# Appendix A GENERAL FRAMEWORK FOR POLICY EVALUATION

**Section A.1** summarizes definitions, assumptions, issues, and principles common to any type of policy analysis. That summary is an *evaluation framework* that is the basis for the methods used to evaluate the policy issues in this project. [1] Those methods are described in Appendix B.

Some readers will find the material in this appendix self evident; some irrelevant. It is common for the discussion that follows to be relegated to an appendix, and more common still for it not to exist at all. That is unfortunate, because it probably leads to a much poorer discussion of the critical policy choices that governments face.

Everyone tends to base decisions on internal models of cause and effect that are simple and incomplete, and most of facts that go into those mental models are based heavily on *assumptions* (some testable empirically, some not). Any technical (as opposed to ideological or emotional) discussion of public policy must focus on assumptions, and that discussion will get derailed if it does not start with some clarity about *definitions*.

## A.1.1 GENERAL PRINCIPLES FOR POLICY EVALUATION

Independent of the policy issue being evaluated, there are general principles for policy evaluation that the professions of policy evaluation and decision science generally concur are necessary (or, at least, highly desirable) for good policy evaluation.

### Definitions

There is difference between ends and means: between *desired outcomes* and *actions* intended to achieve those outcomes. Figure A-1 shows the definitions used in this report. Many terms that cover more or less the same idea, though they get used differently by different jurisdictions and even by different people in the same jurisdiction. Some examples:

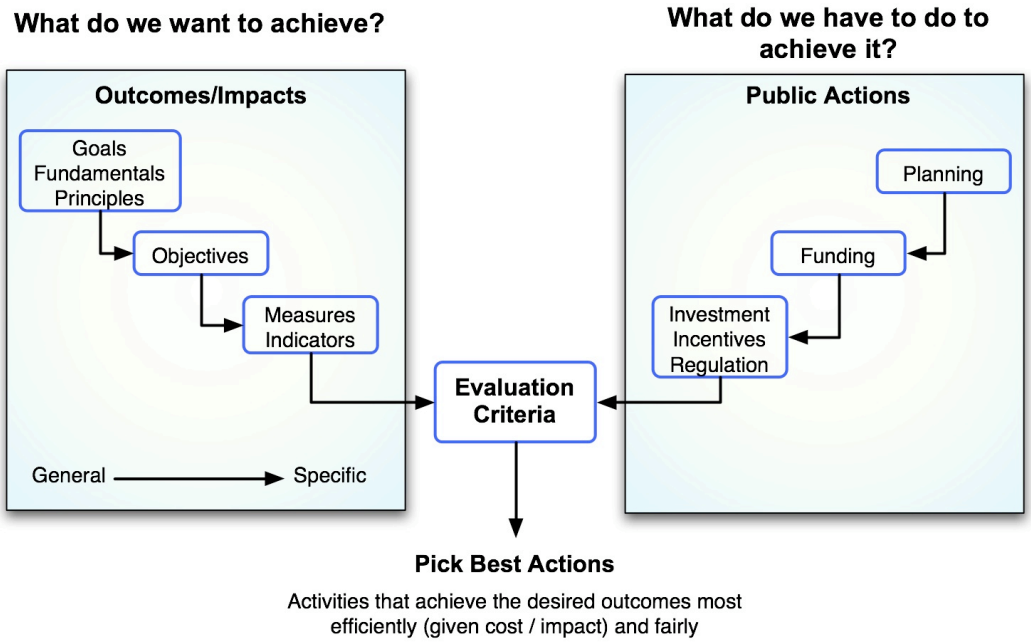
- Terms related to outcomes (from broad to specific): goals, principles, fundamentals, objectives, impacts, measures, indicators, and evaluation criteria. Logically, since goals and objectives are categories of things people care about, they are roughly synonymous with the term impacts: the objectives are about good impacts that a

[1] Terry Moore at ECONorthwest has been working on public policy evaluations (over 500 projects) and teaching evaluation methods at the University of Oregon for over 35 years. He is author or co-author of books and articles on benefit-cost analysis, land-use evaluation, and fiscal impact analysis. This section summarizes some basic evaluation principles from his work and experience, and the work and experience of others at ECONorthwest.

community wants to increase, and bad impacts that it wants to reduce.

- Terms related to actions: strategies, policies, implementation tools, programs, regulations, and investments. There are several ways actions can be classified (by where they get applied; by who implements them; by the area of development they affect). The taxonomy in Figure A-1 is as close as we can get to one that is comprehensive and mutually exclusive.

**Figure A-1: Definitions for public policy: outcomes and actions**




Support for public actions presumably derives from a belief or assumption that thinking about and taking collective action now can lead to a better future than failing to do so. Implicit in that idea is one of alternative futures (sometimes called scenarios).

