Almost three quarters of the growth burden for elderly housing between 2000 and 2020 will be placed on the suburbs. The gap in single family owner-occupied units in the suburbs will be particularly large: 3.5 million units in the largest metropolitan areas and 5.3 million units in the smaller metropolitan areas, giving a total of 8.8 million units. The gap in the central cities of the largest metropolitan areas will be quite small: only 0.7 million owner-occupied units and 0.6 million rental units. The central cities in the smaller metropolitan areas, however, are expected to face a gap of 2.2 million owner-occupied units and 0.8 million rental units.

The differences in the gap across the United States are quite striking. The largest gap, not surprisingly, will be in the South Atlantic Division. Owner-occupied units in the suburbs represent 2.5 million of the 3.0 million units in this Division. The Pacific Division is second with a gap of 2.1 million in single family owner-occupied units and 0.8 million in rental units, with again, a large proportion to be borne by single family owner-occupied units in the suburbs. The West South Central Division will have a 1.8 million unit gap in single family owner-occupied units (of which 1.1 million units will be in the suburbs) and 0.5 in million rental units. The East North Central Division will have a substantial gap of 1.5 million owner-occupied units (of which 1.3 million will be in the suburbs) and 0.4 million in rental units. The Middle Atlantic Division will have a gap of 0.8 million single family owner-occupied units (about 90 percent of which will be in the suburbs), and 0.4 million in rental units. Both the East South Central and the New England Divisions will have very small gaps.

2020 "Relative Gap" by Census Division and Metropolitan Size

Table 5.2 shows the "relative gap" by Census Division and metropolitan size in 2020, that is, the proportion of the projected shortfall of elderly housing units by 2020 compared to the existing units in 2000. The average relative gap for the United States will be about 70 percent for single family owner-occupied units and 62.3 percent for rental units. Relative gaps in single family owner-occupied units and rental units will be larger in the suburbs: 79.4 percent for single family owner-occupied units and 75.3 percent for rental units. In central cities, the relative gap will be only 51.5 percent for single-family owner-occupied units and 49.5 percent for rental units.

When metropolitan size (population) is considered, the most striking prediction is that the relative gaps will be almost the same for both the largest and smaller metropolitan areas. The difference between the relative gaps for central cities, however, will be quite substantial: 31.8 percent for single family owner-occupied units in the central cities of the largest metropolitan areas versus 52.5 percent for the central cities of the smaller metropolitan areas; and 31.2 percent for rental units in the central cities of the largest metropolitan areas versus 50.5 percent in the central cities of the smaller metropolitan areas.

In general, the relative gaps between single family owner-occupied units and rental units *within* either central cities or suburbs are not very different. In contrast, the relative gaps for the same housing types (either single family owner units or rental units) *between* central cities and suburbs can be very different. This implies that *the possibility of substitution between single family owner-occupied units and rental units (holding the location decision between central city versus suburbs constant) seems to be easier than the substitution between locations (central city versus suburbs) holding the decision on housing type constant.* In other words, the preference for living in either the central city or the suburbs appears to be stronger than the preference over the choice of either living in a single family owner-occupied unit or a rental unit.

As expected, there are significant variations across the United States. Relative gaps range from 131.4 percent for single family owner-occupied units in the suburbs of the Mountain Division to 5.9 percent for rental units in the central cities of the Middle Atlantic Division. The Mountain Division is expected to face the strongest growth pressures for elderly housing by 2020. In particular, both single family owner-occupied units and rental units will have relative gaps of more than 130 percent. In the central cities, the relative gaps will also be highest in the Mountain Division: 95 percent for owner-occupied units and 83 percent for rental units.

The South Atlantic and Pacific Divisions will have high relative gaps. There is a noticeable difference, however, between the growth pressure patterns of these two Divisions. In the South Atlantic Division, the growth pressure is more concentrated in the suburbs, while that in the central cities is limited. The relative gaps for single family owner-occupied units and rental units will be more than 90 percent in the suburbs, while those in central cities will be only about 50 percent. In contrast, in the Pacific Division, central cities are expected to grow as much as their suburbs. The relative gap for single family owner-occupied units in these central cities will be about 85 percent, while that in the suburbs will be only 72.1 percent. The relative gap in rental units in the central cities of the Pacific Division will be 82.8 percent, while that in the suburbs will be, again, only 70 percent. In fact, the Pacific Division is the only Census Division that shows higher relative gaps for its central cities compared to its suburbs.

This contrast between the South Atlantic and Pacific Divisions may partly imply that *national elderly housing policies that work in one region may not work as effectively in other regions*. If so, local policies, in addition to national policies, will continue to be important in addressing the housing challenges created by the growth in elderly Baby Boomers. Of course, the differences between the South Atlantic and Pacific Divisions may also be due to other factors. For example, the findings may reflect the fact that the Pacific central cities are more likely to be "over-bounded" compared to their South Atlantic counterparts (that is, that the administrative extent of Pacific central city municipalities may be larger typically than the physical extent of the city; this contrasts with the situation in some South Atlantic central cities, with their longer history of urban development combined with the associated resistance by suburban communities to central city annexation and resultant suburban incorporation).

Not surprisingly, the Middle Atlantic and the New England Divisions are expected to face the lowest growth pressures. The Middle Atlantic Division will have the lowest relative gaps: 36.6 percent for single family owner-occupied units and 26.3 percent for rental units. In that Division, however, the lower relative gaps are driven by the central city locations. The relative gaps in the suburbs will be surprisingly large: 42.3 percent for single family owner-occupied units and 36.2 percent for rental units.

The New England Division will have comparatively low relative gaps: 46.3 percent for single family owner-occupied units and 36.4 percent for rental units. This pattern is strikingly different from the Middle Atlantic Division, however. Unlike the Middle Atlantic Division where the relative gaps are quite different between central cities and suburbs, the differences in the relative gaps in the New England Division are relatively small. The relative gap in the single family owner-occupied units for central cities will be 26.0 percent, whereas that in the suburbs will be 53.1 percent; the gap for rental units in these central cities will be 24.1 percent, while that for the suburbs will be 46.4 percent.

The West South Central Division is expected to face substantially higher growth pressures than the national average. The projected relative gap for single family owner-occupied units in the central cities will be 68.2 percent, while that for rental units will be 67.1 percent. The relative gaps for the suburbs will be substantially higher: 94.3 percent for single family owner-occupied units and 93.3 percent for rental units.

In general, the Midwest Census Region will have a slightly higher relative gap than the Northeast Census Region, with the difference mainly due to the comparatively strong growth pressures in the West North Central Division. The West North Central Division is expected to face slightly greater growth pressures than the national average, while the East North Central Division will be slightly below the national average. The relative gaps for the central cities in the East North Central Division will be expected to be only 33.5 percent for single family owner-occupied units and 31 percent for rental units. In the suburbs, the gaps will be substantially higher. The relative gap for single family owner-occupied units will be 59.9 percent, while that for rental units will be 53.2 percent. In the West North Central Division, the relative gap for single family owner-occupied units in the central cities will be 66.8 percent, while that in the suburbs will be 75.3 percent. The relative gaps for rental units will be 60.4 percent and 75.3 percent in the central cities and in the suburbs respectively.

The East South Central Division is expected to grow much more slowly than the national average. In fact, its growth will not be much different from that of the Middle Atlantic Division.

The relative gap in single family owner-occupied units in the central cities of the East South Central Division will be 16.3 percent, while that for rental units will be 14.9 percent. The relative gaps for the suburbs will be substantially higher: 56.3 percent for single family owner-occupied units and 54.2 percent for rental units.

2020 "Gap" and "Relative Gap" for Each Metropolitan Area

Table 5.3 shows the absolute and relative gaps for single family owner-occupied housing units and rental units for all the metropolitan areas in this study. In this table, the largest metropolitan areas (those with a population in 2000 of 3 million or more) are shaded in order to distinguish them for the smaller metropolitan areas (those with a population in 2000 of fewer than 3 million) (Table 5.3). The absolute gaps are shown for both single family owner-occupied units and for rental units. The "city" and "suburbs" indicate the sum of single family owner-occupied and rental units combined for a specific area. The relative gaps are shown for the metropolitan area as a whole as well as for the central cities and the suburbs for owners and renters separately.

Spatial Patterns of 2020 "Gap" and "Relative Gap"

Figures 5.1 to 5.4 show the "gaps" in 2020. Figures 5.1 and 5.2 show the gaps in single family owner-occupied housing units and in rental units (with the central cities and the suburbs combined for both). Figures 5.3 and 5.4 show the gaps in the central cities and in the suburbs (with the single family owner-occupied units and rental units combined for both). Figures 5.5 to 5.8 show the "relative gaps" for single family owner-occupied units in central cities and in the suburbs, as well as rental units in central cities and in the suburbs respectively.

Most metropolitan areas exhibit large gaps in both their single-family owner-occupied and rental housing units (Figures 5.1 and 5.2). The only exception is Philadelphia, which has negative gaps for both single family owner-occupied units and rental units. Figure 5.3 shows the gaps for central cities. Atlanta, Detroit, and Philadelphia have negative gaps for their central cities, while the suburbs of the largest metropolitan areas all have positive gaps. In fact, all of the largest metropolitan areas have very large gaps (greater than 60,000 units), except for, again, Philadelphia (see Figure 5.4).

Among the smaller metropolitan areas, many booming ones in Florida (West Palm Beach, Orlando, Jacksonville, and Tampa-St. Petersburg), in California (Sacramento and San Diego), in Texas (Austin and San Antonio), and in North Carolina (Charlotte, Greensboro, and Raleigh) will have the highest gaps. Other medium-sized metropolitan areas, such as Las Vegas, Portland, Indianapolis, Cleveland, Cincinnati, Columbus, Minneapolis-St. Paul, St. Louis, Oklahoma City, Salt Lake City, and Denver are also expected to have large gaps (Figures 5.1 and 5.2).

In the smaller metropolitan areas in the Northeast and Midwest Census Regions, the growth pressures will be concentrated mainly in the suburbs; this situation is most evident in Figure 5.5, which shows the relative gaps in single family owner-occupied units for central cities. While most metropolitan areas in the Northeast and Midwest have negative or very low relative gaps, most in the Pacific and Mountain Census Regions and in the South Atlantic Division have high relative gaps. Smaller metropolitan areas in Tennessee, West Virginia, Kentucky, Mississippi, Pennsylvania, New York, and Illinois have negative or very low relative gaps.

Table 5.1: Projected "Gap" (absolute) in elderly housing units between 2000 and 2020 by Census Division and metropolitan size

Census Division	Metropolitan Areas		Central Cities		Suburbs	
	Elderly single family owner units	Elderly rental units	Elderly single family owner units	Elderly rental units	Elderly single family owner units	Elderly rental units
United States	11,545,389	3,311,546	2,781,198	1,367,939	8,764,191	1,943,607
New England[1]	253,103	77,509	30,947	20,701	222,156	56,808
Middle Atlantic[2]	842,631	410,083	56,890	223,789	785,741	186,294
East North Central[3]	1,530,161	377,171	245,877	126,998	1,284,284	250,173
West North Central[4]	769,216	174,245	212,071	73,822	557,145	100,423
South Atlantic[5]	2,969,911	691,489	483,576	165,049	2,486,336	526,440
East South Central[6]	186,463	25,382	-15,683	-11,142	202,146	36,524
West South Central[7]	1,759,567	453,943	700,279	249,915	1,059,288	204,028
Mountain[8]	1,137,979	313,794	402,480	149,991	735,499	163,803
Pacific[9]	2,096,358	787,930	664,761	368,817	1,431,596	419,113
Large metros[a]	4,213,036	1,469,927	754,398	613,845	3,458,638	856,082
Smaller metros[b]	7,332,353	1,841,618	2,026,800	754,094	5,305,553	1,087,525

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[2] New Jersey, New York, Pennsylvania.
[3] Indiana, Illinois, Michigan, Ohio, Wisconsin.
[4] Iowa, Kansas, Minnesota, Missouri, Nebraska, N. Dakota, S. Dakota.
[5] Delaware, D.C., Florida, Georgia, Maryland, N. Carolina, S. Carolina, Virginia, W. Virginia.
[6] Alabama, Kentucky, Mississippi, Tennessee.
[7] Arkansas, Louisiana, Oklahoma, Texas.
[8] Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming.

[9] Alaska, California, Hawaii, Oregon, Washington.

