# Zoning as a Barrier to Multifamily Housing Development

Gerrit Knaap, Stuart Meck, Terry Moore, and Robert Parker

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Gerrit–Jan Knaap is Professor and Director of the National Center for Smart Growth Research and Education at the University of Maryland.

Terry Moore, FAICP, has been a vice president and planner at ECONorthwest in Eugene, Oregon, since 1979. He is the lead author of two other PAS Reports: PAS Report Nos. 546/547 *The Transportation/Land Use Connection* (New Edition) and PAS Report No. 541, *An Economic Development Toolbox: Strategies and Method*s.

Stuart Meck, FAICP, was formerly a senior research fellow with the American Planning Association. He has authored or coauthored many PAS Reports, including PAS Report No. 541, *An Economic Development Toolbox*, PAS Report No. 529/530, *Planning for Wildfires*, and PAS Report Nos. 513/514, *Regional Approaches to Affordable Housing*. He is currently Director of the Center for Government Services, Edward J. Bloustein School of Planning and Public Policy, The State University of New Jersey, New Brunswick.

Robert Parker, AICP, is Managing Director of the Community Service Center (CSC) at the University of Oregon. The CSC is known widely throughout Oregon as one of the state's critical planning and policy analysis resources, connecting expertise of university faculty and students with communities and agencies. Parker has also served as an associate for ECONorthwest since 1990.

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APA's publications office is at 122 S. Michigan Ave., Suite 1600, Chicago, IL 60603.
E-mail: pasreports@planning.org
APA headquarters office is at 1776 Massachusetts Ave., N.W., Washington, DC 20036.

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# Foreword

We were pleased and honored to learn that this report, written originally as a final report for the U.S. Department of Housing and Urban Development, Lincoln Institute of Land Policy and the Fannie Mae Foundation, would be published as a Planning Advisory Service (PAS) report. Affordable housing ranks high on the list of planners' concerns, and zoning is probably the most common tool used by practicing planners. By publishing this research as a PAS Report, the American Planning Association has allowed us to talk to a broad audience with a potential interest.

While we think planners will find something of value, frequent readers of PAS Reports will recognize a difference in style between this report and most other publications by the Planning Advisory Service. Unlike most PAS Reports, this one offers little explicit guidance for improving planning practice. It offers instead an investigation of a broader policy question: Does zoning present a barrier to higher-density, multifamily housing development?

To address this question, our research:

- identified, using several criteria, six U.S. metropolitan areas as case-study areas;
- used Census and local GIS data to compute several indicators of zoning regulations and housing market performance for each of several jurisdictions in those six metropolitan areas;
- examined state statutes, regional and local plans and regulations in five jurisdictions in each metropolitan area to check our interpretation of the indicators and to gain additional evidence of regulatory barriers; and
- interviewed three to five land-use experts in each metropolitan area to get an independent assessment of our conclusions.

Among our conclusions:

- It is possible to use zoning and housing trend data to gain insights into the effects of zoning on high density, multifamily housing development.
- In some jurisdictions, zoning clearly appears to impede the development of high-density multifamily housing.
- No single indicator provides unambiguous evidence of regulatory barriers.

- Indicators of zoning and housing trends are often best expressed as ratios.
- High-density residential development is not always affordable, and low-density development is not always costly.
- Ample high-density and multifamily zoning is neither necessary nor sufficient to produce affordable housing.
- Regional collection and generalization of zoning data facilitates analysis of regulatory barriers.
- Oversight of local zoning by a regional agency appears to mitigate regulatory barriers.

We could, with only relatively uncontroversial normative assumptions, offer policy recommendations and offer lessons for planning practice. We don't. We do, however, offer recommendations for HUD, the primary sponsor of this research. We leave it to planners, though, to draw their own conclusions and lessons for local planning practice. Given the widely varying physical and institutional environments at the local level, and the highly contingent nature of many of our results, we suspect that the lessons planners draw may differ widely as they adapt them to their communities.

# Preface

This study furthers the efforts of the U.S. Department of Housing and Urban Development's Regulatory Barriers to Affordable Housing study series, which started with the 1991 report of the President's Commission on Regulatory Barriers to Affordable Housing (also known as the Kemp Commission), "*Not in my Backyard: Removing Barriers to Affordable Housing*," and the 2005 update "*Why Not in Our Community: Removing Barriers to Affordable Housing*." As part of the Department's effort to document these regulatory barriers and identify effective approaches to overcoming them, it commissioned the study, published as this Planning Advisory Service Report from the American Planning Association's Research Department, by Professor Gerrit Knaap of the University of Maryland.

HUD initially focused on this issue—limiting multifamily housing through exclusionary zoning—because it is one of the most common and most pervasive barriers to affordable housing in America. The Kemp Commission identified exclusionary zoning practices as a key regulatory barrier in 1991. What had been lacking, however, was systematic, reliable empirical evidence to document these concerns.

This study has served a dual purpose. First, the study provides the documentary evidence that exclusionary zoning is in fact a significant barrier to higher-density, multifamily housing in major metropolitan areas throughout the United States. It has documented, in a multisite study, how communities, through restrictive zoning policies, limit the supply of multifamily housing, which is a major source of affordable housing in this country. Second, it piloted a GIS approach to analyze the impact of regulatory barriers on housing affordability. The use of this research tool may provide even more lasting benefit from the study because it can more clearly illuminate the impact of regulatory barriers on affordable housing and highlight what data are needed to produce more effective measure of how and where these barriers operate.

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CHAPTER 1

# Background and Research Approach

Evidence from a variety of sources makes a compelling case that moderate- and low-income households in the United States have a problem in obtaining affordable housing. The causes of this problem are complex and controversial, but local government regulation is clearly among them.

This report does not attempt to address all the theoretical arguments and empirical details of the effects of regulations on the availability and price of different types of housing. It assumes a need for some regulation of housing and land markets (e.g., building codes, certain aspects of zoning and subdivision ordinances), and defines a regulatory barrier to certain housing types as a government requirement or process that significantly impedes the development or availability of that housing.

In 1991, the President's Advisory Commission on Regulatory Barriers to Affordable Housing (also known as the Kemp Commission, after U.S. Department of Housing and Urban Development Secretary Jack Kemp) found that various regulatory barriers can:

- directly raise development costs in such communities by as much as 20 to 35 percent;
- prevent the development of affordable housing in many suburban and other areas of high job growth, forcing lower-income households to live in locations far from job opportunities (a problem sometimes defined as "jobs-housing balance"); and
- restrict the full range of market rate and affordable housing options (e.g., higher-density housing, multifamily rental housing, accessory units, and manufactured homes).

*Regulatory problems in housing markets take many forms, but zoning that excludes certain housing--usually based on type, size, or lot size--is perhaps the most pervasive.*

Since 1991, several studies and journal articles have confirmed the nature of the problem and suggest it may be getting worse in particular metropolitan areas. A number of papers seem to bear out theoretical expectations. When local regulators effectively withdraw land from buildable supplies—whether under the rubric of "zoning," "growth management," or other regulation—the land factor and the finished product can become more costly. Caps on development, restrictive zoning limits on allowable densities, urban growth boundaries, and long permit-processing delays have all been associated with increased housing prices.

Regulatory problems in housing markets take many forms, but zoning that excludes certain housing--usually based on type, size, or lot size--is perhaps the most pervasive. Though anecdotal evidence of zoning as a regulatory barrier is common, systematic evidence of the practice is scarce for several reasons:

- Zoning is the purview of many dissimilar local governments, making the problem difficult to isolate.
- Until recently, comprehensive zoning data in GIS format were unavailable, making the problem difficult to measure.
- Zoning ordinances are complex, making the problem difficult to understand.
- Zoning is used for many different reasons, making the problem difficult to identify.

In part because zoning is the purview of local governments, systematic and empirically based studies analyzing the patterns of zoning at the metropolitan scale are few. Questions that need to be answered include:

- How much land is zoned for higher-density or multifamily housing?;
- How do zoning patterns vary across metropolitan areas?; and
- Is zoning a significant barrier to higher-density, multifamily housing in the United States.

The rapid development of Geographic Information Systems (GIS) data by local governments creates new opportunities for answering these questions. This study uses that data and attempts to:

- characterize visually and quantitatively the pattern of residential zoning in six metropolitan areas in the United States.

- characterize the regulatory environment in each study area, using information obtained from ordinances and statutes, key informants, and published materials.
- consider whether the evidence suggests zoning represents a barrier to higher-density, multifamily housing.

## OVERVIEW OF THE RESEARCH APPROACH

The research we present here examines whether zoning by local governments limits the development of multifamily and higher-density housing. The work is motivated by concerns that local governments use zoning to exclude affordable housing and potential occupants of that housing.

"Exclusionary" and "affordable" are value-laden terms, however, and difficult to define objectively. For this reason, we limit our evaluation to the effects of zoning on housing density and type. Because higher-density and multifamily housing are generally more affordable than low-density, single-family housing, zoning barriers to higher-density and multifamily housing are likely also barriers to housing affordability.

*While there is a rough correlation between higher-density, multifamily housing and various definitions of "affordable housing," the problems in assuming those terms are synonymous are several.*

While there is a rough correlation between higher-density, multifamily housing and various definitions of "affordable housing," the problems in assuming those terms are synonymous are several. Multifamily units come in several types (garden apartment, mid-rise, high-rise. They come in different sizes and have different types and quality of amenity. Their cost per square foot can be more expensive than the costs for single-family dwelling units. Nonetheless, we found no other, single measure of affordability better than unit type for which we could collect comparable data across metropolitan areas. If zoning is substantially restricting the development of multifamily dwelling units, it is a barrier to provision of affordable housing.

Our research does not consider other possible public policies that might represent a barrier to higher-density housing. It does not consider, for example, subdivision regulations or impact fees, the provision and cost of public services, building codes, and property taxes. It does not directly address consumer ability to pay. It focuses on zoning. Furthermore, it focuses on residential zoning, especially zoning for higher-density, multifamily use.

In addition, our research does not address any potential benefits of such barriers—such as protecting community character, lowering the cost of infrastructure, or minimizing traffic. Thus, we cannot draw conclusions, from this research alone, about whether such barriers increase or decrease social welfare. In other words, we are not evaluating the efficiency of zoning: whether its benefits exceed its costs. In this evaluation we look only at the barrier to the provision of affordable housing that zoning might create by limiting ability of the private market to build multifamily housing.

The research began with a review of the literature on exclusionary zoning, then evaluated data in six metropolitan study areas. For each study area, research included: 1) quantitative analysis of census and zoning data; 2) review and evaluation of local policies; and 3) interviews with local experts.

## ORGANIZATION OF THIS REPORT

The remainder of the research is presented in three chapters.

- Chapter 2 describes how we defined the research problem, the evaluation logic, data, methods, and limitations.
- Chapter 3 summarizes the results of our GIS and regulatory analysis, as well as the results of interviews from the six metropolitan study areas.
- Chapter 4 summarizes key findings of our research and discusses the implications of those findings.

This report also includes several appendices:

- Appendix A presents the results of our review of literature on exclusionary zoning.
- Appendix B describes the process we used to determine which study areas we would evaluate.
- Appendix C describes the methods and data sources for the GIS analysis.
- Appendix D describes the methods for completing the analysis of the state and regional regulatory context and the local comprehensive plans and zoning ordinances.
- Appendix E summarizes results of the review of public policy documents that guide development in the study areas.
- Appendix F presents the detailed results of GIS and quantitative analyses in the study areas.
- Appendix G presents the methodology and results of an additional analysis of interactions among zoning policies within the Portland, Oregon, study area.

CHAPTER 2

# Research Methods

This chapter provides our framework for the analysis, describing the methods and data we used to address the research questions.

## RESEARCH QUESTIONS AND APPROACH

As housing prices in the United States have risen rapidly in recent years, concerns about regulatory barriers to affordable housing have risen to an all-time high. Although many reasons exist for the increase in housing prices, growing evidence suggests that local regulatory barriers to the creation of high-density, multifamily housing are a major contributing cause to price increases. Evidence further suggests that zoning is a common form of such regulatory barriers (see Appendix A). Zoning is a regulatory barrier when it is used to exclude from a community certain types, densities, or sizes of residential development. Such zoning can cause housing prices to rise, commuting distances to grow, and low-income residents to suffer disproportionately. Zoning ordinance provisions that serve as regulatory barriers include:

*While zoning policies restricting density (especially density in the form of multifamily housing) indicate that land-use regulations may be exclusionary, their presence does not always mean a municipality is using zoning as a tool to restrict the development of affordable housing.*

- restrictions on land zoned for multifamily use;
- restrictions on the number of bedrooms;
- restrictions on manufactured housing or mobile homes;
- minimum lot-size requirements;
- minimum lot-width requirements; and
- minimum building-size requirements.

The literature on regulatory barriers suggests that zoning often limits the construction of multifamily housing and lowers the density of single-family housing. By limiting the supply of smaller multifamily units and single-family units on small lots, both of which tend to be more affordable than their single family, large-lot counterparts, such zoning is often described as *exclusionary.*

While zoning policies restricting density (especially density in the form of multifamily housing) indicate that land-use regulations may be exclusionary, their presence does not always mean a municipality is using zoning as a tool to restrict the development of affordable housing. Most zoning policies are meant to achieve multiple objectives: for example, to preserve open space or agricultural land, to maintain community identity, or to meet future demand for the housing types that a community needs. Zoning codes with these objectives might reduce overall density and therefore might seem to indicate exclusionary motives, but they do not necessarily mean the community either lacks affordable housing or intends to restrict future development of affordable housing. In some communities, high-density, multifamily housing can be very expensive, while lower-density development can be relatively affordable.

Intentions are not measurable from standard data sets and difficult to discern from the language in a zoning ordinance. For this reason and as noted in our introduction, this PAS Report avoids using the term "exclusionary." Housing affordability is also difficult to define, though it is reasonable to assume that, holding other things constant (e.g., locational amenities and construction materials) fewer materials and resources (including land) are needed to construct high-density, multifamily housing, making it a more affordable form of housing. Consequently, our study focuses on the restrictions affecting housing density and type that are embodied in local zoning ordinances and comprehensive plans, and examines specific restrictions in six study areas.

Because an examination of whether local governments use zoning to exclude affordable housing is fraught with methodological difficulties, the objective of our project is more limited: to document and examine, on

a pilot basis, how zoning patterns and processes vary within and across metropolitan areas and whether zoning impedes the development of high-density, multifamily housing in growing metropolitan areas. Specifically, the research explores the following hypotheses:

1. It is possible to use local GIS data, data visualization, and case study techniques to gain new insights about the effects of zoning in select metropolitan areas.
2. Based on the evidence obtained in select metropolitan areas, zoning represents a barrier to the construction of high-density, multifamily housing.

## EVALUATION METHODS

The research for this project began with a review of the literature on exclusionary housing, then focused on six metropolitan areas as study areas. For each study area, the primary sources of information were: 1) GIS and Census data; 2) state and local statutes, plans, and regulations; and 3) interviews with local experts. This section briefly describes the methods used for each of the research steps in this project.

### Literature Review

The literature review provides the foundation for our research. In addition to providing background information regarding previous research, it helped narrow the focus of the research on regulations imposed on housing density and type. See Appendix A for the full review.

### Study Area Evaluations

We conducted in-depth research in six metropolitan areas to test the three research questions articulated above in Chapter 1:

- How much land is zoned for high-density or multifamily housing?;
- How zoning patterns vary across metropolitan areas?; and
- Is zoning a significant barrier to high-density, multifamily housing in the United States.

We conducted both a GIS analysis (quantitative) and an analysis of the regulatory environment (qualitative) of each study area. The regulatory analysis covered the following sources:

- Zoning ordinances, subdivision regulations, and comprehensive plans
- Land use statutes for each pertinent state
- Reports, papers, and interviews with local experts

### Selection of Study Areas

We employed a two-step study area selection process. First, we accumulated and reviewed Census data and previous research done on diverse sites using GIS data. Second, we interviewed representatives from 20 metropolitan areas to collect more information about the availability of GIS data and the likelihood of local cooperation. The quality and availability of metropolitan land data was the most significant factor in choosing our six case study sites from the 20 potential candidates. Ultimately, we chose:

1. Boston, Massachusetts;
2. Miami-Dade County, Florida;
3. Minneapolis-St Paul, Minnesota;

4. Portland, Oregon;
5. Sacramento, California; and
6. Washington, D.C.

### Indicator Analysis and Data Visualization

A primary objective of each case-study analysis was the characterization of residential zoning in major metropolitan areas. We used *indicator analysis* and *data visualization* to meet this objective.

By *indicator analysis,* we mean an analysis of how much land the government zoned for various types of residential uses and what conditions it imposed on each type of development. We focused primarily on land zoned for high-density, multifamily use, but data on land zoned for other types of uses (e.g., detached and attached single-family residential) was also important for data visualization and model estimation.

The following steps were taken to generate indicators of zoning constraints.

- Using GIS metadata and local zoning ordinances, we categorized zoning codes by the type of use they governed, specifically single-family, multifamily, mixed use, commercial, industrial, and public use/open space. This was necessary to allow for comparison across the study areas.
- Using GIS metadata and local zoning ordinances, we calculated the maximum allowed residential density. The highest allowed density was used; for example, if zoning allowed 1.0 to 5.0 dwelling units per acre, 5.0 was assumed to be the maximum residential density.
- We determined total residential acreage for each jurisdiction by adding up the acreage of all residentially zoned areas, except for agricultural residential areas. Residential area includes areas designated for mixed use.
- We totaled the number of housing units allowed by zoning provisions to show the maximum number of units a particular zone could accommodate.
- We categorized residential zones by their allowed maximum density. Most metro areas provided acreage in net acres (which do not include typically undevelopable land, such as streets and public right of ways), which allowed us to calculate the net densities. The Boston study area was the exception. The categories included: 1) very low density (equal to or less than one unit per acre); 2) low density (more than one but less than or equal to eight units per acre); 3) high density (more than eight units per acre); (4) mixed use; and (5) agricultural use. This process allowed a standard comparison across jurisdictions. We computed density without regard to designated use. In other words, most multifamily designations allowed densities that fell into the high-density category; some single-family uses, however, also fell into the high-density category.

We used the results of the analysis to create a set of indicators comparable across the study areas. The indicators incorporate the GIS zoning data and United States Census data from 1990 and 2000. Many of the most informative indicators are normalized by using ratios (e.g., the share of land zoned for high-density use; the ratio of new housing units to new households; and the number of housing units divided by the total residential acres).

In addition to this descriptive analysis, we used the GIS data to do *data visualization.* Data visualization represents data and the relationship among

variables. Such representation can often reveal relationships or provide insights that tabular and graphic representations cannot. Urban development and land-use regulatory data are particularly well suited for this kind of representation. To facilitate visualization, we used the GIS data to create two- and three-dimensional maps to represent densities, allowed use mix, and various other measures in each jurisdiction in the six study areas.

### Qualitative Analysis

To provide further insight into the results of the indicator analysis and data visualization processes, we undertook a regulatory analysis and conducted interviews with local representatives.

We prepared an analysis of the regulatory environment in each study area to better understand the issues behind the availability of land zoned for multifamily housing. The analysis describes:

- the overall state enabling structure affecting the local government;
- the adopted policies toward housing, particularly affordable housing as expressed in the comprehensive plan or various subplans;
- the types of zoning regulations that authorize multifamily housing;
- any special procedures that apply to multifamily housing (e.g., conditional uses); and
- other relevant policies and regulations.

To provide additional context for the quantitative analysis, we interviewed local representatives familiar with the study area's development codes and land-use regulations. These representatives included planners and local government officials, residential developers, home builders' association representatives, and nonprofit providers of affordable housing.

### Statistical Analysis and Simulation

We first conducted some simple statistical tests using the limited data available from the study jurisdictions. We examined correlations between measures of zoning restrictiveness and housing production, as well as prices and rents, and then used some simple equations to explore the impacts of zoning on housing production, prices, and rents.

We then used Metroscope, a regional-level simulation model that predicts where employment and housing are likely to locate, to supplement its analysis of the Portland, Oregon, study area. Appendix G describes the Metroscope model and presents results of two scenarios—one that predicts housing location choices with current zoning in place, and one that predicts housing location choices if certain jurisdictions increase zoned densities in the future.

## LIMITATIONS

The limitations of the study are related to scope, data, and research design.

### Limitations Related to the Scope of the Study

This research does not consider all the possible public policies that might be exclusionary. It evaluates only zoning policies affecting residential uses. Furthermore, it addresses only a subset of factors *affecting* housing affordability (i.e., zoning policies) and does not *directly* address housing affordability (the price of housing, or consumer ability to pay). Specifically, this study excludes from consideration, among other things:

- Development impact fees, land dedications, fees in lieu of improvements
- Development permit allocation systems and permit caps (limitations on the number of residential building permits issued in a year)
- Adequate public facilities ordinances
- Development moratoria
- Building permits and building codes
- The procedures by which development permits are issued for multifamily housing and the duration of those procedures, except to identify those situations where multifamily development can be built only through a conditional use process or by special permit (i.e., not as of right anywhere in the local government's jurisdiction)
- Development standards applicable to multifamily housing (e.g., parking, paving, landscaping, setbacks)
- Subdivision procedures
- Financing
- Discriminatory motives by local governments (i.e., an animus toward certain races or socioeconomic groups, or the disabled)
- The process of zoning change

### LIMITATIONS RELATED TO DATA

One set of limitations relates to the consistency and accuracy of data, which we gathered from each of six study areas. In five of the study areas (Portland, Boston, Sacramento, Minneapolis-St. Paul, and Miami), we gathered the data from a regional governmental body that compiles zoning and GIS data for its own purposes. In the other study area (Washington, D.C.), we gathered the data from each of the counties or cities within the study area because no region-level data were available. This introduced several limitations:

#### Data Currency

Data were more recent in some regions or cities than in others. Some jurisdictional or regional data more accurately represented land use patterns at the time of the study than others. Zoning code data, for example, was often tabulated together with Census data from 2000. Because the data sources were created at different times, comparing data across jurisdictions is difficult.

#### Level of Detail

While some jurisdictions or regions had detailed, parcel-level data available, others had data available only for much larger areas (blocks or zones). Additionally, some spatial data excluded roads and other typically undevelopable areas from calculations of area, while others did not. This difference between net and gross area makes comparing densities difficult.

#### Density Generalization

When we gathered local zoning code data rather than data from a regional government, we had to categorize the zoning codes of the local jurisdictions to a regional standard to complete the analysis. This generalization may not reflect the local densities as accurately as the original zoning.

### Zoning or Comprehensive Plan Designation

In Portland, Miami, Boston, and Washington, current GIS representations of local zoning codes were available. In Sacramento and Minneapolis-St. Paul, however, only future-land-use (comprehensive plan) designations were available. Future-use designations present limitations: (1) They are not legally binding and therefore might not be implemented as planned; and (2) They do not necessarily represent the land uses currently in existence because existing zoning designations may only be roughly consistent with future-land-use designations.

In general, these limitations complicate comparisons from one jurisdiction or region to another, but still allowed us to draw conclusions about land use patterns in the six study areas.

Data limitations specific to a study area's data are discussed in the Chapter 3 section, Study Area Evaluations.

## LIMITATIONS OF RESEARCH DESIGN

An underlying assumption of this research is that high-density and multifamily development are relatively more affordable. By extension, policies that limit dense development contribute to the problem of affordability and are potentially evidence of zoning barriers.

While these assumptions are defensible, restrictions on housing density and type are imperfect measures of barriers for a variety of reasons:

- In some communities, high-density housing is more expensive to own or rent than single-family development. In this study, these communities might appear to have an abundance of affordable housing and still have regulatory barriers in place.
- Regulatory barriers can be imposed through a variety of methods not captured in an analysis of zoning code and density. These barriers include: requirements for implementing zoning code provisions (e.g., requiring additional public process or other burdens for multifamily units); building codes with stricter requirements that add expense for multifamily developments; and other requirements. We discuss some of these issues in more detail in the section on limitations to the study scope.
- Other factors that have little to do with zoning can limit the availability of dense housing in a community. For instance, existing land-use patterns can limit the availability of parcels of sufficient size for multifamily developments, and high land costs can make the development of affordable housing unattractive to developers. In this study, communities with such limitations may appear to have zoning barriers in place because of a relative lack of multifamily units, when their public policies are not the cause of that disparity.

CHAPTER 3

# Findings

This chapter presents the results of the quantitative and qualitative evaluations of six study areas, including statistical analyses and a simulation model analysis. The study areas, listed alphabetically, are:

- Boston, Massachusetts
- Miami-Dade County, Florida
- Minneapolis-St. Paul, Minnesota
- Portland, Oregon
- Sacramento, California
- Washington D.C.

Our study area evaluations are the core of this PAS Report. The purpose of the evaluations is to conduct a quantitative and qualitative analysis of zoning practices, housing production, and housing prices and rents. This chapter begins with an overview of the study evaluation methods and limitations, followed by in-depth analyses of each of the study areas and a summary of the findings from a statistical analysis of key indicators for housing price and density. These analyses include the presentation of:

1. selected metropolitan characteristics and policies,
2. results of GIS analysis of housing type and density,
3. results of interviews with key stakeholders, and
4. a qualitative analysis of the regulations that affect housing type and density in select jurisdictions in the six study areas.

Complete documentation of methods for the qualitative research can be found in Appendix D; documentation of quantitative methods can be found in Appendix E.

## OVERVIEW OF STUDY AREA EVALUATION METHODOLOGY

To obtain new insights into potential barriers to multifamily and high-density development, we completed the following analyses.

### Analysis of Housing Stocks, Production, Prices, and Rents

We used data from the U.S. Census Bureau to analyze levels and trends of growth in populations and housing units. Specifically, we collected 1990 and 2000 Census data on populations, households, the number of single-family and multifamily housing units, median house prices, and median contract rents for each jurisdiction in each of the six study areas.

### Analysis of Zoning Regulations

From GIS metadata and local zoning ordinances, we conducted a quantitative analysis of current zoning relations. Specifically, for each jurisdiction with land-use authority in each study area, we computed a variety of indicators. These indicators include: acres of land zoned for single-family, multifamily, mixed-use, commercial, industrial, and public use-open space; acres of land zoned for low-density and high-density residential use; and the total density of land zoned for residential use.

### Key Stakeholder Interviews

We followed this quantitative analysis with interviews of people familiar with the housing market and land-use regulations in each of the regions. Interviewees included housing developers, planning professionals, academics with expertise in housing and/or planning issues, affordable housing advocates, and regional government officials. Interviewees were asked to discuss the housing market and zoning practices in those jurisdictions where the quantitative analysis indicated that barriers to multifamily housing may exist.

### Regulatory Analysis

We gathered zoning and development codes from several cities and counties within each region that the quantitative analysis and interviews had suggested might offer additional insights on barriers to multifamily housing. The regulatory analysis considers the allowed uses, densities, and required setbacks in both single-family and multifamily residential zones, development fees and processes, and, if available, buildable land inventories to seek evidence of zoning barriers.

## STUDY AREA SELECTION

We used a two-step study-area selection process. In step one, we accumulated and reviewed data from two sources:

- Census data about population, growth rates, and political divisions for the 50 largest metropolitan areas in the US.
- Previous research on GIS data for metropolitan areas, particularly from *Assessment of Regional GIS Capacity for Transportation and Land Use Planning* by the National Center for Smart Growth and Department of Urban and Regional Planning at the University of Illinois (available at www.urban.uiuc.edu/metrogis/).

Based on this information, we identified 20 metropolitan areas as candidates for further consideration. This selection was based on the following criteria:

- We eliminated a few metropolitan areas because they were considered "unwieldy," a term that was mutually understood to mean, in general, "too complicated to deal with." The best example: New York–Newark-Edison, with 18 million people and approximately 25 counties.
- We chose metropolitan areas with the thought of creating a diverse sample based on size, geography, race, and governance structure. It was preferable that metropolitan areas not be all of similar size and from the same part of the country.

In step two, we interviewed representatives from each of the 20 metropolitan areas to collect more information about the availability of GIS data and the likelihood of local cooperation. Based largely on the quality and availability of metropolitan data the 20 metropolitan areas were reduced to six: Boston, Massachusetts; Miami-Dade County, Florida; Minneapolis-St. Paul, Minnesota; Portland, Oregon; Sacramento, California; and Washington D.C.

