

# **Greater Wasatch Area Housing Analysis**

Prepared for

Envision Utah

by

## **ECONorthwest**

99 W. Tenth, Suite 400  
Eugene, OR 97401  
(541) 687-0051

with

## **Free and Associates**

1100 East 6600 South, Suite 201  
Salt Lake City, UT 84121  
(801) 492-0000

September 1999



# Table of Contents

	Page
<b>PREFACE .....</b>	<b>III</b>
<b>SUMMARY .....</b>	<b>V</b>
<b>CHAPTER 1 INTRODUCTION .....</b>	<b>1-1</b>
BACKGROUND AND PURPOSE: WHY THIS REPORT?.....	1-1
FRAMEWORK: HOW DOES THIS REPORT APPROACH HOUSING MARKET FORECASTING? .....	1-2
METHODS: HOW DOES THIS REPORT EVALUATE THE REGIONAL HOUSING MARKET? .....	1-3
ORGANIZATION: WHAT DOES THIS REPORT CONTAIN? .....	1-5
<b>CHAPTER 2 SOCIOECONOMIC AND DEMOGRAPHIC PROFILE OF THE REGION .....</b>	<b>2-1</b>
POPULATION: MORE PEOPLE MEAN MORE HOUSES .....	2-1
HOUSEHOLD CHARACTERISTICS: DEMOGRAPHIC AND SOCIOECONOMICS INFLUENCE HOUSING CHOICE .....	2-4
<b>CHAPTER 3 THE GREATER WASATCH AREA HOUSING MARKET .....</b>	<b>3-1</b>
CONTEXT: HOW HOUSING MARKETS WORK.....	3-1
THE REGIONAL HOUSING MARKET: WHERE IT'S HEADED AND WHY .....	3-12
SIMULATIONS: POSSIBLE FUTURES FOR HOUSING DEVELOPMENT IN THE GREATER WASATCH AREA.....	3-24
<b>APPENDIX A HOUSING DATA .....</b>	<b>A-1</b>
<b>APPENDIX B WASATCH FRONT DEVELOPMENT BARRIERS.....</b>	<b>B-1</b>



# Summary

## Housing in the Greater Wasatch Area, 2020

---

**Abstract:** This report examines trends that will affect the future housing market in the Greater Wasatch Area. The analysis leads to the development of two different simulations of the distribution of housing in 2020: a baseline simulation based on a continuation of trends in the 1990s, and an alternative simulation that reflects expectations about the way housing demand will shift in response to projected demographic shifts in the Greater Wasatch Area.

In both simulations, an average of almost 20,000 housing units per year are needed between now and 2020 to keep up with the forecasted growth in households. In the baseline simulation, over 70% of new housing is single-family. In the alternative simulation, the single-family share drops to about 60%, with a corresponding increase in the multi-family share; and the number of smaller lot (less than 5,000 square foot) single-family units increases by an average of about 500 units per year.

The more detailed breakdowns of housing type by county provided a market-driven check on the assumptions used to allocate population to different development types in the Quality Growth Strategy. The conclusion of those working on the development of the Quality Growth Strategy is that its allocations are consistent with the Alternative Simulation of housing types.

### WHY A REPORT ON HOUSING?

Salt Lake City and the region around it will grow. Earlier this year citizens of the Greater Wasatch Area (which comprises 10 counties centered on Salt Lake City) discussed the four scenarios for accommodating that growth. In the Fall of this year Envision Utah will be presenting its synthesis of public opinion and additional analysis in a single scenario called the *Quality Growth Strategy*.

Envision Utah wanted to ensure that the Quality Growth Strategy responded to likely market forces, in particular to the need and demand for new housing. It hired ECONorthwest and Free and Associates to describe, at a regional level, what kind of housing exists now, and what kind of new housing is likely to be demanded in the next 20 years, given likely changes in demographics, market forces, and public policy.

### HOW DOES THIS REPORT APPROACH HOUSING MARKET FORECASTING?

This report takes a long-run perspective on housing. It looks at long-run trends and tends to downplay short-run cycles. That approach is shared by the Governor's Office of Planning and Budget when it prepares the official state and county population forecasts. By using the official population forecasts as the basis for our analysis of housing demand, we implicitly consider many of the key demographic and economic variables that influence those forecasts.

Economists view housing as a bundle of services that people are willing to pay for: shelter certainly, but also proximity to other attractions, amenity, prestige, and access to public services. Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs.