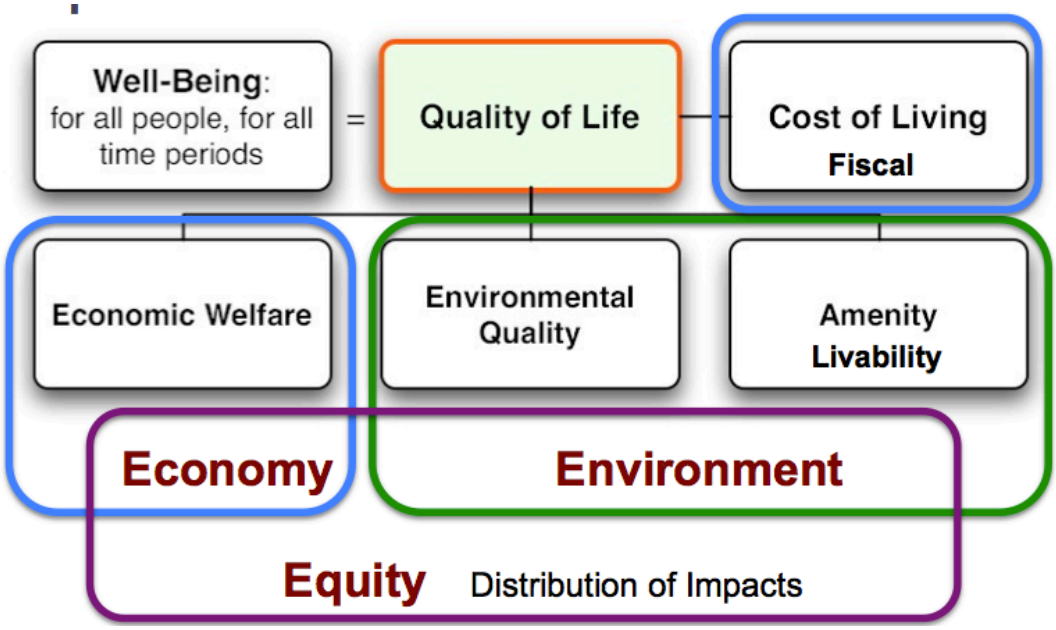
## Purposes

What is public policy trying to achieve? At the broadest level, decisionmakers and their constituents want policies that make everybody happy: all people, in all locations, now and in the future. While academic work has been done on measuring happiness, public policy usually has more specific objectives, based on an implicit assumption that achieving those objectives will make people happy. Policy does not use the term "happiness." It is more likely to use the terms well-being or social welfare (from economics) or public interest, quality of life, or livability (from planning). It typically defines good policies as those that are more effective, more efficient, and more fair than the alternatives at achieving desired ends.

But social welfare or quality of life are broad terms that include many components. A person's quality of life is affected by job quality, income, housing, public services (e.g., education and recreation opportunities, public safety), environmental quality, cost of living, and more. Figure A-2 goes one level deeper to identify broadly the components of quality of life. It starts on the top left with economic well-being (the term economist would use; psychologist might call it happiness; policy analysts might call it quality of life). It shows that *public policy aims at better quality of life by achieving a more efficient or more fair distribution of economic, environmental, and social benefits, subject to the constraints of cost.*

Figure A-2 incorporates the idea from the literature on sustainability of *triple bottom line*: good policy must address and optimize across objectives related to the Economy (in blue), the Environment (in green), and Equity (in purple).

**Figure A-2: The purpose of public policy**




## Problems

There are many; here are a few:

- *Complexity*. Simple diagrams like Figure A-2 get messy as one moves from broad theory to the details of reality. Economy, Environment, and Equity have dozens of sub-categories, each with dozens of possible measurement, and scores of areas or groups for which they could be measured. The matrix of possible measurements (of benefits and costs by group) is huge.
- *Uncertainty and prediction*. Policy evaluation is less often about measurement than it is about prediction, which increases the uncertainty and compounds the number of potential impacts that

must be described. In the context of concerns about sustainability, there is more concern about the long run, which means not only more uncertainty, but the need for a local government to make assumptions about and take into consideration the needs of people that do even live within its boundaries yet.

- *Distribution of impacts*. It is hard enough to predict and report some idea of the average impacts for a city, county, or state.
- *Relative value of impacts*. Even if one could predict with a high degree of accuracy and certainty what the impacts of public actions would be on all groups now and into the future, there is still the messy issue of *valuing the impacts*. In the private sector, decisions are often simplified to a single bottom line: business revenue less business cost equals business profit; pick the option with the highest present discounted value of profit. But in the public sector, benefit-cost analysis is more complicated and less definitive even when it is used, as it rarely is (at least, not properly). So how does one compare the benefits to one group on one dimension against the ills that other groups expect or fear? Policy evaluation refers to this as the problem of multiple objective decisionmaking. Decades of work by policy analyst has not got the practice much farther than: gather the best information the budget allows and then let the political process do what it does to make a decision.

Policy evaluation addresses these problems by ignoring the ones it can and simplifying the ones it cannot.