Once we settled on the six metropolitan areas, we collected GIS data from websites and local governments. After collecting data, we found great variability in the quality and character of data across the six metropolitan regions—and in most cases within the regions. Thus, for each of the study areas, we had to develop standard definitions and classifications to facilitate intra- and inter-regional comparisons. Some of the larger data-related issues include the following:

- For Washington D.C., Boston, Miami-Dade, and Portland, we were able to obtain zoning layers; for Sacramento and Minneapolis-St. Paul, we were able to obtain only future-land-use data.
- For all study area regions, except Miami and Boston, we were able to obtain parcel polygon data; parcel polygons were not available in Miami and Boston.
- For Portland, we were able to obtain a vacant land layer; for all the other jurisdictions, a reliable vacant land layer was not available.
- For Boston, Minneapolis-St. Paul, Portland, and Sacramento, we classified local zoning (or future-land-use) data into consistent categories for the entire metropolitan area; for Washington D.C., and Miami, we had to create our own general layer.
- For Washington D.C., Miami-Dade, Sacramento, and Portland, the number of jurisdictions with land-use authority were relatively small; therefore, we included every jurisdiction in the area with land-use authority in the analysis. In Boston and Minneapolis-St. Paul, however, the number

of jurisdictions with land-use authority was large, and, therefore, we included only jurisdictions with populations larger than 25,000 in the analysis. This had the unfortunate but unavoidable effect of creating spatial discontinuities within these study areas.

- In every jurisdiction, the zoning data captured the most recent—often the current—zoning regulations. The census data on housing stocks, prices, and incomes come from the 1990 and 2000 decennial Census. Thus, any analysis of the effect of zoning regulations on housing prices, rents, and rates of production requires the strong assumption that existing zoning regulations offer a reasonable depiction of the regulatory environment over the previous decade and a half.

*One indicator cannot provide unambiguous evidence of regulatory barriers to multifamily development, but together with other indicators, it can serve to identify where barriers to high-density development may exist.*

- To focus on questions regarding barriers to high-density, multifamily housing, the analysis largely excluded rural areas. For this reason, the analysis focused on municipalities in the Portland, Miami-Dade, Sacramento, Boston, and Minneapolis-St. Paul study areas. In the Washington, D.C., study area, however, most suburban development takes place in unincorporated counties; thus, in this study area, the analysis included the urban (as defined by the Census) parts of unincorporated counties, as well as incorporated areas.
- In part for the reasons described above, the size of jurisdictions in the respective study areas varied extensively. In large jurisdictions with areas designated for both low- and high-density uses, the jurisdiction appeared to have a moderate overall density. In small jurisdictions with largely low- or high-density uses, however, overall zoned densities varied more extremely—even if the underlying development pattern was the same in both circumstances.
- In small jurisdictions, measurement errors can be more pronounced. A sliver in a zoning polygon, for example, can lead to large measurement errors of zoned density in smaller jurisdictions. Large measurement errors in census data on populations, households, and housing units are also common for smaller jurisdictions.

Because of these and other limitations (described in Chapter 2 and Appendix C), all measures reported here are considered "indicators." In other words, while the measures we report provide a basis for comparison, they suffer from a variety of measurement errors. Further, one indicator cannot provide unambiguous evidence of regulatory barriers to multifamily development, but together with other indicators, it can serve to identify where barriers to high-density development may exist. Furthermore, the most reliable indicators are constructed as ratios (e.g., percent of land zoned for high-density development, allowed density per acre, price per unit, or the change in income divided by change in price). Such ratios not only serve to normalize the measure by some common denominator, but also help to offset measurement errors in both the numerator and denominator. Finally, while the census data we collected for each of the six study areas are relatively uniform, the precision and definitions of GIS data vary extensively between study areas. For this reason, comparisons within study areas are more reliable than comparisons across study areas.

### INDICATORS USED IN THE STUDY AREA EVALUATIONS

Table 3-1 shows some of the indicators computed for each of the study areas. You will find these indicators described in detail for each study area and all of the jurisdictions within each study area in Appendix F. Appendix F also contains visual representations of the data (two- and three-dimensional maps).

**TABLE 3-1. INDICATORS OF ZONING, DENSITY, AND HOUSING MIX, 1900 AND 2000**

| | Boston | Miami | Minneapolis | Portland | Sacramento | Washington |
|---|---|---|---|---|---|---|
| **Housing Price** | | | | | | |
| Average Median Value of Owner-Occ. Units (2000) | 249,824 | 241,903 | 150,267 | 184,625 | 150,677 | 207,261 |
| Change in Average Median Value of Owner-Occ. Units (1990-2000) | 56,154 | 92,107 | 52,841 | 102,375 | 27,809 | 25,698 |
| Average Median Rent for Units (2000) | 774 | 705 | 707 | 648 | 581 | 868 |
| Change in Average Median Rent for Units (1990-2000) | 165 | 181 | 193 | 243 | 143 | 179 |
| Average Median Household Income (2000) | 58,194 | 46,177 | 60,420 | 52,585 | 45,284 | 68,402 |
| Change in Average Median Household Income (1990-2000) | 16,276 | 8,229 | 18,109 | 17,834 | 14,773 | 18,252 |
| Average Median Value of Units / Average Median Household Income (2000) | 4.29 | 5.24 | 2.49 | 3.51 | 3.33 | 3.03 |
| Change in Average Median Value of Units / Change in Average Median Household Income (1990-2000) | 3.45 | 11.19 | 2.92 | 5.74 | 1.88 | 1.41 |
| Median Contract Rent for Specified Units / Monthly Median Household Income (2000) | 0.17 | 0.18 | 0.14 | 0.14 | 0.17 | 0.16 |
| Change in Median Contract Rent for Specified Units / Change in Monthly Median Household Income (1990-2000) | 0.16 | 0.19 | 0.13 | 0.15 | 0.15 | 0.15 |
| **Housing Production** | | | | | | |
| Total Housing Units (2000) | 914,991 | 471,557 | 728,567 | 440,847 | 403,290 | 1,484,606 |
| Total Households (2000) | 882,088 | 411,324 | 709,689 | 415,298 | 384,044 | 1,431,243 |
| Tot Multi-Family Housing Units (2000) | 567,406 | 270,175 | 247,567 | 157,446 | 114,699 | 464,479 |
| Change in Housing Units (1990-2000) | 35,845 | 44,383 | 72,767 | 103,551 | 65,539 | 326,785 |
| Change in Households (1990-2000) | 57,223 | 36,096 | 89,799 | 95,659 | 64,103 | 319,069 |
| Change in Multi-Family Housing Units (1990-2000) | 13,660 | 20,896 | 4,132 | 43,875 | 13,018 | 78,306 |
| Change in Housing Units / Change in Total Households | 0.63 | 1.23 | 0.81 | 1.08 | 1.02 | 1.02 |
| Change in Multi-Family Housing Units / Change in Total Housing Units | 0.38 | 0.47 | 0.06 | 0.42 | 0.20 | 0.24 |
| **Zoning - Acres** | | | | | | |
| Total Residential Acres / Total Households | 0.27 | 0.15 | 0.30 | 0.23 | 0.27 | 0.49 |
| Total Residential Acres / Total Acres | 0.73 | 0.57 | 0.57 | 0.63 | 0.49 | 0.41 |
| High Density Acres / Total Residential Acres | 0.39 | 0.60 | 0.07 | 0.23 | 0.15 | 0.06 |
| Low Density Acres / Total Residential Acres | 0.54 | 0.33 | 0.79 | 0.69 | 0.57 | 0.75 |
| Very Low Density Acres / Total Residential Acres | 0.07 | 0.07 | 0.14 | 0.02 | 0.27 | 0.12 |
| **Zoning - Units** | | | | | | |
| Total Zoned Housing Units / Total Existing Housing Units | 1.50 | 1.90 | 1.54 | 2.16 | 1.97 | 3.01 |
| High Density Zoned Housing Units / Total Zoned Housing Units | 0.78 | 0.84 | 0.24 | 0.48 | 0.37 | 0.25 |
| Low Density Zoned Housing Units / Total Zoned Housing Units | 0.21 | 0.12 | 0.73 | 0.38 | 0.61 | 0.55 |
| Mixed Use Zoned Housing Units / Total Zoned Housing Units | * | 0.03 | 0.01 | 0.14 | * | 0.19 |
| Very Low Density Zoned Housing Units / Total Zoned Housing Units | 0.01 | 0.004 | 0.01 | 0.002 | 0.02 | 0.02 |
| **Zoning - Density** | | | | | | |
| Total Zoned Housing Units / Total Residential Acres | 5.83 | 14.87 | 5.23 | 10.07 | 7.51 | 4.77 |
| High Density Units / High Density Acres | 11.79 | 20.61 | 17.78 | 21.01 | 18.20 | 18.46 |
| Low Density Units / Low Density Acres | 2.24 | 5.82 | 4.88 | 5.55 | 8.00 | 3.52 |
| Mixed Use Units / Mixed Use Acres | * | 45.45 | 17.02 | 22.06 | * | 13.71 |
| Very Low Density Units / Very Low Density Acres | 0.54 | 0.97 | 0.35 | 1.00 | 0.57 | 0.87 |

*Source:* National Center for Smart Growth analysis of U.S. Census data from 1990 and 2000, and study area GIS databases. Please see Appendix F for a complete list of data sources used, and for a full description of these indicators.

*Note:* The data in this table include only the jurisdictions included in the study area evaluations; they do not represent data for entire metropolitan areas.

Table 3-1 presents the five sets of indicators for each of the study areas. We computed these indicators using data from the U.S. Census and from GIS data collected at the local level for each jurisdiction in each study area; the aggregate of jurisdictions in each study area is presented in Table 3-1. The table does not present data for entire metropolitan areas.

The first set of indicators measure levels and changes in housing prices, housing rents, and household incomes. All measures are unadjusted for inflation but are readily comparable across study areas. Housing affordability is captured by the ratio of housing prices and rents to incomes. Detailed

analysis of housing affordability is beyond the scope of this report; but for this study, evidence of barriers to multifamily, high-density housing is of greatest interest in jurisdictions where housing is least affordable.

The second set of indicators provides information on existing housing stocks in 2000, housing production rates from 1990 to 2000, and relative shares of single- and multifamily units. Barriers to high-density, multifamily housing can exist in any community; but for this study, barriers to multifamily development are of greatest interest in growing communities. Furthermore, because the size and definitions of each of the study areas vary, the most useful indicators are ratios that reveal, for example, the growth of the housing stock relative to growth in population; the multifamily share of existing housing units; and growth in multifamily housing units relative to growth in total housing units. Of particular interest, for example, are jurisdictions where the rate of housing development is high, but the existing proportion and growth in the proportion of multifamily housing is low.

*Our intent is to analyze the problem in a new and direct way, illustrating how various indicators can be used to identify and monitor potential barriers, and create the foundation for a regional, state, and federal policy response.*

The third set of indicators characterizes existing zoning regulations measured in acres. Again, because the size of jurisdictions varies extensively, the most revealing indicators are expressed as ratios. Total zoned residential acres divided by total population, for example, captures the total acres zoned for residential use for each resident. Zoned residential acres divided by total acres represents the share of land zoned for residential use. Acres zoned for high-density use divided by total acres zoned for residential use captures the share of residential land zoned for high-density use. These indicators offer quantitative measures of the relative extent to which barriers to multifamily, high-density development could be the result of low proportions of *land* zoned for such use.

The fourth set of indicators characterizes existing zoning regulations measured in housing units. Zoned housing units are measured as acres zoned for residential use times the maximum allowed units per acre. Once again, ratios are most telling. Capacity for new housing development, for example, is captured by the ratio of housing units allowed by zoning relative to existing housing units. Regulatory capacity for high-density housing is captured by the ratio of housing units zoned for high-density development relative to total housing units allowed by zoning. These indicators offer quantitative measures of the extent to which barriers to multifamily, high-density housing could be the result of low proportions of *units* zoned for such use.

The fifth set of indicators characterizes existing zoning regulation measured in density for land in all density categories and for land in specific density categories. These indicators of density offer quantitative measures of the extent to which high-density, multifamily development could be the result of constraints on development *density*.

The section that follows describes the indicators for each jurisdiction in each study area. Our intent in presenting these indicators is not to identify specific jurisdictions where zoning represents a potential barrier to high-density, multifamily housing. Instead, our intent is to analyze the problem in a new and direct way, illustrating how various indicators can be used to identify and monitor potential barriers, and create the foundation for a regional, state, and federal policy response.

## OVERVIEW OF STUDY AREA EVALUATIONS

This chapter does not present detailed information about all of the indicators in Table 3-1, but focuses on a few key indicators. Detailed information about all the indicators is presented in Appendix F. This section identifies jurisdictions that, relative to the rest of their study area, have:

- high median home prices;
- a low percentage of multifamily units relative to the total of units in the jurisdiction;

- low average zoned density (measured as total zoned units per zoned residential acre); and
- few acres of land zoned for high-density use.

This section also summarizes the qualitative research conducted as part of this research: regulatory analyses and key stakeholder interviews. You will find the complete results of the qualitative research in Appendix E.

These indicators are used to address the following questions:

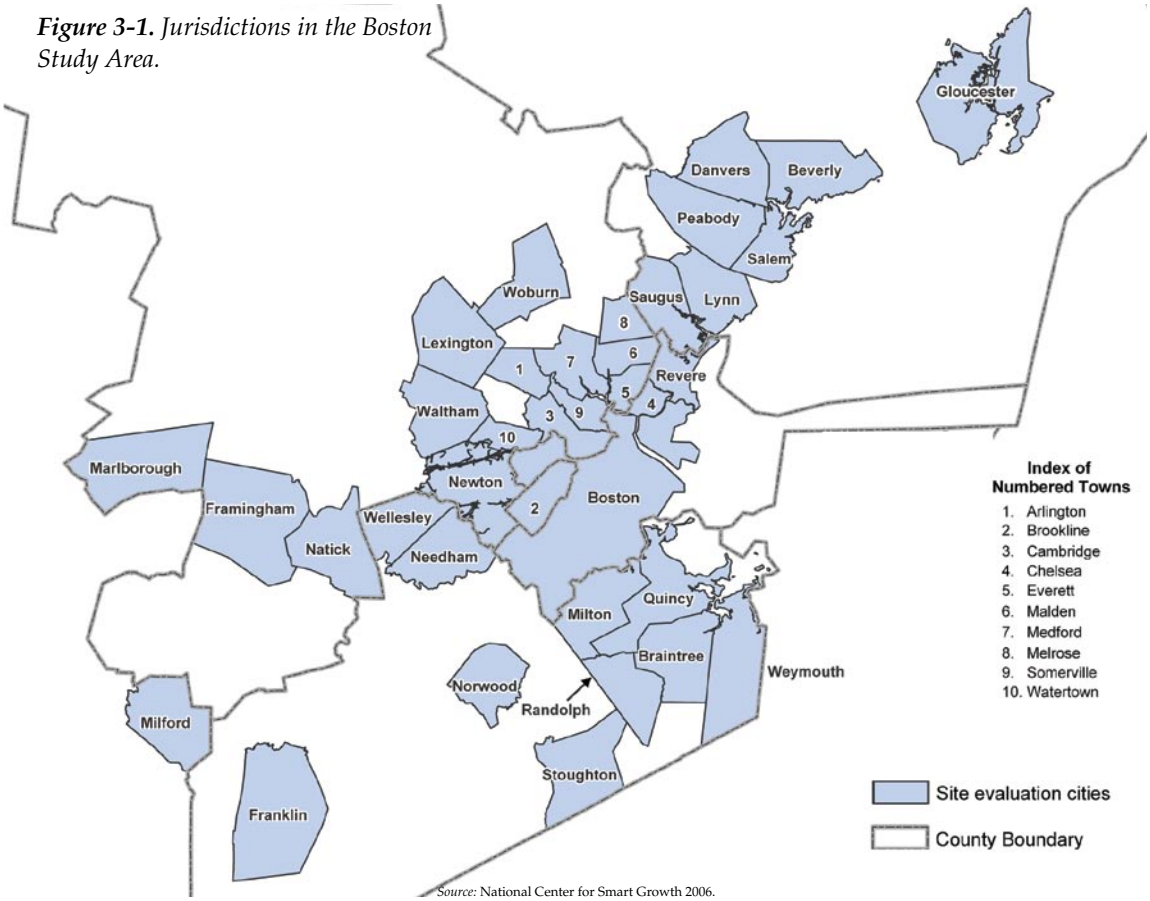
- In which jurisdictions is housing least affordable?
- In which jurisdictions is multifamily development least common?
- In which jurisdictions is there little land zoned for high-density, multifamily use?
- In which jurisdictions are the density constraints imposed by zoning most restrictive?

## BOSTON, MASSACHUSETTS

The Boston study area is located in the Northeast region at the northern end of the urban eastern seaboard and includes parts of five counties: Essex, Middlesex, Norfolk, Suffolk, and Worcester. Overall, the Boston study area is densely developed with high housing prices, high rents, and a relatively high share of multifamily units. Growth in housing prices and rents was in the middle range of the six study areas, but the share of new multifamily housing units fell significantly during the period 1990 to 2000 when compared with historic levels.

Figure 3-1 shows the jurisdictions included in the Boston study area. Because of the large number of jurisdictions in the Boston metropolitan area, jurisdictions

***Figure 3-1.*** *Jurisdictions in the Boston Study Area.*




*Source:* National Center for Smart Growth 2006.

**KEY INDICATORS: BOSTON**

*Jurisdictions with the highest median home price:*

- Brookline ($599,500)
- Wellesley ($548,100)
- Newton ($438,400)
- Lexington ($417,400)

*Jurisdictions with the lowest percentage of multifamily:*

- Wellesley (14 percent)
- Lexington (16 percent)
- Milton (19 percent)
- Franklin (24 percent)

*Jurisdictions with the lowest average zoned density (zoned units/acre):*

- Franklin (1.25)
- Stoughton (1.35)
- Danvers (2.24)
- Milford (2.52)

*Jurisdictions with the fewest residential acres zones for high-density residential use:*

- Braintree, Salem, and Stoughton (0 percent)
- Lexington and Danvers (1 percent)
- Saugus (2 percent)

included in the analysis are limited to those with populations greater than 25,000. Using this criterion keeps the analysis focused on jurisdictions of significant size but eliminates small and perhaps rapidly growing jurisdictions where barriers to multifamily housing could well exist.

The region grew about 4 percent in population between 1990 and 2000, though growth rates in some of the cities in the region were substantially higher than in the region as a whole. Jurisdictions that added more than 5,000 residents include the central city of Boston, the inner-city suburbs of Cambridge and Chelsea, and the more suburban Franklin and Lynn.

## Regulatory Context

Cities and towns in Massachusetts have primary authority for planning and regulatory control of land use and development; there is no single state planning agency. Cities and towns with populations greater than 10,000 must establish planning boards, which are empowered to undertake studies of and to prepare plans for the resources, possibilities, and needs of the municipality. These boards are required to prepare a master plan that may serve as a basis for decision making regarding the long-term physical development of the municipality.

Most cities or towns are members of regional planning commissions, which develop comprehensive plans for their regions and assist the local planning boards of the cities and towns in their areas. The regional planning commission for the Boston Metropolitan area is the Metropolitan Area Planning Council (MAPC). MAPC is responsible for the preparation of the regional plan for the 101 cities and towns under its jurisdiction. Its plan is the MetroPlan, revised in 2005. Housing is included as one of the plan elements; the stated housing goal is to provide a variety of housing opportunities.

A new law, the Smart Growth and Housing Production Act, creates incentives to produce affordable housing. To participate in the voluntary plan, municipalities agree to create special "smart-growth" zoning districts close to transportation nodes, town centers, or vacant retail and commercial sites where housing can be built on less costly lots. The law requires that at least 20 percent of residential units in projects with more than 12 units are affordable and provides mechanisms to ensure that at least 20 percent of the total residential units built in the districts are affordable. Participating jurisdictions are eligible for some incentives to build affordable housing.

## Key Indicators

As for every study area, the indicators for the Boston study area were derived from data from the U.S. Census Bureau and from local GIS sources. Because the jurisdictions in the Boston area were limited to those with populations greater than 25,000, the Census data provide reasonably accurate information for every jurisdiction (i.e., problems of sample size are relatively minor). The GIS zoning data obtained from MassGIS are of reasonably high quality, but the generalization of local ordinances is coarse and masks some important distinctions in density. The data also do not include a mixed-use category.

***Housing prices and rents.*** Housing prices and rents in the Boston study area rose significantly in the 1990s, and, by 2000, were relatively high. Housing values increased in every jurisdiction between 1990 and 2000. Arlington, Milton, Cambridge, Lexington, Newton, Wellesley, and Brookline all had 2000 median home prices more than 30 percent above the regional median home price.

Over the 1990-2000 period, home values increased faster than incomes in almost all Boston-area jurisdictions. In Brookline, Cambridge, Lexington, Needham, Newton, Watertown, and Wellesley, home values rose more than four times faster than incomes.

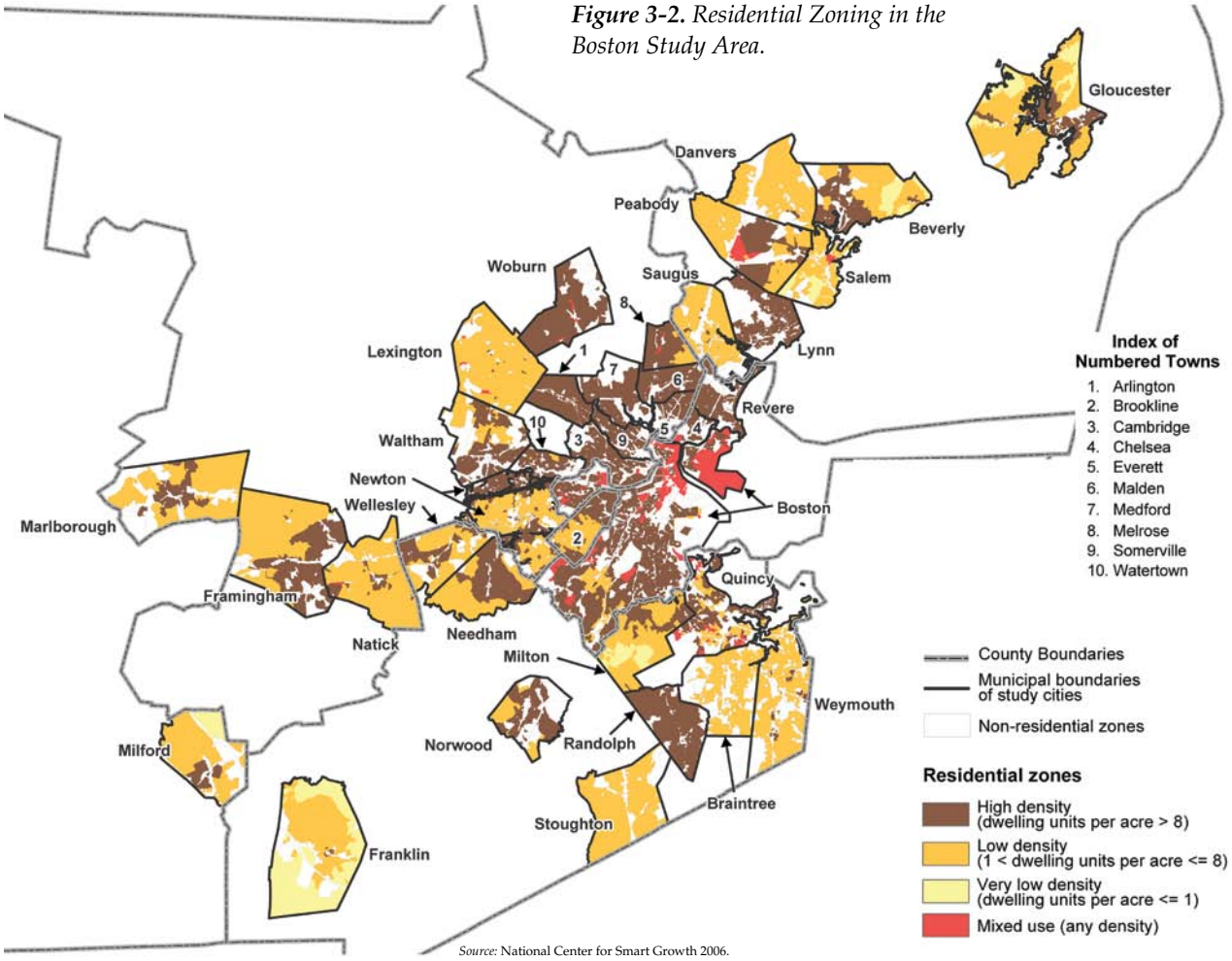
In 2000, average rents were highest in Newton, Needham, Lexington, and Brookline. With the exception of Newton, rents rose most rapidly from 1990 to 2000 in the same jurisdictions.

***Housing production and mix***. Compared with the other study areas, Boston's housing stock grew slowly over the 1990s, increasing just 4.5 percent. The housing stock grew 40 percent slower than did population (measured in households). Moreover, much of what new development occurred was not high-density development. While, in 2000, about 62 percent of all housing units were multifamily, between 1990 and 2000 only about 32 percent of the new housing units built were multifamily.

Several inner suburbs lost population, but nearly all jurisdictions gained housing units. Most jurisdictions gained multifamily units between 1990 and 2000, but in most jurisdictions the share of multifamily units declined from 1990 to 2000; 11 jurisdictions lost multifamily housing units over this period. Cities with low or negative multifamily proportions of multifamily housing units include Beverly, Franklin, Lexington, Milton, Glouster, Malden, Medford, Milford, Natick, Norwood, Peabody, Randolf, Saugus, Wellesley, and Weymouth.

***Zoned density and mix***. Much of the residential land in the Boston metropolitan area is zoned for single-family use but at moderately high densities. Sizable proportions of land in many jurisdictions fall into the MassGIS category R5, which designates single-family use up to 8.7 units per acre. Because the generalization rules used in this study places land zoned for greater than

***Figure 3-2.*** *Residential Zoning in the Boston Study Area.*




*Source:* National Center for Smart Growth 2006.

eight units per acre in the high-density category, much of the single-family-zoned land in the Boston area is classified as zoned for high-density.

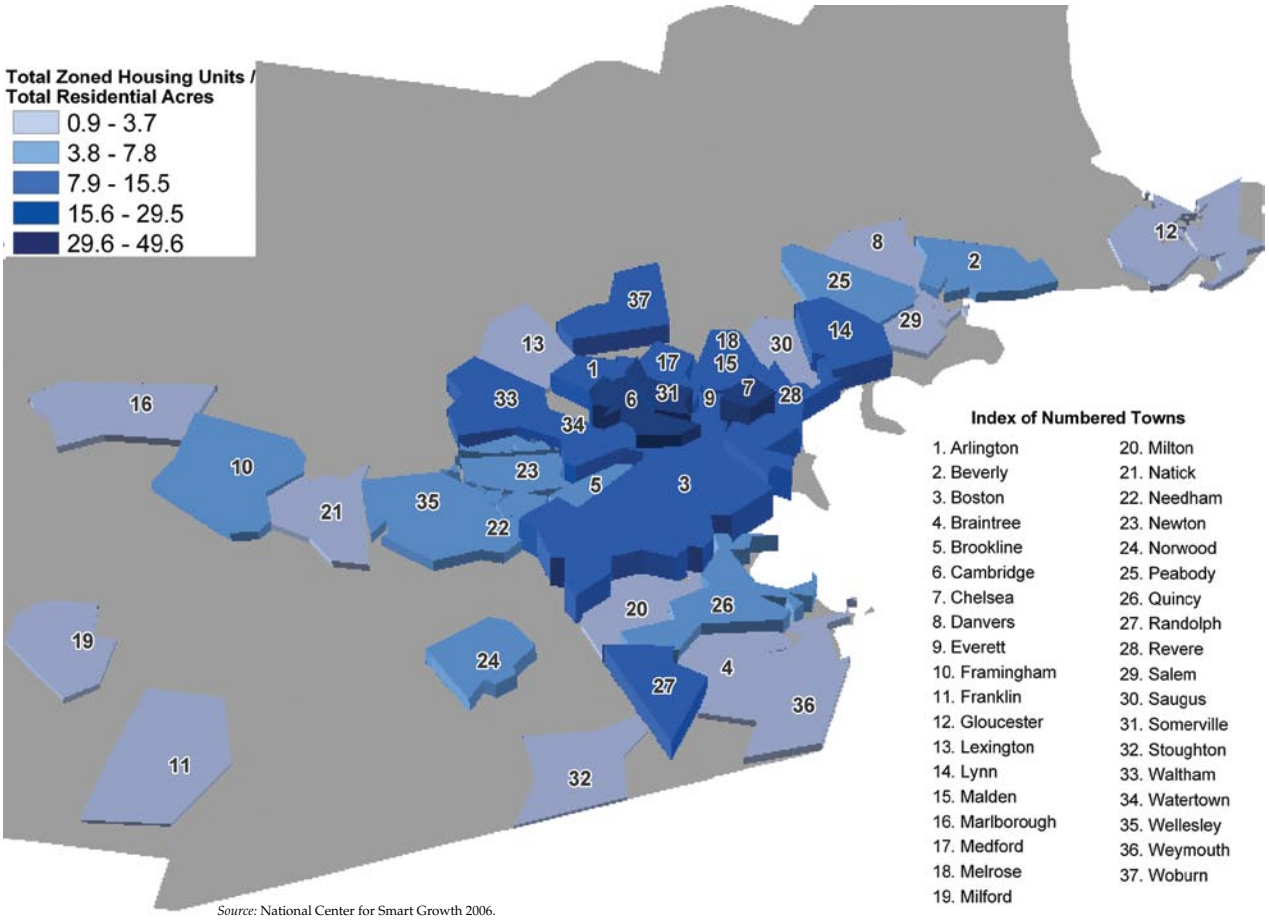
Even with this generous definition, however, several jurisdictions have little or no land zoned for high-density *uses*. Jurisdictions with less than 10 percent of residential land zoned for high-density include Braintree, Danvers, Franklin, Lexington, Natick, Salem, Saugus, Stoughton, and Weymouth. Jurisdictions with less than 10 percent of all units zoned for high-density include Braintree, Danvers, Franklin, Lexington, Salem, and Stoughton.