Different households will value what they can get differently: they will have different preferences. Substantial research confirms what most people understand intuitively: demographic and economic characteristics such as income, age of household head, and family size affect the residential choices people make. Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

The complexity of a housing market is a reality, but it does not obviate the need for some type of forecast of future housing demand, and for some assessment of the implications of that forecast for regional households and urban form. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explication of their underlying assumptions about the dynamics of markets (demand and supply conditions) and policies than from the specific estimates of future demand. That is the perspective that this report takes.

## **HOW DOES THIS REPORT EVALUATE THE REGIONAL HOUSING MARKET?**

This report focuses on long-run demographic change and new housing between now and 2020. The long run focus of this report means that we can ignore short run events such as business cycles, changes in interest rates, vacancy rates, lease rates, projects in the pipeline, and so on. We assume that the region's official long-run population forecast is at least approximately correct. Thus, our task is to make defensible predictions about the amount and characteristics of new dwelling units that will be built to accommodate projected increases in population. The main steps in our analysis are:

- Define the study area (10 counties centered on Salt Lake City)
- Describe current and forecasted demographic and socioeconomic characteristics that have an affect on the amount and type of housing that consumers will demand and the market will build.
- Analyze the current housing market (type of housing existing and being constructed).
- Describe how changing economic and demographic trends are expected to impact the future housing market.
- Identify public policy barriers that prevent the market from meeting current housing demand and barriers that may prevent the market from meeting future demand.

- Simulate demand by housing types and lot size, by county, from now to 2020.

## **POPULATION: MORE PEOPLE MEAN MORE HOUSES**

The population of the Greater Wasatch Area reached 1.7 million in 1998, over 80% of Utah's total population. By 2020, the Greater Wasatch Area is expected to grow by about a million people, reaching almost 2.7 million, almost a 60% increase over the 1998 level. That growth rate is two to three times the expected average for the U.S.

Almost 70% of the population growth in the Greater Wasatch Area will be from natural increase (births less deaths), the rest comes from net migration (more in migration than out migration). This is much more growth from natural increase than that of other growing metropolitan areas in the west.

Compared to the United States, the Greater Wasatch Area has a younger population, and this condition is expected to continue through 2020. Between 2000 and 2020 all age groups are projected to grow. The biggest absolute gains are in the 0–14 age group but bigger relative increases occur for the groups aged 45-59 and 60+.

The age distribution in the Greater Wasatch Area will affect the composition of housing demand and the types of housing provided. Compared to the United States, the Greater Wasatch Area will have a smaller share of households in the retirement phase of their lifetime, and a larger share of young singles, young couples, and families. Given the propensities of these classes of households, one should expect (all else being equal) the regional market to build a larger share of multi-family rental housing, affordable housing for first-time homebuyers, and single-family housing for couples with children than national averages for similar sized regions.

## **HOUSEHOLD SIZE**

The Greater Wasatch Area has a larger share of families with children than the United States. Though demographic and cultural trends suggest that the area will continue to have a larger average household size than most metropolitan areas in the US, the trend for the region is for household size to decrease. Average household size in the Greater Wasatch Area was 3.15 in 1990; it is projected to decline steadily through the forecast period to 2.78 in 2020.

Several things are happening to make household size decrease: more younger households, single or without children; more retirement-age households without children; and some decrease in the size of traditional families. Though these factors are expected to decrease household size, Utah will continue to have the highest percent of nuclear families in the nation: 64% of all two-person households in Utah are married couples.

Other things being equal, the trend of decreasing household size should increase aggregate demand for housing units (for a given population increase, more new units will be needed when household size is decreasing because there are more households), and increase demand for smaller single-family housing and for units in multi-family structures (because of lower space needs and less income per household).

## **AGE OF HOUSEHOLD HEAD**

The number of households in all age groups grows, but the greatest growth is among households with a head aged 60+, which is expected to grow by 134,000 and increase its share of households from 21% in 2000 to 27% in 2020. The next largest amount of growth is expected in the 30–44 age group: the age at which households have families, larger household size, and needs for more space. Other things being equal, growth in this age group would be associated with more demand for larger homes and lots, single-family units, and suburban locations. But the percent of households with a head aged 30–44 declines from 34% to 31%. Thus, while single-family construction will continue to have the largest share of the housing market, this share will probably decline over the next twenty years.

## **HOUSEHOLD INCOME**

Utah's level of per capita income has been and will continue to be only about 80% the U.S. average. But aggregate figures and comparisons to US averages do not answer questions about the ability of households in the Greater Wasatch Area to purchase housing. For example, a combination of land constraints, public policy, and stronger than expected growth could lead to real increases in housing price. The simplest and best assumption about income for a long-run housing forecast for the Greater Wasatch Area is that real incomes and the real price of housing will remain constant.