## Principles

Countless pages have been written by policy analysts trying to cope with the problems above, and many others. Some of the key ideas:

- *Acknowledge the limitations*. Those include the inevitably of multiple objectives; the large number of causal variables, the complexity of their interactions, and the resulting uncertainty about facts and predictions; and the differences in how people place values on the facts that they do agree about. An implication is that technical evaluation may be helpful, but it is not definitive: the process by which that information gets used in public debates that ultimately lead to public decisions is equal important.
- *Focus on the tradeoffs.* There are always multiple impacts and objectives. Decisions are choices; choices are about alternatives; alternatives mean comparisons and tradeoffs. That point has several implications:
  - *Frame the analysis with and without the action under consideration*. This point relates to the previous one. The impact of a policy alternative is the difference between what the world would be

*with* the policy and what it would be *without* the project. Framing the analysis in this way forces one to consider future changes likely to happen without the policy—impacts from these changes are not impacts of the policy because they will happen anyway. Framing an analysis as "before and after" often causes analysts to incorrectly attribute impacts to a policy that would happen without the policy.

- *"No Action" is not "No Change."* The world "Without Policy Change" should almost certainly not be defined as "nothing changes." The economy, politics, and other policies may change the future even in the absence of the adoption of the policy being evaluated. Changes will occur even without the policy because of other planned or likely policies or public investments, population growth and demographic shifts, economic shifts, new technology, changes in consumer preferences, and many other factors not directly attributable to or even related to the proposed policy.
- *Focus on differences among alternatives at the margin*. Differences among alternatives are the correct basis for choice. Remembering that can simplify analysis. For example, impacts on the environment is an important decisionmaking criterion to most people, but it the five policies under consider all have about the same impact, than other factors will be more important to the choice among them.

- *The principles of microeconomics are fundamental to the evaluation of public policy.* Microeconomics is a science about the allocation of resources; about evaluating the choices households, businesses, and governments have about those choices. People—in their roles as households, consumers, employees, business owners, and government decisionmakers—want things, and the things they want exceed their capacities to acquire them (their resources, including budgets). There are tradeoffs. Thinking in terms of the demand for and supply of goods and services helps to clarify those tradeoffs.
- *The incidence of impacts matters.* A policy that would make 95% of the households in a jurisdiction better off by making 5% of the households worse off might or might not be acceptable. If the 5% were previously getting a special benefit or creating a special problem (e.g., polluting an upstream water source), that outcome might be judged fair. If the policy requires uprooting and relocating households in established communities, it might be judged too unfair. If the benefits are great, then there is room for mitigation policies that can offset the losses to some groups and still leave net benefits to the larger group. Technically the impacts and mitigation measures can usually be described if there is a will to do so. But there is no definitive technical solution to the valuation: that is a moral, legal, and political debate about rights and fairness. Policy

analysts can describe the *distribution* of impacts; the *equity* of that distribution is a political judgment.[2]

- *Design the evaluation modularly and hierarchically*. If evaluation stays at the high level (e.g., at the level of goals), it is mainly ideological and based on prior assumptions about cause and effect. If it gets into the details and stays there (e.g., how this specific policy will, for example, decrease the travel time from point A to point B for this class of travelers), then there is extremely difficult for anyone to look at that measure and hundreds of similar ones to make an overall assessment of the net benefits or costs of the policy. The best (perhaps only) solution is to have a nested hierarchy of impacts—one that is conceived, in theory, to be both comprehensive and mutually exclusive - so that details about specific impacts can be rolled up into broader conclusions about the relative importance and performance of categories of impacts.
- *Tell a story*. There is ample evidence in decision science to suggest that humans are wired to make decisions quickly based on a story that is intuitive and coherent, comports with their prior beliefs, and is consistent with just the evidence in front of them. It is always a story of *cause and effect*, and the simpler the better: if A, then B. A simple story, supported by anecdotal examples, is more likely to be compelling than thorough but disembodied statistical analysis. But the previous points make it clear that "if A, then B" is an oversimplification: if the story's simplicity is also simplemindedness, policy and society will suffer. Thus, statistical analysis is valuable to the extent it supports the story and keeps it in the category of nonfiction. This point is not a cynical critique of public policy—it is a practical recognition about how people make decisions, and the kind and format of information they need to make better decisions.

[2] There *are* analytical techniques for trying to statistically quantify the relative values of different criteria in a multi-criterion process (e.g., conjoint analysis). They can be time consuming, and they are rarely accepted as definitive by a decisionmaking body or its constituents.

# Appendix B FRAMEWORK FOR EVALUATING HOUSING MARKETS

This appendix presents a framework for evaluating growth in housing markets. It describes the complex factors that affect housing demand and discusses the relative importance of different factors. The appendix discusses considerations in modeling future housing demand and presents options for modeling future housing demand.

## B.1 MANY FACTORS AFFECT DEMAND

Economists view housing as a bundle of services for which people are willing to pay some price: shelter certainly, but also proximity to other attractions (jobs, shopping, recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools).

Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs. What they can get for their money is influenced by both economic forces and government policy. Different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of the head of the household, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

These points explain why forecasting what types of housing will be built is so complex and uncertain:

- The housing choices of individual households are influenced by dozens of factors.
- Those factors interact in complex ways.
- Individual households may weight (value) the factors in very different ways. Those preferences may be correlated with certain socioeconomic and demographic characteristics, but they are not dictated by them.
- What people say they want and what they can and will actually pay may be very different.
- Housing demand in a given region is the result of the individual decisions of thousands of households.