For an old, eastern city, the overall zoned density in the study area is relatively low, at just under six units per acre. Jurisdictions zoned for less than three units per acre include Braintree, Danvers, Franklin, Glouster, Lexington, Milford, Milton, Natick, Salem, Saugus, and Stoughton.

### Data Visualization

Additional insights on intrametropolitan patterns of zoning and housing prices are available by examining Figures 3-2, 3-3, and 3-4. As shown in Figure 3-2, the overall pattern of zoning in the Boston study area largely follows the pattern predicted by urban economic theory. High-density, mixed-use zones (shaded in red) are located in the center of the metropolitan area; these are surrounded by high-density residential uses (shaded in brown), and these are surrounded by low-density residential zones (shaded in orange). Because the high-density zones in Figure 3-2, however, include all residential zones greater than eight units per acres, Figure 3-2 masks some of the differences in densities between jurisdictions and perhaps overstates allowable densities.

***Figure 3-3.*** *Zoned Densities in the Boston Study Area.*




*Source:* National Center for Smart Growth 2006.

Figure 3-3 offers additional information on zoning patterns in the Boston study area. In Figure 3-3, increasing densities are illustrated in increasing heights and darker shades of blue. As shown, Cambridge, Chelsea, and Sommerville are jurisdictions with high overall residential densities. All the other jurisdictions have residential densities less than 15.5 units per acre (most of these densities fall below 10 units per acre).

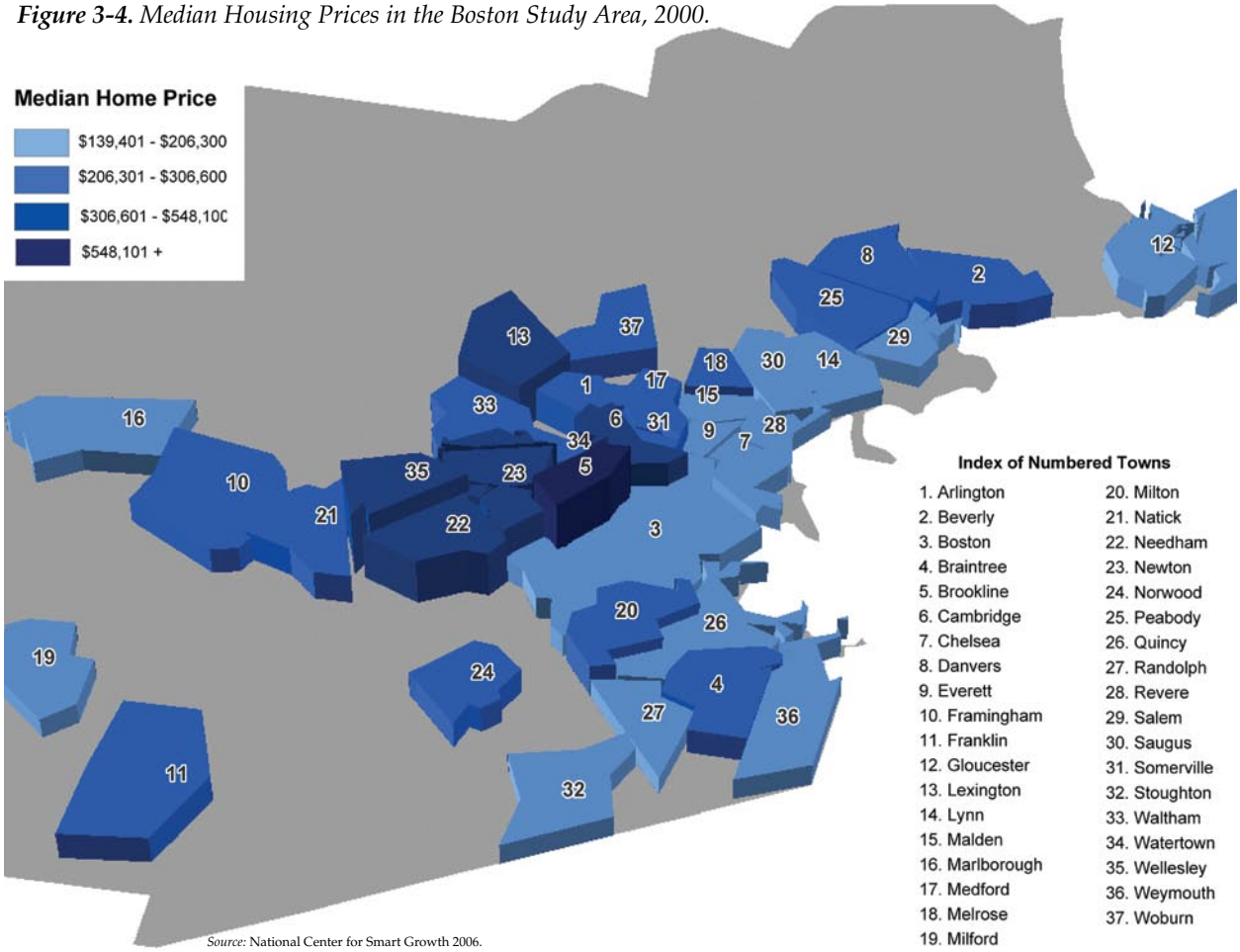
Figure 3-4 illustrates the pattern of housing prices in the study area. As shown, Brookline has the highest median housing prices (greater than $599,000); Wellesley and Lexington have housing prices between $306,000 and $548,000; and Needham, Newton, and Cambridge have housing prices between $206,000 and $306,000. Contrasting Figure 3-4 with Figure 3-3 reveals that many of the highest-priced communities have among the lowest zoned densities. This combination of high prices and low zoned densities does not provide prima facie evidence that zoning represents a barrier to multifamily, high-density development in these communities. But it does suggest these communities might be a good place to look for such barriers.

### Key Stakeholder Interviews

To gain a local perspective on the data analysis, we interviewed four people familiar with the public policy and development practices surrounding multifamily housing in the Boston metropolitan area.

Interviewees include a program manager with a nonprofit research foundation who is completing a study of zoning bylaws in the Boston area, a Ph.D. student at the Kennedy School of Government at Harvard University, a

***Figure 3-4.*** *Median Housing Prices in the Boston Study Area, 2000.*




*Source:* National Center for Smart Growth 2006.

vice president of a local bank who is also an official with the Home Builders Association of Massachusetts, and a home builder.

In general, those interviewed agreed a severe housing affordability problem exists in the Boston area and the lack of land zoned for multifamily housing, coupled with the practice of requiring that all multifamily developments be approved by special permit rather than as of right, contributed to a shortage of multifamily housing. The Ph.D. student had evaluated 187 zoning bylaws in the Boston area. She found that 103 towns allowed multifamily residences by special permit or flexible development for cluster development.

Nonetheless, those interviewed also suggested that land development regulation in Massachusetts is complex; lack of land and special permitting requirements are only part of the problem. As one interviewee commented, "It's pretty clear that in some communities the land-use regulations are restricting new housing growth. It's not clear which regulations are really the binding constraints." Another interviewee observed that Massachusetts is a strong home rule state, "which means each community has its own set of zoning, subdivision, wetland, and septic regulations. We're a disaster. You have the state wetlands act overridden by local governments, and local boards of health overriding the [Massachusetts] Department of Environmental Protection [on wastewater protection.]" A third observed: "I think there is explicit snob zoning—large lots for single-family residences, very limited multifamily." The interviewee pointed to "non-science-based regulations on wetland, septic systems, and subdivision regulations in terms of road construction." Together, he said, these constituted "a series of regulations to discourage and prohibit housing production."

Interviewees reported that the problem is more severe in smaller towns—those with populations less than 25,000 (and excluded from the Massachusetts zoning database sample). The builder-developer pointed to the following towns that have severe barriers to multifamily housing: Georgetown, Topsfield, Boxford, Wenham, Hamilton, Norwell, and Bridgewater.

### Regulatory Analysis

This analysis looked at planning policies and regulations affecting availability of multifamily housing in the Towns of Framingham, Lexington, Milton, Wellesley, and Weymouth, Massachusetts, outside of Boston. All towns are 25,000 or greater in population.

Four of these five towns had regulations that posed significant barriers to the development of multifamily housing; indeed, they were the most severe restrictions we found among all the communities in the six regions we studied.

While Framingham allowed multifamily housing in the 1970s, it now prohibits it entirely, although it does have a specialized permitting procedure to build "affordable housing."

Lexington does not allow multifamily housing as of right, only by special permit, and its zoning code contains no minimum lot area per dwelling unit for multifamily housing. Its land-use plan contains no density standard that would allow a benchmark for the determination of appropriate residential-use districts.

The Milton Zoning Bylaws do not allow multifamily housing as of right in any district. In fact, the term "multifamily" or "apartment" is not defined in the bylaws. Attached dwelling units may be constructed, but only by a special use permit granted by the planning board under an "attached cluster development" provision in the bylaws and only in a "Residence E" District.

Even though Wellesley has some vacant land available for multifamily housing development in a "General Residence" district, multifamily hous-

ing cannot be built there, and there is scant other vacant land on which multifamily housing could be constructed. Indeed, the zoning bylaws favor townhouses over multifamily housing.

Only Weymouth appears to have progressive policies and corresponding regulations regarding multifamily housing.

Massachusetts has a special law, Chapter 40B, that allows an appeal of a denial of a comprehensive permit for affordable housing projects or in cases in which the imposition of conditions on such permits is "unreasonable." The law sets a statewide 10 percent of a jurisdiction's housing must be affordable. Despite their restrictive development regulations, two of the five communities reviewed here exceeded that standard as of November 2005: Framingham with 10.2 percent, and Lexington, with 11.3% percent Massachusetts Department of Housing and Community Development, *Chapter 40B Subsidized Housing Inventory,* www.mass.gov/dhcd/ToolKit/shi.pdf (accessed December 12, 2005).

### Summary

The Boston metropolitan area has one of the most severe housing affordability problems in the nation. This problem arises from tightly controlled local land markets that do not accommodate housing stock growth even when the regional economy is booming. The effect is to bid up the cost of both new and existing housing.

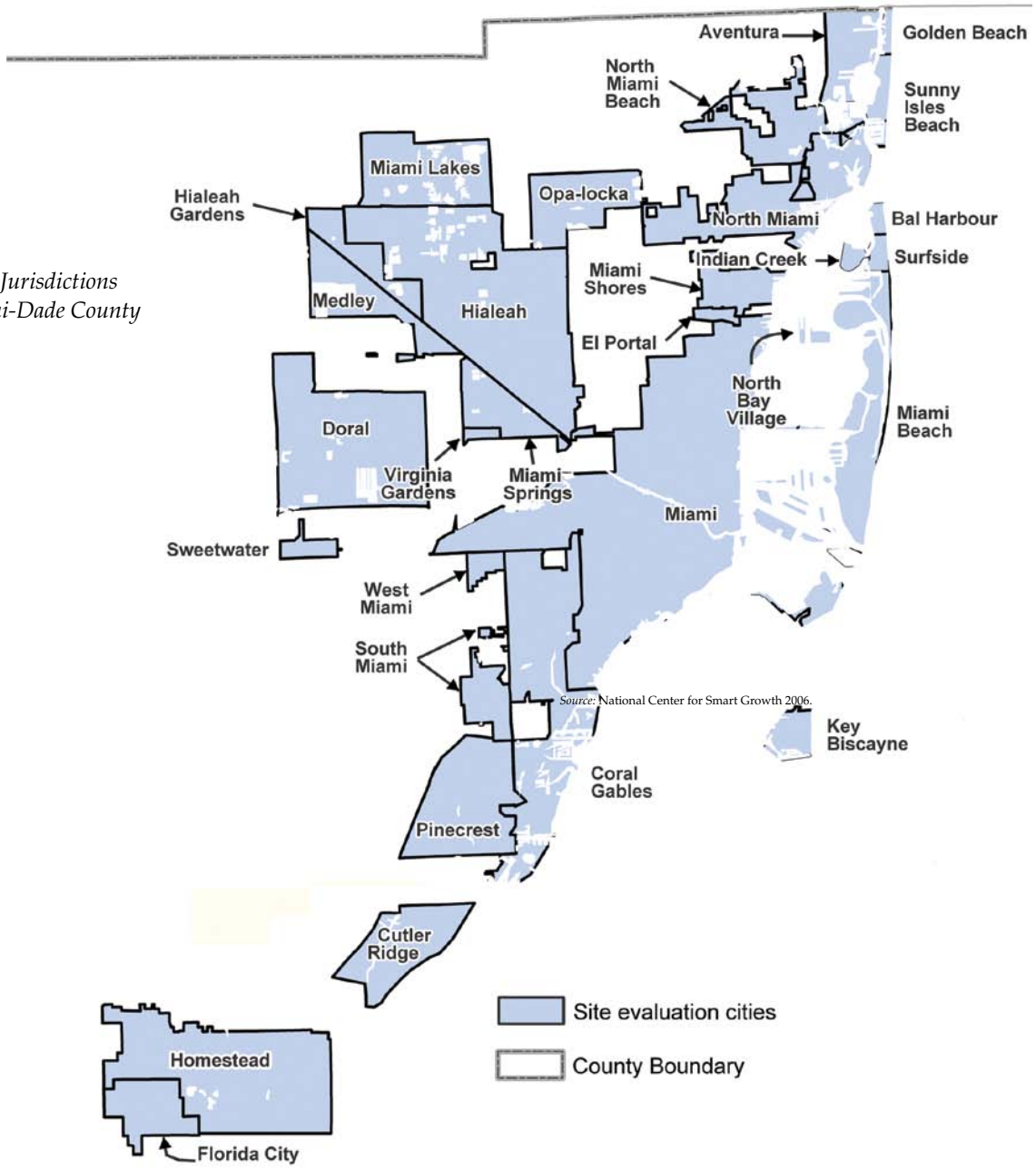
In the study area, zoned density varies widely, from 1.28 units per acre in the least densely zoned jurisdiction to 24.32 units in the most densely zoned jurisdiction. Boston itself is dense but has high housing prices and a consistently high share of multifamily housing; Cambridge follows the same pattern. Other local governments are small and practice zoning with limited state and no regional oversight. Communities with little or no land zoned for high-density and multifamily housing tend to have the highest housing prices. The qualitative analysis revealed that some of the communities with low densities and high prices appear to have land-use policies in place that impede the development of multifamily housing. If multifamily housing is allowed at all, it is only allowed through a discretionary permitting procedure, such as a conditional use permit, and not as of right through predevelopment zoning of land for multifamily uses.

The Commonwealth of Massachusetts's response to local zoning practices has been to establish a state-level housing appeals board with the authority to overturn local decisions that reject affordable housing projects or impose conditions on them that make them economically infeasible. While this law, Chapter 40B, has had some success in getting otherwise intractable local governments to approve affordable projects, it does not address the larger issue of increasing the supply of *all* housing, in particular, multifamily housing, whether or not it is for low- and moderate-income households, in response to regional changes in demand. Until housing policies address the issue at this level, the Boston area will continue to have among the most expensive housing in the nation.

## MIAMI-DADE COUNTY, FLORIDA

The Miami-Dade study area lies at the southeastern-most tip of the nation, and its development patterns are shaped by its warm climate and coastal amenities. The housing market is strongly influenced by the demand for vacation homes, especially for retirees. As a result, housing prices in the study area rose rapidly from 1990 to 2000 and were high in 2000 relative to other study areas. Rents in 2000 and increase in rents between 1990 and 2000 were in the middle range of the study areas. Compared to the other study areas, median incomes in 2000 were low; incomes also increased the least from 1990 to 2000.

The study area is presented in Figure 3-5. As shown, it includes every city in the county with land-use authority but excludes unincorporated Dade County. Jurisdictions vary significantly in size; many are quite small. Several of the southern most jurisdictions were significantly affected by Hurricane Andrew, especially Homestead.




*Source:* National Center for Smart Growth 2006.

***Figure 3-5.*** *Jurisdictions in the Miami-Dade County Study Area.*

The study area grew in population by about 8 percent from 1990 to 2000, but growth rates vary considerably by jurisdiction. Miami, the central city, grew slowly, but many older and smaller jurisdictions lost population. Like most other metropolitan areas, the most rapid growth is occurring in municipalities located at the urban fringe. Most of the population growth from 1990 to 2000 occurred in Aventura, Doral, Hialeah, Hialeah Gardens, Miami Lakes, and North Miami, all located at the urban edge.

## Regulatory Context

Florida's integrated planning and growth management system includes plans and regulations at three levels of government. The State Comprehensive Plan provides policy direction for all government levels. State agencies must adopt agency plans to implement pertinent portions of the State Comprehensive Plan. At the regional level, each regional planning council must adopt a regional plan consistent with the State Comprehensive Plan but shaped by the circumstances and conditions of the region. At the local level, each county and municipality must adopt a local comprehensive plan consistent with the state and regional plans. The state government reviews local plans for compliance with statutory criteria and administration rules.

A regional planning council (RPC) exists in each of the comprehensive planning districts of the state. Regional planning councils are also recognized as having the capacity to offer technical assistance to local governments and to meet other needs of the communities in each region.

An RPC is responsible for preparing a strategic regional policy plan. The strategic regional policy plan is required to address five subject areas: affordable housing, economic development, emergency preparedness, natural resources of regional significance, and regional transportation. Regional plans must be consistent with the state plan. Upon adoption, the strategic regional policy plan shall provide the basis for regional review of developments of regional impact, regional review of federally assisted projects, and other regional comment functions. Adoption of regional plans is by two-thirds vote of the council's governing board (Florida Statutes, Sections 186.501 et seq.).

## Key Indicators

Jurisdictions in the study area vary greatly in size; many are quite small. For these jurisdictions, the census data are subject to considerable measurement error, especially for data series estimated using sampling procedures. Furthermore, because the jurisdictions are small, the jurisdiction-level indicator values vary extensively because they capture small-area differences in population and housing patterns. The zoning data were obtained from Miami-Dade County and generalized into density categories.

***Housing prices and rent.*** Median housing values in the Miami-Dade study area are high and rose rapidly from 1990 to 2000. Housing values increased in every jurisdiction in the study area except Miami Beach. Miami Beach, Coral Gables, Pinecrest, Key Biscayne, Bal Harbour Village, Golden Beach, and Indian Creek all have 2000 median home prices that are more than double the regional median.

Although housing values vary extensively, they have increased faster than incomes in every jurisdiction in the study area except Miami Beach. As a ratio of home value to income, housing units are least affordable in Bal Harbour Village, Indian Creek, Miami Beach, and Sunny Isles Beach. In Key Biscayne, Sunny Isles Beach, Miami, and Bal Harbour Village, home values rose more than 10 times faster than incomes between 1990 and 2000.

Average rents vary dramatically among jurisdictions and are highest in Aventura, Bal Harbour Village, Golden Beach, and Key Biscayne. Except in Doral, where rents fell, and in Key Biscayne, where rents rose by three times the average for the study area, changes in rents between 1990 and 2000 did not vary extensively.

***Housing production and mix.*** Several jurisdictions in the study area lost housing units between 1990 and 2000. Some lost significant multifamily housing stock during this same period. Miami Beach lost 1,227 units, North Miami lost 950, and Opa-locka lost 327.

**KEY INDICATORS: MIAMI–DADE COUNTY**

*Jurisdictions with the highest median home price:*

- Indian Creek ($1 million +)
- Golden Beach ($739,300)
- Bal Harbour Village ($664,300)
- Key Biscayne ($615,500)

*Jurisdictions with the lowest percentage of multifamily units:*

- Golden Beach and Indian Creek (0 percent)
- Miami Shores (12 percent)
- El Portal and Medley (15 percent)

*Jurisdictions with the lowest average zoned density (zoned units/residential acre):*

- Pinecrest (2.06)
- Miami Shores (3.37)
- Cutler Ridge (5.43)

*Jurisdictions with the lowest percentage of residential acres zoned for high-density use:*

- Miami Shores (1 percent)
- Pinecrest (3 percent)
- Cutler Ridge and El Portal (11 percent)

For many communities, multifamily units made up a significant share of total new housing units. In Bal Harbour Village, Homestead, North Bay Village, Sunny Isles Beach, Virginia Gardens, and West Miami, every net housing unit added from 1990 to 2000 was multifamily.

Other communities gained multifamily units, but as a share of total new housing units, very few were multifamily. For every 100 new housing units in Coral Gables, Hialeah Gardens, and Miami Lakes, 30 or fewer were multifamily, a ratio substantially lower than the region as a whole.

***Zoned density and mix.*** In the southern portion of the study area, most of the land is zoned for single-family residential use. In the northern portion, the zoning is more varied with multifamily, commercial, and single-family zones interspersed. Mixed-use and multifamily zones are concentrated along transportation corridors. Very little land within incorporated cities is zoned for agricultural use. The concentration of housing units per acre is highest along the coast and in the City of Miami.

In several jurisdictions—El Portal, Golden Beach, Pinecrest, and Surfside—more than 90 percent of total land area is zoned for residential use. Of these communities, only Pinecrest has a very low percentage of its residential land zoned for high-density housing uses. In contrast, all of Golden Beach's residential land is zoned for high-density housing uses. While Golden Beach has no multifamily units, all of its single-family development is greater than eight units per acre, which is the criterion in this study for "high density," and therefore it is classified as high density.

Throughout the study area, 61 percent of residential acres are zoned for high-density use. Cutler Ridge, El Portal, Miami Shores, Pinecrest, and Surfside have less than 15 percent of residential land area zoned for high-density use; Miami Shores and Pinecrest have almost none.

Regionally, total zoned residential density varies from 2.1 units per acre in Pinecrest to 49.6 units per acre in Sunny Isles Beach. Miami Shores and Pinecrest are zoned for the lowest overall densities.

### Data Visualization

Intrametropolitan patterns of zoning and housing prices are illustrated in Figures 3-6, 3-7, and 3-8. As shown in Figure 3-6, much of the Miami-Dade study area is zoned for high-density use. Most of Miami is zoned for high-density use, as are much of several suburban jurisdictions. As in other metropolitan areas, low-density zones are more common in the urban fringe than in central locations.

Figure 3-7 offers additional information on zoning patterns in the Miami-Dade study area. Overall zoned densities tend to fall with distance from the Atlantic shore, but with notable exceptions. Surfside, North Miami, and Coral Gables are shoreline communities with low overall zoned densities.

Figure 3-8 illustrates the pattern of housing prices in the study area. With the exception of the city of Miami, the highest housing prices are found along the Atlantic shore with very high prices in Indian Creek, Golden Beach, Key Biscayne, and Bal Harbour and high prices in Coral Gables and Pinecrest. But as shown in Figure 3-7, many of these high priced communities have among the lowest zoned densities. Zoned densities in Coral Gables and Pinecrest are particularly low given the high prices in these communities.

### Key Stakeholder Interviews

We interviewed five people familiar with the public policy and development practices affecting multifamily housing development in the Miami-Dade metropolitan area. The purpose of the interviews was to gain a local perspective on the data analysis conducted as part of the case study of the region.

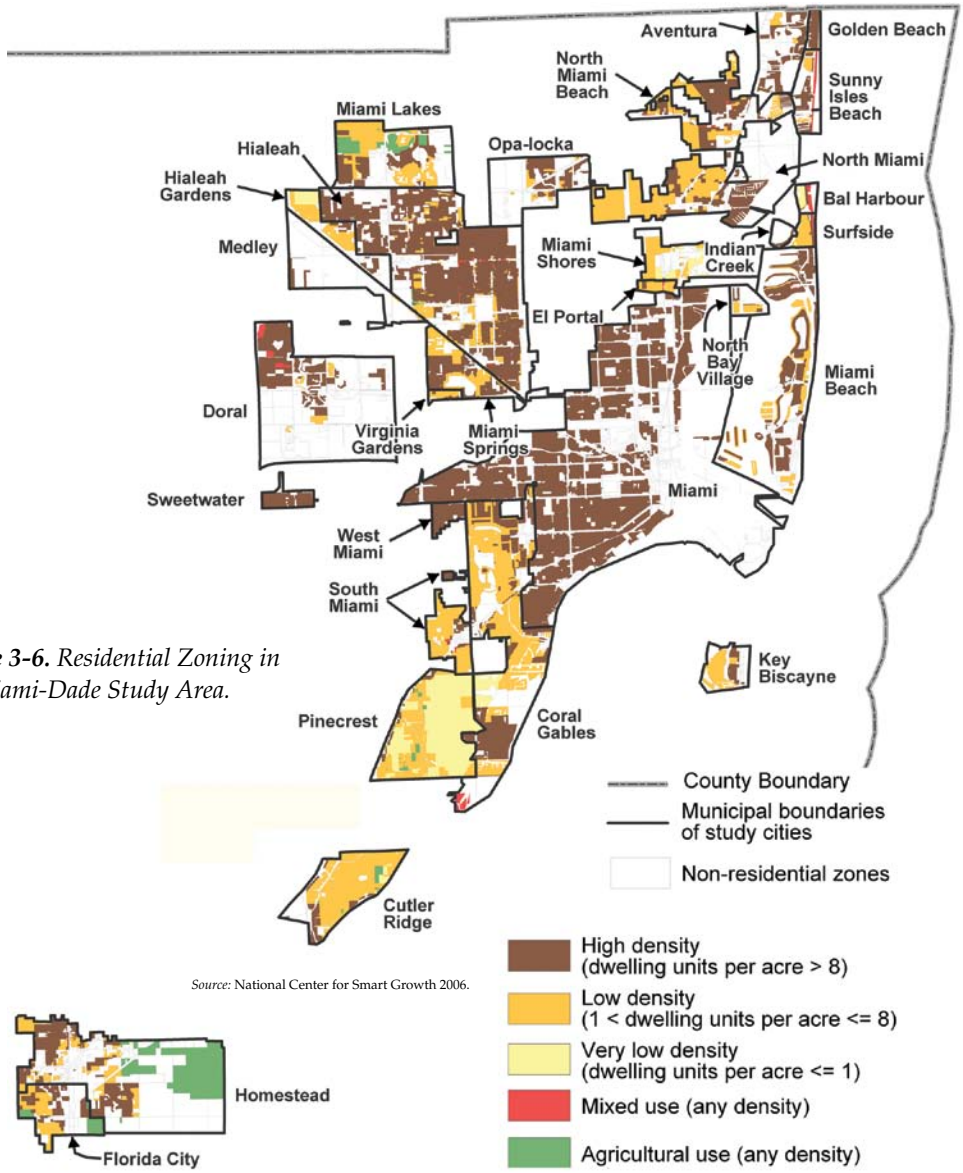



***Figure 3-6.*** *Residential Zoning in the Miami-Dade Study Area.*

*Source:* National Center for Smart Growth 2006.