[a] 3 million people or more
[b] fewer than 3 million people

Table 5.2: Projected "Relative Gap" (%) in elderly housing units between 2000 and 2020 by Census Division and metropolitan size

	Metropolitan Areas		Central Cities		Suburbs	
	Elderly single family owner units	Elderly rental units	Elderly single family owner units	Elderly rental units	Elderly single family owner units	Elderly rental units
Metropolitan Average	70.0	62.3	51.5	49.5	79.4	75.3
New England	46.3	36.4	26.0	24.1	53.1	46.4
Middle Atlantic	36.6	26.3	6.3	5.9	42.3	36.2
East North Central	51.6	42.7	33.5	31.0	59.9	53.2
West North Central	77.6	66.3	66.8	60.4	85.6	75.3
South Atlantic	85.1	75.4	51.2	50.0	93.6	90.2
East South Central	38.7	30.5	16.3	14.9	56.3	54.2
West South Central	78.6	74.0	68.2	67.1	94.3	93.3
Mountain	110.3	104.4	95.0	94.0	131.4	130.7
Pacific	80.3	79.4	84.6	82.8	72.1	70.0
Large metros	66.8	55.3	31.8	31.2	79.6	74.9
Smaller metros	70.2	62.7	52.5	50.5	79.4	75.3

Table 5.3: Projected "Gap" (absolute) and "Relative Gap" (%) of elderly housing units between 2000 and 2020 by metropolitan area

Census Division*	2000 total metro. population	Metropolitan Area	Gap in Absolute Number of Units				Relative Gap re. Existing (2000) Units					
							Metro (%)		City (%)		Suburbs (%)	
			single family owner	rental	city	suburb	single family owner	rental	single family owner	rental	single family owner	rental
7	126,555	Abilene, TX MSA**	5438	1304	5352	1390	45	42	41	40	68	69
5	120,822	Albany, GA MSA	5274	1345	2662	3957	56	39	29	29	105	102
2	875,583	Albany-Schenectady-Troy, NY MSA	22534	5920	1160	27295	28	19	4	4	33	29
8	712,738	Albuquerque, NM MSA	51319	12607	36286	27639	81	74	67	67	105	105
7	126,337	Alexandria, LA MSA	5709	1425	2620	4513	44	42	39	38	47	47
2	637,958	Allentown-Bethlehem-Easton, PA MSA	33137	8077	6379	34835	47	37	25	23	54	47
2	129,144	Altoona, PA MSA	4105	914	952	4067	26	20	13	10	35	29
7	217,858	Amarillo, TX MSA	12085	2844	10057	4872	60	52	46	43	141	143
9	260,283	Anchorage, AK MSA	12221	5624	17845	0	103	113	103	113	0	0
6	112,249	Anniston, AL MSA	7185	1115	-202	8502	53	40	-4	-4	73	72
3	358,365	Appleton-Oshkosh-Neenah, WI MSA	21151	4885	8698	17338	66	54	51	43	77	67
5	225,965	Asheville, NC MSA	15690	3628	4993	14325	63	56	43	43	73	72
5	153,444	Athens, GA MSA	8490	2902	10018	1374	78	91	113	113	27	24
5	4,112,198	Atlanta, GA MSA	358802	71646	-1464	431912	126	98	-3	-3	140	134
6	115,092	Auburn-Opelika, AL MSA	8848	1736	3586	6998	120	84	65	57	188	181
5	477,441	Augusta-Aiken, GA-SC MSA	32662	7171	14306	25527	77	70	55	54	96	94
7	1,249,763	Austin-San Marcos, TX MSA	117114	28518	53011	92620	157	135	105	104	207	200
9	661,645	Bakersfield, CA MSA	32483	11890	25512	18861	75	78	117	115	51	52
1	90,842	Bangor, ME MSA	3270	1211	1352	3129	46	37	38	35	50	39
1	162,591	Barnstable-Yarmouth, MA MSA	26190	3752	12109	17833	90	80	82	74	96	87

7	602,894	Baton Rouge, LA MSA	46246	9330	15284	40292	92	83	54	55	121	120
7	385,090	Beaumont-Port Arthur, TX MSA	13958	2403	3921	12440	33	27	16	16	49	48
9	166,814	Bellingham, WA MSA	17137	5176	8027	14285	130	115	117	105	138	127
3	162,453	Benton Harbor, MI MSA	5719	887	-367	6972	30	22	-35	-34	32	30
8	129,352	Billings, MT MSA	12114	3646	10813	4947	102	97	92	90	131	137
6	363,988	Biloxi-Gulfport-Pascagoula, MS MSA	34760	8011	18709	24063	98	99	102	102	96	94
2	252,320	Binghamton, NY MSA	6992	1670	589	8072	26	20	9	9	29	28
6	921,106	Birmingham, AL MSA	45892	7365	-4388	57644	48	33	-13	-14	68	66
4	94,719	Bismarck, ND MSA	9375	3456	7671	5160	123	113	122	112	125	114
3	120,563	Bloomington, IN MSA	6826	1838	5890	2774	79	80	113	106	51	36
3	150,433	Bloomington-Normal, IL MSA	6485	1670	6241	1915	58	56	68	62	40	31
8	432,345	Boise City, ID MSA	43204	9910	31476	21638	132	125	135	126	128	123
1	5,819,101	Boston-Worcester-Lawrence, MA-NH-ME-CT CMSA***	81059	26224	10992	96290	19	12	7	6	22	16
7	335,227	Brownsville-Harlingen-San Benito, TX MSA	25630	7406	21541	11496	110	107	105	104	119	115
7	152,415	Bryan-College Station, TX MSA	9252	2610	9899	1963	116	115	114	113	130	134
2	1,170,111	Buffalo-Niagara Falls, NY MSA	18492	3439	-5493	27425	16	8	-13	-13	22	24
1	169,391	Burlington, VT MSA	9314	2720	1216	10818	76	63	33	33	86	77
3	406,934	Canton-Massillon, OH MSA	20571	4494	3778	21287	43	38	23	22	50	47
8	66,533	Casper, WY MSA	6735	1756	7155	1336	101	104	104	110	86	77
4	191,701	Cedar Rapids, IA MSA	15275	2967	10418	7824	82	71	72	66	98	86
3	179,669	Champaign-Urbana, IL MSA	8320	1778	4120	5978	60	51	46	43	72	66
5	549,033	Charleston-North Charleston, SC MSA	42490	11812	23497	30805	91	99	117	117	80	78
5	251,662	Charleston, WV MSA	14086	2895	2287	14694	45	40	24	23	52	51
5	1,499,293	Charlotte-Gastonia-Rock Hill, NC-SC MSA	93391	24826	68915	49303	75	78	89	87	63	61
5	159,576	Charlottesville, VA MSA	15181	3264	2396	16049	102	89	55	53	115	109
6	465,161	Chattanooga, TN-GA MSA	-4049	-1943	-5546	-445	-8	-14	-22	-23	-1	-2
8	81,607	Cheyenne, WY MSA	7291	1758	5862	3186	98	91	81	80	148	161

3	9,157,540	Chicago-Gary-Kenosha, IL-IN-WI CMSA	334947	102590	102470	335067	51	39	31	31	58	52
9	203,171	Chico-Paradise, CA MSA	6806	2821	8401	1226	38	51	86	90	9	9
3	1,979,202	Cincinnati-Hamilton, OH-KY-IN CMSA	182401	45061	19622	207841	106	77	35	33	123	109
6	207,033	Clarksville-Hopkinsville, TN-KY MSA	-2768	-756	-1774	-1750	-19	-21	-13	-18	-30	-32
3	2,945,831	Cleveland-Akron, OH CMSA	109813	26932	10702	126043	35	29	10	10	42	41
8	516,929	Colorado Springs, CO MSA	49701	12973	44400	18274	133	131	123	126	158	161
4	135,454	Columbia, MO MSA	10808	2987	8797	4998	123	119	127	124	118	104
5	536,691	Columbia, SC MSA	34542	8206	9692	33056	78	78	78	78	78	77
5	274,624	Columbus, GA-AL MSA	10996	3365	9300	5060	45	42	42	39	52	49
3	1,540,157	Columbus, OH MSA	90293	24189	46963	67519	72	61	59	56	81	71
7	380,783	Corpus Christi, TX MSA	20059	5916	17903	8072	61	59	57	56	71	69
9	78,153	Corvallis, OR MSA	6151	1673	4445	3379	106	102	109	102	104	102
5	102,008	Cumberland, MD-WV MSA	2893	450	-128	3470	22	13	-2	-4	28	26
7	5,221,801	Dallas-Fort Worth, TX CMSA	389602	100808	151656	338754	108	97	72	73	134	130
5	110,156	Danville, VA MSA	3882	756	203	4434	28	19	2	2	50	51
4	359,062	Davenport-Moline-Rock Island, IA-IL MSA	17334	3915	9667	11582	43	38	39	37	46	40
3	950,558	Dayton-Springfield, OH MSA	48065	10527	7134	51458	46	38	20	20	54	51
5	493,175	Daytona Beach, FL MSA	56623	9841	4005	62458	84	71	40	41	88	83
6	145,867	Decatur, AL MSA	12356	2788	6434	8711	82	77	81	76	82	79
3	114,706	Decatur, IL MSA	3964	803	3377	1389	28	26	26	25	31	30
8	2,581,506	Denver-Boulder-Greeley, CO CMSA	186837	54561	58192	183207	101	94	69	70	114	116
4	456,022	Des Moines, IA MSA	32277	7068	9003	30341	80	61	38	33	115	98
3	5,456,428	Detroit-Ann Arbor-Flint, MI CMSA	149810	27631	-8930	186372	29	20	-6	-6	38	34
6	137,916	Dothan, AL MSA	12917	3554	8489	7983	92	92	100	99	85	83
5	126,697	Dover, DE MSA	6133	1463	2365	5231	56	52	62	52	54	52
4	89,143	Dubuque, IA MSA	5735	1104	3837	3002	62	49	51	45	81	76

4	243,815	Duluth-Superior, MN-WI MSA	8484	2336	4876	5945	30	29	30	30	30	27
3	148,337	Eau Claire, WI MSA	7568	1860	3564	5864	54	46	54	49	54	44
7	679,622	El Paso, TX MSA	44600	13897	46280	12216	93	86	78	78	247	248
3	182,791	Elkhart-Goshen, IN MSA	11492	2853	7265	7080	72	68	79	73	67	54
2	91,070	Elmira, NY MSA	1134	174	-44	1352	11	6	-1	-1	15	15
7	57,813	Enid, OK MSA	4337	913	4722	528	59	62	66	65	31	30
2	280,843	Erie, PA MSA	10320	2395	2306	10408	37	27	16	15	49	42
9	322,959	Eugene-Springfield, OR MSA	30797	10576	26814	14559	110	118	139	136	83	81
3	296,195	Evansville-Henderson, IN-KY MSA	14930	3073	4895	13108	47	34	21	20	73	71
4	174,367	Fargo-Moorhead, ND-MN MSA	8520	4042	9484	3078	72	69	82	73	57	50
5	302,963	Fayetteville, NC MSA	21959	5187	17431	9715	105	101	124	115	83	81
7	311,121	Fayetteville-Springdale-Rogers, AR MSA	38800	8279	19406	27674	130	129	140	138	125	119
8	122,366	Flagstaff, AZ-UT MSA	9807	2396	3515	8689	120	111	96	91	132	127
6	142,950	Florence, AL MSA	12347	2611	3610	11349	69	67	62	61	71	70
5	125,761	Florence, SC MSA	6910	1863	1660	7114	60	62	38	40	69	73
8	251,494	Fort Collins-Loveland, CO MSA	28350	6439	21529	13259	149	142	149	142	150	143
5	440,888	Fort Myers-Cape Coral, FL MSA	63924	13494	19363	58055	118	110	90	87	130	125
5	319,426	Fort Pierce-Port St. Lucie, FL MSA	53354	9667	66089	-3068	133	140	365	360	-11	-10
7	207,290	Fort Smith, AR-OK MSA	19842	4845	7206	17481	95	84	65	64	113	108
5	170,498	Fort Walton Beach, FL MSA	26742	5436	1500	30678	152	153	44	51	173	168
3	502,141	Fort Wayne, IN MSA	26735	5651	12725	19661	56	49	51	48	59	52
9	922,516	Fresno, CA MSA	42917	16458	29589	29786	67	68	70	70	65	64
6	103,459	Gadsden, AL MSA	5153	950	407	5696	39	29	5	5	63	64
5	217,955	Gainesville, FL MSA	15946	3445	4631	14760	100	92	51	51	139	138
2	124,345	Glens Falls, NY MSA	7650	1601	295	8957	57	46	16	15	61	54
5	113,329	Goldsboro, NC MSA	6766	1857	1518	7105	69	52	29	25	92	88
4	97,478	Grand Forks, ND-MN MSA	2854	1058	2516	1396	36	39	58	55	23	20
8	116,255	Grand Junction, CO MSA	12551	3782	10275	6058	104	130	158	166	70	70