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 of the implications of that housing demand for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions

about the dynamics of markets and policies than from the specific estimates of future demand and need. This section attempts to provide such an explanation.

## B.1.1 HOUSING AS A BUNDLE OF GOODS

Starting broadly, residential choice means the choice of both a housing *location* and a housing *type*. Factors relating to location include travel times (to work, shopping, recreation, education), views, neighborhood characteristics, quality of public services (especially, for many families, schools), and tax rates. Housing type comprises many attributes, the most important of which are structure type (e.g., single-family, multi-family) and size, lot size, quality and age, price, and tenure (own/rent). All of these attributes—what real estate economists refer to as the *bundle of goods* that one purchases when making a housing choice—affect residential choice.

Consider in more detail some of the location and structure characteristics that households evaluate:

- **Access to work.** For a large majority of U.S. households, at least one member of each household, and often two members, commutes to work daily. Fundamental to early and (to a significant extent) prevailing theories of urban economics and location theory is the tradeoff between travel time and land value (which for households means residential land value). There is no doubt other factors influence location decisions, or that the auto gives households considerable flexibility in choosing a location, but access to work remains an important determinant of household location.
- **Access to shopping, recreation, friends.** About 70% of all household travel in the U.S. is for non-work purposes. People travel from their homes to shopping, recreation, education, and other neighborhoods. Households value access to a variety of destinations.
- **Public services.** Households value a variety of public services, some of which vary by location. The quality and price of water, sewer, drainage, and power service typically vary little within a metropolitan area. The quality of other public services, especially schools and public safety (police and fire protection) can often vary substantially, and can have a large impact on a household's location decision.
- **Neighborhood characteristics.** Characteristics of residential neighborhoods—character of development, income, age, and size of households, environmental quality—vary substantially within a metropolitan area, and are important to households. Most households have had the experience of settling for a smaller, less-well maintained unit in order to get housing they can afford in a location they (and others) desire.

- **Land and improvements.** As with businesses, the desire for space varies by household, and households are willing to trade-off space for other attributes, such as accessibility and amenities. Some families, for example, are willing to pay more for space, and use less of it, in areas with especially good schools.

### B.1.2 SIX CATEGORIES OF FACTORS THAT DETERMINE THE TYPE AND AMOUNT OF NEW HOUSING

At ECONorthwest, we combined our knowledge of economic theories about housing demand with practical experience with local housing markets and policies to identify six categories of factors that affect the amount and type of housing built in a community and can be summarized into six categories (which we refer to as "the six P's"):

- **Population.** Even if none of the subsequent factors changed, housing demand will change, all else being equal, if population (i.e., the number of households) changes. Population grows either when people move to a region (in-migration) or through natural increase (births minus deaths). The demographic characteristics (e.g., age) of new population affect housing demand.
- **Purchasing power.** Even without population growth, if an existing population were to suddenly get richer, it would spend more on housing—housing demand would increase. The amount that a household can spend on housing is predominantly dependent on household income and wealth, but the availability of mortgage financing also affects housing choice.
- **Preferences.** Households have preferences about: (1) types of housing (e.g., single-family detached or apartments), (2) housing amenities (e.g., fireplaces or multiple-car garages), (3) and locational amenities (e.g., distance from work, quality of schools, or access to shopping). Housing preferences are linked to demographic characteristics and purchasing power.
- **Prices (and costs) of housing.** Households have money to pay for housing, and preferences about the kind of housing they want to pay for. Prices tell them how much of what they want they can afford to get. If there are reasons to believe, for example, that the real price of residential land or housing construction will be rising, then one would expect housing developers and purchasers to begin to economize on lot size (land) or built space. Development costs describe the costs of building a house, including construction costs, land costs, and public services and infrastructure. Costs are strongly related to prices, but are not identical. For example, in a strong market with excess demand, a developer may be able to command a price that is in excess of development costs and a standard rate of return. In addition, certain

advances in the technology of building housing or infrastructure my reduce costs.

- **Prices of housing substitutes.** One important substitute for housing is transportation. For example, choices to purchase housing in suburban locations was influenced by the price of travel: if it had been very much higher, fewer households could have afforded to move to suburban locations. Telecommunications is a substitute for proximity and is a technology whose prices have dropped substantially in the last three decades.
- **Policy.** Governments affect the housing market through policies and actions that encourage or discourage development of certain types of housing in certain locations.

### B.1.3 THE RELATIVE IMPORTANCE OF DIFFERENT FACTORS

The literature is inconclusive on the relative weight of site and structure characteristics in housing location choice in the U.S. Based on a household survey, Wachs, et. al. (1993) concluded "…commuting distance is likely to be a secondary consideration in choosing where to live; housing costs, quality of schools, and safety from crime were anticipated generally to play a much larger role." Geographic scale plays a large role in the appropriateness of this statement. If one is looking at neighborhoods that represent an overall difference of five minutes in travel time, service and housing attributes will probably dominate residential locational choice. Within a larger metropolitan region travel time will play a much more substantial role.