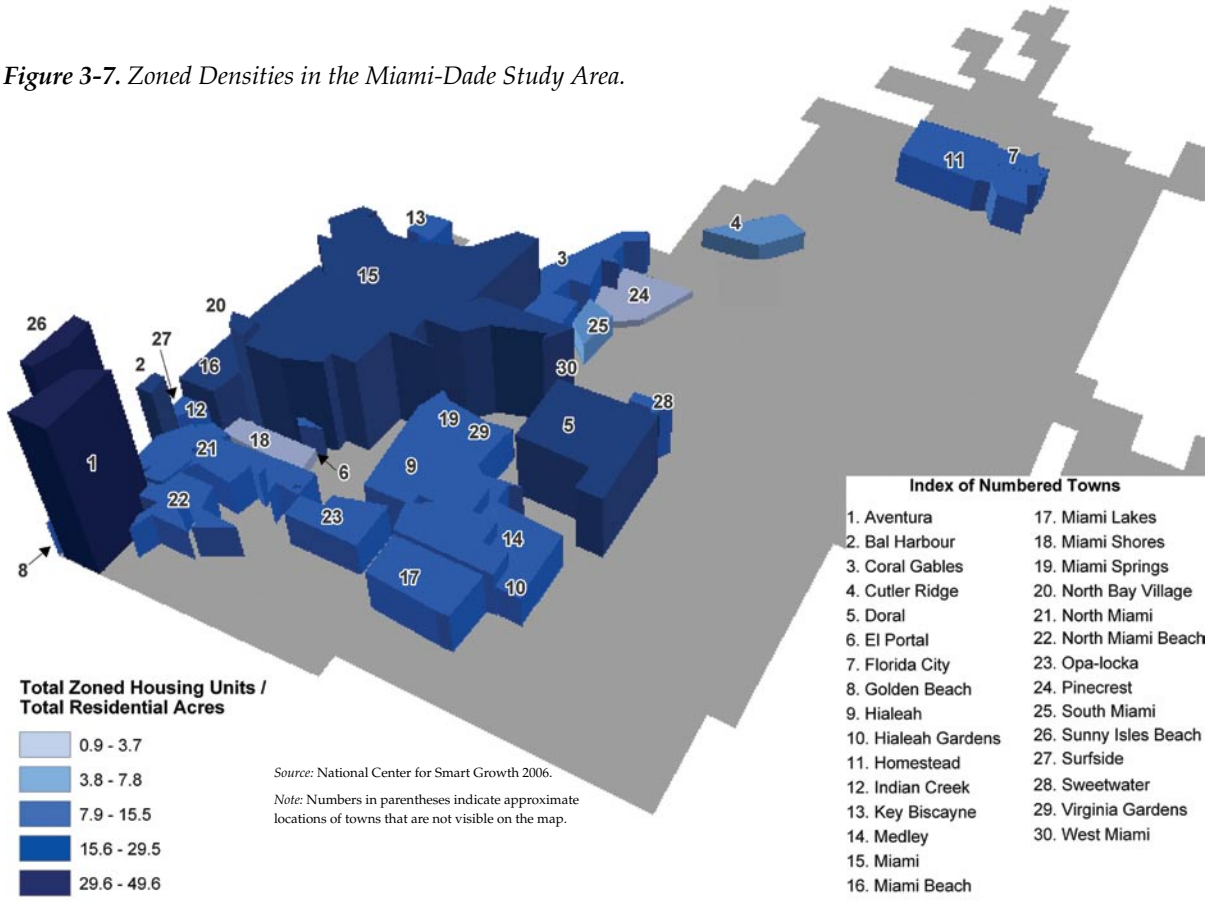
Interviewees included a senior planner at the South Florida Regional Planning Council, the vice president of a development company that specializes in residential development, the director of the area housing finance authority, the director of a center for urban studies at Florida Atlantic University, and a representative of the county administrator for one of the counties in the region.

Interviewees had mixed opinions about the impact of zoning on the development of multifamily housing in the region. Most felt the zoning in place in Miami-Dade contributes to a lack of adequate affordable housing and of multifamily housing, but also thought zoning alone does not drive the low-density land-use patterns.

Interviewees pointed to the following additional factors as influences on multifamily housing development.

***Existing development patterns and land availability.*** All five interviewees described the combined effect of constrained land supply (the urban area is hemmed in on the west by the Everglades and the east by the Atlantic Ocean) and existing low-density development as a major impediment to building new multifamily housing units. Very few undeveloped areas are

***Figure 3-7.*** *Zoned Densities in the Miami-Dade Study Area.*




*Source:* National Center for Smart Growth 2006.

*Note:* Numbers in parentheses indicate approximate locations of towns that are not visible on the map.

available, and redevelopment is complicated by the need to remove existing single-family developments and assemble parcels.

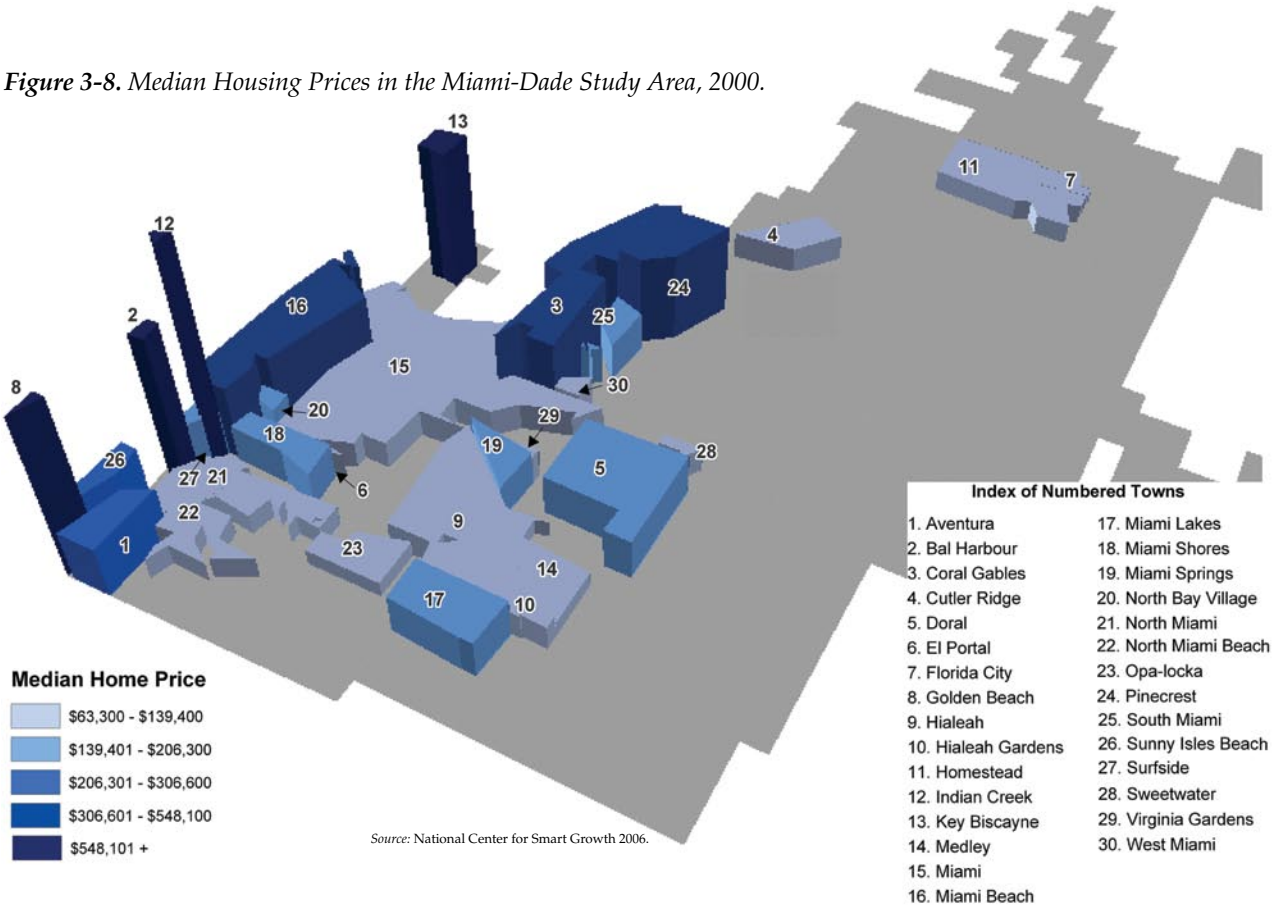
***Market forces.*** The Miami-Dade area has experienced rapid growth over the past decade, driving up the price of land and housing faster than incomes have increased. One interviewee estimated that 60 percent to 70 percent of all new development in the area is spurred by speculation from investors, which has resulted in a shortage of affordable housing, rather than a lack of multifamily units or low-density zoning. In some very desirable locations, even the multifamily units are very expensive.

***Community resistance to density.*** In many communities, new multifamily development is met with resistance from current residents interested in protecting their neighborhoods from what they view as an overflow of urban development from the Miami-Dade County area. As one interviewee described, "People fear density. In the few cases where there is an opportunity for land-use patterns to shift toward higher density, the community fights it."

***Building costs.*** Because of the existing land-use patterns, developing new multifamily housing often means removing existing buildings and/or remediating properties, which add to the cost of development. Additionally, since Hurricane Andrew, stricter codes for hurricane mitigation have led to additional building costs.

***Infrastructure availability.*** Some communities were originally developed as very low-density residential areas and are dependent on septic tanks and wells. In these communities, developing multifamily units is simply not possible. Parkland and Southwest Ranches are two communities in this

***Figure 3-8.*** *Median Housing Prices in the Miami-Dade Study Area, 2000.*




*Source:* National Center for Smart Growth 2006.

category, and both were mentioned by several interviewees as places where it is very difficult to build multifamily housing. In other communities (e.g., Opa-locka), older sewer and water infrastructure is underperforming and could not support higher density.

Several interviewees said zoning is an important tool for changing future land-use patterns, but noted the current zoning is primarily single-use, Euclidian zoning that separates uses and contributes to difficulties when attempting to increase densities throughout the region. One interviewee specifically cited a Florida planning requirement that cities not exceed "available densities" within their boundaries. Some cities in the region have already met this limit and cannot develop to higher densities.

Several respondents also pointed out that low density is not necessarily associated with a lack of affordable housing in the region. Several communities, including Opa-locka and Cutler Ridge, are low-income communities developed with single-family units. At the same time, many of the newer multifamily units would not be considered affordable.

### Regulatory Analysis

Our analysis considered planning policies and regulations affecting the availability of multifamily housing in El Portal, Golden Beach, Medley, Miami Shores, and Pinecrest in Miami-Dade County, Florida.

Of the five municipalities analyzed, three of them have policies and regulations that pose substantial barriers to multifamily housing, while a fourth has a possible interlocking set of barriers. El Portal, Golden Beach, and Medley simply do not allow multifamily residences, either as permitted or condi-

tional uses. Miami Shores does permit multifamily uses, and the number of units is regulated by floor area ratios and a standard that links lot area per dwelling unit to the number of rooms in the multifamily unit.

Pinecrest's density range for multifamily units is a liberal one, from 12.9 to 50 dwelling units per net acre, but it has very limited land, less than 1 percent of its total residential acreage, devoted to multifamily residences. Of the 102 acres of vacant residential land in 1996, the year the comprehensive plan was being prepared, 91 acres were proposed for single-family residences and the remainder, 11 acres, for multifamily residences at 23.5 dwelling units per net acre.

To some degree, this lopsided allocation must be balanced against the relative surplus of affordable housing in the community, as identified in the 1999 comprehensive plan. Nonetheless, the limited amount of land for multifamily uses and the nature of the zoning regulations, which require a site plan review for all uses, do serve as potential barriers to multifamily housing development.

### Summary

Overall, zoning in the Miami-Dade study area is less of a barrier to high-density, multifamily housing than in the other five study areas of this research. For the entire study area, the high-density share of zoned housing units, the share of land zoned for high-density residences, and the aggregate zoned density are the highest of all the study areas. But within the study area, zoning patterns and housing prices vary extensively. Jurisdictions along the beach—Miami Beach, Bal Harbour, Indian Creek, and Golden Beach—have some of the highest prices in the region, but not the highest zoned densities. Further, Coral Gables and Pinecrest, located on the southern edge of the City of Miami, have very high housing prices and very low zoned densities. The case study analyses suggest this is not unintentional. In the past, the demand for higher-density housing in this part of the metropolitan area may have been weak; now, however, it seems quite likely that zoning limits the construction of high-density housing in these jurisdictions.

Since the 1930s, the Miami metropolitan economy has been dominated by tourism, expensive vacation homes, and retirement villages; at the same time, the region has seen growing numbers of poor immigrants and hurricane refugees. As a result, housing prices are generally high and rapidly rising, and resident median incomes are low.

The regulatory and institutional environment of Miami-Dade County is intricate but orderly. The state requires local governments to plan and zone. Zoning must be consistent with comprehensive plans. Plans must include a housing element. Local plans must be consistent with regional plans and regional plans must be consistent with the state plan. Under state law, local governments must impose concurrency regulations, which require that infrastructure must be in place before development is allowed. As in Maryland, concurrency requirements (called *adequate public facility ordinances* in Maryland) often impose regulatory barriers even when zoning does not.

Zoning in Miami-Dade County often changes when land is developed and annexed to a city. In the past, development and annexation reduced the influence of zoning at the urban-rural fringe. As Dade County has tightened its regulatory controls and maintained its longstanding urban development boundary, its zoning has grown in significance, especially in constraining the overall supply of developable land.

Still, from a metropolitan perspective, overall densities are high and, with the exceptions noted above, densities are high where prices are high. The Miami-Dade region thus offers evidence that, at the metropolitan scale, zoning often follows the market and high zoned or actual densities are no certain prescription for housing affordability.

### MINNEAPOLIS-ST. PAUL, MINNESOTA

Minneapolis-St. Paul is located at the northern edge of the slow-growing upper midwest. The density of development and the share of multifamily housing are both low. Housing prices were relatively low in 2000 and grew at a moderate rate from 1990 to 2000. Rents, however, were moderately high and rapidly rising. Median incomes in 2000 were the highest of all the study areas as was in the increase in incomes from 1990 to 2000.

Figure 3-9 provides a map of the Minneapolis-St. Paul study area. The study area includes the 27 cities in the region with populations greater than 25,000. As a result, the jurisdictions in the study area are relatively large in population and, because of their low densities, are also relatively large in area.

Despite its regional location, the study area grew 10 percent from 1990 to 2000. The central cities of Minneapolis and St. Paul both grew by nearly 15,000 residents. Other jurisdictions that grew by similar amounts or more

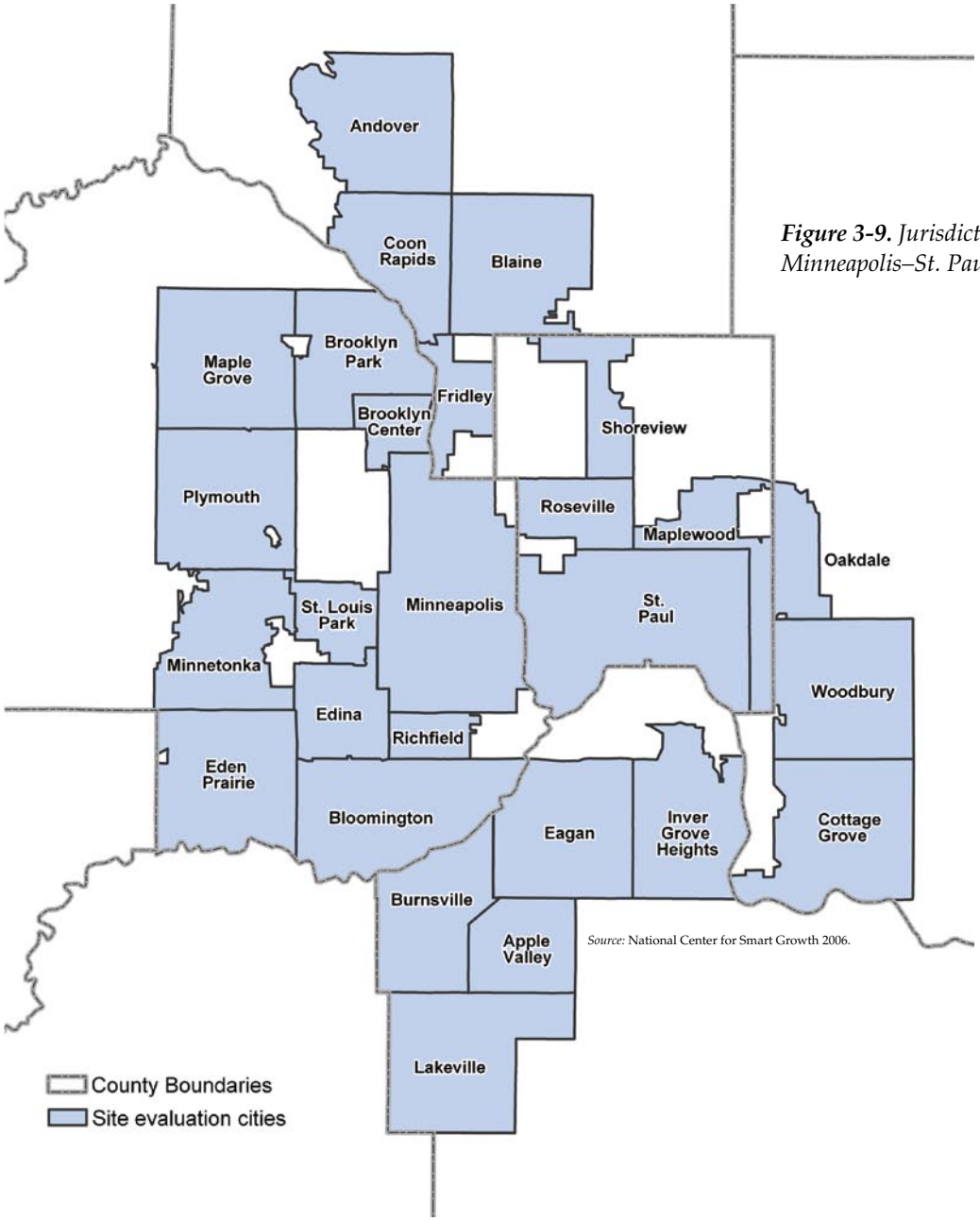



***Figure 3-9.*** *Jurisdictions in the Minneapolis–St. Paul Study Area.*

*Source:* National Center for Smart Growth 2006.

include Eagan, Eden Prairie, Lakeville, Plymouth, and Woodbury, all located at the urban fringe.

### Regulatory Context

Counties and municipalities have the power to plan and zone. In the Twin Cities area, the Metropolitan Council oversees local planning and reviews local plans against its own plans. The Minnesota Environmental Quality Board serves, in part, as the state planning agency and has some regulatory role in the designation of areas of critical concern.

The Metropolitan Council, the planning entity for the seven-county Minneapolis-St. Paul (Twin Cities) region, is an appointed body. It is required to prepare a development guide, the "Blueprint." The development guide must "consist of a compilation of policy statements, goals, standards, programs and maps prescribing guides for the orderly and economical development, public and private, of the metropolitan area" (provisions are contained in Minnesota Statutes Annotated, Sections 473.123 et seq.).

Among the components required in a local comprehensive plan is a land-use plan. That land-use plan shall also include a housing element containing standards, plans and programs for providing adequate housing opportunities to meet existing and projected local and regional housing needs, including but not limited to the use of official controls and land-use planning to promote the availability of land for the development of low- and moderate-income housing (Minnesota Statutes Annotated, Section 473.859). The Council shall review and comment on the apparent consistency of the comprehensive plans and capital improvement programs with the adopted plans of the Council. The Council may require a local governmental unit to modify any comprehensive plan or part thereof if, upon the adoption of findings and a resolution, the Council concludes the plan is more likely than not to have a substantial impact on or contain a substantial departure from the Council's metropolitan system plans.

### Key Indicators

Our study of the jurisdictions in the Minneapolis-St. Paul study area was limited to those that are relatively large and, hence, relatively the same size in area. As a result, Census data provide an accurate portrayal of existing housing stocks and trends. The GIS data were obtained from the Metropolitan Council and provide information about planned land use, not zoning. Whether this represents a limitation or advantage for analyzing barriers to multifamily, high-density development is unclear. While existing zoning is perhaps a better representation of current regulatory constraints, planned land use provides a better representation of jurisdictional intentions, especially in cases where zoning is easily changed. It is also important to note that the Metropolitan Council's generalization of local comprehensive plan designations are coarse; they include only six residential categories and no mixed use.

***Housing prices and rents***. Housing prices in the study area are relatively low and affordable, at only 2.5 times median incomes. Housing values increased in every jurisdiction during the 1990 to 2000 period. Minnetonka, Plymouth, Eden Prairie, and Edina all had 2000 median home prices more than 30 percent above the regional median home price.

From 1990 to 2000, housing values increased faster than incomes in every jurisdiction. As a ratio of change in median home value over the change in median household income, homes became more expensive in every jurisdiction. This trend was strongest in Edina and St. Paul. In these cities, home values rose more than four times faster than incomes from 1990 to 2000.

Median rents were highest in 2000 in Woodbury. Rents in Woodbury were more than 30 percent above the regional median rent. Rents in all other jurisdictions fell within 30 percent of the study area median.

***Housing production and mix***. Housing units in the study area grew by approximately 10 percent between 1990 and 2000, but the share of multifamily units developed over the same period was just more than 5 percent. Four jurisdictions (Minneapolis, St. Paul, Richfield, and Brooklyn Center) lost housing units, and Minneapolis, St. Paul, Richfield, and Shoreview lost multifamily housing units. Jurisdictions that gained more than 5,000 housing units include Eagan, Eden Prairie, Lakeville, Plymouth, and Woodbury, which gained more than 10,000.

Most jurisdictions gained both total and multifamily housing units; for many, however, the multifamily share was quite low. For Andover, Eden Prairie, Fridley, Lakeville, Maple Grove, and Woodbury, the multifamily share of units built from 1990 to 2000 was less than 10 percent.

***Planned density and mix.*** As in other study areas, most of the region's land is zoned for single-family residential use at low density. Only three jurisdictions have 15 or more percent of residential land zoned for high-density use: Richfield, St. Louis Park, and St. Paul. In Andover, Blaine, and Woodbury, less than 3 percent is so designated, though because multifamily land is so scarce in this study area, this does little to distinguish these jurisdictions from all the others. Not surprisingly, the share of units zoned for high-density development in most other jurisdictions is also low. St. Paul has the highest share at 52 percent; the corresponding share for Andover, Blaine, Maple Grove, and Woodbury is 10 percent or less.

### Data Visualization

Patterns of planned land use and housing prices for the Minneapolis-St. Paul study area are illustrated in Figures 3-10, 3-11, and 3-12. As shown in Figure 3-10, most of the study area is planned for low- and very-low-density residential use. A significant area is planned for high-density use in central St. Paul, but smaller areas planned for high-density use are dispersed throughout the metropolitan area. Land planned for mixed use is uncommon in all jurisdictions except Minnetonka.

Overall planned densities are illustrated in Figure 3-11. As shown, the pattern of planned density follows the pattern predicted by urban economics: planned densities are highest in the central cities and fall systematically with distance. The jurisdictions with the lowest planned densities lie at the urban fringe.

Figure 3-12 illustrates the pattern of housing prices in the study area. As shown, housing prices overall are generally low and evenly distributed. Only Edina lies in the highest price category. Although these images present only a cursory view of housing prices and planned densities, they offer little evidence of barriers to high-density, multifamily housing by any particular jurisdiction in the study area.

### Key Stakeholder Interviews

We interviewed four people familiar with the public policy and development practices affecting multifamily housing development in the Twin Cities metropolitan area. Interviewees included a planning faculty member at the University of Minnesota, a fellow at the University of Minnesota Humphrey Institute, a state representative and attorney, and a director of research at a local foundation who is also a planner.

The interviews elicited mixed responses about the status of multifamily housing. In general, those interviewed agreed rapidly growing, high-income

**KEY INDICATORS: MINNEAPOLIS–ST. PAUL**

*Jurisdictions with the highest median home price:*

- Edina ($248,500)
- Eden Prairie ($198,300)
- Plymouth ($197,600)
- Woodbury ($174,300)

*Jurisdictions with the lowest percentage of multifamily units:*

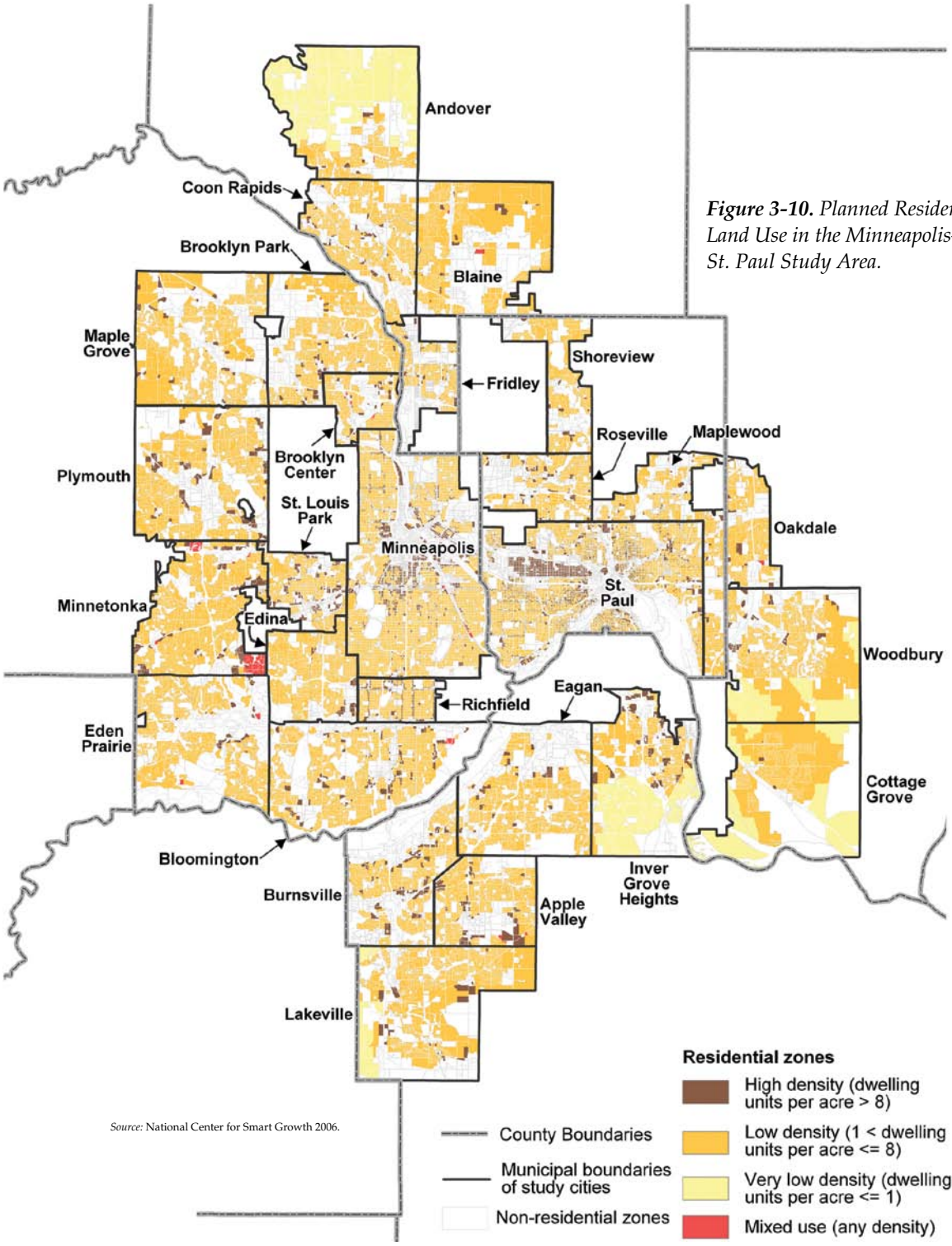
- Andover (3 percent)
- Lakeville (6 percent)
- Cottage Grove (7 percent)
- Bloomington and Maple Grove (8 percent)

*Jurisdictions with the lowest average zoned density (zoned units/residential acre):*

- Andover (1.22)
- Cottage Grove (2.55)
- Inver Grove Heights (2.79)
- Woodbury (3.2)

*Jurisdictions with the lowest percentage of residential acres zoned for high-density use:*

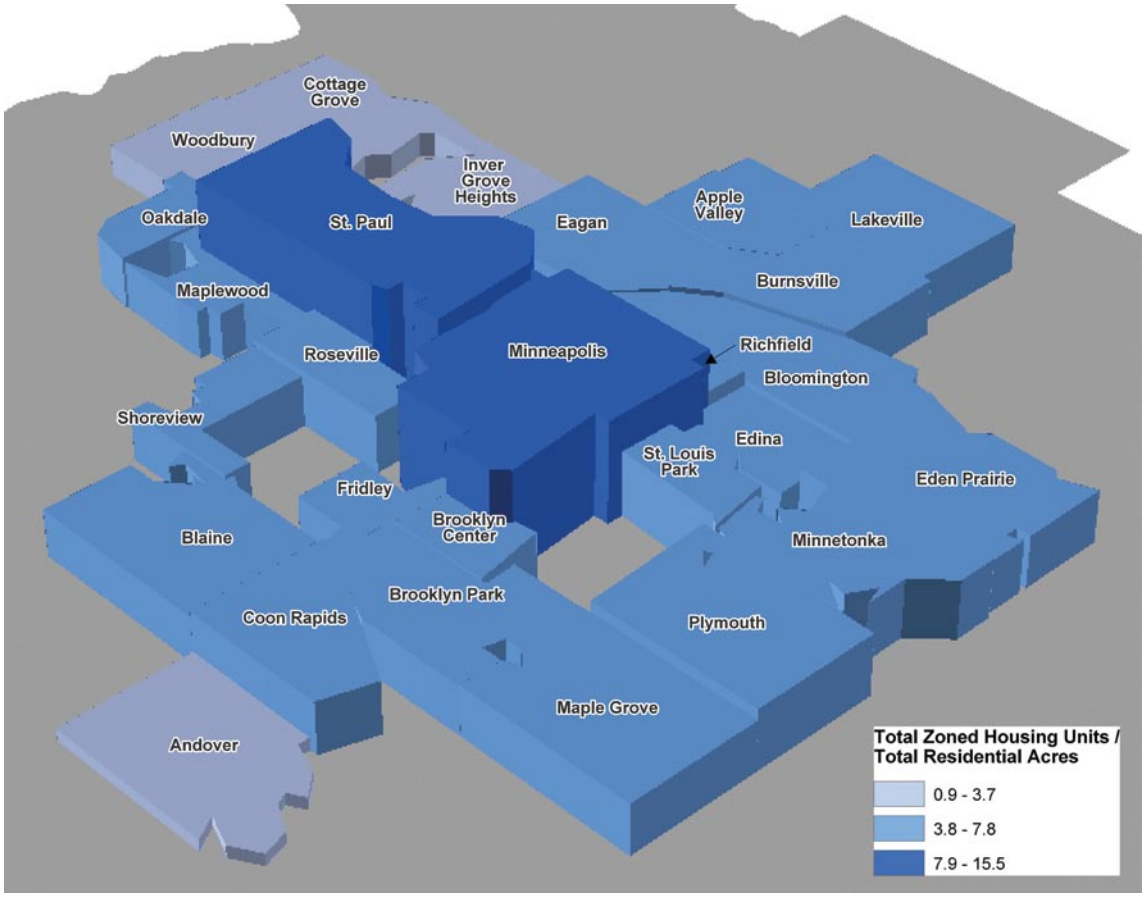
- Cottage Grove (1 percent)
- Andover (1 percent)
- Blaine (2 percent)
- Eden Prairie and Woodbury (3 percent)




*Source:* National Center for Smart Growth 2006.