# **THE REGIONAL HOUSING MARKET: WHERE IT'S HEADED AND WHY**

## **INDICATORS OF PAST AND CURRENT HOUSING MARKET PERFORMANCE**

### **NUMBER AND TYPE OF DWELLING UNITS**

In 1990, the Greater Wasatch Area had 484,900 dwelling units. About 70% of the dwelling units in 1990 were single-family; 4% were mobile or manufactured homes, and the remaining 26% percent were multiple family units. Analysis of 1990 Census data by county show:

- A strong preference in the suburban and rural areas for single-family housing.
- Counties with larger populations and larger cities have more and higher percentages of multiple-family housing. Moreover, the percent of units in larger complexes (20 or more units) is higher in larger counties.

- Rural counties tend to have a higher proportion of housing in mobile or manufactured homes. Tooele, Juab, Wasatch, and Box Elder Counties had the highest percentages of mobile and manufactured homes in 1990.
- Summit County had the highest percentage of single-family attached housing and apartments with 50 or more units in 1990. This reflects the County's recreational amenities and tourism industry.
- About two-thirds of households in the Greater Wasatch Area were homeowners in 1990. Small rural counties tended to have higher ownership rates than larger, more urbanized counties.
- Households in higher income categories, regardless of household size or age of household head, have higher home ownership rates.
- Households with heads aged 15-24 are more likely to rent than to own, unless their income is over \$45,000. Homeownership rates increase for those households with three or more members.
- Homeownership tends to increase with age up to age 65, regardless of household size or income. By age 65, homeownership rates stabilize or decrease slightly.

Nearly 120,000 building permits were issued in the Greater Wasatch Area between 1990 and 1998. Single-family units dominated new construction: 73% of building permits issued between 1990 and 1998 in the 10-county area were for single-family units. Analysis at the county level, however, shows variation. Permits for single-family units made up more than 90% of total residential permits in Morgan and Juab Counties, but less than 70% of total residential permits in Utah and Summit Counties. Other trends are evident in the building permit data:

- Single-family dwellings accounted for a larger share of all development between 1990 and 1998 than they did of housing that existed in 1990. In other words, the recent trend has been to relatively more single-family housing.
- Single-family attached units (condominiums, row houses, and townhouses) accounted for a slightly larger share of development between 1990 and 1998 than they did of housing that existed in 1990.
- The percentage of permits issued for apartments decreased slightly between 1990 and 1998 when compared with units that existed in 1990.
- The percentage of permits issued for mobile and manufactured homes between 1990 and 1998 decreased in all counties compared to existing housing in 1990.

Despite some shifts in the percentage of individual housing types built between 1990 and 1998 (compared to the composition of total housing stock in 1990), the magnitude of the shifts has not significantly affected the overall distribution of the housing stock by type—the relative shares of different housing types in 1999 are not very different from the shares in 1990.

Updating 1990 Census data with building permit data, ECONorthwest estimates that the Greater Wasatch Region had 604,385 dwelling units as of January 1999. This is a 25% increase in dwelling units between 1990 and 1998, or a 2.5% average annual growth rate for the area.

## **DENSITY (LOT SIZE) OF DWELLING UNITS**

Assessment data for Davis, Salt Lake, Utah, and Weber Counties<sup>1</sup> shows the four-county area had an overall net density of 3.3 dwelling units per net residential acre. Analysis of a large sample of existing single-family development in the four-county area by lot size shows that almost 50% of existing single-family homes are on lots between 5,000 and 10,000 square feet; about 11% of single-family units are on lots smaller than 5,000 square feet; and about 11% are on lots greater than 20,000 square feet.

Overall single-family densities are higher in the more urbanized counties. Salt Lake County had the highest single-family residential density of the four counties: 4.7 dwelling units per net residential acre. MLS data for the Greater Wasatch Area shows an overall trend of increasing home size, with a large increase for units built in the 1990s. This finding is consistent with national trends.

Average dwelling unit size (in square feet) has increased consistently since the 1940s. Based on assessment data, the average size of a single-single family dwelling unit was about 1,080 sq. ft. in the 1940s; it increased to 1,902 sq. ft. in the 1990s. The largest increase in dwelling unit size (21%) occurred between the 1980s and 1990s, in large part because Utah's large baby-boom cohort reached peak child-rearing ages during these years.