3	1,088,514	Grand Rapids-Muskegon-Holland, MI MSA	45136	7166	4351	47952	51	36	16	14	61	52
8	80,357	Great Falls, MT MSA	6116	2149	6371	1894	82	81	80	80	86	88
3	226,778	Green Bay, WI MSA	15090	4115	5432	13774	81	62	45	40	112	95
5	1,251,509	Greensboro-Winston-Salem-High Point, NC MSA	90683	23295	58336	55641	72	73	83	81	64	62
5	133,798	Greenville, NC MSA	6704	2970	5570	4103	75	80	107	106	55	54
5	962,441	Greenville-Spartanburg-Anderson, SC MSA	52111	9520	-2145	63777	55	41	-11	-12	64	63
2	629,401	Harrisburg-Lebanon-Carlisle, PA MSA	40200	8172	1848	46524	60	42	14	13	66	54
1	1,183,110	Hartford, CT MSA	59574	15642	146	75070	55	38	0	1	58	51
6	111,674	Hattiesburg, MS MSA	6430	1226	2025	5631	64	54	39	40	78	80
5	341,851	Hickory-Morganton-Lenoir, NC MSA	30774	6428	11126	26075	85	88	108	106	79	78
9	876,156	Honolulu, HI MSA	35950	14320	18431	31839	58	48	38	39	72	72
7	194,477	Houma, LA MSA	19846	3541	4409	18978	111	109	108	106	112	110
7	4,669,571	Houston-Galveston-Brazoria, TX CMSA	350131	96172	169903	276400	113	101	82	81	141	140
5	315,538	Huntington-Ashland, WV-KY-OH MSA	17263	3527	2887	17903	45	40	22	21	53	52
6	342,376	Huntsville, AL MSA	40802	7501	12332	35971	121	102	54	50	200	194
3	1,607,486	Indianapolis, IN MSA	90245	21393	32928	78710	63	50	33	31	97	88
4	111,006	Iowa City, IA MSA	7907	1333	2433	6808	117	81	60	38	174	151
3	158,422	Jackson, MI MSA	5803	791	263	6331	36	24	6	6	43	36
6	440,801	Jackson, MS MSA	22907	4271	-308	27485	60	46	-1	-2	105	101
6	107,377	Jackson, TN MSA	-9413	-2591	-6874	-5131	-89	-89	-89	-89	-90	-90
5	1,100,491	Jacksonville, FL MSA	89754	23136	59106	53784	95	86	75	72	130	122
5	150,355	Jacksonville, NC MSA	10300	1925	1421	10804	130	111	44	42	170	164
2	139,750	Jamestown, NY MSA	2920	632	-69	3620	20	12	-1	-2	24	21
3	152,307	Janesville-Beloit, WI MSA	9283	2150	6905	4528	61	53	59	52	64	56

6	480,091	Johnson City-Kingsport-Bristol, TN-VA MSA	-4446	-1035	-1739	-3742	-7	-8	-7	-8	-8	-8
2	232,621	Johnstown, PA MSA	5843	1001	-542	7386	19	12	-10	-10	22	20
7	82,148	Jonesboro, AR MSA	7144	1892	5862	3174	93	90	88	87	103	99
4	157,322	Joplin, MO MSA	10504	2215	2772	9947	61	55	41	41	69	66
3	452,851	Kalamazoo-Battle Creek, MI MSA	17262	3148	1667	18744	40	29	12	10	48	43
4	1,776,062	Kansas City, MO-KS MSA	112843	27294	31996	108141	68	57	39	37	84	76
7	312,952	Killeen-Temple, TX MSA	17867	5035	13403	9500	89	93	107	105	74	73
6	687,249	Knoxville, TN MSA	-67133	-14874	-26294	-55712	-87	-88	-90	-90	-86	-86
3	101,541	Kokomo, IN MSA	8717	1764	4483	5997	72	64	63	59	79	73
3	126,838	La Crosse, WI-MN MSA	6495	1421	1982	5934	56	39	31	26	71	61
7	385,647	Lafayette, LA MSA	30016	7332	11881	25467	87	85	90	88	85	83
3	182,821	Lafayette, IN MSA	7544	2226	5708	4062	53	55	83	83	37	31
7	183,577	Lake Charles, LA MSA	12536	2449	4988	9997	71	62	49	46	89	89
5	483,924	Lakeland-Winter Haven, FL MSA	33352	7822	6958	34216	73	64	44	41	83	81
2	470,658	Lancaster, PA MSA	33481	8654	2010	40126	79	60	33	32	83	66
3	447,728	Lansing-East Lansing, MI MSA	23803	4225	2240	25787	63	44	15	13	84	71
7	193,117	Laredo, TX MSA	12477	4582	15423	1635	129	124	123	121	196	201
8	174,682	Las Cruces, NM MSA	16496	3882	8776	11602	127	117	100	92	159	157
8	1,563,282	Las Vegas, NV-AZ MSA	221239	95983	120507	196715	188	186	212	210	176	173
4	99,962	Lawrence, KS MSA	7773	2222	7014	2982	124	110	120	109	133	112
7	114,996	Lawton, OK MSA	7119	1850	10174	-1204	76	87	117	112	-44	-46
1	90,830	Lewiston-Auburn, ME MSA	2133	1025	1771	1387	31	23	22	19	53	51
6	479,198	Lexington, KY MSA	34138	10912	21988	23062	88	85	79	77	97	95
3	155,084	Lima, OH MSA	6228	987	-296	7511	37	26	-5	-6	50	46
4	250,291	Lincoln, NE MSA	17287	5137	20019	2405	87	78	87	79	83	76
7	583,845	Little Rock-North Little Rock, AR MSA	46573	11514	25089	32998	88	78	66	63	113	109
7	208,780	Longview-Marshall, TX MSA	10274	2334	4613	7994	47	43	35	34	58	56
9	16,373,645	Los Angeles-Riverside-Orange County, CA CMSA	630564	274905	269098	636371	62	59	50	51	67	65

6	1,025,598	Louisville, KY-IN MSA	53198	10481	5460	58219	50	38	13	12	65	62
7	242,628	Lubbock, TX MSA	14483	3667	14052	4099	69	67	64	62	95	98
5	214,911	Lynchburg, VA MSA	14881	2452	1951	15381	61	46	20	18	77	76
5	322,549	Macon, GA MSA	15467	2412	-917	18796	52	29	-6	-8	80	78
3	426,526	Madison, WI MSA	29079	8709	12009	25779	96	77	64	56	121	102
3	175,818	Mansfield, OH MSA	9914	1990	2665	9239	48	39	35	31	52	47
7	569,463	McAllen-Edinburg-Mission, TX MSA	48160	11378	15703	43835	141	134	90	89	175	171
9	181,269	Medford-Ashland, OR MSA	22808	8105	18541	12373	128	132	152	148	107	103
5	476,230	Melbourne-Titusville-Palm Bay, FL MSA	68365	14602	31810	51157	119	118	114	113	123	123
6	1,135,614	Memphis, TN-AR-MS MSA	-14776	-7188	-30444	8480	-15	-26	-38	-38	19	18
9	210,554	Merced, CA MSA	10771	3723	3282	11212	76	72	55	56	84	84
5	3,876,380	Miami-Fort Lauderdale, FL CMSA	167898	65827	1856	231870	68	47	3	2	78	72
3	1,689,572	Milwaukee-Racine, WI CMSA	61540	19640	9502	71677	44	32	13	11	59	54
4	2,968,806	Minneapolis-St. Paul, MN-WI MSA	204234	43772	19833	228173	91	64	32	31	104	81
8	95,802	Missoula, MT MSA	8307	2678	7108	3877	119	112	127	113	109	107
6	540,258	Mobile, AL MSA	46267	8761	10453	44575	81	69	37	37	107	106
9	446,997	Modesto, CA MSA	24005	8292	17743	14554	77	72	73	68	81	82
7	147,250	Monroe, LA MSA	7022	1708	1845	6886	52	43	28	28	64	61
6	333,055	Montgomery, AL MSA	22377	4864	12542	14700	70	62	50	49	101	98
3	118,769	Muncie, IN MSA	6227	1030	2698	4559	47	38	31	30	64	61
5	196,629	Myrtle Beach, SC MSA	37683	5657	-3429	46769	180	136	-114	-121	212	205
5	251,377	Naples, FL MSA	72772	16462	794	88440	285	253	20	19	320	292
6	1,231,311	Nashville, TN MSA	-89451	-25341	-61544	-53248	-86	-88	-89	-89	-84	-85
1	293,566	New London-Norwich, CT-RI MSA	15582	3984	1772	17793	54	41	24	23	59	51
7	1,337,726	New Orleans, LA MSA	63217	20303	20497	63022	54	46	33	33	64	64

2	21,199,865	New York-Northern New Jersey-Long Island, NY-NJ-CT-PA CMSA	465218	340462	325088	480592	35	33	34	33	35	32
5	1,569,541	Norfolk-Virginia Beach-Newport News, VA-NC MSA	95177	24291	63609	55859	72	65	52	53	116	118
5	258,916	Ocala, FL MSA	54649	6169	582	60236	146	103	7	10	167	164
7	237,132	Odessa-Midland, TX MSA	14624	3867	15592	2899	72	66	70	64	84	87
7	1,083,346	Oklahoma City, OK MSA	92196	22387	64419	50164	89	86	85	82	94	93
4	716,998	Omaha, NE-IA MSA	47723	12157	41546	18334	75	69	76	71	73	63
5	1,644,561	Orlando, FL MSA	146791	34831	6087	175534	112	94	30	30	120	113
6	91,545	Owensboro, KY MSA	5923	1415	4343	2995	59	52	49	50	77	73
5	148,217	Panama City, FL MSA	15561	2969	3084	15446	102	88	57	59	117	111
5	151,237	Parkersburg-Marietta, WV-OH MSA	11359	2119	3665	9813	60	51	43	43	68	60
5	412,153	Pensacola, FL MSA	47068	8345	3661	51752	108	98	37	36	124	118
3	347,387	Peoria-Pekin, IL MSA	17036	3497	7334	13199	42	37	36	33	46	41
2	6,188,463	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD CMSA	-24456	-18481	-54950	12013	-4	-10	-22	-22	3	-2
8	3,251,876	Phoenix-Mesa, AZ MSA	221996	46058	91812	176242	82	68	48	45	124	116
7	84,278	Pine Bluff, AR MSA	3089	739	2111	1717	36	33	30	29	47	45
2	2,358,695	Pittsburgh, PA MSA	59628	13562	-2297	75487	20	16	-4	-5	23	21
1	84,278	Pittsfield, MA MSA	2443	937	1333	2048	25	23	19	17	33	30
8	75,565	Pocatello, ID MSA	5306	912	3792	2425	85	83	77	73	103	109
1	243,544	Portland, ME MSA	11907	3277	1440	13744	57	38	19	16	67	56
9	2,265,223	Portland-Salem, OR-WA CMSA	174528	53871	68926	159473	100	89	77	75	113	101
1	1,188,613	Providence-Fall River-Warwick, RI-MA MSA	28947	13787	13958	28776	30	24	25	23	33	26
8	368,536	Provo-Orem, UT MSA	34286	4565	10665	28186	176	173	97	117	244	260
8	141,472	Pueblo, CO MSA	9945	1806	4675	7075	61	46	29	31	154	148
5	141,627	Punta Gorda, FL MSA	27611	3935	5052	26495	99	95	113	111	97	93

5	1,187,941	Raleigh-Durham-Chapel Hill, NC MSA	97128	24750	42962	78916	114	101	92	88	128	119
4	88,565	Rapid City, SD MSA	8820	3231	9085	2966	128	117	128	116	129	128
2	373,638	Reading, PA MSA	17761	3175	1483	19454	44	29	15	14	49	38
9	163,256	Redding, CA MSA	14373	4857	13175	6056	87	98	122	118	58	57
8	339,486	Reno, NV MSA	7090	3394	5729	4755	29	29	27	28	31	32
9	191,822	Richland-Kennewick-Pasco, WA MSA	17435	5145	17802	4778	124	121	139	127	91	87
5	996,512	Richmond-Petersburg, VA MSA	52392	9036	-1288	62715	56	36	-4	-4	73	71
5	235,932	Roanoke, VA MSA	9254	2150	2112	9291	33	27	14	14	44	44
4	124,277	Rochester, MN MSA	13417	2899	12463	3853	130	112	149	118	95	80
2	1,098,201	Rochester, NY MSA	43194	10194	1712	51676	42	30	8	7	46	39
3	371,236	Rockford, IL MSA	22935	4952	8084	19803	62	51	43	39	74	66
5	143,026	Rocky Mount, NC MSA	5606	2323	4443	3487	45	47	62	61	34	33
9	1,796,857	Sacramento-Yolo, CA CMSA	136406	42429	37245	141590	92	87	66	67	101	99
3	403,070	Saginaw-Bay City-Midland, MI MSA	21069	4029	5192	19906	47	42	28	28	56	53
4	167,392	St. Cloud, MN MSA	10885	2426	4967	8343	78	67	96	91	71	54
4	102,490	St. Joseph, MO MSA	2936	651	2117	1470	26	21	21	19	39	34
4	2,603,607	St. Louis, MO-IL MSA	111858	17618	-2815	132291	42	26	-3	-5	52	46
9	401,762	Salinas, CA MSA	16154	7307	13130	10331	59	68	96	97	42	43
8	1,333,914	Salt Lake City-Ogden, UT MSA	122757	24569	34358	112968	133	134	126	120	135	145
7	104,010	San Angelo, TX MSA	5566	1526	6021	1071	54	53	52	52	67	67
7	1,592,383	San Antonio, TX MSA	111753	29719	92882	48590	84	80	72	73	115	117
9	2,813,833	San Diego, CA MSA	116315	45247	69209	92353	60	58	52	52	66	65
9	7,039,362	San Francisco-Oakland-San Jose, CA CMSA	360544	137764	200582	297726	68	64	63	61	71	68
9	246,681	San Luis Obispo-Atascadero-Paso Robles, CA MSA	16264	4780	6445	14598	71	71	66	62	73	77
9	399,347	Santa Barbara-Santa Maria-Lompoc, CA MSA	14755	6471	15190	6036	47	55	70	69	28	27