Levine (1998) concluded commute time was a dominant determinant of residential location at the regional scale, and that provision of affordable housing near employment concentrations can influence residential location decisions for low-to-moderate income single-worker households. He noted, however, that the jobs-housing balance does not decrease travel times or increase travel speeds, but that relaxation of suburban regulation intended to lead to improved matches between home and workplace is seen as enhancing the range of households' choices about residence and transportation.

The relative importance of many of these factors to different households is different. Some like the excitement, diversity, and opportunities of an urban location; others like the quiet and security of a suburban cul-de-sac. Some may want a big yard; some want no maintenance responsibilities. Children and pets make a difference. Similar tradeoffs apply for own vs. rent; close-in vs. far out; amount of space and quality vs. price.

## B.2 CONSIDERATIONS IN MODELING FUTURE HOUSING DEMAND

### B.2.1 DEFINITIONS: DEMAND, ABSORPTION, AND NEED

The term "demand" gets used to mean two different but related things, which can create confusion analytically and in public discussion. In economic textbooks, "demand" is the ubiquitous downward-sloping demand curve: the estimated amount of some good or services that consumers will purchase at different prices. The greater the price, the less they purchase. But "demand" gets used commonly and in the press to mean not the demand curve, but the intersection of supply and demand curves at some quantity for a given price. In real estate, that use of the term demand would be equivalent to the term "absorption."[1]

Sometimes analysts introduce yet a third variation: "potential demand," which is a very squishy term. It is not the demand that one observes historically in the market place or that one expects to observe in the future. Rather, it is some bigger amount of demand—not predicted to occur necessarily—but apparently out there potential under some set of demand and supply conditions that are not specified.

In the context of housing markets, what one observes when looking at past and current housing conditions is *the intersection of the forces of housing supply and demand at prevailing prices*: in other words, absorption. As noted in Section A.1, there are many factors that go into determining that intersection. Analysts will often divide these, as we do here, into factors that tend to have more influence on the demand side (e.g., growth in population, households, and income), and those that tend to have more influence on the supply side (e.g., the cost of materials, construction, and land).

Thus, in this report we use the term "demand" in two ways: (1) to refer to a category of factors that influence the amount of housing, by type, that has been or is likely to be absorbed in the San Luis Obispo market, and (2) the historical and forecasted amount of that absorption.

Consistent with the first use of the term, we discuss characteristics of households that create or are correlated with *preferences* for different types of housing, and *the ability to pay* for that housing (the ability to exercise

[1] Further definitions: absorption is similar but not identical to "new construction." New construction is probably the variable of primary interest. Over the longer run, absorption and new construction will be approximately equal. In the short run, units can get built but not sold (absorbed). Building permit data is directly about new construction and indirectly and approximately about absorption.

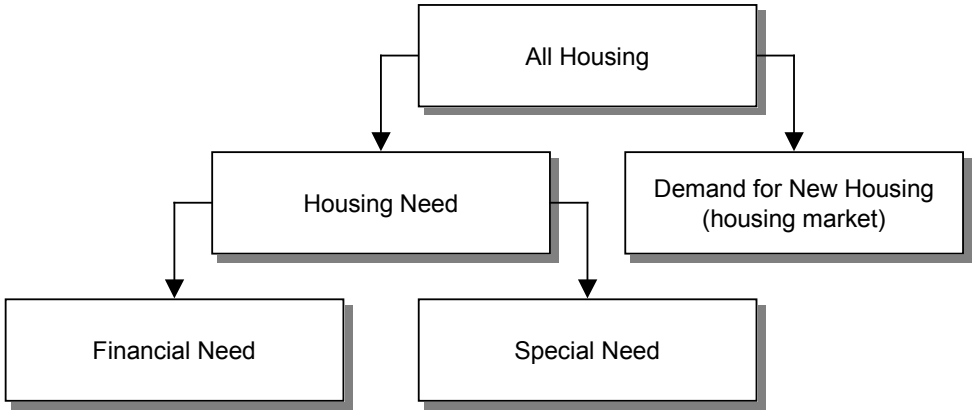
those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

The ability to pay is essential to the definition of housing demand. Housing market analysis often do not make a clear distinction between *demand* and *need*:

- *Housing need* can be defined broadly or narrowly. At its broadest, all households need shelter. For analysis, however, most studies use narrower definitions that distinguish between: (1) households that are financially able to purchase or rent housing at an "affordable" price, consistent with the requirements of their household characteristics, and (2) households that cannot find and afford such housing. Households in the second category have *need*: they are either unhoused, in housing of substandard condition, overcrowded, or paying more than their income and federal, state, or local standards say they can afford.
- *Housing market demand* is what households demonstrate they are willing to purchase in the market place. Growth in population means growth in the number of households and implies an increase in demand for housing units. That demand is met, to the extent it is, primarily by the construction of new housing units by the private sector based on its judgments about the types of housing that will be absorbed by the market.