## **FACTORS AFFECTING FUTURE HOUSING PRODUCTION IN THE REGION**

Most long-run housing forecasts start with an implicit assumption that future relationships will be like past relationships and the future housing market will change at the margin in ways that it has been observed to change the recent past. Implicit in the forecast is that housing consumers, producers, and regulators will behave about how they have in the past. In this study we are adjusting explicitly for demographic shifts: the simulations in the next section are driven by shifts in household composition. But other factors will affect housing production as well:

---

<sup>1</sup> The only counties for which complete data were available. Together, these counties account for almost 93% of the population in the 10-county Greater Wasatch Area.

- *Physical factors.* Physical limits on the supply of buildable land lead to increases in land and housing prices. At a regional scale, the Greater Wasatch Area is constrained by the Wasatch Mountains to the east, and the Great Salt Lake and Utah Lake to the west. However, there appears to be ample room for urbanization for the forecasted growth for 2020. None of the four growth scenarios evaluated earlier this year found that growth could not be accommodated due to a lack of land.
- *Economic factors.* Most Utah economists agree that Utah's broad-based economy will continue to perform well in the foreseeable future. Thus, at a regional level there is no strong reason to believe that the state or regional economy will fail in ways that will cause households to experience significant drops in real income and modify their housing choice.
- *Industry factors.* First, if the area were dominated by a few large builders that only wanted to build to a standard pattern, innovation on housing types may be low. Alternatively, if the industry consisted of many small builders, none may have the financial resources or risk-taking capacity to build either innovative or large developments. Our analysis found no reason to believe that either of these conditions exist. Second, what is often identified as a lack of education among builders about alternative housing types is often an economic decision about risk. The building a different housing type has potential economic rewards, but it also has risks. Thus, the composition of housing that gets built each year changes slowly. The evidence is beginning to accumulate in the Greater Wasatch Area that communities offering open space and amenities are obtaining premium values. Increased public awareness regarding environmental constraints and public service costs should support a continued shift in the future.
- *Regulatory factors.* Our interviews suggest that the greatest barrier to different (denser) housing types is not a lack of interest by developers and builders, but constraints of local policy. Many municipalities restrict housing types that the market would otherwise provide; many areas of the region have permitted only low-density units in the last two years.

## **IMPLICATIONS OF THE ANALYSIS FOR SIMULATIONS OF THE FUTURE HOUSING MARKET**

The possible combinations of changes in variables that will affect housing are infinite. The key issue for this study and for the evaluation of the market reality of the Quality Growth Strategy is whether the future housing market will produce housing in the next 20 years of types and in quantities that look like today's housing products, or whether it will shift. Following is our summary of the impacts on housing production and absorption.

- *Number of housing units.* The economic forecasts are for growth—the Greater Wasatch Area will have to provide housing for an additional 363,000 households over the next 20 years.
- *Type of housing structures.* The expected growth in income does not necessarily mean households will purchase more large-lot dwellings. The expectation nationally is that the money will go into larger single-family and multi-family units with more amenities but on smaller lots.

The main demographic changes—migration of mobile young adult and elderly households to the west, smaller household size, and increasing average age of the population—all argue for a shift toward smaller units and more multi-family units.

While the large amount of potentially buildable land in the region suggests that land prices can stay relatively low and average lot size can stay relatively high, it is certainly possible that public policy in this area could change for a number of reasons, including public concerns about sprawl, congestion, and natural resources; and increasing fiscal pressure of trying to serve expansive development while providing infrastructure and maintaining environmental quality.

In response to all these forces, we expect more planned-unit developments in the future, which could include mixed uses, a mix of housing types, smaller lot sizes for single family units, and overall increases in housing and site amenity.

Housing affordability will continue to be a problem in this region as it is elsewhere. As in the past, the public sector will be unable to supply resources to have much effect on the problem. Our expectation is that consumers will be more willing to give up lot size than built space, and will make various choices regarding tradeoffs between built space and amenity. The implication is a shift toward smaller lots, multifamily units, and manufactured housing.

- *Housing tenure.* The evidence is clear that increasing incomes and increasing age of household head correlate with increasing home ownership, and that single family detached homes have been the preferred form of home to own. The big question here is whether the economic forecast of increasing average real income will hold up, and how that income will be distributed. For example, if real income increases are driven largely by large increases in the upper 10% of all households, than there might be little effect on tenure: those households already own homes.

## RESULTS FOR HOUSING MARKET SIMULATION

No amount of analysis is likely to make the long-run future any more certain: the purpose of the housing simulations is to get an approximate idea about the long run so policy choices can be made today.

The Base Simulation is based on trends exhibited in the Greater Wasatch Area between 1990 and 1999, primarily as evidenced in building permits for that period. This simulation is intended to provide a baseline for the area assuming continuation of past trends. In the Base Simulation the Greater Wasatch Region adds 381,642 new dwelling units between 2000 and 2020: about 76% would be single family; 79% would be owner-occupied units, 19% would be renter-occupied, and 2% would be manufactured homes.