8	147,635	Santa Fe, NM MSA	18936	3693	6979	15650	127	101	70	71	182	179
5	589,959	Sarasota-Bradenton, FL MSA	52365	9708	2715	59358	64	52	18	16	71	67
5	293,000	Savannah, GA MSA	14226	2499	-358	17083	52	29	-2	-1	100	102
2	624,776	Scranton-Wilkes-Barre-Hazleton, PA MSA	15704	4188	970	18922	20	15	5	4	23	20
9	3,554,760	Seattle-Tacoma-Bremerton, WA CMSA	273030	87659	91563	269127	104	93	77	75	115	108
2	120,293	Sharon, PA MSA	4004	763	197	4570	26	21	7	8	29	24
3	112,646	Sheboygan, WI MSA	5069	1232	1789	4511	48	37	27	26	63	54
7	110,595	Sherman-Denison, TX MSA	6880	1401	3271	5010	54	46	37	37	71	71
7	392,302	Shreveport-Bossier City, LA MSA	19582	4978	16642	7917	50	49	50	49	50	49
4	124,130	Sioux City, IA-NE MSA	3794	899	2612	2082	32	27	26	22	46	41
4	172,412	Sioux Falls, SD MSA	11464	4025	10839	4651	91	77	88	77	97	77
3	265,559	South Bend, IN MSA	8682	1715	2567	7829	30	27	17	17	39	39
9	417,939	Spokane, WA MSA	27886	8487	15221	21152	78	69	61	59	94	88
3	201,437	Springfield, IL MSA	9596	2414	6656	5353	47	41	46	40	48	44
4	325,721	Springfield, MO MSA	34457	6305	9497	31264	105	76	45	43	161	151
1	591,960	Springfield, MA MSA	12685	4949	5559	12074	24	21	18	18	28	24
2	135,758	State College, PA MSA	10941	1879	-98	12919	102	72	-4	-7	115	101
3	132,008	Steubenville-Weirton, OH-WV MSA	4275	870	1209	3936	22	21	15	15	26	26
9	563,598	Stockton-Lodi, CA MSA	24956	9491	16843	17604	62	58	53	53	71	71
5	104,646	Sumter, SC MSA	5233	1241	1909	4566	62	52	39	38	79	77
2	732,117	Syracuse, NY MSA	19160	3891	-461	23512	27	16	-2	-2	33	30
5	284,539	Tallahassee, FL MSA	21494	4658	12240	13912	104	98	97	99	110	96
5	2,395,997	Tampa-St. Petersburg-Clearwater, FL MSA	102688	24169	10699	116158	41	34	12	12	50	48
3	149,192	Terre Haute, IN MSA	3433	822	1780	2475	21	18	22	20	20	17
7	129,749	Texarkana, TX-Texarkana, AR MSA	5858	1442	4580	2720	42	46	54	54	32	33
3	618,203	Toledo, OH MSA	18598	4194	6143	16649	31	24	14	14	50	46

4	169,871	Topeka, KS MSA	13120	2991	10170	5941	74	55	60	53	106	95
8	843,746	Tucson, AZ MSA	42792	10320	16663	36449	55	44	32	31	75	72
7	803,235	Tulsa, OK MSA	66643	15940	36478	46105	85	79	69	68	102	101
6	164,875	Tuscaloosa, AL MSA	6999	1547	1911	6635	49	37	21	18	74	69
7	174,706	Tyler, TX MSA	13882	2892	7088	9687	74	66	59	59	88	87
2	299,896	Utica-Rome, NY MSA	6125	1465	-1371	8961	20	12	-11	-9	31	31
7	84,088	Victoria, TX MSA	6296	1425	5142	2579	80	76	71	71	104	106
9	368,021	Visalia-Tulare-Porterville, CA MSA	13100	4470	11631	5939	53	54	72	69	35	37
7	213,517	Waco, TX MSA	8853	2217	5001	6069	43	39	36	35	50	50
5	7,608,070	Washington-Baltimore, DC-MD-VA-WV CMSA	453888	110662	18567	545984	74	52	9	9	89	84
4	128,012	Waterloo-Cedar Falls, IA MSA	6452	1688	6773	1367	47	47	50	48	39	38
3	125,834	Wausau, WI MSA	8449	1609	2662	7397	67	55	49	46	75	67
5	1,131,184	West Palm Beach-Boca Raton, FL MSA	106605	28064	13956	120713	91	87	72	69	93	91
5	153,172	Wheeling, WV-OH MSA	2734	603	-18	3356	13	11	0	0	17	17
4	545,220	Wichita, KS MSA	33078	8448	28303	13223	67	64	70	67	61	54
7	140,518	Wichita Falls, TX MSA	4807	1155	4268	1694	35	33	35	33	33	34
2	120,044	Williamsport, PA MSA	5685	1146	881	5949	42	28	21	20	46	34
5	233,450	Wilmington, NC MSA	43344	8414	14384	37374	166	146	128	126	182	176
9	222,581	Yakima, WA MSA	10901	3555	4939	9517	67	61	59	55	72	68
2	381,751	York, PA MSA	32856	5190	135	37912	82	58	2	3	88	72
3	594,746	Youngstown-Warren, OH MSA	19563	4362	-1226	25152	26	24	-6	-6	35	36
9	139,149	Yuba City, CA MSA	7099	2833	3946	5986	67	70	103	105	56	53
8	160,026	Yuma, AZ MSA	14804	3959	5531	13232	154	130	85	82	221	200

* Division 1: New England; Division 2: Middle Atlantic; Division 3 East North Central; Division 4: West North Central; Division 5: South Atlantic; Division 6: East South Central; Division 7: West South Central; Division 8: Mountain; Division 9: Pacific.

** Metropolitan Statistical Area (MSA).

*** Consolidated Metropolitan Statistical Area (CMSA).

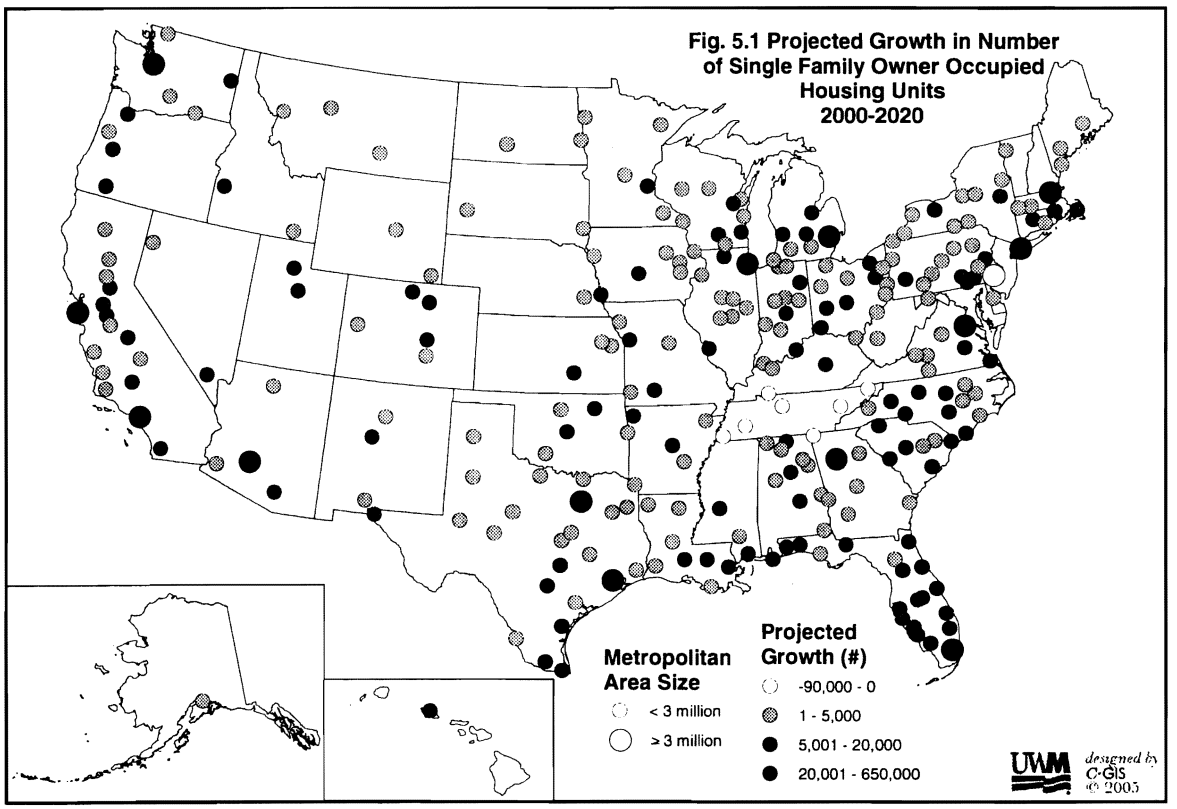
Fig. 5.1 Projected Growth in Number of Single Family Owner Occupied Housing Units 2000-2020
Metropolitan Area Size
< 3 million
> 3 million
Projected Growth (#)
-90,000 - 0
1 - 5,000
5,001 - 20,000
20,001 - 650,000
UWM
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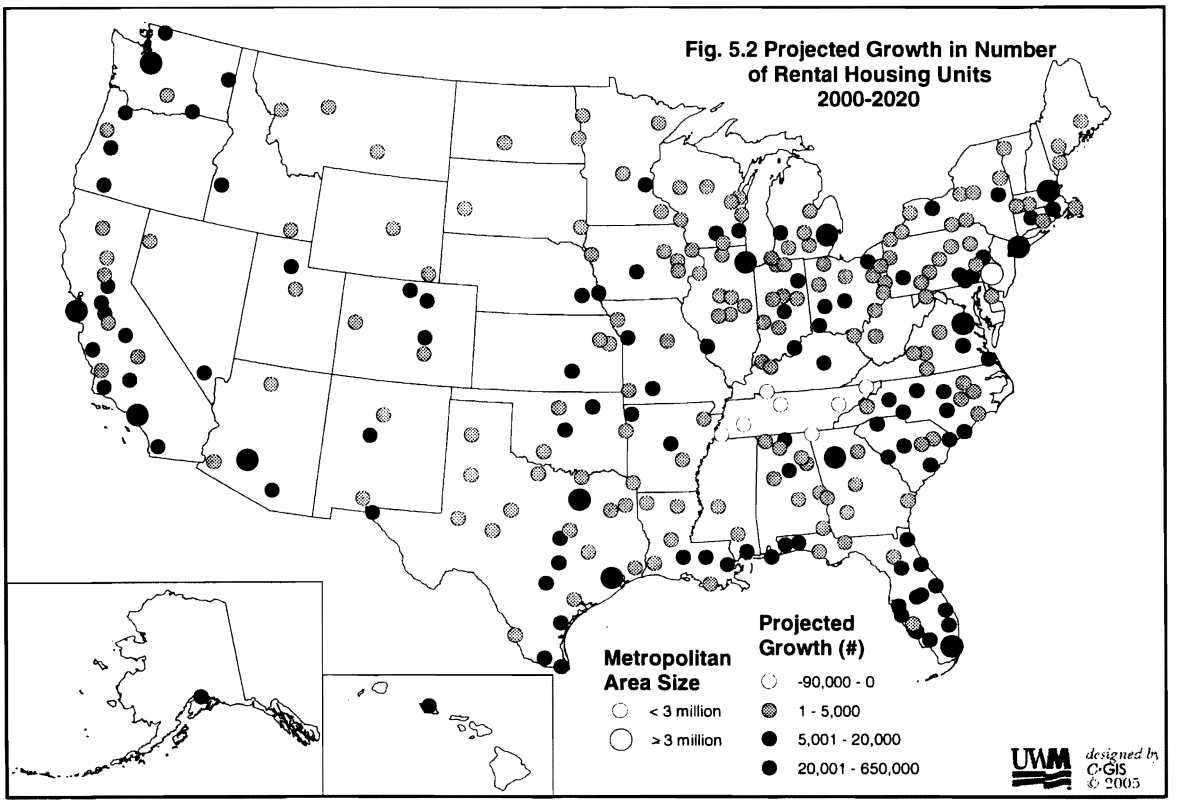
Fig. 5.2 Projected Growth in Number of Rental Housing Units 2000-2020
Metropolitan Area Size
< 3 million
> 3 million
Projected Growth (#)
-90,000 - 0
1 - 5,000
5,001 - 20,000
20,001 - 650,000
UWM
designed by C-GIS © 2005