Figure B-1 distinguishes between housing needs that are unmet and those that are met via market transactions. Housing need is the total number of housing units required to shelter the population. In that sense, housing need is approximately the number of households: every household needs a dwelling place. Some housing need is met through market transactions without much government intervention because households have the income to *demand* (purchase) housing services (as owners or renters). That demand is shown in the box on the right. Other households, however, have needs unmet, usually because they lack the resources to purchase housing services (financial need), but also because of special needs (though, even here, the issue is still one of financial resources).

**Figure B-1. Relationship between housing need and housing demand**




Source: ECONorthwest

Further confusing the discussion is that most households with needs (ones that do not have the financial resources to purchase or rent what society deems as minimally acceptable housing) are actually part of the effective demand overall: they are being housed somewhere. Most, however, are not part of the effective demand for *new* housing units (though a few are because they either receive income supplements or housing cost and price are reduced by other government programs).

## B.2.2 FORECASTING DEMAND BASED ON COMPONENT FACTORS

A simple way to forecast new housing units (i.e., units built or absorbed, one definition of demand) is to project historical trends into the future. That technique gets criticized as "driving by looking in the rear-view mirror," but for long-run forecasting it can be equally or more reliable than much more sophisticated forecasting techniques. Why?

For growing metropolitan areas, it is typical to see long-run, average growth rates for population and employment in the range of 1.0% to 1.5%. Since housing stock is highly correlated with population, it is not surprising that new housing gets added annually at the rate of about 1% of total housing stock. In any given year, these numbers can vary in the aggregate and by type of housing. But over a 20-year forecasting period, the historical data typically show a long-run (secular) upward trend containing short-run (cyclical) peaks and troughs.

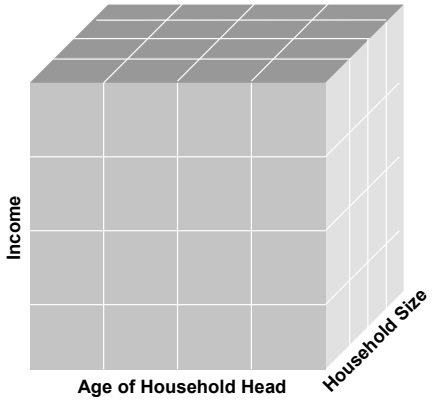
The other way to forecast new housing construction / absorption is as a function of the factors that cause it to occur. If one could do the measurement fine enough, one might find that every household has a unique set of preferences for housing. But no regional housing analysis can expect to build from the preferences of individual households.[2] Thus, most

[2] Not only could one not measure the preferences of all existing households; one could not know what specific households would be migrating to the region.

housing market analyses that get to this level of detail try to describe *categories* of households on the assumption that households in each category will share characteristics that will make their preferences similar.

Three household characteristics are strongly correlated with choices about residential location and housing type: age of the household head, size of the household, and income. Even if these were the only three significant variables influencing housing preferences (they are not), and if they each only had four subcategories (e.g., age of head 18-30, 31-40, 41-55, 55+) they would lead to 64 different household types (4*4*4). This idea is illustrated in Figure B-2.

**Figure B-2. Illustration of combinations of factors influencing housing choice**




Source: ECONorthwest

It is difficult, at best, to allocate households to each of the 64 different housing types. Simpler forecasting techniques allow a reasonable estimate of the total number of housing units that will be needed based on expected population increases and the basic relationships between the variables shown in Figure B-2.