***Figure 3-10.*** *Planned Residential Land Use in the Minneapolis–St. Paul Study Area.*

communities were the most difficult in which to build multifamily housing and a growing affordability problem exists. One interviewee believed not a lot of land is zoned multifamily and large-lot zoning also poses a problem. The interviewee pointed to "very white collar communities on the I-494 corridor" and on "the eastern side of the metropolitan area" as areas where multifamily development might be limited.




*Source:* National Center for Smart Growth 2006.

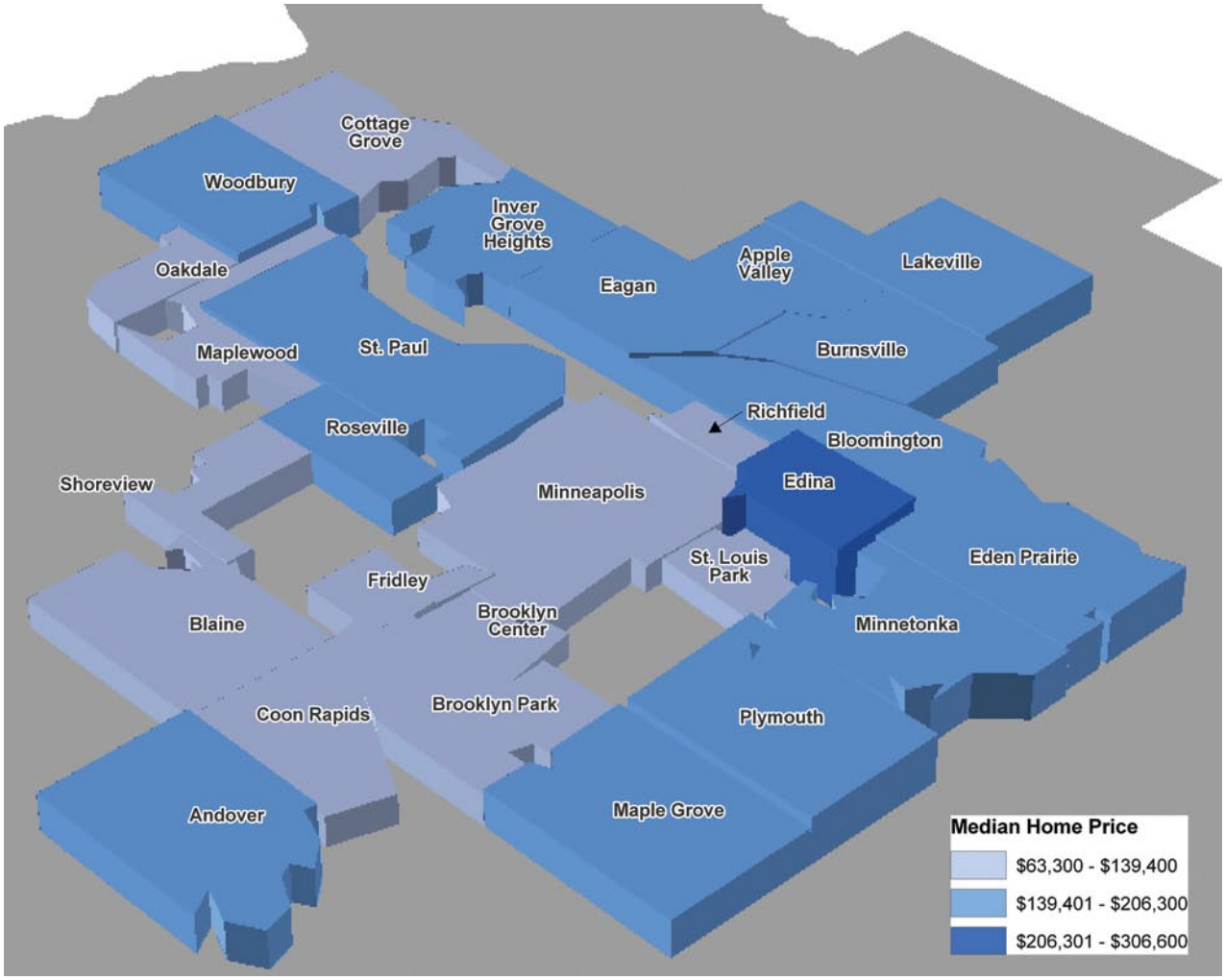
***Figure 3-11.*** *Planned Densities in the Minneapolis-St. Paul Study Area.*

Another interviewee stressed that "attitudes are changing" toward multifamily housing, and that townhomes (albeit expensive units) are a robust part of that market. "Almost 40 percent of housing units are townhomes. The townhome market is strong and communities are responding." The problem is not land-use regulations per se, she said, but "the lack of tools to put affordable housing packages together."

### Regulatory Analysis

Our analysis looked at planning policies and regulations affecting availability of multifamily housing in the Cities of Andover, Cottage Grove, Eagan, Eden Prairie, and Woodbury in the Twin Cities region in Minnesota. All five of the communities permitted multifamily housing. Andover's comprehensive plan anticipated the need for multifamily housing and the zoning code allows it in two districts, although at the lower end of the typical density range for multifamily units (13 dwelling units per net acre or less). Cottage Grove's comprehensive plan allocates 232 acres for multifamily housing. Its R-6 High-density Residential District allows up to 16 dwelling units (including apartments) per gross acre.

Eagan's comprehensive plan's housing plan (2001) essentially stresses the development of detached housing and high-end multifamily housing, mainly because approximately 47 percent of the housing stock as of 1998 was multifamily compared to the Metropolitan Council's benchmark of 38 percent non-single-family housing. The Eagan Zoning Code allows townhouse development in the R-3 Townhomes District at 7.26 dwelling units per net acre (6,000 square feet per unit). Multifamily dwellings (four or more dwelling units per structure) are permitted in the R-4 Multiple District under




*Source:* National Center for Smart Growth 2006.

***Figure 3-12.*** *Median Housing Prices in the Minneapolis-St. Paul. Study Area, 2000.*

a standard requiring 5,000 square feet for the first six multifamily units and 2,750 square feet per multifamily unit thereafter.

Thus, for the first acre, the density would be 10.9 dwelling units per acre, and 15.8 dwelling units per net acre for the next acre. Eden Prairie's Land Use Guide Plan (2003) map shows both medium density (2.5 to 10 dwelling units per net acre) and high-density (10 to 40 units per acre) areas. Eden Prairie's zoning code permits multifamily residences in two districts, although at lower densities than shown in the Land Use Guide Plan: (1) RM 6.5, which permits a gross density of 6.7 dwelling units per acre; based on the requirement of 6,500 square feet per dwelling [DITTO] unit; and (2) RM 2.5, which permits a gross density of 17.5 dwelling units per acre, based on the requirement of 2,500 square feet per dwelling [DITTO] unit. Finally, Woodbury's comprehensive plan acknowledges the demand for multifamily residences. Woodbury's zoning code allows multifamily dwelling units in the R-4 Urban Residential District but only as planned unit developments, not as of right. The densities must be consistent with densities contained in the comprehensive plan, which can range between 3.5 and 15 units per net acre.

## Summary

Housing in the Minneapolis–St. Paul study area is relatively inexpensive and is developed at low densities. Although zoned densities and multifamily construction rates are low, this study area revealed little evidence that

zoning represents a significant barrier to multifamily development. Data limitations might partially explain this finding; zoning data for the entire metropolitan area were not available.

Total planned residential density varies from 1.22 units per acre in Andover to 11.85 units per acre in St. Paul. Cottage Grove and Inver Grove join Andover as the three communities with the lowest housing units per acre. The cities with the highest median housing values also have among the lowest percentages of multifamily units. Two exceptions are Edina and St. Paul. Both of these communities have high median home prices and are high density.

Along with the Portland area, the Minneapolis-St. Paul region is one of few where local housing plans are subject to a review by a regional planning agency, in this case the Metropolitan Council. The Council's jurisdiction extends over the seven-county area. An apparent consequence of that oversight is that, at least for the sample of five cities whose plans and development regulations were reviewed in this study, local governments recognize the need for multifamily housing and allow it in varying degrees. In the Twin Cities area, those interviewed said attitudes toward townhouse development were changing and the area was experiencing in an increase in their numbers.

### PORTLAND, OREGON

The Portland study area lies at the confluence of the Willamette and Columbia River, on the border between Oregon and Washington, and includes every municipality in Washington, Multnomah, and Clackamas counties within Portland's urban growth boundary (UGB). In 2000, the region had moderately high housing prices as a result of rapid price escalation from 1990 to 2000. Rents exhibited a similar pattern. Despite high zoned densities, the existing density of development is moderate.

The study area, depicted in Figure 3-13, includes every incorporated city within the UGB but excludes unincorporated areas. The study area grew in population by 250,000 from 1990 to 2000 to reach a total population of 1.1 million. Jurisdictions vary widely in size, and all but the very smallest gained population. Jurisdictions that gained more than 20,000 residents between 1990 and 2000 include Beaverton, Gresham, Hillsboro and the central city of Portland.

#### Regulatory Context

Oregon's planning program has been in place for more than 30 years. Development is regulated at the state level and is coordinated by a state agency, the Department of Land Conservation and Development (DLCD). DLCD prepares the goals and guidelines for local government to follow as they undertake planning activities. These goals cover a variety of topics, including citizen participation, urbanization, forestry, housing, recreation, and agriculture.

Each county and city in Oregon must develop, adopt, and amend comprehensive plans that comply with state land use goals (Oregon Revised Statutes, Section 197.250, 255). The urban growth boundary (UGB), intended to identify and separate urbanizable land from rural land and to ensure compact development, is a critical component of the land use planning system. DLCD's urbanization goal requires all Oregon cities to define, adopt, and plan urban development within UGBs (Oregon Administrative Rules 660-015-0000(14)).

Metro, a regional planning agency with an elected council, oversees regional land-use issues in the Portland region. Key to the purposes of this study is the Metropolitan Housing Rule (Oregon Administrative Rules 660-007)

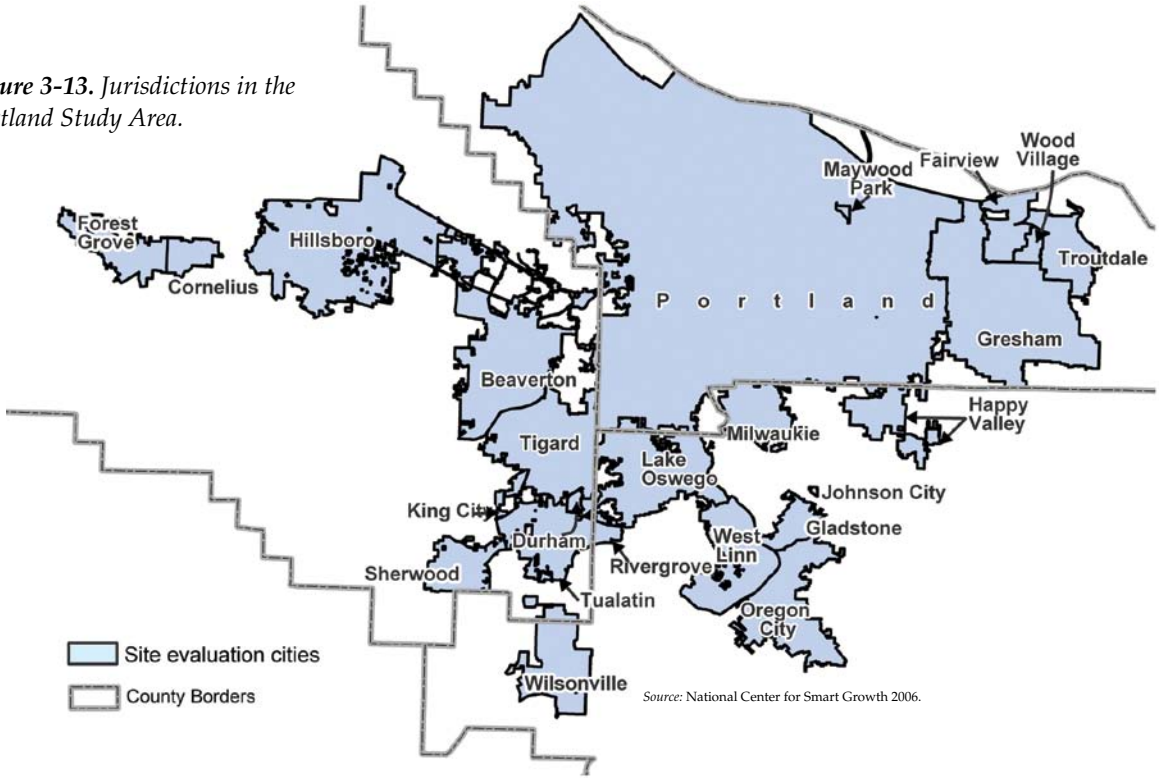



***Figure 3-13.*** *Jurisdictions in the Portland Study Area.*

for the Portland Region. It requires cities and counties within the regional UGB to meet regional standards for density and housing mix. Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be multifamily housing or justify an alternative percentage based on changing circumstances (Oregon Administrative Rules 660-007-0030 through 660-007-0037; 660-007-0045).

The Metropolitan Housing Rule also requires cities to develop overall target densities that vary depending on the size and growth rate of the jurisdiction.

### Key Indicators

Because the jurisdictions in the Portland study area vary widely in size, small sample measurement error is possible in the Census data for the very small jurisdictions. The GIS data were obtained from Portland Metro, the regional government for the Portland metropolitan area. Without doubt, Metro's Regional Land Information System offers the best data on zoning, planned designation, and existing development patterns available for any metropolitan area in the country. Although generalized into regionwide categories, Metro's zoning data are highly detailed and precise.

***Housing prices and rents***. Housing prices are relatively high in the Portland study area and increased in every jurisdiction in the study area between 1990 and 2000. Durham, Happy Valley, Lake Oswego, and West Linn all have 2000 median home prices more than 30 percent above the regional median. Housing values increased faster than incomes in every jurisdiction in the study area. As a ratio of housing value to income, housing is least affordable in Durham, Fairview, Lake Oswego, and Wilsonville. In these communities, housing values have risen more than four times faster than incomes between 1990 and 2000.

Average rents vary less than prices among jurisdictions but are highest in Rivergrove, West Linn and Lake Oswego. Rents in Rivergrove are substantially higher than regional averages. Rents have risen somewhat faster than income between 1990 and 2000, but rents remain closer to affordable in most communities.

***Housing production and mix.*** The housing stock in the Portland metropolitan area grew by almost 24 percent from 1990 to 2000. In 2000, the share of multifamily housing units was 36 percent; from 1990 to 2000, the multifamily share of new housing units was 43 percent. Portland was the only study area for which the multifamily share of housing increased over the 1990s. Almost all of the jurisdictions in the study area gained housing units between 1990 and 2000; some, however, did not gain or even lost multifamily housing stock over the same period. Happy Valley, Maywood Park, Rivergrove, and Wood Village fall into the latter category.

Other communities gained multifamily units, but as a share of their total new housing units, very few were multifamily. For every 100 new housing units in Cornelius, Lake Oswego, Sherwood, Troutdale, or West Linn, fewer than 30 were multifamily units, a substantially lower ratio than in the study area as a whole but a substantially larger share than jurisdictions in most other study areas.

Some jurisdictions on the edges of the study area—Wilsonville, Forest Grove, Beaverton—have relatively high percentages of multifamily homes, while others—Troutdale, Happy Valley, Lake Oswego, West Linn—have relatively low percentages of multifamily units.

***Zoned density and mix***. As in other study areas, most of the land in the Portland study area is zoned for single-family residential use. Mixed-use and multifamily zones are concentrated along transportation corridors. Durham, Happy Valley, Maywood Park, and River Grove have less than 10 percent of residential land zoned for high-density use.

The share of units zoned for high-density use exhibits a similar pattern. Happy Valley, Maywood Park, and River Grove have less than 5 percent of housing units zoned for high-density use. Because zoned densities in high-density zones are relatively high, however, every other jurisdiction has nearly or more than 30 percent of all units zoned for high-density use. The study area average is 48 percent.

Total zoned residential density varies from 2.5 units per acre in Happy Valley to 19.9 units per acre in Johnson City. Besides Happy Valley, however, only Durham and River Grove are zoned for less than five units per acre. The study area average, highest among the six, is slightly more than 10 units per acre.

## Data Visualization

Patterns of planned land use and housing prices for the Portland study area are illustrated in Figures 3-14, 3-15, and 3-16. As shown in Figure 3-14, land zoned for high-density residential use is dispersed widely throughout the metropolitan area from the urban core to the urban fringe. Mixed uses are almost as widely dispersed.

The effects of this wide dispersion of high-density zones on the overall planned densities are illustrated in Figure 3-15. As shown, overall zoned densities are relatively, and almost uniformly, high. Jurisdictions with the lowest zoned densities lie in the southeast quadrant of the metropolitan area. Happy Valley stands out in this regard.

The pattern of housing prices, illustrated in Figure 3-16, is a remarkable reflection of the zoned densities in Figure 3-15. Housing prices are highest in the southeast quadrant of the metropolitan area. Lake Oswego and West

### KEY INDICATORS: PORTLAND

*Jurisdictions with the highest median home price:*

- Happy Valley ($306,600)
- Lake Oswego ($296,200)
- Durham ($248,300)
- West Linn ($246,500)

*Jurisdictions with the lowest percentage of multifamily units:*

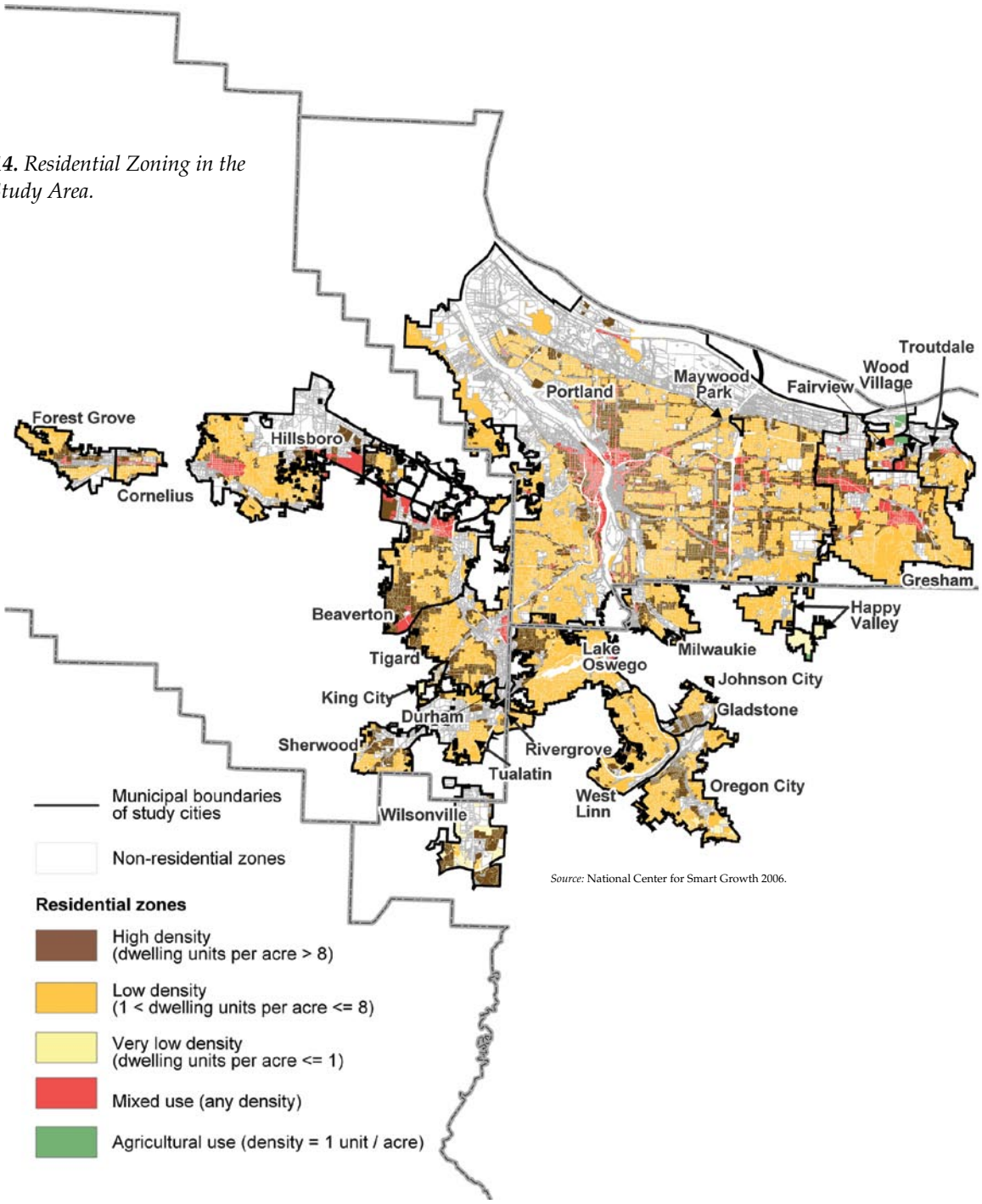
- Happy Valley and River Grove (0 percent)
- Johnson City and Maywood
- Park (2 percent)
- Cornelius and Sherwood (17 percent)

*Jurisdictions with the lowest average zoned density (zoned units/residential acre):*

- Durham (1.05)
- Maywood Park (1.21)
- King City (1.22)
- Tualatin (1.29)

*Jurisdictions with the lowest percentage of residential acres zoned for high-density use:*

- Happy Valley (0 percent)
- Maywood Park and
- Rivergrove (1 percent)
- Durham (9 percent)
- West Linn (10 percent)




*Source:* National Center for Smart Growth 2006.

***Figure 3-14.*** *Residential Zoning in the Portland Study Area.*

Linn have high prices and low densities, though both have areas zoned for high-density use. Happy Valley has the highest prices, the lowest overall density, and no land zoned for high-density use.

### Key Stakeholder Interviews

We interviewed six people familiar with the public policy and development practices affecting multifamily housing development in the Portland metropolitan area. The purpose of the interviews was to gain a local perspective on the data analysis conducted as part of the case study of the study area.

Interviewees included a representative from the regional home builder's association, the executive of a policy institute focused on urban develop-

ment issues, the executive director of a nonprofit community development corporation, a developer, an attorney with 1000 Friends of Oregon (an advocacy organization dedicated to land-use issues), and a project manager from Metro, the area's regional government.

The interviewees agreed that housing affordability is a problem in the Portland metropolitan area but had mixed opinions about the impact of zoning on the development of multifamily and affordable housing in the region. In general, those interviewees directly involved in development activities felt that zoning and land-use controls (especially the UGB) constrain land supply, causing increases in land costs and limiting the affordability of new housing. At the same time, some interviewees recognized that zoning laws have improved the livability of the region and made it more attractive as a location for new development.

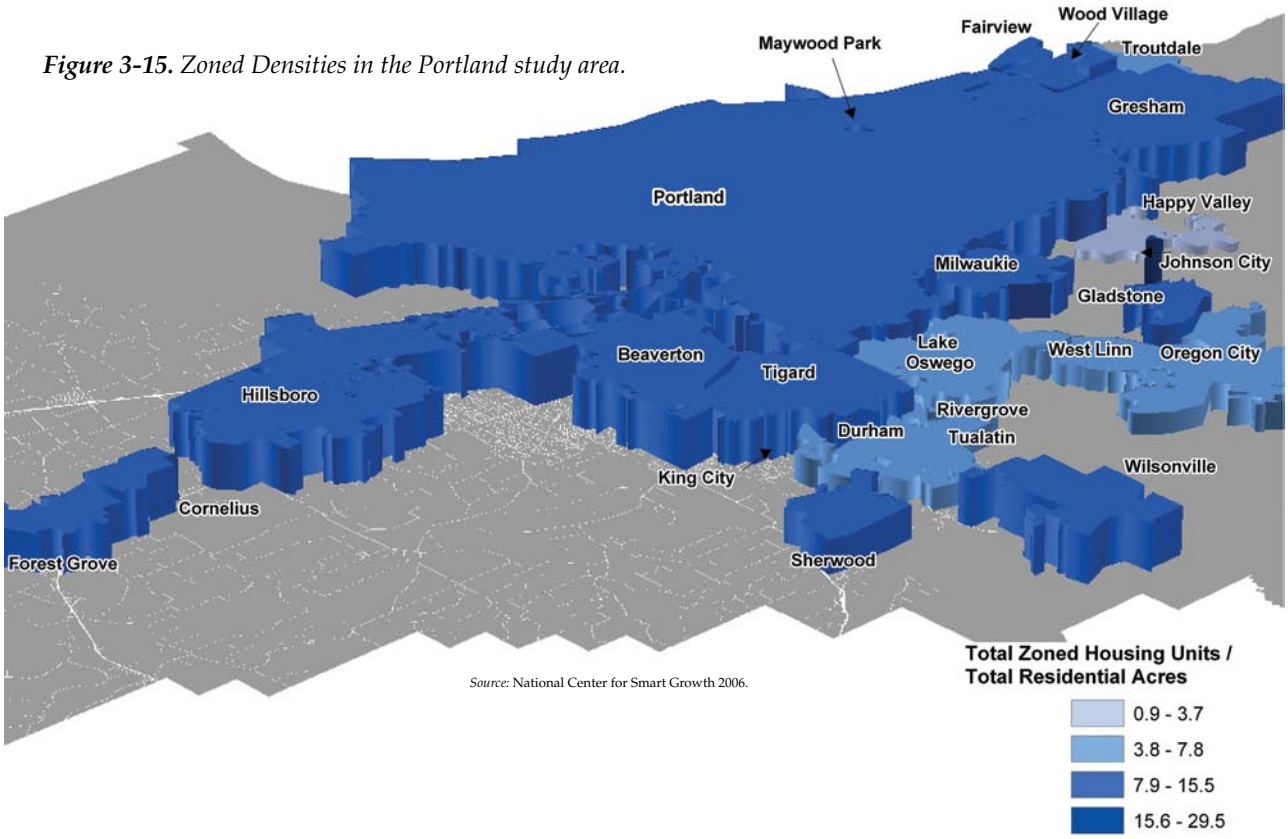
Interviewees described a number of ways that zoning and other regulations contribute to the problem of affordability in the region:

"In some communities, the problem is caused by intentional zoning decisions. Some public officials are even willing to say that they are intentionally excluding lower-value housing stock to protect property values. Sometimes, they place high impact fees on multifamily development as an additional impediment."