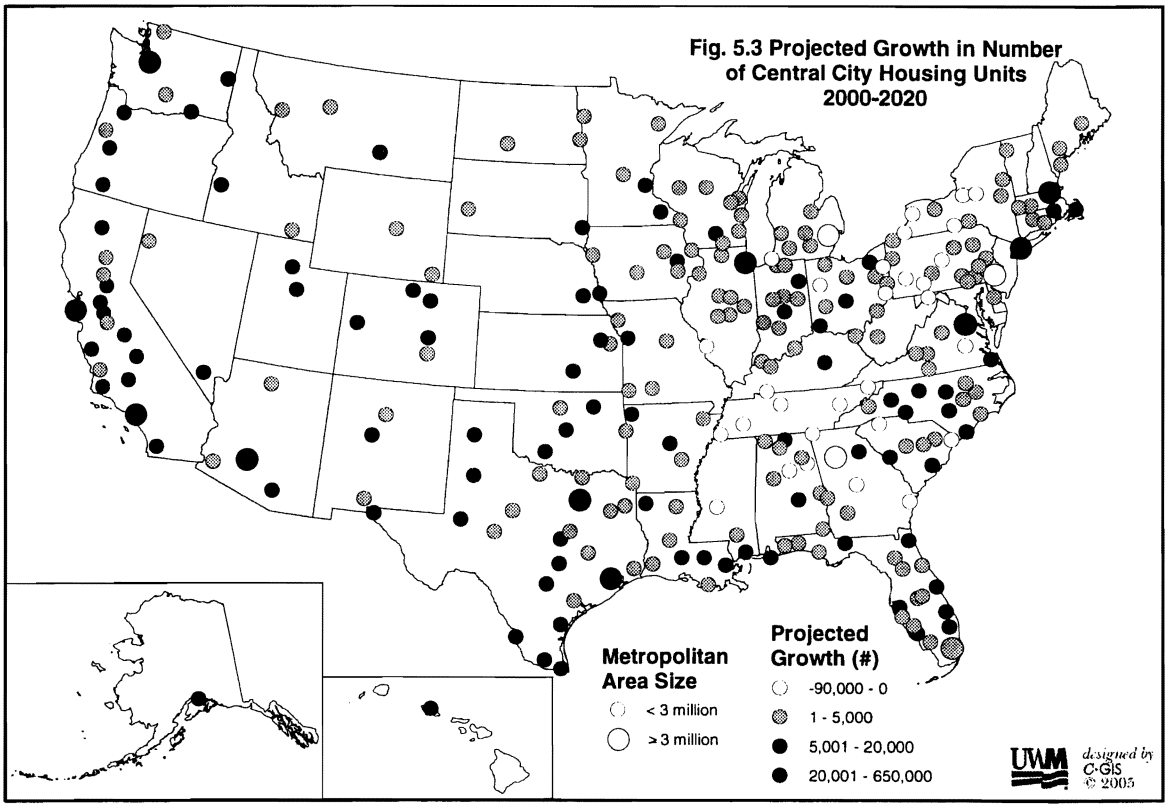
Fig. 5.3 Projected Growth in Number
of Central City Housing Units
2000-2020
Metropolitan
Area Size
< 3 million
> 3 million
Projected
Growth (#)
-90,000 - 0
1 - 5,000
5,001 - 20,000
20,001 - 650,000
UWM
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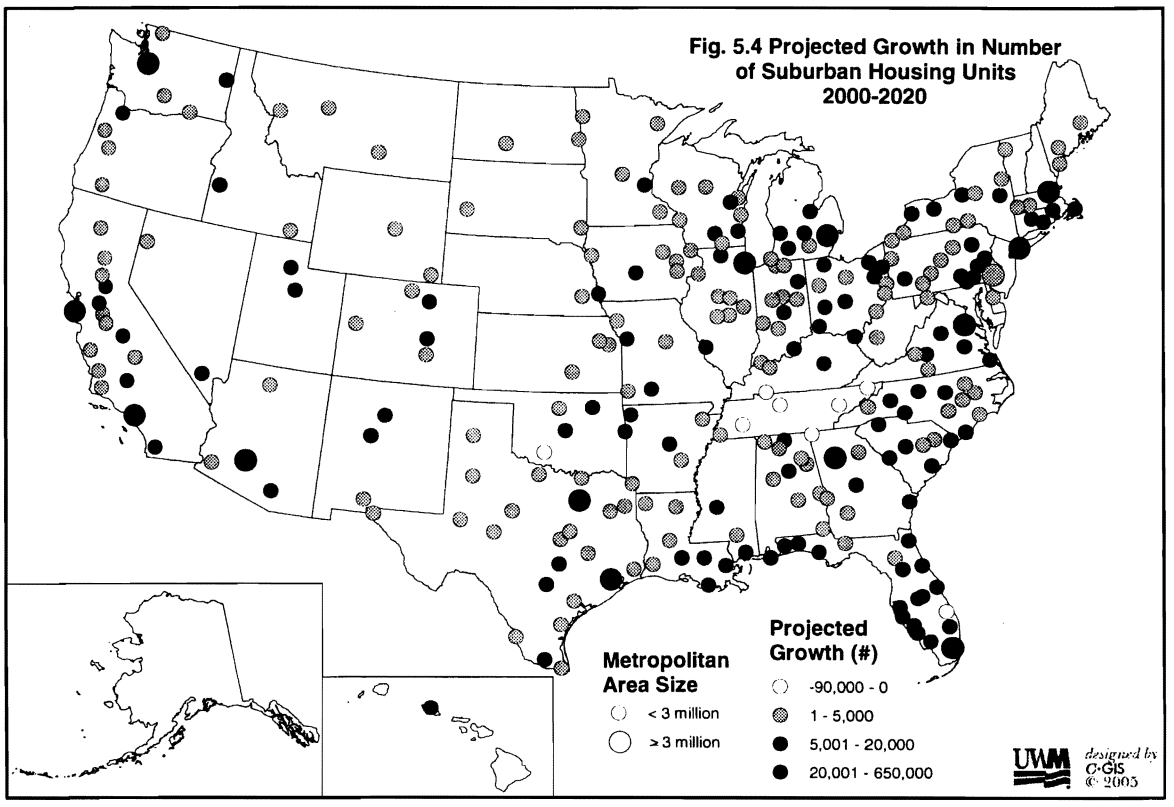
Fig. 5.4 Projected Growth in Number
of Suburban Housing Units
2000-2020
Metropolitan
Area Size
< 3 million
> 3 million
Projected
Growth (#)
-90,000 - 0
1 - 5,000
5,001 - 20,000
20,001 - 650,000
UWM
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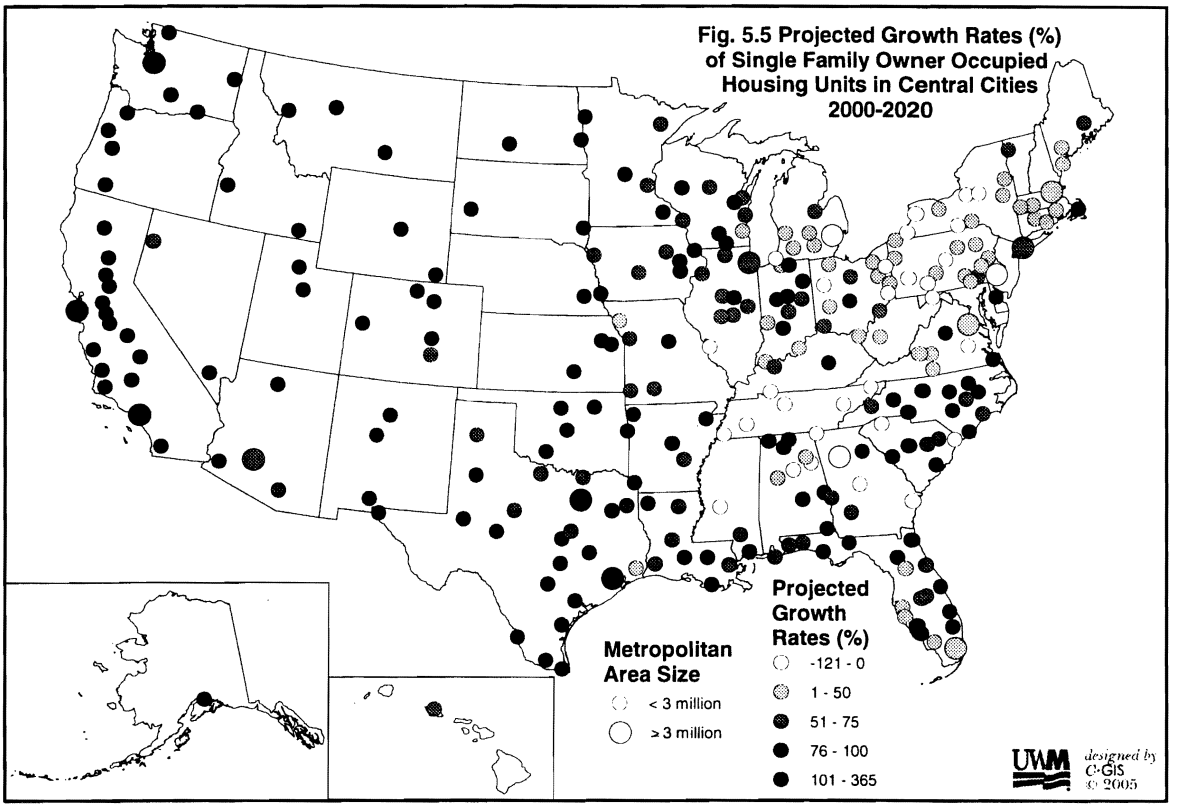
Fig. 5.5 Projected Growth Rates (%)
of Single Family Owner Occupied
Housing Units in Central Cities
2000-2020
Projected
Growth
Rates (%)
-121 - 0
1 - 50
51 - 75
76 - 100
101 - 365
Metropolitan
Area Size
< 3 million
> 3 million
UWM
designed by
C·GIS
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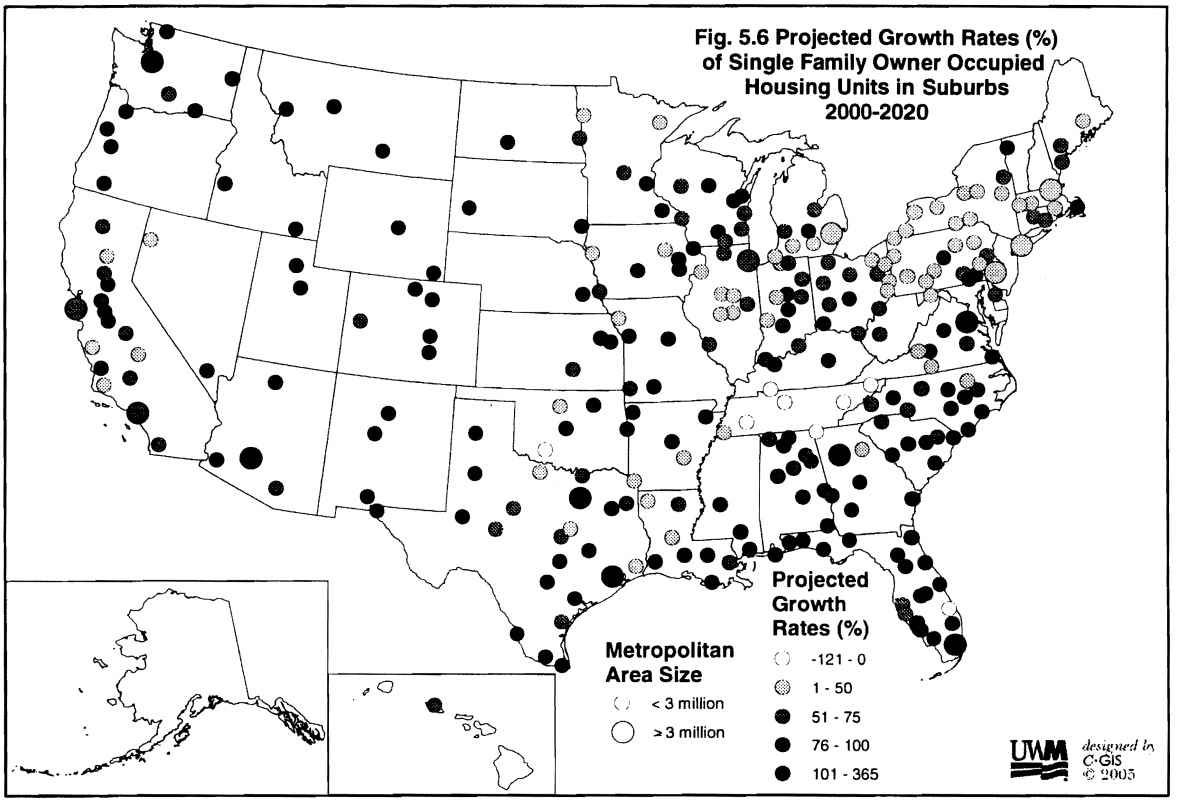
Fig. 5.6 Projected Growth Rates (%)
of Single Family Owner Occupied
Housing Units in Suburbs
2000-2020
Projected
Growth
Rates (%)
-121 - 0
1 - 50
51 - 75
76 - 100
101 - 365
Metropolitan
Area Size
< 3 million
> 3 million
UWM
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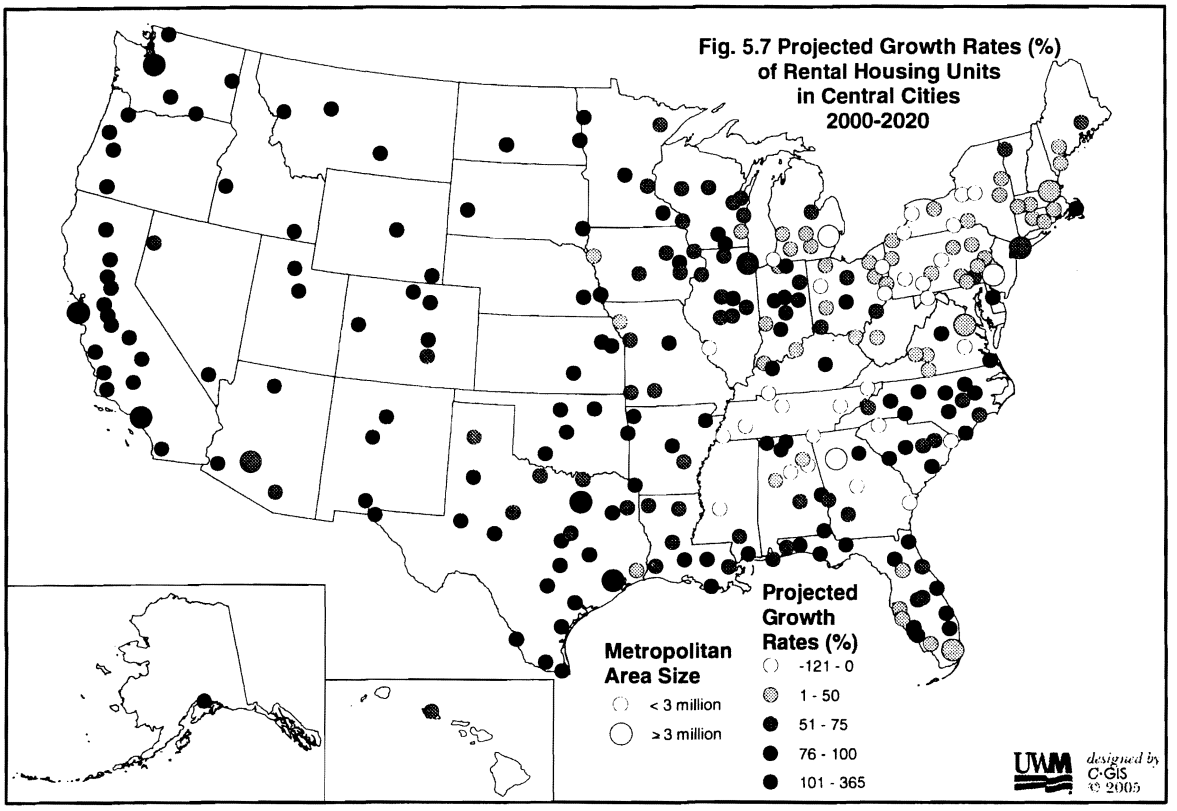
Fig. 5.7 Projected Growth Rates (%)
of Rental Housing Units
in Central Cities
2000-2020
Projected
Growth
Rates (%)
-121 - 0
1 - 50
51 - 75
76 - 100
101 - 365
Metropolitan
Area Size
< 3 million
≥ 3 million
UWM
designed by
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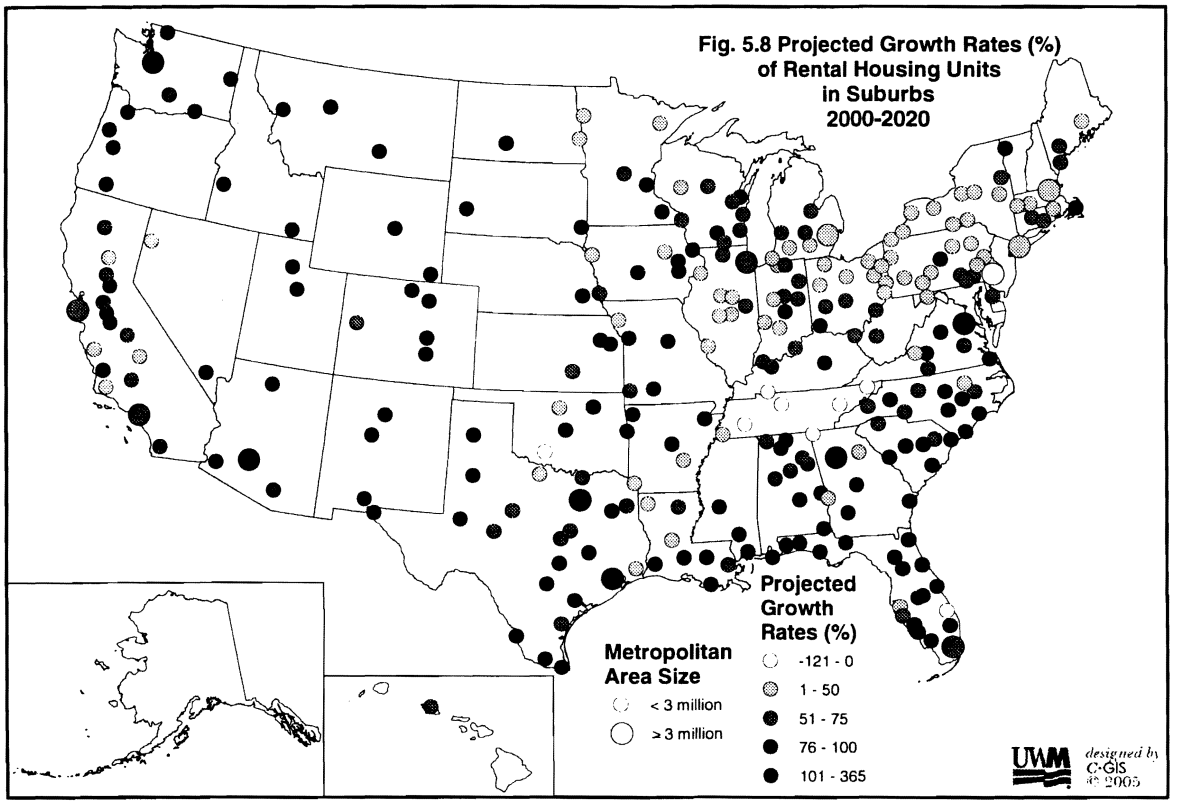
Fig. 5.8 Projected Growth Rates (%)
of Rental Housing Units
in Suburbs
2000-2020
Projected
Growth
Rates (%)
-121 - 0
1 - 50
51 - 75
76 - 100
101 - 365
Metropolitan
Area Size
< 3 million
≥ 3 million
UWM
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6. POLICY IMPLICATIONS OF FINDINGS