A continuation of past trends is useful for providing a baseline for analysis, but many factors point to a shift in the type of new housing that will be built in the Greater Wasatch Area between 2000 and 2020. An Alternative Simulation that accounts for these factors predicts declining shares of single-family dwellings in most counties, primarily because of declining average household size and increasing average age of household head. The trend of decreasing household size should increase aggregate demand for housing units (for a given population increase, more new units will be needed when household size is decreasing because there are more households), and increase demand for smaller single-family housing and for units in multi-family structures. Multiple family dwellings account for nearly 40% of new housing built between 2000 and 2020 in the Alternative Simulation. That change in housing type implies a shift in housing tenure: a bigger share of multi-family units will reduce ownership rates, other things being equal. In the Alternative Scenario, home-ownership rates decrease to 67%—the level recorded in the 1990 Census.

Table S-1 shows that the main difference between the Base and Alternative Simulations is a shift in the composition of new housing development of about 15% from single-family units to multi-family units during the period from 2000 to 2020.

The Alternative Simulation is driven largely by expected demographic shifts. Other factors, however, can affect the distribution of housing by type and density:

- Public policy can play a key role in housing types and densities through land use designations, capital improvement plans, and other policy tools.
- Total land supply does not appear to be a constraining factor in the region for the next 20 years. But other factors (e.g., local water supply, public service policies, or public service costs) could lead to some reductions in the relatively availability of buildable, serviceable land, which would in turn increase land prices and housing costs.

**Table S-1. Distribution of housing by type, actual and predicted, Greater Wasatch Area**

Housing Type	Actual			Predicted			
	1990 Total	Change 1990- 1999	1999 Total	Base Simulation		Alternative Simulation	
				Change 2000- 2020	2020 Total	Change 2000- 2020	2020 Total
Single Family	66%	73%	67%	74%	70%	59%	64%
Multiple Family	29%	25%	29%	24%	27%	40%	33%
Mobile/Manuf	5%	2%	4%	2%	3%	1%	3%

Source: US Census (1990), BEBR (1990-1999), ECONorthwest (2000-2020, 2020)

- Long-term income trends suggest an increase in real income region-wide. But a recession or real increases in housing cost could eliminate or counter real increase in income. Moreover, expected income increases will not affect all households equally: the region will still have low-income households looking for affordable housing.
- The ability to sustain the expected rate of development over the next 20 years may be affected by air quality, congestion, or other environmental constraints.

# Preface

---

---

This report was prepared by ECONorthwest: Terry Moore, Bob Parker, and David Helton are its principal authors. Roland Robison of Free and Associates assisted with various aspects of the research, authored the appendix on development barriers, and provided information about specific developments and trends in the Greater Wasatch Area.

This report would not have been possible without the substantial assistance of others. D.J. Baxter of the Coalition of Utah's Future, and Scenario Manager for Envision Utah, kept us on track throughout the project, and managed all aspects of local review and meetings. Natalie Gochnour of the Governor's Office of Planning and Budget provided background reports on Utah's economy and population projections, and made sure we had access to the resources at the State of Utah. Pam Perlich of the Governor's Office of Planning and Budget answered our many questions about the methods behind the population and demographic projections and reviewed a draft of this report. Stuart Challender, at the State's Automated Geographic Reference Center, quickly provided detailed assessment data on residential property characteristics. Jim Wood at the Bureau of Economic Business Research at the University of Utah provided building permit data. Greg Naccarato of the Wasatch Front Regional Multiple Listing Service provided residential sales data.

Despite all the assistance, some errors are sure to remain in the document. Errors of fact are relatively easy to correct once they are found. But some data sources are inherently limited by the way data can be collected. Any data-intensive analysis has to make decisions about the appropriate relationship between analytical detail and cost.

Moreover, even accurate information about past and existing conditions does not ensure that the future will look like the forecasts contained in this report. The future is, by definition, uncertain. We have made a special effort to be clear about our definitions, assumptions, and methods. We have produced a forecast that meets or exceeds the professional standards for studies of this type. Though it provides a solid basis for a 20-year planning analysis, different assumptions could lead to different conclusions.

This document is disseminated under the sponsorship of Envision Utah in the interest of information exchange. Envision Utah assumes no liability for its contents or use thereof.

The contents of this report reflect the views of the authors, who are solely responsible for the facts and accuracy of the material presented. The contents do not necessarily reflect the official view of Envision Utah.