"The Urban Growth Boundary and rural downzoning have put much of the land available for housing development off-limits. This has created an 'urban cartel' of landowners who control all of the developable land and drive up the costs for everyone."

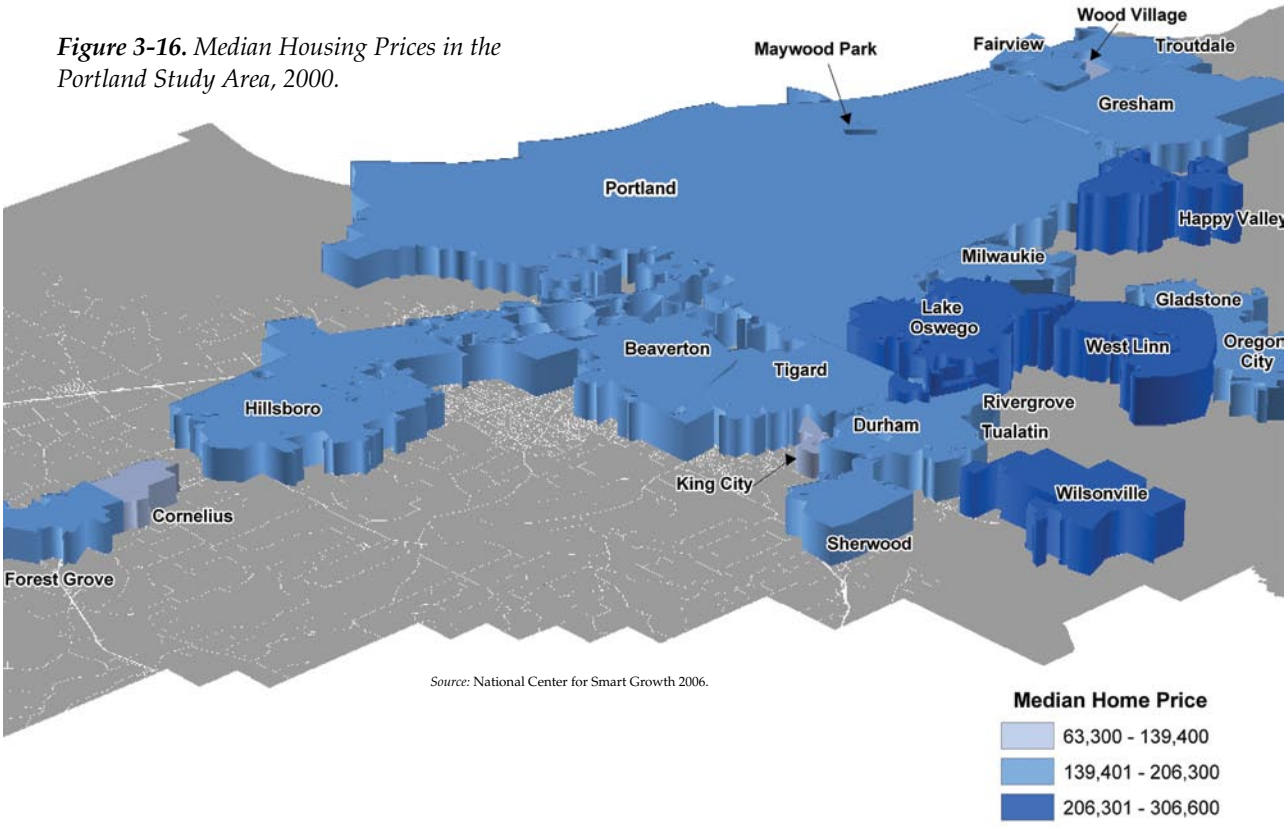
While most felt that the zoning in place in Portland contributes to a lack of adequate affordable housing in some way, all agreed that zoning alone does not drive the low-density land-use patterns. Interviewees pointed to the following additional factors:

***Figure 3-15.*** *Zoned Densities in the Portland study area.*




*Source:* National Center for Smart Growth 2006.

***Figure 3-16.*** *Median Housing Prices in the Portland Study Area, 2000.*




*Source:* National Center for Smart Growth 2006.

***Land cost.*** Whether it is caused by the constrained land supply resulting from the implementation of land-use policies or the increased demand resulting from the desirability of the region as an urban area, the price of land has increased quickly over the last decade. This adds to construction costs, making it more difficult to build affordable units and discouraging developers interested in building a for-rent product.

***Building costs***. High-density development (especially development higher than three stories) is more expensive because of the more complex building materials and designs required to meet building code.

***Speculation in the housing market.*** Home values have been increasing so rapidly that purchasing property has become an attractive investment option. This increases competition for units on the market and drives up the price.

***NIMBY-ism.*** In some communities (especially affluent ones), the fear that multifamily housing will drive down the value of existing single-family housing leads to community opposition to dense development. Developments face an additional obstacle when community members have had poor experiences with the management of apartment complexes in the past.

***Lack of resources.*** Though a regional task force has identified housing affordability as a serious problem, efforts to address the issue have been piecemeal. The region has not worked to provide incentives to developers interested in building for-rent multifamily units or to subsidize affordable unit development.

***Existing land-use patterns.*** In many communities, the established patterns of residential development make parcel assemblage for larger multifamily developments difficult. Additionally, existing patterns would necessitate the removal of existing single-family homes to build denser housing options. This adds to the cost and discourages many developers.

Despite these caveats, some interviewees mentioned some specific cities where they felt that zoning regulations might be in place that limit the development of new multifamily or affordable housing units. These communities included Happy Valley, West Linn, and Lake Oswego.

It is important to note that no interviewee said he or she was certain that exclusionary zoning policies were in place in any of these communities, but that, based on their knowledge of the political climate and existing development patterns, some possibility existed that regulations might discourage new multifamily or affordable developments.

### Regulatory Analysis

This analysis looked at planning policies and regulations affecting availability of multifamily housing in Happy Valley, Milwaukie, Lake Oswego, Tualatin, and West Linn, Oregon, in the Portland study area. In this region, by virtue of a state administrative rule, the Metropolitan Housing Rule, communities must meet certain housing density minimums. Happy Valley, for example, must provide for an overall density of six or more dwelling units per net buildable acre. Milwaukie, Tualatin, and West Linn must provide for an overall density of eight or more dwelling units per net buildable acre. Finally, Lake Oswego must provide for an overall density of 10 or more dwelling units per net buildable acre. Collectively, the plans and regulations of these communities appear to be providing opportunities for multifamily housing.

### Summary

The Portland study area is growing quickly; with that growth has come relatively rapid increases in housing prices and rents as well as increased density in many of the region's jurisdictions. Planning and zoning in the Portland region are more closely monitored than in our other study areas. All local governments devise and enact zoning codes that must comply with both regional and state requirements and plans. These requirements include density and housing mix targets that encourage the development of multifamily housing. Metro, the area's regional government, requires zoning in the urbanized areas to facilitate a 50 percent multifamily/single-family housing split.

As is true in our other study regions, some variation exists among study area jurisdictions as regards the amount of land zoned for high-density use. High-density land is primarily located along major arterials throughout the region. This pattern is consistent with Metro's regional plan (the 2040 Plan) for growth. On the whole, however, most of the jurisdictions in the region appear to have adequate land zoned for multifamily development and use zoning as a tool for enforcing their multifamily development goals.

Overall, the ratio of zoned housing units to built housing units is high, while, relative to the other study areas, zoned density is about average, suggesting that increased built density is possible within the existing zoning code. Portland's high-density zoned land has the highest number of units zoned per acre of any of the regions.

Home prices also vary among study area jurisdictions, but with some exceptions, the jurisdictions with the highest median home values also have among the lowest percentages of multifamily units. Happy Valley, Lake Oswego, and Durham fall into this category, with home prices well above the median for the region, very few existing multifamily units, and a relatively low percentage of land zoned for multifamily development.

At the same time, some communities with relatively high amounts of land zoned for high-density housing are also among the most expensive. Beaverton, for example, has about 40 percent of its residential acres zoned

for high-density development, a higher percentage than all but one other jurisdiction in the study area. By Census measures, 49 percent of the city's housing units are multifamily units. Beaverton's home prices, however, are among the highest in the region.

In summary, Oregon's state policy framework makes it more difficult for jurisdictions to use zoning to intentionally limit multifamily development and zoning in the Portland study area. The effects that Portland's urban growth boundary may have on housing prices notwithstanding, zoning does more to encourage the development of multifamily housing units than to impede it.

## SACRAMENTO, CALIFORNIA

The Sacramento study area is located east of San Francisco in central California. Because it is located at some distance from the Pacific coast, Sacramento has not experienced the high rates of growth and increases in housing prices prevalent in other parts of California. As a result, the overall density of development is low, with a correspondingly low share of multifamily units.

Figure 3-17 provides a map of the Sacramento study area. We limited jurisdictions in the study area to 22 incorporated cities in Eldorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. The study area does not include unincorporated areas. Because of the municipal boundaries, the study area is highly fragmented and excludes significant inner-city locations. As in Minneapolis-St. Paul, the GIS data for this study area capture planned land-use designations, not zoning. Also like the data for Minneapolis-St. Paul, the density designations are coarse, and include only six residential categories.

The population of the study area grew by almost 200,000 residents from 1990 to 2000, to reach a population greater than 1 million. Several jurisdictions, however, lost population, including Citrus Heights, which lost more than 22,000 residents. Other jurisdictions grew by sizable numbers; Elk Grove, Folsom, Roseville, and Sacramento gained more than 20,000 residents; 17 cities grew by over 10 percent over the same period.

### Regulatory Context

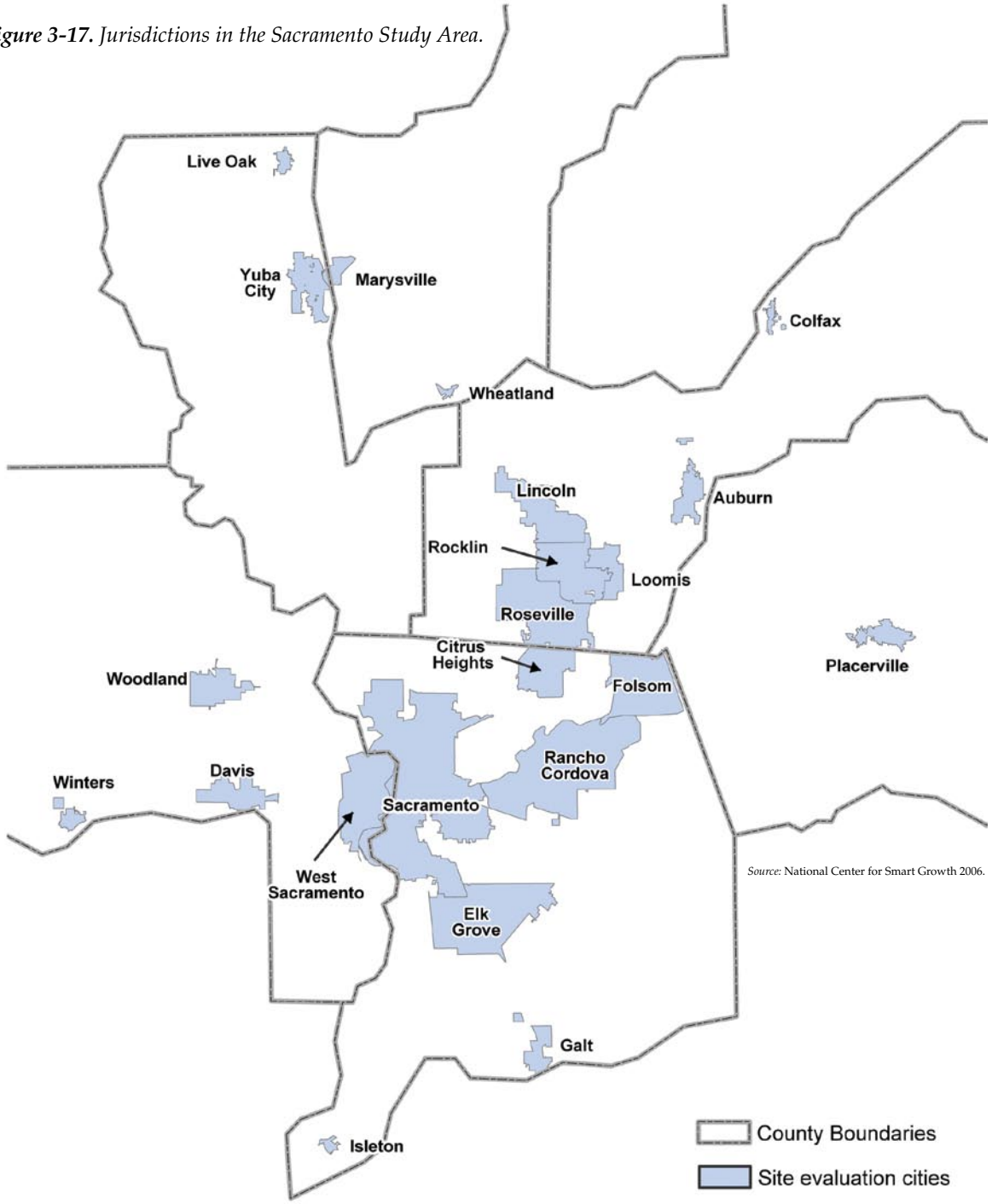
California has no overall state planning system in which local plans and regulations are reviewed by a state planning agency or commission, nor must communities advance or comply with state goals and objectives.

The California Government Code, however, does contain detailed requirements for the housing element of local plans, which must include six parts: review of the previous housing element; existing and projected needs assessment; resource inventory; identification of governmental and nongovernmental constraints on housing; quantified housing objectives; and housing programs (California Government code Section 65583). Under the statute, the primary factor in the local government's housing needs assessment must be the allocation of regional housing needs prepared by regional councils of governments (COGs) under state supervision.

To establish this allocation, the California Department of Housing and Community Development (HCD) determines each COG's share of state housing needs for four income categories (very-low, low-moderate, moderate, and above-moderate), thus covering the entire spectrum of housing need. Based on data provided by HCD relative to the statewide need for housing, each COG must then determine the existing and projected need for its region; the COG must determine, with HCD's advice, each city's or county's share.

Local governments must then include the COG's share of regional housing need in their individual housing plans. The statutes require the local

***Figure 3-17.*** *Jurisdictions in the Sacramento Study Area.*




*Source:* National Center for Smart Growth 2006.

government's housing element to identify specific sites to accommodate housing needs for all household income levels and to "provide for sufficient sites with zoning that permits owner-occupied and rental multifamily residential use by right, including density and development standards that could accommodate and facilitate the feasibility of housing for very-low- and low-income households" (Section 65583(c)(1)).

Local governments must revise the housing elements at least every five years. HCD has the authority to review draft and adopted local housing elements or amendments to determine whether they "substantially comply" with the statute prior to their adoption by the governmental unit. HCD

**KEY INDICATORS: SACRAMENTO**

*Jurisdictions with the highest median home price:*

- Davis ($238,500)
- Folsom ($228,700)
- Auburn ($214,900)
- Rocklin ($213,100)

*Jurisdictions with the lowest percentage of multifamily units:*

- Loomis (3 percent)
- Elk Grove (5 percent)
- Galt (11 percent)
- Live Oak and Winters (13 percent)

*Jurisdictions with the lowest average zoned density (zoned units/residential acre):*

- Colfax (0.95)
- Loomis (1.80)
- Placerville (3.41)
- Lincoln (3.62)

*Jurisdictions with the lowest percentage of residential acres zoned for high-density use:*

- Colfax, Wheatland, and Loomis (0 percent)
- Elk Grove (4 percent)
- Live Oak (6 percent)
- Rocklin (8 percent)

submits written comments identifying any provisions that would need to be revised or issues that would need to be addressed in order to comply with the state housing element law. Alternatively, the local government may adopt the draft element or amendment without changes, provided that the legislative body includes in its adopting resolution findings of why it believes the element or amendment "substantially complies" with the statute, despite HCD's findings. Upon adoption, the local government must then send a copy of the element or amendment to HCD for a final review.

## Key Indicators

Because jurisdictions included in the study area were limited to incorporated areas, the Census data for some jurisdictions suffer from small-area measurement error. The GIS data represent planned land use rather than zoning and do not include mixed use. Both sources of data could result in relatively imprecise indicators.

***Housing prices and rents.*** Housing prices in the Sacramento study area are relatively low and in 2000 represented only 3.3 times median household incomes. As in other study areas, however, housing prices rose quickly from 1990 to 2000 and generally outpaced increases in income. In general, the cities on the edges of the Sacramento Region have higher home values than the cities near the city center. Auburn, Davis, and Rocklin had median housing prices greater than $200,000 in 2000. Housing prices rose by nearly $50,000 in Auburn and Davis from 1990 to 2000.

Median rents were highest and rapidly rising in roughly the same cities where median home prices were high. Median rents were also high in Roseville and Loomis, however, and rose rapidly in Winters as well.

***Housing production and mix.*** The study area added 65,000 housing units from 1990 to 2000, about 2 percent more than it added households. In 2000, multifamily units comprised approximately 28.2 percent of housing units; but of the housing units built from 1990 to 2000, the multifamily share fell to 20 percent. The 2000 share of multifamily housing units for Elk Grove and Loomis was less than 5 percent.

During the 1990-2000 period, four jurisdictions (Galt, Isleton, Colfax, and Placerville) lost housing units, and six jurisdictions (Citrus Heights, Marysville, Loomis, Live Oak, Colfax, and Winters) lost multifamily housing units. The remaining 16 jurisdictions gained multifamily housing from 1990 to 2000. Of the jurisdictions that gained both total and multifamily units from 1990 to 2000, the percentage of multifamily units for Auburn, Elk Grove, Galt, Woodland, and Yuba City was less than 10 percent.

***Planned density and mix.*** Most residential land in the study area is planned for low-density use. The proportion of residential land planned for low-density use ranges between 0 percent in West Sacramento (meaning simply that there are no plans for low-density residential uses) to 98 percent in Wheatland. Colfax, Loomis, and Wheatland have no land planned for high-density use.

The share of high-density units for Colfax, Loomis, and Wheatland, of course is also zero. The density of land in high-density categories, however, is high for most jurisdictions, thus the share of units in high-density categories is much higher than the share of land in high-density land in most jurisdictions.

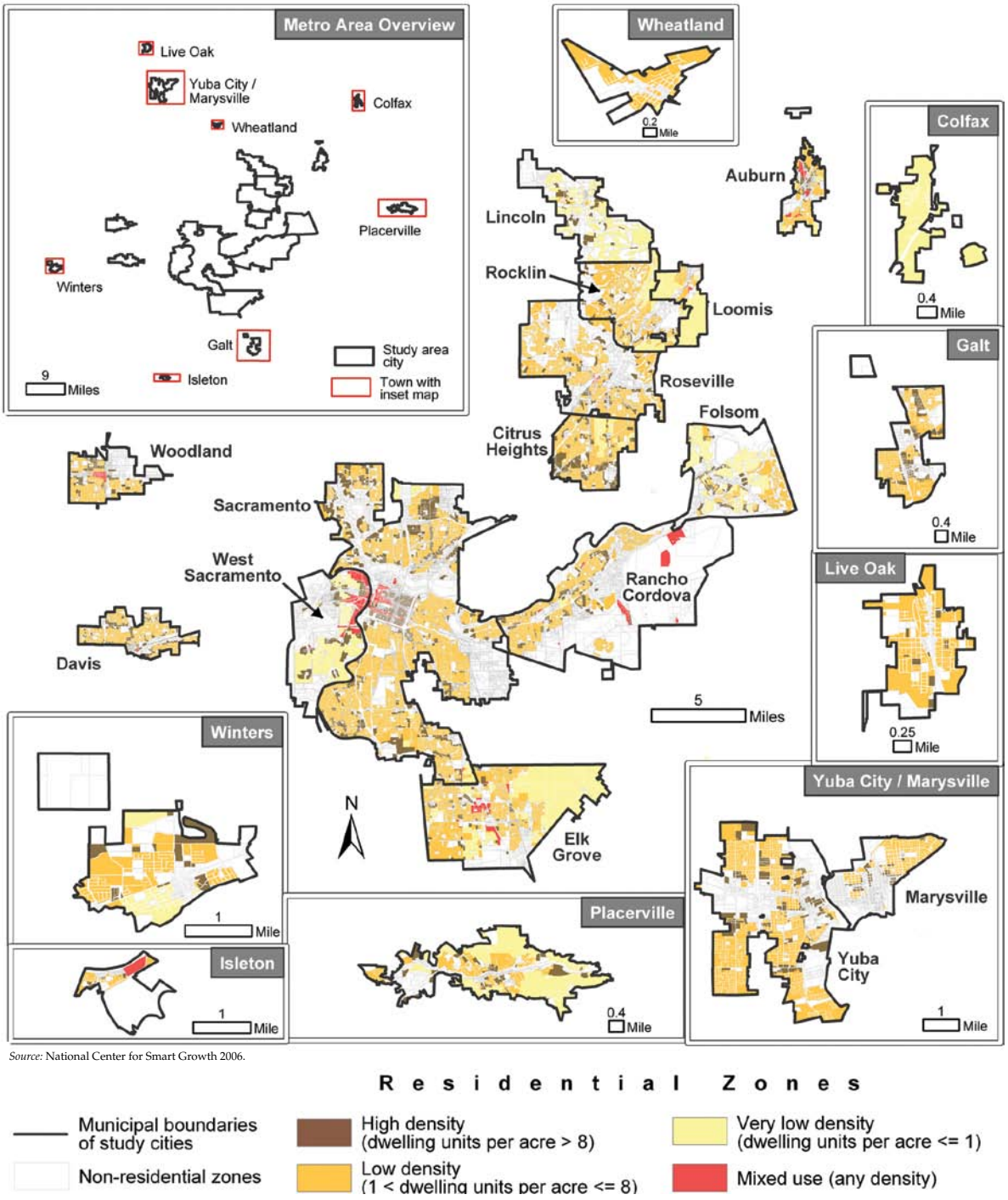
Because the density of development allowed in high-density categories in most jurisdictions is relatively high, the overall density planned for the study area falls in the middle range of the six study areas. Still, the density planned for Colfax is less than one unit per acre, and the planned density for Elk Grove, Lincoln, Loomis, Placerville, and West Sacramento is less than five units per acre. In other words, a few communities have very low density, which brings the average down.

## Data Visualization

Patterns of planned land use and housing prices for the Sacramento study area are illustrated in Figures 3-18, 3-19, and 3-20. As shown in Figure 3-18, most of the study area is planned for low- and very-low-density residential use. Sizable areas are planned for high-density use in Sacramento, but smaller high-density areas are dispersed throughout the metropolitan area. Areas planned for mixed use are uncommon but are dispersed throughout the metropolitan area.

Overall planned densities are illustrated in Figure 3-19. As shown, overall planned densities are relatively low and very low in the fringe communities of Lincoln, Loomis, Folsom, Colfax, El Dorado, and West Sacramento. There

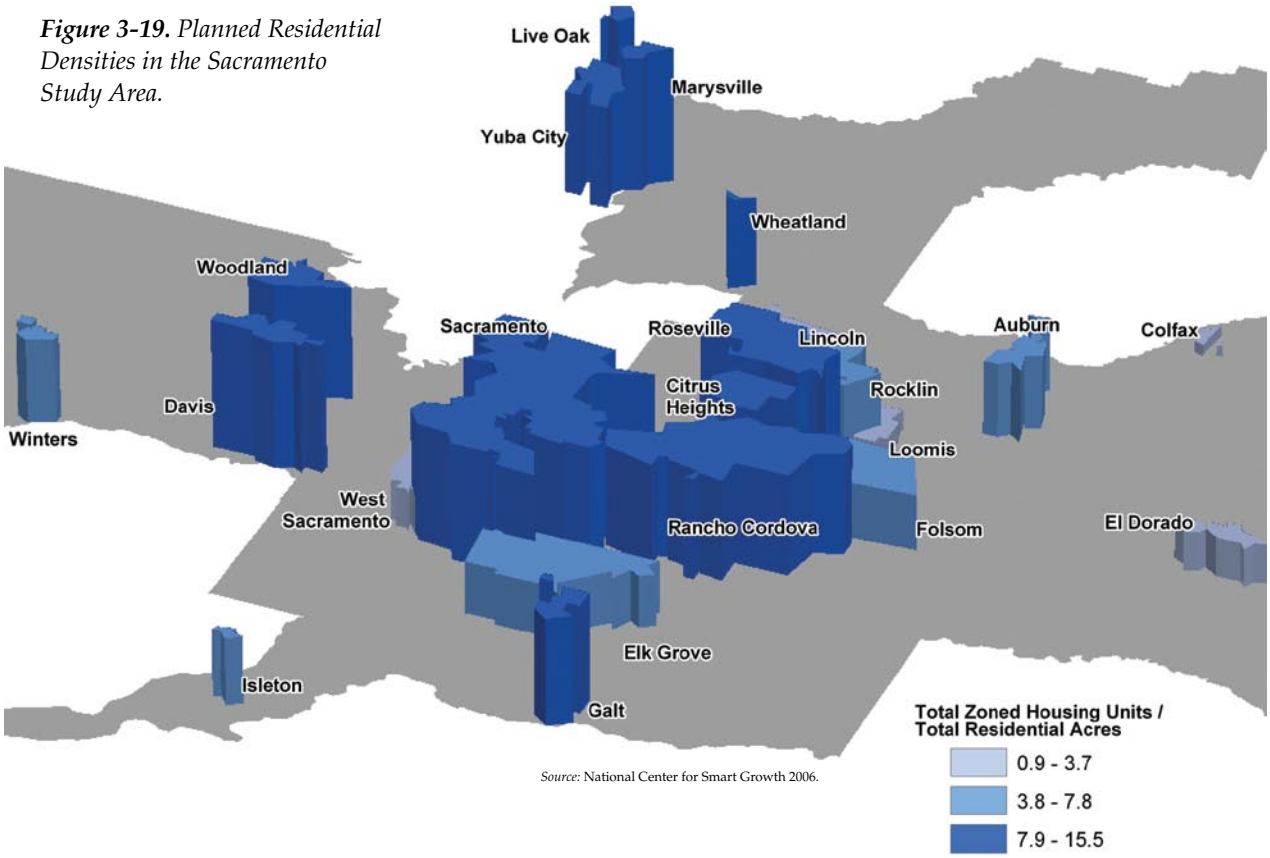
***Figure 3-18.*** *Planned Residential Land Use in the Sacramento Study Area.*




*Source:* National Center for Smart Growth 2006.

is no obvious pattern or systematic variation, perhaps in part because much of the metropolitan area is excluded from the analysis.

***Figure 3-19.*** *Planned Residential Densities in the Sacramento Study Area.*




*Source:* National Center for Smart Growth 2006.

Figure 3-20 illustrates the pattern of housing prices in the study area. As shown, housing prices overall are generally low and fairly evenly distributed. The highest median home prices are in Davis, Loomis, Lincoln, Rocklin, and Auburn. Davis is a community with high prices and high densities; Colfax, Lincoln, Folsum, and Rocklin have both high prices and low zoned densities.

### Key Stakeholder Interviews

We interviewed five people familiar with the public policy and development practices affecting multifamily and affordable housing development in the Sacramento metropolitan area. Interviewees included the executive director of a nonprofit affordable housing advocacy group, a department director and a principle planner from Sacramento County Housing and Redevelopment Agency, a planner from SACOG, and the director of a nonprofit affordable housing development agency.

All of the interviewees agreed that zoning and land-use controls do contribute to the problem of housing affordability in the Sacramento area. Community opposition has led public officials in some communities to favor single-family, low-density zoning. Development standards also contribute to the problem. For example, in the unincorporated county, large setbacks from single-family zones are required even for two-story multifamily developments, and at least one parking space must be built per unit, making it difficult to find a site suitable for multifamily projects. Additionally, navigating the land-use system adds to the costs of development and the amount of time it takes to complete projects. Service development charges also can be a barrier to the creation of affordable developments.

At the same time, land-use controls are an important part of the solution to the affordability crisis. Regulation is an important tool for changing land-use patterns and encouraging the development of multifamily or affordable units. For example, Sacramento has recently passed an inclusionary zoning ordinance that requires multifamily developers to include a certain percentage of affordable units in new development. Additionally, the state requires that communities zone enough multifamily land to meet the expected demand for affordable housing. Several communities in the Sacramento area have been involved in litigation because they do not have enough land zoned for multifamily development to meet state regulations.