This final component of the research briefly assesses the implications for federal housing policies and local government zoning/building regulations of the findings of this research. Given the increasing demands on public expenditures (amid continued growing constraints on government budgets in general), some of the main findings that have the most serious public policy implications are: the projected steadily growing elderly population in the coming decades; the significant increases projected for the largest age group (the pre-retirement 55-64 year olds); the locational preference of pre-retirees and retirees for the South and West of the United States; the extent of current and projected future "aging in place" in the suburbs in particular; the higher proportions of elderly renters in those metropolitan areas with higher home values; and the "gap" between future elderly owner and rental housing demand and the existing housing stock in 2000.

The policy analysis briefly evaluates—in light of these findings for metropolitan areas from the statistical and spatial analysis—the extent to which current federal housing policies and local government zoning/building regulations already meet the expected aging and housing challenges of the coming decades, and identifies aspects of these policies that may require modification in order to meet these challenges more effectively. This involves a brief evaluation of federal housing-related policies, including the U.S. Department of Housing and Urban Development's reverse mortgage for seniors program as well as Section 202 Supportive Housing for the Elderly that includes the Assisted-Living Conversion Program. The policy analysis also includes a brief assessment of local housing-related policies, such as zoning laws and building codes as well as community information and support networks.

Elderly Owner Occupied Housing

▪ HUD's Reverse Mortgage for Seniors program

Reverse mortgages are a particular kind of home loan that can allow elderly homeowners to convert the equity in their homes into cash that can supplement their other sources of income to meet expected and unexpected expenses. The U.S. Department of Housing and Urban Development's Reverse Mortgage for Seniors Program—Section 255: Home Equity Conversion Mortgages (HECM)—is open to homeowners aged 62 and older who have paid off all or most of their mortgage balance. These homeowners can borrow against the equity in their homes (http://www.hud.gov).

In contrast to ordinary home equity loans, a Department of Housing and Urban Development (HUD) reverse mortgage does not require repayment as long as the borrower lives in the home. Lenders recover their principal, with interest, when the home is sold, with the remaining value of the home going to the elderly homeowners or their survivors. If the sales proceeds are insufficient to pay the amount owed, HUD pays the lending institution (mortgage lender, bank, credit union, or savings and loan association) the shortfall. The Federal Housing Administration (FHA), which is part of HUD, collects an insurance premium from all borrowers to provide this coverage—this makes HUD's program less expensive to borrowers than the smaller reverse mortgage programs run by private lenders without FHA insurance (http://www.hud.gov).

The size of a reverse mortgage loan is determined by the borrower's age, the interest rate, and the home's value. The older the borrower, the larger the percentage of the home's value that can be borrowed against. There are no asset or income limitations on borrowers receiving HUD's reverse mortgages. There are no limits on the value of homes qualifying for a HUD reverse mortgage, but the amount that may be borrowed is capped by the maximum FHA mortgage limit for the area (ranging from $172,632 to $312,895, and adjusted up to 150 percent for Alaska and Hawaii) based on local housing costs. As a result, owners of higher-priced homes cannot borrow more than owners of homes valued at the FHA limit (http://www.hud.gov).

Given the findings of this research on the extent of current and projected future "aging in place" in the suburbs in particular, HUD's Reverse Mortgage for Seniors Program certainly addresses the situation in which many seniors my find themselves: equity rich, but cash poor. This will increasingly be a particular problem in those metropolitan areas with above average increases in housing values, where the associated increased property taxes place an additional financial burden on senior homeowners. Certainly, the quadrupling of the number of reverse mortgages since they first become available in the early 1990s reflects that the way that the program is set up, that is, not to be dependent on HUD's budget, is particularly effective. (http://www.texasreversemortgage.com/hud.htm).

Similarly, the finding that metropolitan areas with higher home values tend to have higher home ownership by the 65 and older population has important policy implications. If this situation is due to more elderly households keeping a larger amount of their wealth bound up as long as possible in their suburban homes in a tight housing market, with the implication that rising home prices may induce more homebound aging, particularly in the suburbs, then it will be necessary for HUD to constantly monitor changing local housing costs across the continental United States; this is necessary in order to keep abreast of rising home values so that HUD's reverse mortgage program borrowing limits can take into account variations in local housing costs among the more and less expensive housing markets in the metropolitan areas across the United States. In addition, the annual number of reverse mortgages that Congress authorizes HUD to insure needs to be regularly increased to keep up with elderly population growth and demand. The regular increase from the initial 2,500 to 150,000 by 2000 (http://www.texasreversemortgage.com/hud.htm) reflects the attractiveness of this program for the elderly and the federal government's commitment to facilitate more successful and longer "aging in place"—the preference of many older Americans.

▪ HUD's HOME Investment Partnerships program

In addition to affordable housing for rent, HUD's HOME Investment Partnerships Program provides formula grants to states and local governments to build, purchase, or rehabilitate affordable housing units for ownership. The formula takes into account factors such as the relative inadequacy of each jurisdiction's housing supply, the incidence of poverty, and fiscal distress.

The HOME projects can help address the projected steadily growing elderly population in the coming decades, and the "gap" between future elderly owner and rental housing demand and the existing housing stock in 2000. Since 1990 when the HOME

program was enacted, HOME has assisted more than 250,000 households to purchase a home (Abt Associates Inc., 2004). A major strength of the HOME program is that it allows decisions to be made at the local level—by people and communities—as to how best to design and implement strategies tailored to their own particular needs and priorities using the HOME funds for grants, direct loans, loan guarantees, or other forms of credit enhancement (http://www.hud.gov/). Although HOME is the largest federal block grant to state and local governments designed exclusively to create affordable housing for low-income households—allocating about $2 billion annually—federal budgetary constraints in the coming decades during a period of increasing elderly housing demand for affordable housing could present problems.