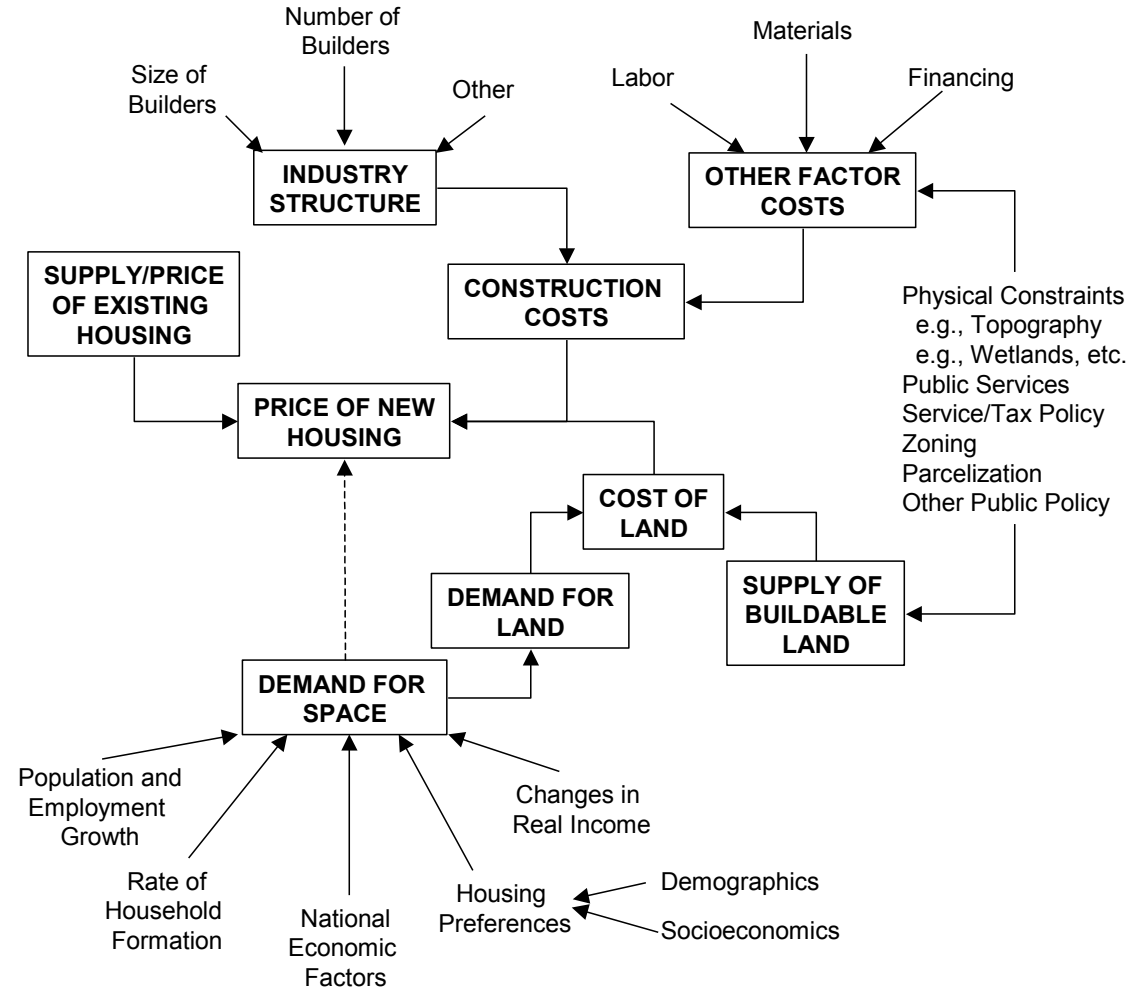
More rigorous specifications of factors that drive housing choice are also possible. Economists have developed what they refer to as *hedonic price models* of the housing market, which is jargon for models that try to estimate the contribution of each key component in a house's bundle of services to its market price. The housing demand variables in a hedonic price model are typically price of housing, price of other goods and services (because some of them are substitutes for goods and services in the housing bundle: e.g., auto and transit travel is a substitute for residential locations next to trip destinations), the financial resources of consumers (income and wealth), preferences, and the number of households.[3] The model must also

[3] Complicating the picture further is that for a large percentage of households, housing is not only a consumption good, but also an investment. Thus, housing choice depends also on one's assessment of future capital gains in the housing market.

account for housing supply variables, such as the price of desirable housing characteristics.

Figure B-3 shows factors that influence housing cost. A more complete model would have to be disaggregated by type of housing product (e.g., single-family dwelling, multi-family), and type of household with effective demand for those products (e.g., by household size, age of household head, income).

**Figure B-3. Factors affecting housing price**




Source: ECONorthwest

The purpose of the discussion so far has been to give some background on the kinds of factors that influence housing choice, and in so doing, to convey why the number and interrelationships among those factors ensure that any generalization about housing choice will be wrong, at least in part. Given that caveat, we proceed to make some of those generalizations.

Figure B-4 illustrates a common pattern for how one's life cycle intersects with housing choice. Many other patterns exist, but the one shown is common. The point is that housing needs and preferences change

for a person or a household over time, and, on average, they change in predictable ways.

The main demographic and socioeconomic variables that may affect housing choice and preference for compact housing are: age of householder, household composition (e.g., married couple with children or single-person household), size of household, ethnicity, race, household income, or accumulated wealth (e.g., real estate or stocks). The literature about housing markets identify the following household characteristics so those most strongly correlated with housing choice are: age of the householder, size of the household, and income. [4]

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Householder age affects housing type and tenure. Households make different housing choices at different stages of life. Mobility is substantially higher for people aged 20 to 34. People in that age group will also have, on average, less income and fewer children than people in the next older age bracket. All of these factors mean that younger households are much more likely to be renters. Renters are more likely to be in multi-family housing. Figure B-5 shows this general pattern and also shows that it is not absolute: some young people own single-family houses and some old people rent.

- **Size of household** is the number of people living in the household. The size of the household is related to the age of the householders. Younger and older people are more likely to live in single-person households and people in their middle years are more likely to live in multiple person households (often with children). In San Luis Obispo County, average household size is 2.48 persons per household.

- **Income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own). Figure B-6 shows how age and income relate to housing type and tenure in the U.S. (1990). It illustrates a substantial preference for single-family housing and ownership when incomes allow that choice, regardless of age. A review of census data that analyzes housing types by income in most cities will show that as income increases, households are more likely to choose single-family detached housing types. Consistent with the

[4] See the end of this appendix for citations to some of the literature supporting these generalizations.

relationship between income and housing type, higher income households are also more likely to own than rent.