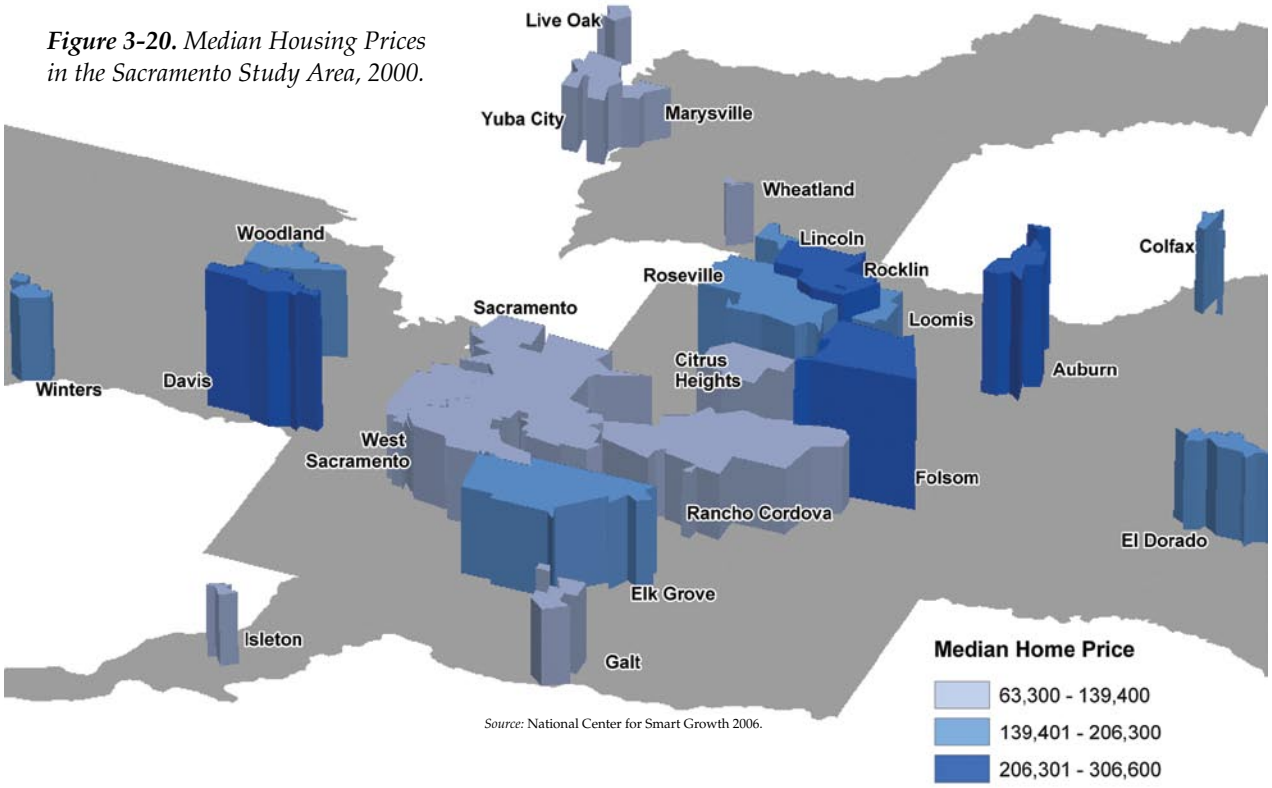
Zoning and land-use controls alone do not explain the housing affordability problem in the Sacramento area. Interviewees pointed to the following additional factors:

***Spill-over from the Bay Area market.*** Housing affordability is an even larger problem in the Bay Area than in Sacramento. Some people are choosing to commute from the Sacramento area to the Bay Area because they cannot afford homes in the Bay Area or are selling their homes in the Bay Area to purchase investment homes in Sacramento. This is fueling speculative investment and driving up the housing costs in the region.

***Condo conversions.*** Because there are not enough affordable for-sale units available, many for-rent apartment complexes have been converted to condominiums. This reduces the availability of affordable for-rent units throughout the region.

***Community opposition.*** Some communities have older apartments that have not been well-maintained or monitored. Because people in these communities have had poor experiences with multifamily housing in the past, they are reluctant to see additional multifamily developments. And many property owners and local government representatives believe that affordable or multifamily units negatively impact property values.

***Figure 3-20.*** *Median Housing Prices in the Sacramento Study Area, 2000.*




*Source:* National Center for Smart Growth 2006.

***Opposition from the development community.*** Some in the building industry believe that community preference is for single-family homes and are unwilling to take a risk of building denser housing.

***Availability of resources to subsidize affordable development.*** There are some state tax credits available for multifamily housing, but they are very competitive. Section 8 money has been overcommitted.

***Investment and speculation.*** Home values have been increasing so rapidly that purchasing property has become an attractive investment option.

### Regulatory Analysis

This analysis looked at planning policies and regulations affecting availability of multifamily housing in Sacramento, Elk Grove, Davis, West Sacramento, and Woodland, California, as part of the Sacramento Region. All five of the communities below have housing elements that reflected fair-share allocations established by the SCOG's Regional Housing Needs Plan. Only West Sacramento did not have a recent (since 2000) inventory of vacant land zoned for multifamily zoning. Densities ranged widely, reaching as high as 82.5 dwelling units per net acre in Sacramento. All communities offered density bonuses for provision of affordable housing. On the basis of this analysis, it can be concluded these communities have, at least in writing, a policy and corresponding regulatory framework to support multifamily housing.

### Summary

Densities and housing prices in the Sacramento study area are relatively low, and the multifamily share of housing units is the lowest of all of the study areas. Although some Sacramento-area jurisdictions have little land designated for high-density development, the region offers weak evidence that zoning serves as a barrier to multifamily development. As with the Minneapolis–St. Paul study area, this weak evidence could result from a lack of zoning data for the entire metropolitan area.

The share of residential land planned for high-density housing by jurisdictions in the Sacramento metropolitan area ranges from zero to 20 percent. Some of the cities with the highest median home values also have among the lowest percentages of existing multifamily units. Furthermore, the comprehensive plan designations vary among the jurisdictions in the region. Some have large portions of land designated for higher-density housing, while others have little or no land planned to accommodate multifamily dwelling units. Some of these same communities have also planned to have relatively low amounts of high-density residential land available in the future.

By state law, local governments must have housing elements in their comprehensive plans that address affordable housing and explain how the jurisdiction will meet its share of regional housing need. And, although the Sacramento Area Association of Governments has no statutory review responsibilities, it is leading a regional planning effort that would raise densities considerably.

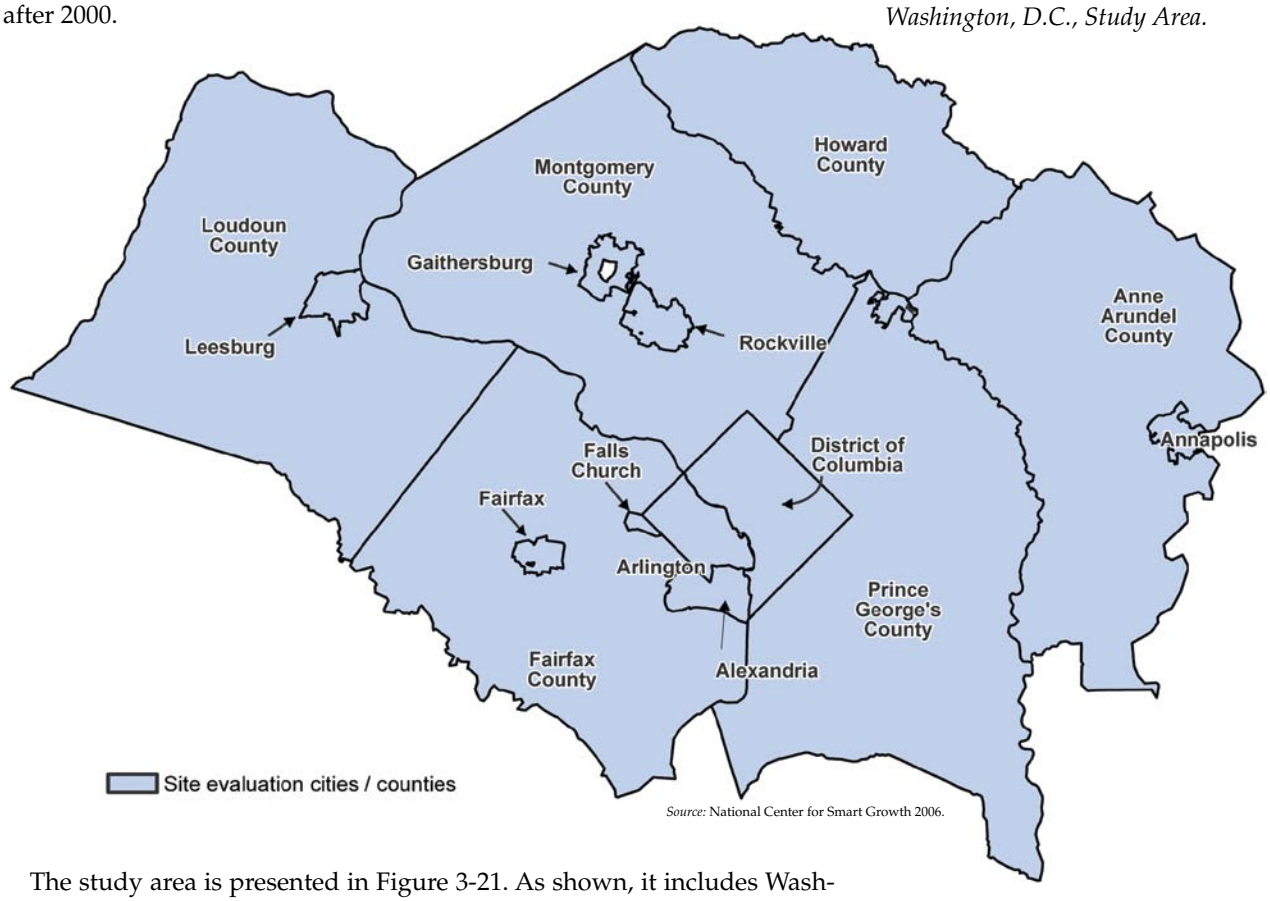
Local stakeholders interviewed in the region acknowledged that zoning presents an impediment to affordable housing in the Sacramento area, but argued that zoning is also an important part of the solution. Several interviewees pointed to inclusionary zoning codes, which require the inclusion of affordable units in new developments, as an important tool for combating the affordability crisis that has accompanied rising housing costs. At the same time, other factors, such as community and developer opposition and condominium conversions, also contribute to the problem of affordability.

## WASHINGTON, D.C.

The Washington, D.C., study area lies in the mid-Atlantic region at the southernmost end of the urban eastern seaboard. Parts of the region are old, built well before the advent of zoning in the 1920s; other parts are new and carefully planned and regulated, including the new towns of Greenbelt and Columbia, Maryland. Like many other urban areas on the eastern seaboard, the central city of Washington, D.C., continues to lose population as the region continues to grow.

Median housing prices in the Washington study area are in the midrange of the six study areas, though median rents and median incomes are the highest of the six. From 1990 to 2000, median housing prices and median rents did not rise as rapidly as in most study areas. This probably changed after 2000.

***Figure 3-21.*** *Jurisdictions in the Washington, D.C., Study Area.*




*Source:* National Center for Smart Growth 2006.

The study area is presented in Figure 3-21. As shown, it includes Washington D.C., and all of the cities and counties that surround Washington for which zoning data were available. Unlike other parts of the country, counties are the dominant form of local government in the region. Much of the land in the region, therefore, is regulated by county zoning.

Although the region is growing rapidly, growth rates vary considerably. Loudon County, Virginia, for example, nearly doubled its 1990 population in a decade, from 86,129 in 1990 to 169,599 in 2000. Other areas, largely built out, grew slower than the region as a whole. None except Washington lost population. The fastest-growing cities and counties—Gaithersburg, Howard County, Leesburg, and Loudoun County—are all located at the urban fringe at considerable distances from employment centers.

### Regulatory Context

***Maryland.*** Maryland has a state-level planning agency, the Maryland Department of Planning (MDP). MDP provides data, research assistance, and policy

development and implementation support for local governments, communities, businesses, and organizations. MDP also provides technical assistance, local program review, and planning design services for Maryland's counties and municipalities (as provided for in Maryland Code, Section 5-201 et seq.).

This department has an Office of Smart Growth that works directly with local governments, businesses, and organizations to coordinate the implementation of proven planning strategies (as provided for in Maryland Code, Section 9-1401 et seq.). The office is responsible for administering the state's 1997 Smart Growth Act (Maryland Code Annotated, Section 5-B-01 et seq.), aimed at directing new development into "priority funding areas." Under the statute, state funding of certain growth-related projects is prohibited outside of these priority areas, which include the state's 154 municipalities, land within the Baltimore and Washington Beltways, 31 enterprise zones, and the locally designated growth areas.

The region includes the Metropolitan Washington Council of Governments (WCOG), which is the designated Metropolitan Planning Organizations for transportation planning purposes. WCOG has a housing program and has adopted a regional affordable housing policy (WCOG 2005).

As specified by the state code, Article 66B, Section 4.01 et seq., the power to plan and zone is held by local governments, either counties or municipalities. Section 4.01 specifically authorizes a county or municipal corporation to create a planning and zoning commission that can compose and implement a plan. Unlike many other states, Maryland has few municipalities, and the majority of urban development takes place in parts of the unincorporated counties. Thus, also unlike in many other states, counties play a major role in the urban development process and county zoning is potentially very influential.

***Virginia.*** In contrast to Maryland, Virginia does not have a state planning department or office. Counties and cities have the power to plan and control land use, and, of interest to this research, local comprehensive plans must address affordable housing issues.

The Virginia Area Development Act, known as the "Regional Cooperation Act" (Code of Virginia, Sections15.1-1400 et seq.), implements regional planning efforts within the state. According to state code, Section 15.1-1406. A., planning district commissions (regional planning commissions) must prepare a regional strategic plan to guide the district and the municipalities within the district. The plan must include regional goals and objectives, strategies to meet them, and methods of measuring progress toward the goals and objectives, some of which must address housing development.

Local planning may occur at the county or municipal level. The governing body of any county or municipality may classify the territory under its jurisdiction in zoning districts; it then has the authority to regulate land use and development. Like Maryland, Virginia has few municipalities and, especially in the Washington metropolitan area, considerable development takes place in the unincorporated counties and under the constraints of county zoning.

### Key Indicators

Jurisdictions in the Washington region are relatively large. As a result, Census data generally do not suffer from small-area measurement error, but small-area differences in housing and population changes are masked in jurisdiction wide totals or averages. Unlike all the other study areas, the GIS zoning data for this region were not obtained from a regional agency but instead from the individual cities and counties. This was possible because the number of jurisdictions with land-use authority is small and because we had obtained much of the data for previous projects. The use of local data reduces the loss of precision that occurs through regional generalization, but it increases the potential for misinterpretation of local definitions.

Because counties control most of the land use in the region, most of the jurisdictions in the region include both urban and rural land. To facilitate comparison with the jurisdictions in the other study areas, the analysis of zoning in the Washington region is limited to the urban regions (Census defined) of the counties. While this limitation facilitates inter-study-area comparison, this focus on urban areas masks the potential impact of rural zoning on housing prices and rents, and limits the analysis to small portions of the county. This is especially true for Loudoun County.

***Housing prices and rents***. Compared to other study areas, housing prices in the Washington, D.C., study area in 2000 were moderately high but rents were the highest of all. Housing values increased in every jurisdiction between 1990 and 2000. Alexandria, Arlington County, and Falls Church all had 2000 median home prices that are more than 30 percent above the regional median.

Housing values have increased faster than incomes in every jurisdiction in the study area. As a ratio of housing value to income, housing is least affordable in Alexandria, Annapolis, Arlington County, Falls Church, and Montgomery County. Average rents vary less among the jurisdictions in the study area, but are highest in Rockville, Fairfax County, and Falls Church. Rents have risen somewhat faster than income between 1990 and 2000.

***Housing production and mix.*** Every jurisdiction in the study area gained housing units between 1990 and 2000. Fairfax County, the most populous jurisdiction in the region, gained the most, while Loudoun County, the most exurban jurisdiction, experienced the greatest percent increase. Anne Arundel, Howard, Montgomery, and Prince George's counties also added more than 20,000 housing units, though only Prince George's County gained more housing units than households.

Multifamily units are concentrated in Washington, D.C., Arlington County, and Alexandria, the only jurisdictions where multifamily housing units represent more than half of the housing stock. Between 1990 and 2000, Fairfax and Montgomery counties added large numbers of multifamily units while Annapolis and Fairfax City both lost multifamily housing stock. Other communities gained multifamily units, but as a share of total new housing units, very few were multifamily. For every 100 new housing units in Loudoun County, Leesburg, Prince George's County, Howard County, and Falls Church, fewer than 20 were multifamily units.

***Zoned density and mix.*** In the entire study area, only 7 percent of the land is zoned for high-density use. Most counties have less than 10 percent of their land zoned for high-density use; the amount of land zoned for high-density use in Anne Arundel, Fairfax, Howard, Loudoun, Montgomery counties is less than 5 percent. For the entire region, the share of units zoned for high-density development is only 25 percent. In Howard, Loudoun, and Montgomery counties, the share is less than 20 percent.

Because the share of land zoned for high-density housing is low, overall zoned density is low—less than five units per acre. Jurisdictions zoned for less than four units per acre include Fairfax, Howard, and Loudoun counties.

## Data Visualization

Additional insights on zoning patterns and housing prices for the Washington study area are available in Figures 3-22, 3-23, and 3-24. As shown in Figure 3-22, areas zoned for high-density are highly concentrated in Washington D.C., Arlington, and Alexandria, and in isolated areas in Prince Georges County. Mixed use zones are somewhat more dispersed with some relatively large areas zoned for mixed use in Montgomery, Howard, Prince Georges, and the urban portions of Loudoun Counties.

### KEY INDICATORS: WASHINGTON, D.C.

*Jurisdictions with the highest median home price:*

- Falls Church, Virginia ($277,100)
- Arlington County, Virginia ($262,400)
- Alexandria, Virginia ($252,800)

*Jurisdictions with the lowest percentage of multifamily units:*

- Loomis (3 percent)
- Elk Grove (5 percent)
- Galt (11 percent)
- Live Oak and Winters (13 percent)

*Jurisdictions with the lowest average zoned density (zoned units/residential acre):*

- Colfax (0.95)
- Loomis (1.80)
- Placerville (3.41)
- Lincoln (3.62)

*Jurisdictions with the lowest percentage of residential acres zoned for high-density use:*

- Colfax, Wheatland, and Loomis (0 percent)
- Elk Grove (4 percent)
- Live Oak (6 percent)
- Rocklin (8 percent)

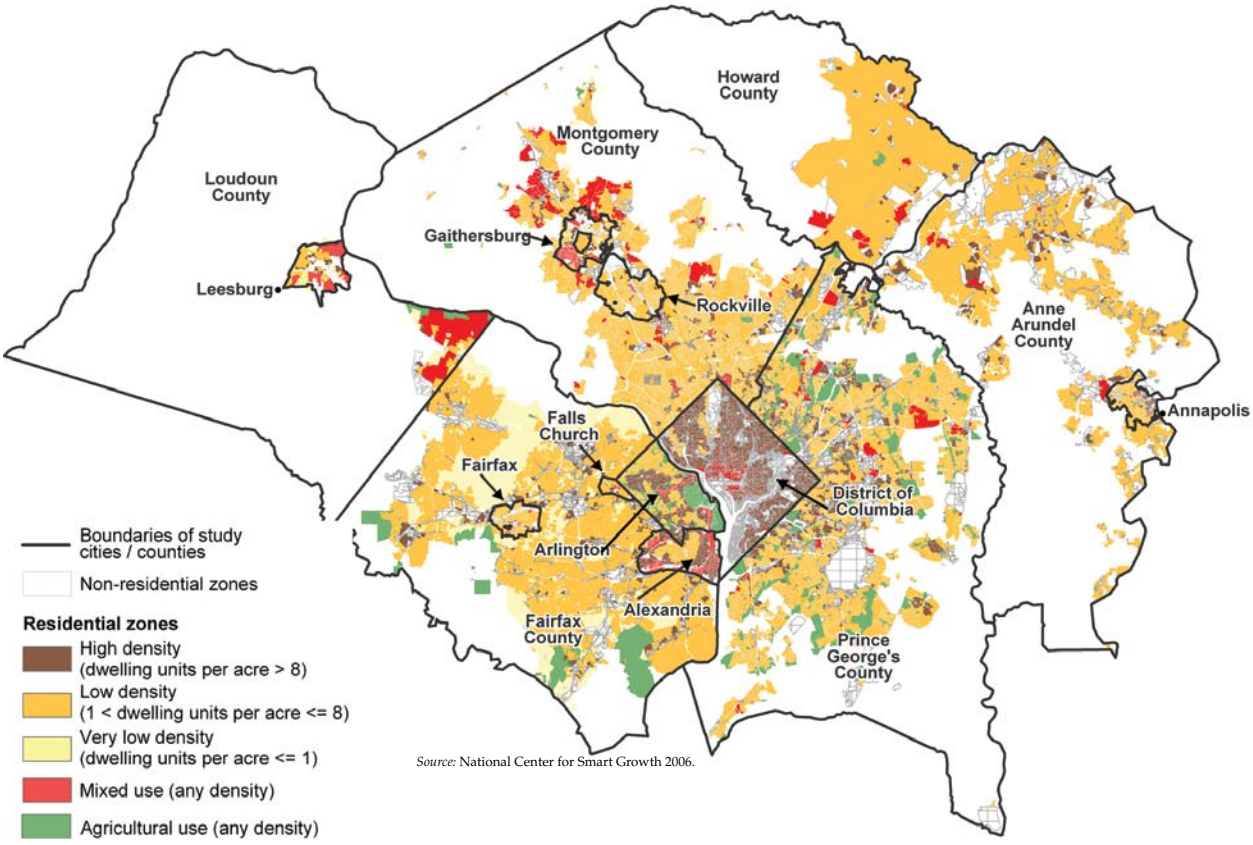



***Figure 3-22.*** *Residential Zoning in the Washington, D.C., Study Area.*

The stark decline in zoned density is even more apparent in Figure 3-23. As shown, the overall zoned densities of Washington, D.C., Alexandria, Arlington, and Gaithersburg clearly stand out from the relatively low overall residential densities in the surrounding counties.

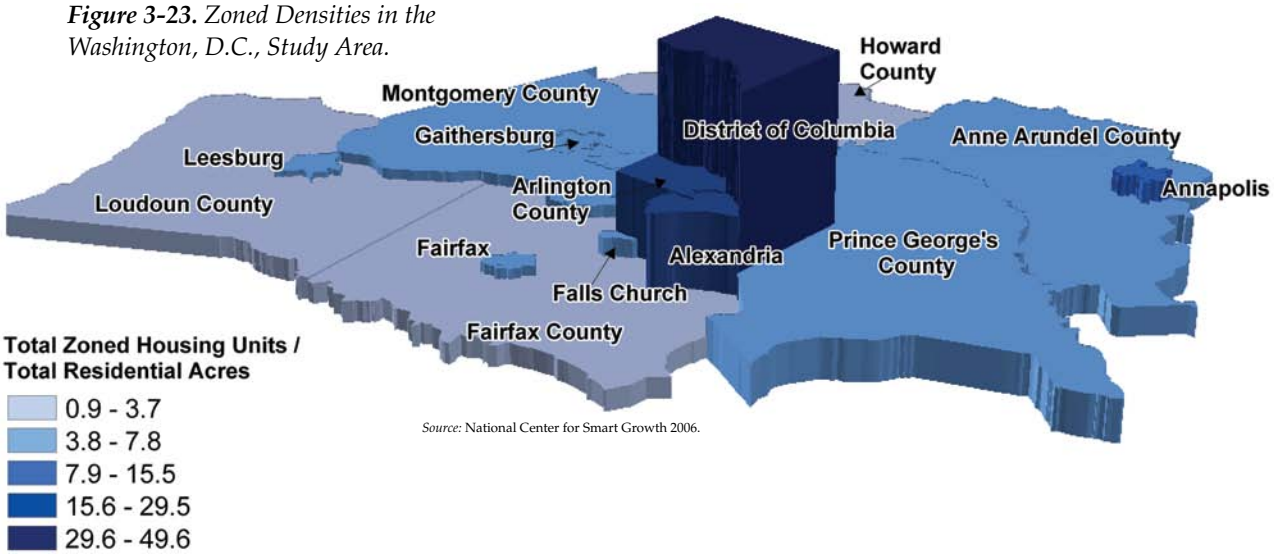
Figure 3-24 illustrates the pattern of housing prices in the study area. As shown, Fairfax and Montgomery Counties—both of which have low overall zoned densities—have the highest median housing prices. Again, the contrasts illustrated by Figures 3-23 and 3-24 do not provide prima facie evidence that zoning represents a barrier to multifamily or high-density development in these communities, but they do provide insights about good places to look.

### Key Stakeholder Interviews

We interviewed three people familiar with the public policy and development practices affecting multifamily housing development in the Washington, D.C., metropolitan area. Interviewees included a senior planner from Annapolis, an upper management representative from the Maryland Department of Planning, and a long-range planner with Montgomery County.

The interviewees agreed that housing affordability is a problem in the metropolitan area but had mixed opinions zoning's effect on the development of multifamily and affordable housing in the region. Many residents and some public leaders believe that increased density leads to an increased strain on public resources; some communities may actively seek to reduce the amount of higher-density housing for this reason. One way that communities do this is through adding development or impact fees to multifamily developments, or by adding complexity to the development review process. Rather than excluding denser development, some communities have intentionally recruited luxury housing as a means of economic development for the community.

***Figure 3-23.*** *Zoned Densities in the Washington, D.C., Study Area.*



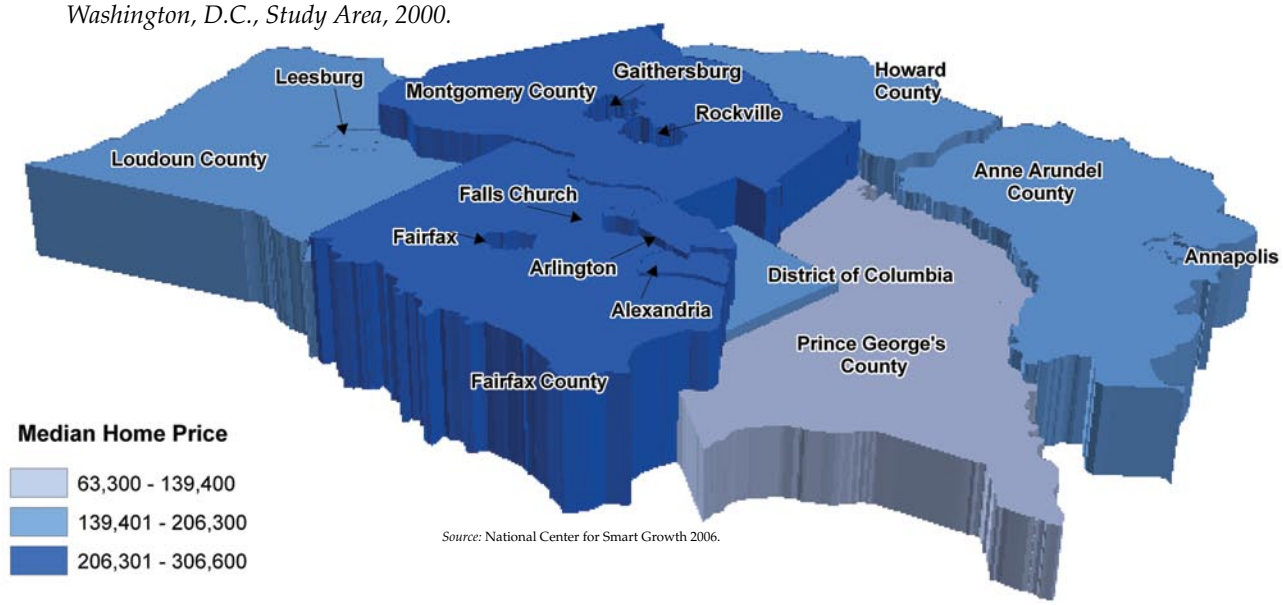

*Source:* National Center for Smart Growth 2006.

While most felt that the zoning in place in the D.C. metro area contributes to a lack of adequate affordable housing in some way, all agreed that zoning alone does not drive the low-density land-use patterns. Interviewees pointed to the following additional factors.

***Perception of housing scarcity.*** The interest rates for mortgages have decreased in recent years, encouraging people to enter the housing market who might not otherwise have done so. Media attention leads people to believe there is a lack of available housing units for purchase, and many are buying whatever they can find as quickly as they can. This increased demand leads to increased prices.