▪ Community Development Block Grant (CDBG)

The CDBG program provides a federal grant to CDBG "entitlement communities" such as states, local governments with a population of more than 50,000 people, and urban counties with more than 200,000 people. A large proportion of the CDBG funds must be allocated to benefit low- and moderate-income people, including the elderly, by providing decent housing. The CDBG funds are important for the growing elderly population because they can be spent on housing rehabilitation (loans and grants to homeowners and developers) (Technical Assistance Collaborative 2001).

▪ Federal Home Loan Bank (FHLBank)

The FHLBank system was set up as a privately-capitalized cooperative government-sponsored organization during the Depression era in order to provide a stable source of mortgage financing. Federal law requires each of the 12 District Federal Home Loan Banks to set up an Affordable Housing Program (AHP) through which the District Bank subsidizes the cost of housing for very low-income and moderate-income owner-occupied housing through grants or low-cost loans. The AHP Set-Aside Program is important for low-income elderly people who own or want to own their own home because it sets aside 35 percent of the annual AHP funds as grants for an affordable homebuyer program for use as down-payments, closing costs, rehabilitation, and homeownership counseling costs.

Home Modification Assistance for the Elderly

▪ HUD's HOME Investment Partnerships program

Some communities use HUD's HOME funds for home improvement assistance. Certainly, this kind of flexibility in the HOME program is useful for elderly homeowners who need to modify their homes in order to more successfully "age in place."

▪ HUD's Section 203(k) Rehab program

The Section 203(k) program, administered by the Federal Housing Administration (FHA), is HUD's primary program for rehabilitating and repairing single-family properties.

Section 203(k) mortgage insurance enables homebuyers and homeowners, including elderly ones, to finance the purchase or refinancing of a house and the cost of needed modifications through a single mortgage—or to finance the modification of their existing home. Lenders have used the Section 203(k) program in partnership with state and local housing agencies and nonprofit organizations to rehabilitate properties. These lenders, with state and local government agencies, have found ways to combine Section 203(k) with other financial resources, such as HUD's HOME programs and its Community Development Block Grant programs, to assist borrowers (http://www.hud.gov/).

The Section 203(k) program should become increasingly relevant for elderly buyers who want to purchase a house in need of modifications to allow them to live independently longer by allowing the elderly homebuyer to get just one mortgage loan at a long-term fixed or adjustable rate to finance both the acquisition and the modification of the dwelling. This option contrasts with the typical more expensive alternative of obtaining financing first to purchase the dwelling and then additional interim financing for the modifications that often comes with relatively high interest rates and short amortization periods. Examples of eligible improvements that would be of interest to the elderly include: the installation of a bedroom and bathroom on the ground floor, new exterior siding, caulking and weather-stripping, and remodeling kitchens and bathrooms for walker or wheelchair access.

▪ Community Development Block Grant (CDBG)

The CDBG program provides a federal grant to CDBG "entitlement communities" such as states, local governments with a population of more than 50,000 people, and urban counties with more than 200,000 people. A large proportion of the CDBG funds must be allocated to benefit low- and moderate-income people, including the elderly, by providing decent housing. The CDBG funds are important for the growing elderly population because they can be spent on making buildings accessible to elderly and disabled people (Technical Assistance Collaborative 2001).

▪ HUD's Property Improvement Loan Insurance (Title I)

Under Title I, HUD insures lenders against most losses on home improvement loans. The Federal Housing Administration (FHA) makes it easier for elderly applicants, among others, to obtain affordable home improvement loans for modifications to allow them to "age in place." Eligible activities include permanent property improvements that improve the basic livability or utility of the property (http://www.hud.gov/). The increased funding allocated to this program during recent years is a welcome trend for elderly homeowners.

▪ Veterans Affairs Regional Loan Center

The Veterans Affairs Regional Loan Center is helpful for elderly homeowners who are veterans because it provides loans and grants to qualifying elderly veterans to adapt an existing dwelling to meet specific needs.

▪ Rebuilding Together, Inc.

Rebuilding Together, Inc. is helpful for low-income elderly homeowners because it assists them with home repairs.

▪ 2-1-1 Infoline

The 2-1-1 Infoline is a useful resource for elderly homeowners because it provides information on home improvement programs and loans.

All of these resources for home modifications to meet the needs of an aging population can help address the projected steadily growing elderly population in the coming decades, the extent of current and projected future "aging in place," and the "gap" between future elderly owner housing demand and the existing housing stock in 2000. Increasing demand for funds for home modification assistance in the coming decades will keep pressure on these and other sources of financing elderly home modifications.

Elderly Rental Housing

▪ Public Housing

HUD administers federal aid to local housing agencies (Public Housing Authorities) that manage public housing for low-income residents, including elderly ones, at an affordable rent. Housing complexes designated for the elderly only are called "Elderly Developments." Certainly, this federal aid helps to provide decent and safe rental housing for eligible elderly persons. While every local housing agency has slightly different policies and different types of housing available, the long waiting periods for people applying for public housing in some cases can be an especially difficult issue for elderly people.

▪ Housing Choice Voucher program ("Section 8")

The Housing Choice Voucher program provides low-income persons with a rent subsidy that offers them some choice over where they live. Under this program, the local housing authority or state housing agency provides the tenant with either a voucher or a certificate for the landlord that states that the government will subsidize the person's rent payments.

Under the certificate program, the landlord agrees to accept no more than the fair market rent for a unit. Under the voucher program, a tenant has more housing choices, which is particularly important in high-demand housing markets in which landlords can be reluctant to accept HUD's fair market rent level for the area. In such situations, the voucher program can allow a household or individual to choose a housing unit at higher than fair market rent and pay the difference. These "tenant-based" arrangements allow a qualified tenant to use the voucher or certificate at any rental unit where the landlord has agreed to participate in the program. In addition to the voucher and certificate programs, the "site-based" Section 8 program offers rental assistance in which, instead of a voucher or certificate held by a tenant ("tenant-based"), the apartment building or unit has Section

8 status ("site-based"). This allows a qualifying tenant to rent one of these units at a reduced rent.

A medical deduction can also be applied for elderly people. Making assisted living an eligible use for the Housing Choice Voucher Program vouchers is a welcome element for very low-income elderly renters. HUD's Multifamily Inventory of Units for the Elderly and Persons with Disabilities (http://www.hud.gov:80/offices/hsg/mfh/hto/inventorysurvey.cfm), designed to assist prospective applicants with locating units in HUD insured and HUD subsidized multifamily properties that serve the elderly, is an excellent resource for elderly renters. Again, however, the long waiting periods that are associated with the "tenant-based" and "site-based" programs due to high demand and limited housing availability are problematical for elderly people in particular.

▪ HUD's Section 202 Supportive Housing for the Elderly program

HUD's Section 202 program helps expand the supply of affordable housing for the poor elderly. It provides capital and operating funds to nonprofit organizations to develop and operate affordable rental housing for elderly people. From the 1959 Housing Act that established the Section 202 Supportive Housing for the Elderly program until 1973, HUD provided direct low interest loans to nonprofit organizations to develop housing for moderate-income elderly and disabled people whose incomes were too high for public housing eligibility. In 1974, Congress revamped Section 202 and additionally began providing Section 8 rent subsidies for all subsequent housing units and eventually to many previously developed units. In 1991, Congress again revamped Section 202 so that the housing projects are now exclusively for very low-income elderly people and the projects must also include frail elderly people in need of supportive services (as distinct from low-income people with disabilities who are now covered by Section 811) (http://www.hud.gov; http://www.chapa.org).

Some relatively new components of the Section 202 program include predevelopment grants that can help nonprofit organizations use the Section 202 funds more effectively, and emergency capital repair grants for federally-assisted senior properties. In addition, Section 202b, the Assisted-Living Conversion Program (ALCP), has been added recently.

The ALCP helps expand the supply of affordable housing with supportive services for the poor elderly. It provides very low-income elderly people with options that allow them to live independently in an environment that provides support activities such as cleaning, cooking, and transportation. The ALCP is an annual competitive program that provides private nonprofit owners of existing multifamily housing with a grant to convert some or all of their housing units into an Assisted Living Facility (ALF) for the frail elderly. ALFs are designed to accommodate frail elderly people who live independently but need help with daily living activities such as bathing and dressing. ALFs must provide support services such as personal care, transportation, meals, housekeeping, and laundry. The ALFs provide an affordable alternative to a nursing home and allow many elderly people to remain independent and out of a nursing home for longer. To be eligible, a frail elderly person must meet the admissions/discharge requirements as established for assisted-living by State and local licensing, or HUD frailty requirements under 24 CFR891.205 if more stringent. In addition, Section 202

project rental assistance contract funds are made available to cover the difference between what an elderly renter can afford and the cost of operating a project. In 2002, for example, this HUD program awarded $54.3 million in grants (http://www.hud.gov).

Section 202 will help directly address the housing needs of the projected steadily growing elderly population in the coming decades, the higher proportions of elderly renters in those metropolitan areas with higher home values, and the "gap" between future elderly rental housing demand and the existing rental housing stock in 2000. Of course, more affordable housing with and without supportive services for elderly people will increasingly be needed in the coming decades at the same time that Section 202 relies on HUD funding which is subject to continued growing constraints affecting all government budgets. This is at a time when the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century (2002) has identified that the inadequate funding of Section 202 has led to a lull in the development of Section 202 housing despite growing demand. Nonetheless, Section 202 in general, and the ALCP in particular, may also perhaps indirectly address the need for affordable housing with and without supportive services by stimulating the provision of profitable projects so that the private sector can identify best practice and replicate it in profitable private-sector developments.

▪ HOPE and CHSP programs

HUD's HOPE VI (Homeownership and Opportunity for People Everywhere) Public Housing Revitalization program provides funding to local housing agencies to demolish and redevelop older and deteriorated public housing, some of which is then available for low-income elderly renters. The demand for public housing, however, far exceeds the number of units available.

In addition, through the HOPE IV for Elderly Independence Program and the Congregate Housing Services Program (CHSP), the local housing authority or state housing agency provides a combination of HUD Housing Choice Voucher ("Section 8") rental assistance and case management and supportive services for low-income, elderly, frail renters (that is, those low-income elderly limited in three or more life activities such as bathing, dressing, and housekeeping). The combination of these programs is particularly helpful because it expands access to Housing Choice Voucher Program rental assistance to the frail elderly while allowing them to avoid unnecessary or premature nursing home placement in situations where home and community-based alternatives are available and appropriate (http://www.huduser.org).

▪ HOME Investment Partnerships program

In addition to affordable housing for ownership, the HOME program's formula grants to states and local governments are used to build, purchase, or rehabilitate affordable housing units for rent or to provide direct rental assistance to low-income people. A major strength of the HOME program is that it allows decisions to be made at the local level—by people and communities—as to how best to design and implement strategies tailored to their own particular needs and priorities using the HOME funds for grants, direct loans, loan guarantees, or other forms of credit enhancement for rental properties

as well as money for rental assistance or security deposits (http://www.hud.gov/). Again, federal budgetary constraints during a period of increasing elderly housing demand in the coming decades will continue to be a problem.

▪ Community Development Block Grant (CDBG)

The CDBG program provides a federal grant to CDBG "entitlement communities" such as states, local governments with a population of more than 50,000 people, and urban counties with more than 200,000 people. A large proportion of the CDBG funds must be allocated to benefit low- and moderate-income people, including the elderly, by providing decent housing. The CDBG funds are important for the growing elderly renter population because they can be spent on housing rehabilitation (loans and grants to landlords, nonprofit groups, and developers) and new housing construction by nonprofit groups (Technical Assistance Collaborative 2001).

▪ Privately-owned federally-subsidized rental housing

Privately-owned affordable housing is the largest source of affordable housing in the United States; nationally, it exceeds in amount both public housing and "tenant-based" voucher and certificate rental subsidies. The government provides funds directly to apartment owners who lower the rent they charge low-income tenants, including elderly ones (http://www.hud.gov). During the 1970s HUD encouraged the development of privately-owned affordable housing through programs such as the Section 221(d)3 and Section 236 programs that combined long-term mortgages with federal mortgage insurance. After Congress created the Section 8 program in the 1970s, much of this housing also received Section 8 "site-based" rental assistance. In the 1970s and early 1980s, the Section 8 New Construction and Section 8 Substantial Rehabilitation program programs were also used to stimulate new subsidized housing development. Under these programs, HUD made 15-year commitments of Section 8 rent subsidies to housing developers. These developers used this Section 8 guarantee to obtain financing from other sources (Technical Assistance Collaborative 2001). This funding is a useful complement to the funding for "site-based" public housing and the "tenant-based" Housing Choice Voucher Program. Most privately-owned federally-subsidized Section 8 housing, however, is at risk of conversion to market rate housing because of expiring HUD contracts and the exercising by owners of mortgage pre-payment options.