***Speculation in the housing market.*** Compounding this perceived lack of supply is an increase in speculative purchasing of homes. Because home values have been increasing so rapidly, purchasing property has become an attractive investment option. This increases competition for units on the market and further drives up the price.

***Figure 3-24.*** *Housing Prices in the Washington, D.C., Study Area, 2000.*




*Source:* National Center for Smart Growth 2006.

***Goal of protecting rural areas.*** Especially in unincorporated areas, many land-use regulations have been implemented to protect farmland and to constrain urban growth. These policies do contribute to lower density development but do not have the intention of reducing the availability of affordable housing. One interviewee stated that Loudon County, for example, is very interested in preserving rural areas, and that, to accomplish both that goal and the goal of providing housing, they zoned land for low-density development.

***Lack of public services.*** Many areas do not have the sewage or water capacity to allow for higher-density development. This is especially true in unincorporated areas where the cost of extending urban services is prohibitively expensive. At least one interviewee noted, however, that some local governments may choose not to increase services to certain areas to ensure that lower-density development patterns are maintained.

***NIMBY-ism.*** In some communities (especially affluent ones), the fear that multifamily housing will drive down the value of existing single-family housing leads to community opposition to dense development. Developments face an additional obstacle when community members have had poor experiences with the management of apartment complexes in the past.

Despite these caveats, some interviewees mentioned some specific jurisdictions where they felt that zoning regulations may limit the development of new multifamily or affordable housing units. These communities included Anne Arundel, Loudoun, and Howard Counties.

Interviewees also mentioned, however, that many of these communities may have zoning in place that limits multifamily development for reasons other than excluding affordable housing: most notably, some areas do not have urban services available (especially sewer), and there is an interest in preserving open space and rural development in unincorporated areas. Further, Montgomery County, which does have relatively low-density development, has a nationally recognized program of inclusionary zoning that promotes the inclusion of affordable units in planned developments. Low-density development there is not necessarily associated with a lack of affordable housing.

### Regulatory analysis

The planning policies and land-use regulations of the five jurisdictions we studied in the D.C. area support the location and construction of multifamily housing at appropriate density ranges. In the case of Howard County, however, the lack of specified densities in the general plan for the county may pose a problem in future rezonings, since the plan does not provide clear guidance about the location of future multifamily development. All of the jurisdictions address affordable housing in some way in their plans and land-use regulations; of the group, Fairfax County has the strongest provisions.

### Summary

The Washington, D.C., metropolitan area is a large, diverse, and, in recent years, rapidly growing area. The study area includes several of the richest and fastest-growing counties in the country and one of the poorest and most challenged central cities. Even so, housing affordability measures for metropolitan Washington are consistently among the lowest in the nation, overall densities are relatively low, and housing production rates, especially multifamily housing production rates, are low relative to population growth.

The regulatory and institutional context of the study area is complicated. In addition to two states and a federal district, the region includes a Council

of Government and an MPO, the National Park and Planning Commission for the Washington suburbs in Maryland, seven counties, and many municipalities. All seven counties but only nine municipalities are examined in detail here.

Much is often made of the difference in regulatory environments between the Dillon Rule State of Virginia and the Smart Growth State of Maryland, but the regulatory environments in the rich, rapidly growing urban counties of Virginia and Maryland are probably more similar to each other than they are with poorer, slow-growing counties in the same state. When it comes to land-use policies, WashCOG is largely irrelevant. Though municipalities in both Maryland and Virginia have zoning authority, counties in both states are the dominant form of government, have extensive zoning authority, and do not hesitate to use it. Thus, zoning by counties is a pervasive and influential across the study area, though the influence of zoning is complicated in Maryland by interactions with other state and local land-use tools.

Because counties play such a major role in land-use governance in the study area and because annexation is relatively rare, perhaps the most significant use of zoning in the region is to identify developable land. Because of the strength of the Washington, D.C., economy, urban development is financially viable in almost the entire region. Zoned densities in the rural tier, rural reserve, agricultural preserve, or outside the priority funding area, however, range from 1 to .02 units per acre. It is difficult to ascertain the extent to which rural zoning in the aggregate affects housing prices or whether development is deflected toward the central city or the distant exurbs. But for better or for worse, there is little doubt that densities would be much higher in the rural tiers of Montgomery, Fairfax, Alexandria, Howard, Prince Georges', and Anne Arundel counties if zoning would permit higher densities.

Zoning in urban areas varies in density from 3.11 in Howard County to 15.87 in Arlington County. Based on measures of net total density, total land zoned for high-density development, and existing multifamily share, it appears as though high-density, multifamily development is less welcome in Howard and Loudoun counties than in other parts of the metropolitan area, though these are suburban counties where the demand for high-density housing may be low. There is little doubt, however, that development pressures on zoning constraints are greater in the affluent and growing counties than in the poorer, slow-growing counties of Prince George's and the central city of Washington, D.C. In the affluent counties, even in areas zoned for high-density or mixed use, high-density development is often prevented or prolonged by other regulatory instruments, procedural delays, and community opposition. In Maryland, anecdotes abound about projects approved only for densities far below that allowed by zoning. That said, regardless of zoning, a high-density and high-quality development would be welcome almost anywhere in Washington, D.C., yet encounter significant formal and informal opposition in Montgomery County.

In sum, it is relatively clear that zoning is a powerful and influential instrument in the Washington, D.C., metropolitan area. Low-density zoning in the rural areas of Virginia and Maryland clearly keep densities in these areas below their market-determined levels. The merits of such policies we do not address here. Further, evidence exists that zoned densities, on average, are exceptionally low in some jurisdictions and in some parts of many jurisdictions. In these locations, it is clear zoning represents a barrier to high-density development. Dillon's rule and an anti-regulatory culture impose constraints on the ability of local governments to use zoning as a regulatory barrier in Virginia; there are few such constraints in Maryland.

## STATISTICAL ANALYSIS

To provide an overall assessment of the relationship between zoning and housing development, housing prices and rents, we conducted some simple statistical analyses. These analyses involved the computation of correlation coefficients between key variables and the estimation of regression equations using data from all of the study sites. As with nearly all statistical analyses, statistically significant relationships do not reveal cause and effect, but do provide insights about the nature of relationships between critical variables. The key relationships explored were those between residential zoning and housing construction and between housing construction and housing prices and rents.

Statistical analysis began with an examination of bivariate correlations between several key variables. The results are presented in Table 3-2.

**TABLE 3-2. STATISTICAL ANALYSIS RESULTS, BIVARIATE CORRELATIONS**

| | | Change in Housing Units (1990-2000) | Change in Median Household Value (1990-2000) | Change in Multifamily Housing Units (1990-2000) | Change in Median Contract Rent (1990-2000) |
|---|---|---|---|---|---|
| Change in Housing Units (1990-2000) | Pearson Correlation | 1 | -0.091 | 0.867 | -0.010 |
| | Sig. (2-tailed) | . | 0.266 | 0.000 | 0.908 |
| | N | 150 | 150 | 150 | 150 |
| Change in Median Household Value (1990-2000) | Pearson Correlation | -0.091 | 1 | 0.001 | 0.571 |
| | Sig. (2-tailed) | 0.266 | . | 0.993 | 0.000 |
| | N | 150 | 150 | 150 | 150 |
| Change in Multifamily Housing Units (1990-2000) | Pearson Correlation | 0.867 | 0.001 | 1 | 0.042 |
| | Sig. (2-tailed) | 0.000 | 0.993 | . | 0.609 |
| | N | 150 | 150 | 150 | 150 |
| Change in Median Contract Rent (1990-2000) | Pearson Correlation | -0.010 | 0.571 | 0.042 | 1 |
| | Sig. (2-tailed) | 0.908 | 0.000 | 0.609 | . |
| | N | 150 | 150 | 150 | 150 |
| Housing Units in 1990 | Pearson Correlation | 0.725 | -0.107 | 0.633 | -0.076 |
| | Sig. (2-tailed) | 0.000 | 0.192 | 0.000 | 0.355 |
| | N | 150 | 150 | 150 | 150 |
| Multifamily Housing Units in 1990 | Pearson Correlation | 0.394 | -0.070 | 0.367 | -0.039 |
| | Sig. (2-tailed) | 0.000 | 0.397 | 0.000 | 0.634 |
| | N | 150 | 150 | 150 | 150 |
| Zoned Housing Units | Pearson Correlation | 0.776 | -0.059 | 0.651 | -0.085 |
| | Sig. (2-tailed) | 0.000 | 0.473 | 0.000 | 0.300 |
| | N | 150 | 150 | 150 | 150 |
| Zoned High-density Housing Units | Pearson Correlation | 0.405 | 0.081 | 0.418 | -0.065 |
| | Sig. (2-tailed) | 0.000 | 0.327 | 0.000 | 0.430 |
| | N | 150 | 150 | 150 | 150 |

*Source:* National Center for Smart Growth 2005.

As shown, *change in housing units* (1990-2000) is significantly correlated with several other indicator values. Not surprisingly, *change in housing units* is significantly positively related with *housing units* (1990), *multifamily housing units* (1990), and *change in multifamily housing units* (1990-2000). More interestingly, *change in housing units* (1990-2000) is significantly correlated with *zoned housing units*. This suggests that jurisdictions with more zoned development capacity realized greater growth in housing units between 1990 and 2000.

As also shown in Table 3-2, *change in multifamily housing units* is significantly positively related with *housing units* (1990), *multifamily housing units* (1990), and *change in housing units* (1990-2000). Furthermore, *change in multifamily housing units* (1990-2000) is significantly correlated with *zoned high-density housing units*. This suggests that jurisdictions with more land zoned for high-density development realized greater growth in multifamily housing units between 1990 and 2000.

As also shown in Table 3-2, *change in median housing value* and *change in median rents* are not significantly correlated with any of the variables correlated with changes in housing units.

To explore these relationships further, we estimated several regression equations. Two of these equations are presented below.

Equation 1 reveals that *change in housing units* is negatively related to *housing units* (1990), positively related to *change in population* (1990-2000), *change in median housing value* (1990-2000), and not related to *change in median household income* (1990-2000). Furthermore, *change in housing units* is positively related to *zoned housing units,* holding other things constant. There

| Equation 1: Change in Housing Units (1990-2000) | Equation 2: Change in Multifamily Housing Units (1990-2000) |
|---|---|
| -176.27 | 774.61 |
| - .07**(Housing Units 1990) | - .03** (Housing Units 1990) |
| + .35** (Change in Population 1990-2000) | + .10** (Change in Population 1990-2000) |
| + .01** (Change in Median Housing Value 1990-2000) | + .01 (Change in Median Contract Rent 1990-2000) |
| - .01 (Change in Median Household Income) | - .03 (Change in Median Household Income 1990-2000) |
| + .04** (Zoned Housing Units) | + .02** (Multifamily Zoned Housing Units) |
| - 376 (Miami) | - 605 (Miami) |
| +549 (Boston) | -638 (Boston) |
| +148 (Sacramento) | -1027** (Sacramento) |
| +114 (Minneapolis) | -1260** (Minneapolis) |
| +1210 (Washington D.C.) | -1138 (Washington D.C.) |
| $R^2 = .97$ | $R^2 = .73$ |

** Significant at the 99 percent level.

Caption??????????

*Figure 3-25. Regression Equations No. 1 and No. 2.*

were no significant differences in housing production between study areas after controlling for the above variables.

Equation 2 reveals that *change in multifamily housing units* is positively related to *housing units* (1990), to *change in population* (1990-2000), not related to *change in median contract rents* (1990-2000) and *change in median household income* (1990-2000). Furthermore, *change in multifamily housing units* (1990-2000) is positively related to *zoned high-density housing units*, holding other things constant. After controlling for the above variables, *change in multifamily housing units* was lower in Sacramento and Minneapolis than in Portland.

It is important again to note several limitations of these results. First, the zoning indicators measure zoning capacity near the end of the period over which growth is measured, not the beginning. Further, zoned capacity includes both capacity on vacant land and capacity on developed land. Finally, correlation does not imply causation. Jurisdictions that zone more land for residential use in general and for high-density development in particular may not realize greater increases in housing and multifamily housing, respectively. But it is more likely that high levels of zoning capacity cause increases in housing stocks than for large increases in housing stocks to cause increases in zoning capacity.

These findings thus suggest that zoning does influence the growth of housing stock in general and the growth of multifamily housing stock in particular. The results do not indicate that an increase in housing stock lowers housing prices or that an increase in multifamily housing stock lower rents.

## SIMULATION EXERCISE: METROSCOPE

MetroScope is a regional-level forecast model used by Metro (the regional planning agency of Portland, Oregon) to predict where employment and housing are likely to locate. With the assistance of Metro staff, this study used MetroScope to provide a look at the connection between zoning and future housing development patterns on a regional level.

Appendix G describes the MetroScope model and presents the results that the model generated. This subsection briefly describes the MetroScope model, the two model runs, and the implications of the results for this study.

MetroScope's main purpose is to predict where employment and housing are more likely to locate within the Portland-Vancouver Metropolitan Statistical Area (MSA), given land supply and capacity, market demand factors, and the expected amount of growth in population and jobs. Supply is calculated from estimates of vacant land and land that could support infill or redevelopment. Local zoning is overlaid on this supply of available land to determine the land's capacity for accommodating expected housing or employment growth.

In this study, we were primarily concerned with the land's capacity to accommodate new housing. MetroScope assumes that households in the Portland-Vancouver MSA will make housing location choices that meet their desires and are affordable for their household income levels. Housing market demand is predicted based on the following factors:

- The location and amount of housing capacity, by type of housing
- Household characteristics (income, household size, etc.)
- Proximity to employment centers
- Relative prices of housing units

The model also adjusts for construction costs, tenure choice, housing type choices, and utility preferences.

This study used the MetroScope model to simulate two scenarios using real data for the Portland-Vancouver MSA:

- **Scenario 1: Baseline.** This baseline scenario uses the residential capacities, based on local plans currently in place, in jurisdictions throughout the region to determine where residential growth is likely to occur.
- **Scenario 2: Increased density.** In this scenario, the residential densities are significantly increased in several jurisdictions: Happy Valley, Milwaukie, Lake Oswego, Tualatin, and West Linn.

The MetroScope results (i.e., the comparison of the results of Scenario 1 and Scenario 2) illustrate that housing demand and supply forces act within a regional market. Changes in the demand for and supply of single-family, high-cost housing in more exclusive communities will result in changes in the demand for and supply of housing units of all types in other jurisdictions in the region.

The MetroScope model runs also illustrate which jurisdictions have an incentive to enact policy barriers to the development of higher-density housing units. Given the parameters of the model run, it predicts a market pattern that is potentially counterintuitive: poorer or middle-income communities have a greater incentive to adopt barriers to multifamily development than do communities with more expensive housing options. The reasons:

- Without intervention, lower-income areas typically get housing for lower-income residents. When these communities restrict the amount of land available for higher-density development or increase the land available for lower-density development, they are positioned to capture any higher-end development that might spill over from neighboring communities.
- At the same time, upper-income areas will continue to see development that caters to an upper-income demographic, even if that development is higher-density development.

Simply put: poorer and middle-income communities have more to gain from enacting exclusionary policies than upper-income communities have to lose from allowing denser development.

Within the context of this report, the MetroScope model runs support the point that the effects of jurisdictional zoning decisions on local and regional housing markets are rarely straightforward. Higher-priced communities may enact exclusionary zoning policies that have the effect of increasing more expensive high-density development in neighboring communities, while communities with a less expensive housing stock may increase the overall value of their housing stock by limiting the amount of higher-density development they allow.

CHAPTER 4

# Conclusions

The objective of this study was to examine, on a pilot basis, whether zoning impedes the development of higher-density, multifamily housing in growing metropolitan areas. The research produced a variety of development and regulatory indicators in an attempt to identify evidence of regulatory barriers to the development of new multifamily housing. The presumption that motivates the analysis is that multifamily represents the most affordable type of housing. That presumption was not, however, evaluated in the study.

This chapter reviews the results of the analysis and discusses their implications for the key research questions.

## KEY FINDINGS FROM THE STUDY-AREA EVALUATIONS

Because the study areas varied widely in regulatory frameworks, data quality and development patterns, each provided unique insights. For example:

- In the Boston study area, where housing prices and rents are high and rising, there was clear evidence of barriers to multifamily housing. Although a significant share of the existing housing stock is multifamily, many communities have little or no land zoned for multifamily use, and multifamily housing starts have fallen precipitously. Analyses of local zoning codes and regulations also support the conclusion that there exist regulatory barriers to multifamily development.
- In the Miami study area, housing prices are high and incomes are low. But in much of the study area, the overall density of development is high, and many communities have significant land zoned for higher-density use. In many higher-density jurisdictions, housing prices and rents are also high. This makes clear that higher-density communities are not necessarily affordable communities.
- In the Minneapolis-St. Paul study area, housing is relatively affordable and development densities are low. Land planned for higher-density development is scarce, but spread relatively evenly throughout the metropolitan area. Little evidence of barriers is present in local zoning ordinances and plans. The results suggest that oversight by the Metropolitan Council might have mitigating effects.
- In the Portland study area, housing prices and rents rose rapidly over the last decade. But despite increasing scarcity of developable land, significant quantities of land are zoned for multifamily use throughout the metropolitan area, and housing and rents remain below many other metropolitan areas. The results suggest that oversight of zoning by a regional government not only fosters the creation of high quality GIS data, but mitigates barriers to the development multifamily units.
- In the Sacramento study area, prices and rents are relatively low, as are development densities. Although zoning data were not available, data on planned land use portend a significant increase in future densities. It is not clear that data on planned land use is well suited for analyzing barriers to multifamily housing, but it is clear that low-density communities are not necessarily unaffordable communities.
- In the Washington, D.C., study area, large, low-density suburban counties surround a relatively dense central city. Many of these counties have both significant amounts of land zoned for higher-density use and affirmative affordable housing programs. But housing production, especially higher-density housing production, remains sluggish. The results suggest zoning is not the only barrier to affordable housing.

## EVIDENCE ON KEY RESEARCH QUESTIONS

The principle purpose of this research is to address two hypotheses:

1. It is possible to use local GIS data, data visualization, and case study techniques to gain new insights on the effects of zoning in select metropolitan areas.
2. Based on the evidence obtained in select metropolitan areas, zoning can impose a barrier to the construction of higher-density multifamily housing

The evidence regarding Hypothesis 1 is mixed. An underlying motivation for this study was the following presumption: with GIS data on local

zoning regulations, it would be easy to identify where zoning was a barrier to higher-density or multifamily housing. In practice, it is not that simple. While the display and analysis of GIS and census data helped gain insights on inter- and intra-metropolitan zoning patterns, it was not generally possible to identify the unique impacts of zoning or precisely where and when zoning imposed regulatory barriers. The reasons are multiple:

- Comprehensive GIS zoning data are not available for most metropolitan areas and collecting and compiling them from the various jurisdictions is an arduous and costly process. Even in metropolitan areas where such data are available, the data are often incomplete and poorly suited for comparative analysis. Portland is a stark exception.
- Even where the zoning data are relatively good, identification of the effects of zoning is limited by the lack of data on vacant land, public infrastructure, and other environmental and regulatory constraints on development capacity.
- In several study areas, jurisdictions with high percentages of multifamily units have high median home prices and rents. This suggests that higher-density communities are not always affordable communities.
- In several study areas, jurisdictions with low percentages of multifamily units also have low housing prices and rents. This suggests that low-density communities are not always unaffordable communities.
- The GIS and statistical analysis was adequate for identifying broadly where housing, including multifamily housing, is allowed and built. It was less effective in isolating the reasons for those patterns or the effects of zoning on development patterns.
- When the GIS data were of high quality, and when the data were carefully analyzed from a variety of perspectives, however, it was not difficult to identify where zoning represents a likely barrier to multifamily or higher-density development.

*While the display and analysis of GIS and census data helped gain insights on inter- and intra-metropolitan zoning patterns, it was not generally possible to identify the unique impacts of zoning or precisely where and when zoning imposed regulatory barriers.*

The evidence regarding Hypothesis 2 is more compelling. The evidence suggests that zoning indeed can serve as a barrier to higher-density multifamily housing. The evidence comes from both quantitative and qualitative analysis.

The statistical analysis suggests a relationship between zoned capacity and housing production, and between higher-density zoning and multifamily housing production. In other words, jurisdictions with more land zoned for residential development had more residential development; and jurisdictions with more land zoned for multifamily development had more multifamily development.

The regulatory analysis found evidence of specific policies in some jurisdictions that directly limit the amount of multifamily housing development. These jurisdictions generally had higher incomes, higher housing prices, lower densities, and fewer multifamily housing units than their neighbors.

Nonetheless, many factors beyond zoning can limit the quantity of multifamily housing stock. These include market conditions, land availability and parcelization, the provision of public services, other planning goals (e.g., protecting open space or rural areas), and existing land-use patterns. Zoning is just one among many factors that can affect the availability of denser forms of housing.

Overall, the results offer compelling evidence that regulatory barriers can impede the development of higher-density multifamily housing. Analysis

of GIS data suggests that local regulations can affect housing development patterns and demonstrate that some local governments have little or no land zoned for multifamily use. Qualitative analysis of local land-use regulations in several jurisdictions provides corroborating evidence that regulatory barriers exist.

Jurisdictions identified as having barriers to multifamily development were frequently less dense and often more expensive than their neighbors. Stakeholder interviews, however, underscored the finding that zoning alone does not cause—nor can it solve—the problem of affordable housing. Multifamily housing is not always cheap, and single-family housing is not always expensive. Multifamily zoning is thus neither necessary nor sufficient as a policy response to the problem of housing affordability.

*Stakeholder interviews, however, underscored the finding that zoning alone does not cause—nor can it solve—the problem of affordable housing.*

## DATA LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The concern about zoning barriers and their impacts on the production of affordable housing is decades old. Many studies of potential exclusionary housing practices have been completed, but many have been case studies of a single jurisdiction based on anecdotal evidence, while others have been statistical analyses of the relationships between regulatory barriers and housing prices. None have used local GIS data to analyze zoning regulations at a regional scale.

Those facts were among the motivations for this research project. Moreover, data in general, and GIS data in particular, has expanded and improved considerably in the last 10 years. That fact suggested that relevant, accurate, and comparable data about variables related to housing affordability and potential regulatory barriers could be assembled for several metropolitan areas across the country. Not only would that allow a broader assessment of potential regulatory barriers, but it would establish protocols for broader and better assessments and policy responses in the future.

This research concluded that those hopes must yet remain tempered. Despite extensive GIS data in metropolitan areas, both the quality of data (for the variables of interest to the issues evaluated in this study) and the comparability of data within and across metropolitan areas make the kind of evaluation attempted here complicated and expensive. There are two fundamental problems: data availability and data interpretation.

### Data Availability

As documented in this report, a key criterion for selecting study areas was the availability of high-quality, metropolitan-wide GIS data. That criterion screened out most of the metropolitan areas in the U.S. Many of the remaining, selected regions were known nationally as having state-of-the-art GIS, land-use planning, and transportation planning programs.

The expectation was that the research would start with well-documented data dictionaries and then clarify definitions and occasional idiosyncrasies with local planners and GIS analysts. As is evident in the description of methodology in Appendix C, even among jurisdictions with advanced GIS capabilities, data were inconsistent among jurisdictions and therefore difficult to analyze.

Given these facts, it was essential to corroborate the conclusions drawn by analysis of local GIS data with standard, qualitative case study methods: reviewing local plans and talking with local experts. The GIS analysis provided suggestions about where to look for regulatory barriers, but case study analysis was necessary to see if those suggestions were good ones.

Thus, a disappointing but not insignificant conclusion of this research is that national-level research based on existing metropolitan-wide GIS data is still problematic, time consuming, and potentially misleading.

### Data Interpretation

One of our conclusions is many parts of the country have zoning barriers to the development of higher-density, multifamily housing. The evidence came from analyses of GIS data, data visualization, case study research of local ordinances, statistical analysis, and simulation modeling. But this finding is not new. It has been known for quite some time that zoning can in some cases, and perhaps in general, impose barriers to multifamily housing development. But mere evidence of a problem does not present an appropriate policy response. An effective policy response requires, at a minimum: (1) the ability to identify when and where the problem exists, and (2) the necessary data and information to craft an appropriate remedy.

In a simple world, for example, zoning barriers to multifamily housing exist only where insufficient land is zoned for multifamily use. In such a world, the problem can be identified by measuring the amount of land zoned for multifamily use, comparing it to some carefully chosen standard, and imposing on local governments state or federal regulations requiring them to meet those standards. But the world is not that simple.

The research here revealed that jurisdictions with little land zoned for multifamily use can have high or low housing prices and rents, high or low proportions of existing multifamily housing, and high or low rates of single- and multifamily housing production. Thus, whether communities with little land zoned for multifamily use have imposed barriers to affordable housing is unclear. Our research suggests it is necessary to examine a variety of indicators, housing production rates, and housing prices and rents to get a complete picture. Moreover, good data and careful examination of those data are critical to understanding the complete housing market.

*Our research suggests it is necessary to examine a variety of indicators, housing production rates, and housing prices and rents to get a complete picture. Moreover, good data and careful examination of those data are critical to understanding the complete housing market.*

The Department of Housing and Urban Development (HUD) is in the process of determining whether and how to create a national database for "regulatory barriers. The current suggestion is to create that database in part from standardized secondary sources and in part from standardized primary data collection (a formal survey instrument for local planners). The research from this project cannot confirm the appropriateness of that strategy, but such a database may reduce the problem of trying to compile and make comparable data from locally generated sources. Such a survey will still, of course, rely on local data, but it may produce more comparable data via the administration of a standard, national-level, survey. A countervailing consideration comes from another study now underway at HUD to look nationally at zoning and subdivision ordinances. That study illustrates the tremendous cost of getting consistent data from local jurisdictions across the country. Unless jurisdictions are required to submit those data (e.g., with federal funding contingent on providing the data), it will likely not be delivered in a timely or consistent manner.

That said, there is no substitute for good data at the local level for analyzing complicated problems like the connection between affordable housing and local zoning. Surveys yield interpretations and perceptions, not facts. The quality of data in the Portland study area, especially coupled with the results of the Metroscope model, identified a jurisdiction where zoning almost certainly represents a barrier to multifamily housing. It is doubtful a survey could have produced the same results.

## RECOMMENDATIONS

As the first attempt to analyze the effects of zoning on multifamily housing development at a national scale, using local zoning data, this study encountered significant limitations but provided important new insights. These limitations and insights lead to the following recommendations.

- ***Support the Regional Collection and Integration of Land Use Regulatory Data*** Few metropolitan areas have acquired and maintained comprehensive data on zoning, plan designations, and other regulatory constraints. Yet, when such data are collected, integrated, and generalized, much better information about regulatory barriers to affordable housing becomes available. Significant advances in transportation planning have been made possible by the development of the Census Transportation Planning Package and the creation of Metropolitan Planning Organizations. Regional collection of land-use and regulatory data would surely result in complementary advances in land and housing policy analysis.
- ***Encourage state and regional governments to provide oversight of local land-use policies.*** Although the evidence is limited, it appears as though state and regional oversight can serve to reduce barriers to multifamily housing development. The Oregon system, with explicit density targets for jurisdictions in the Portland metropolitan area, appears most effective. But regional oversight by the Metropolitan Council of Minneapolis-St. Paul and the metropolitan planning efforts led by the Sacramento Association of Governments appear to mitigate regulatory barriers at the local level. Fair-share remedies (like those in Massachusetts) appear to be less effective.
- ***Focus state and regional oversight policies on quantitative performance measures.*** Zoning is only one barrier to multifamily housing development; many others clearly affect the market for affordable housing. Furthermore, local governments are fully capable of developing new barriers if existing forms are curtailed or removed. Thus, continuous monitoring of housing prices, rents, starts, household incomes, and housing affordability measures need to be used to inform policy. For the purpose of accountability and comparability, this is best done at the regional level.
- ***Continue to develop better measures of zoning barriers and support additional research on the effects of barriers on housing markets.*** With the limited time and data available for this study, significant advances were made toward the measurement of zoning barriers and their effects on multifamily housing development. But much greater advances are now possible through additional research. Such research should focus on developing better measures of development capacity on vacant and infill land, better predictive models of market-determined development patterns, and a better understanding of how housing markets respond to regulatory change.

Mounting evidence shows zoning is a barrier to affordable housing production in some communities. This study adds to that body of evidence. That said, the critical question now is not *whether* regulatory barriers to affordable housing exist in some communities, but whether it is possible to *identify* such communities and craft an appropriate policy response. The results of this study suggest the collection and integration of quality land-use and regulatory data at the regional level helps in such identification; with persistence, this information may lead to the discovery of an appropriate policy response.

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