▪ Low Income Housing Tax Credit (LIHTC)

The federal government established the LIHTC program in 1986 to create incentives for investment in low-income housing by providing 10-year federal tax credits to private developers who invest in affordable low-income housing. Private investors, such as banks, purchase the tax credits from the developer of the affordable housing who then uses the proceeds (usually in combination with other financing) to construct or rehabilitate affordable housing. The federal government establishes basic long-term affordability requirements for these projects. The LIHTC developments are also required to accept applications from prospective tenants with Section 8 vouchers (Technical Assistance

Collaborative 2001). This program provides an additional housing choice for elderly low-income renters. The highly competitive application process for developers, however, is a limiting factor on the amount of affordable housing available through this program.

- **Federal Home Loan Bank (FHLBank)**

Federal law requires each of the 12 District Federal Home Loan Banks to set up an Affordable Housing Program through which the District Bank provides low-cost loans to member savings institutions for below-market loans or grants for affordable housing activities. The member banks then provide grants and below-market loans to organizations to purchase, construct, and/or rehabilitate rental housing for low income tenants. The Affordable Housing Program can help provide affordable housing to low income elderly renters (Technical Assistance Collaborative 2001).

Together, programs for elderly renters, such as public housing, the Housing Choice Voucher Program, government subsidies for privately-owned apartments, and the HOME program can help address the projected steadily growing elderly population in the coming decades, the higher proportions of elderly renters in those metropolitan areas with higher home values, and the "gap" between future elderly rental housing demand and the existing housing stock in 2000. As already mentioned, however, federal budgetary constraints during a period of increasing elderly rental housing demand in the coming decades will continue to be a problem.

Zoning Laws and the Elderly

Zoning laws are designed to allow local governments to control the use of land and buildings within their jurisdictions. In the United States, zoning is widely used to control urban and suburban land use and development. Since the earliest zoning legislation, single-purpose districts have been popular. Traditionally, some of the major classes of single-purpose districts have been residential, commercial, industrial, and public. Street after street, block after block of individual homes on larger lots in many suburban communities are the legacy of single-purpose zoning for individual families.

Perhaps the single most important aspect of recent changes in planning practice of importance for an aging U.S. population, however, has been the way that city planning has accommodated the need for flexibility through new approaches to zoning. Once the cornerstone of city planning practice, single-purpose zoning is now seen as overly rigid, monotonous, and even wasteful. In downtown areas, mixed-use zoning now allows facilities, such as daycare centers, residential space, and space for services, to be zoned together in ways that can help restore variety and vitality to downtown districts. In suburban jurisdictions the solution to the rigidity of single-purpose zoning has been cluster zoning, in which regulations are applied to an entire parcel of land—a planned unit development, or PUD—rather than to individual building lots. With a PUD, developers can calculate densities and profits on a project-wide basis, allowing the clustering of buildings to make room for open spaces and community facilities (such as golf courses and community buildings) or to preserve attractive site features (such as ponds or old barns). Cluster zoning facilitates a blend of residential and nonresidential

elements and a mixture of housing types that can be adjusted to changing housing demand. Early retirement, active retirement, and assisted-living PUDs have already become popular across the United States, especially in the retiree magnet metropolitan magnets in the South and West.

During the coming decades, higher-density mixed land use categories comprising the kinds of retail, employment, and health facilities frequented by older people will be needed to accommodate these facilities in closer proximity to elderly residences, especially in existing suburban communities. Similarly, in an effort to promote a fairer share of affordable housing throughout metropolitan areas, some suburban communities have specifically zoned some affordable housing as well as high-rise elderly housing as part of the mix of land uses. Interest is growing in zoning that allows a second or secondary housing unit on suburban parcels in addition to the existing single family home. These units can include accessory apartments within the existing home and elder cottages as separate self-contained dwellings. These units are designed to allow elderly persons to live independently while having the close support of nearby family members. Further innovations in zoning such as these will be needed to address the projected steadily growing elderly population in the coming decades, the significant increases projected for the largest and most active age group (the pre-retirement, 55-64, year olds), the extent of current and projected future "aging in place" in the suburbs in particular, and the "gap" between future elderly housing demand and the existing housing stock in 2000.

Building Codes and the Elderly

Building codes are legal documents used by local governments that establish minimum standards that regulate construction in order to protect the health, safety, and welfare of people within a jurisdiction. Building codes typically set standards for building construction, building materials, sanitary facilities, electrical systems, lighting, ventilation, fire safety, plumbing, and energy conservation.

The projected steadily growing elderly population in the coming decades, the extent of current and projected future "aging in place," and the "gap" between future elderly housing demand and the existing housing stock in 2000 mean that building codes and local government building inspectors will need to be flexible enough in the coming decades to facilitate the kinds of affordable housing modifications necessary to accommodate the growing number of elderly people who are frail or disabled.

Community Information and Support Networks and the Elderly

In the past, a major barrier for older people has been a lack of awareness about available information and support services. The relatively lower interest in and use of computers and the Internet by the most elderly does not help the situation. All of the main findings of this research indicate that increasing attention needs to be paid to how best to provide older people with advice about their housing options as they age. With most elderly people seeking to avoid long-term institutionalization, preferring instead to "age in place" for as long as possible, community information and support networks will need to take on an increasingly prominent role. Coordination of efforts ranging from the federal to the community level will be increasingly important.

Concluding Comments

The main findings from the statistical and spatial analysis of the aging Baby Boomers in this report show significant regional variations within and across the metropolitan areas of the United States. Component 2 of this analysis found that the graying of America in the 1990s was more prominent in smaller metropolitan areas. During the 1990s, elderly population growth was more rapid in the suburbs than in central cities of metropolitan areas; in 2000, there were larger numbers and percentages of elderly people in the suburbs (compared to in central cities). Elderly people had above (U.S.) average homeownership rates in 2000. The locational preference of pre-retirees (aged 55-64) and retirees was for the South and West as well as certain Rustbelt states.

Component 3 documented the higher proportion of elderly renters in metropolitan areas with higher home values. As households age, the greater requirement to heat and/or cool a housing unit appears to negatively affect the rate of home ownership and to encourage renting. The results also seem to indicate that the decision between living in the central city versus living in the suburbs is less flexible than the decision between renting and owning.

The Component 4 projections showed a steadily growing elderly population between 2000 and 2020, with significant increases for the largest group (the pre-retirement 55-64 year olds). More rapid elderly population growth is projected for the suburbs (compared to central cities). In conjunction with this suburban "aging in place," the graying of America is projected to be more prominent in smaller metropolitan areas and most rapid for the South and West as well as certain Rustbelt states.

Component 5 identified that the projected "gap" (2020 absolute growth numbers) in single family owner-occupied units will be largest for smaller metropolitan areas. The "gap" in single family owner-occupied units will be highest in the suburbs. At the same time, there will be a larger "gap" in single family owner-occupied units in the central cities of smaller metropolitan areas, compared to in the central cities of larger metropolitan areas. The largest absolute "gap" and "relative gap" (the gap by 2020 relative to the 2000 situation) will be in the South and West of the United States.

These findings combined with the tables and maps are of interest to academic researchers and public policy analysts. The report can be publicized through the websites of the U.S. Department of Housing and Urban Development and the U.S. Census Bureau. The detailed level of the findings is particularly useful for informing national policies as they respond to the impending pressures that the aging Baby Boomers will place on federal programs, as well as state and local policies that must address the local impacts of a graying America in individual metropolitan areas, their central cities, and suburbs. The population and housing trends combined with the gap projections and the spatial distributions visible on the maps for metropolitan areas (and their central cities and suburbs) can be used to inform further research on, for example, elderly housing, healthcare, and community support needs in the future.

The research and findings in this report also indicate a need for further research on the aging Baby Boomers. Additional analysis is necessary that incorporates the significant demographic and socioeconomic diversity of the elderly in terms of characteristics such as gender, marital status, and so on. For example, more detailed research is needed that uses micro (individual) data to examine the effect of such factors

as income, household characteristics, regional housing markets, retirement decisions, health, and disability on elderly housing choice.

The projections of the 2020 gap in elderly housing units need to be improved by incorporating the capacity of the local construction industry in a nationwide study that includes housing construction starts (broken down by single family owner-occupied versus rental units) for individual metropolitan areas combined with a measure of housing obsolescence. Given ongoing urban sprawl, further research is also needed that investigates the current and future elderly demographic patterns in the surrounding (non-metropolitan) counties of metropolitan areas, that is, outside the existing built-up area.

Indepth quantitative and qualitative case studies are also needed to investigate the challenges and opportunities associated with housing the aging Baby Boomers. Representative metropolitan areas can be selected from categories such as smaller and larger metropolitan areas (and their central cities and suburbs), metropolitan areas in the South and West that are experiencing a large influx of older elderly people, Rustbelt metropolitan areas that are aging due to the out-migration of younger people, and so on.

In conclusion, a number of policy recommendations related to future elderly housing needs are suggested here within the context of existing federal housing policies and local government zoning/building regulations. In particular, HUD needs to continue to constantly monitor changing local housing costs across the continental United States in order to keep abreast of rising home values so that its programs for homeowners (many of whom expect to "age in place") take into account variations in local housing costs among the more and less expensive housing markets in the metropolitan areas across the United States, and to keep up with the increasing demands placed on HUD's programs (for example, the Reverse Mortgage for Seniors Program) due to the projected significant elderly population growth in the coming decades. In addition, the federal government needs to continue to respond to the increasing demand for funds for home modification assistance for elderly homeowners who desire to "age in place" in the coming decades.

The federal government may also want to consider policies that actively encourage elderly homeowners to downsize before they are forced to do so for economic or health reasons. Policies that could be considered include those affecting the taxation of capital gains from the sale of an elderly person's primary residence, and subsidies that encourage elderly homeowners in large suburban homes to move to housing that can more easily meet their needs as they age, such as townhouses and condominium apartments, geared either to the general public or to elderly people in particular.

HUD, in cooperation with local housing authorities or state housing agencies, also needs to attempt to address the long waiting periods for elderly renters who have applied for housing assistance such as the Housing Choice Voucher Program. Long waiting periods can be an especially difficult issue for the elderly. HUD may also want to consider allocating more funding for government-sponsored public housing given that public housing can work better than vouchers for many poor elderly.

Continued and improved close coordination among federal and other agencies concerned with elderly housing issues needs to be a continuous priority. This will become increasingly critical as the Baby Boomers age during the coming decades. In addition to the U.S. Department of Housing and Urban Development, these agencies include the Administration on Aging (AoA) that pays significant attention to housing the elderly (including its Eldercare Locator that connects older Americans and their caregivers with

state and local agencies on aging and community-based organizations that serve older adults and their caregivers). Coordination with FirstGov.gov will continue to keep the weblink site, FirstGov for Seniors, up-to-date with information on HUD and other federal agencies' programs. Many nongovernmental organizations, such as the Family Caregiver Alliance, the Meals On Wheels Association of America, the AARP, the American Association of Homes and Services for the Aging, and the National Council on the Aging, will also benefit from continued and closer associations with federal agencies like HUD.

In addition, given the variations in the findings among central cities versus suburbs and among different regions of the United States, improved federal-state/local institutional arrangements are needed that can further enhance local decision-making in situations where this can facilitate the design and implementation of funding strategies tailored to local needs and priorities. Similarly, the federal government needs to increasingly coordinate its policies with lower levels of government to support further innovations in zoning at a local government level in response to the significant projected suburban "aging in place." The goal should be to encourage higher densities and to reduce transportation difficulties for the elderly in the suburbs, for example, through supporting more mixed-use development and more planned unit developments (PUDs).

The federal government also needs to consider ways to support community information and support networks as they assume an increasingly prominent role. Coordination of efforts ranging from the federal to the community level will be of growing importance. Furthermore, given continued constraints on budgets at all government levels, the federal government needs to work increasingly with the private sector to stimulate the provision of profitable private-sector responses to the future owner and renter demands of the growing elderly population.

With public policy already attempting to respond to the changing dynamics created by the aging of the Baby Boomers, further indepth research is necessary to assess the extent to which existing policies successfully address the elderly population trends identified in this report. Due to the extent of the projected future "aging in place" in the suburbs in particular but also in central cities, some of the most important initiatives that need to be examined are those that focus on allowing elderly homeowners to remain in their own homes as long and as successfully as possible, encouraging elderly homeowners to consider moving to housing that better meets their needs as they age, and providing more affordable housing options for elderly renters.

APPENDIX A

Census Bureau Regions and Divisions

Region I: Northeast

Division I: New England
Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Division 2: Middle Atlantic
New Jersey
New York
Pennsylvania

Region 2: Midwest

Division 3: East North Central
Indiana
Illinois
Michigan
Ohio
Wisconsin

Division 4: West North Central
Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

Region 3: South

Division 5: South Atlantic
Delaware
District of Columbia
Florida
Georgia
Maryland
North Carolina
South Carolina
Virginia
West Virginia

Division 6: East South Central
Alabama
Kentucky
Mississippi
Tennessee

Division 7: West South Central
Arkansas
Louisiana
Oklahoma
Texas

Region 4: West

Division 8: Mountain
Arizona
Colorado
Idaho
New Mexico
Montana
Utah
Nevada
Wyoming

Division 9: Pacific
Alaska
California
Hawaii
Oregon
Washington

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