**Figure B-4. The intersection of life cycles and housing careers**

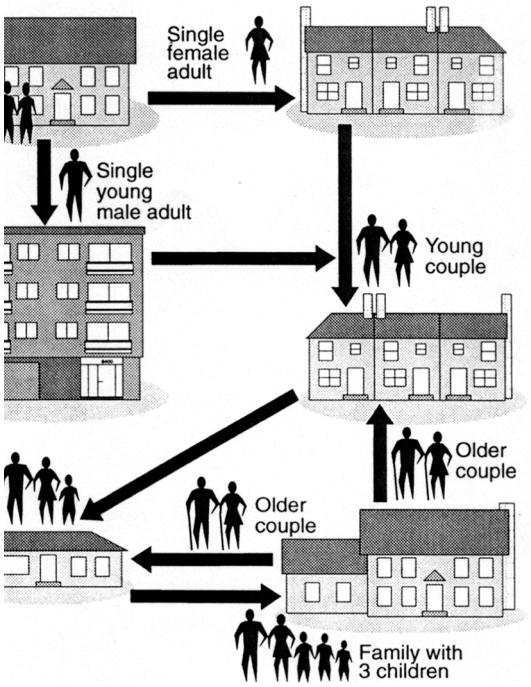
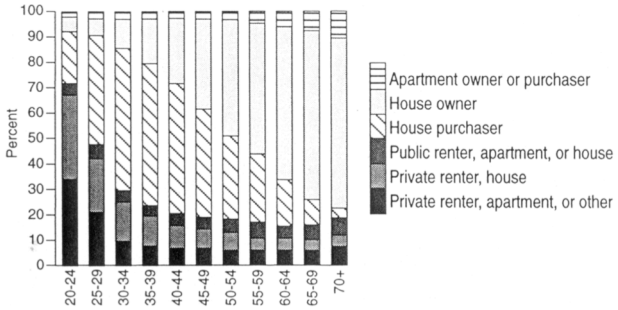
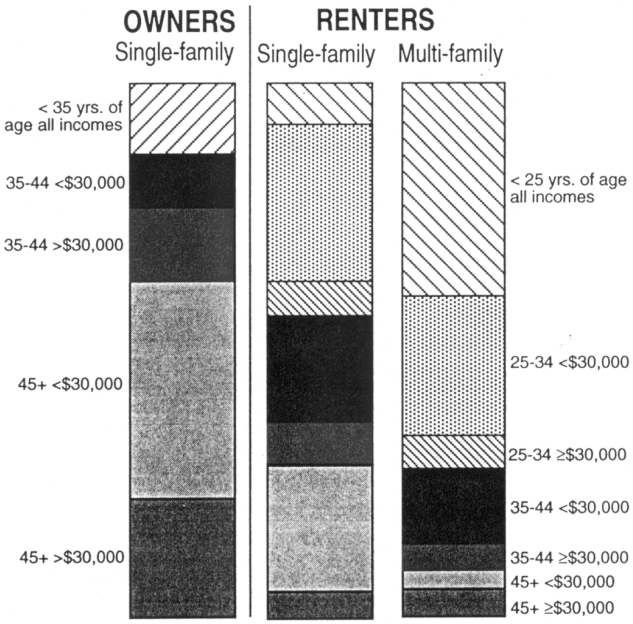



**Figure B-5. Tenure and household type by age of household head**




Source: Reprinted from Clark, Willam A.V. and Frans M. Dieleman. 1996. Households and Housing. New Brunswick, NJ: Center for Urban Policy Research.

**Figure B-6: Composition of owner and renter tenures for U.S. households, 1990**




Source: Reprinted from Clark, Willam A.V. and Frans M. Dieleman. 1996. *Households and Housing*. New Brunswick, NJ: Center for Urban Policy Research.

In summary, the data illustrate what more detailed research has shown and what most people understand intuitively:

- Household life cycles and housing choice interact in ways that are predictable in the aggregate.
- Age of the household head is correlated with household size and income.
- Household size and age of household head affect housing preferences.
- Income affects the ability of a household to afford a preferred housing type.

Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand. The connection between socioeconomic and demographic factors, on the one hand, and housing choice, on the other, is often described informally by giving names to households with certain combinations of characteristics: the "traditional family," the "never-marrieds," the "dinks" (dual-income, no kids), the "empty nesters."

# Appendix C GLOSSARY AND REFERENCE MATERIALS

**Urban Area.** Any area within the urban reserve lines established by the Land Use Element of the general plan.

**Urban Reserve Line** (URL) is a boundary separating urban/suburban land uses and rural land uses. It is based upon both the needs of individual communities for areas of additional growth during the term of the LUE, which is a 20-year period. It relates to the capacities of community resources to support such growth.

The urban reserve line defines growth areas around urban centers in which the county, or the county and affected city, will actively coordinate plans, policies and standards relating to building construction, subdivision development, land use and zoning regulations, street and highway construction, public utility systems, and other matters related to the orderly development of urban areas. The amount of land included in each community URL by the Land Use Element is based on the following factors:

1. Community population projections.
2. The land absorption rate (how much land is actually being converted to urban uses each year).
3. Existing and planned capability of local services such as water and sewer systems committed in actual capital improvement programs to support continuing local development.
4. Community preferences about the character of growth.

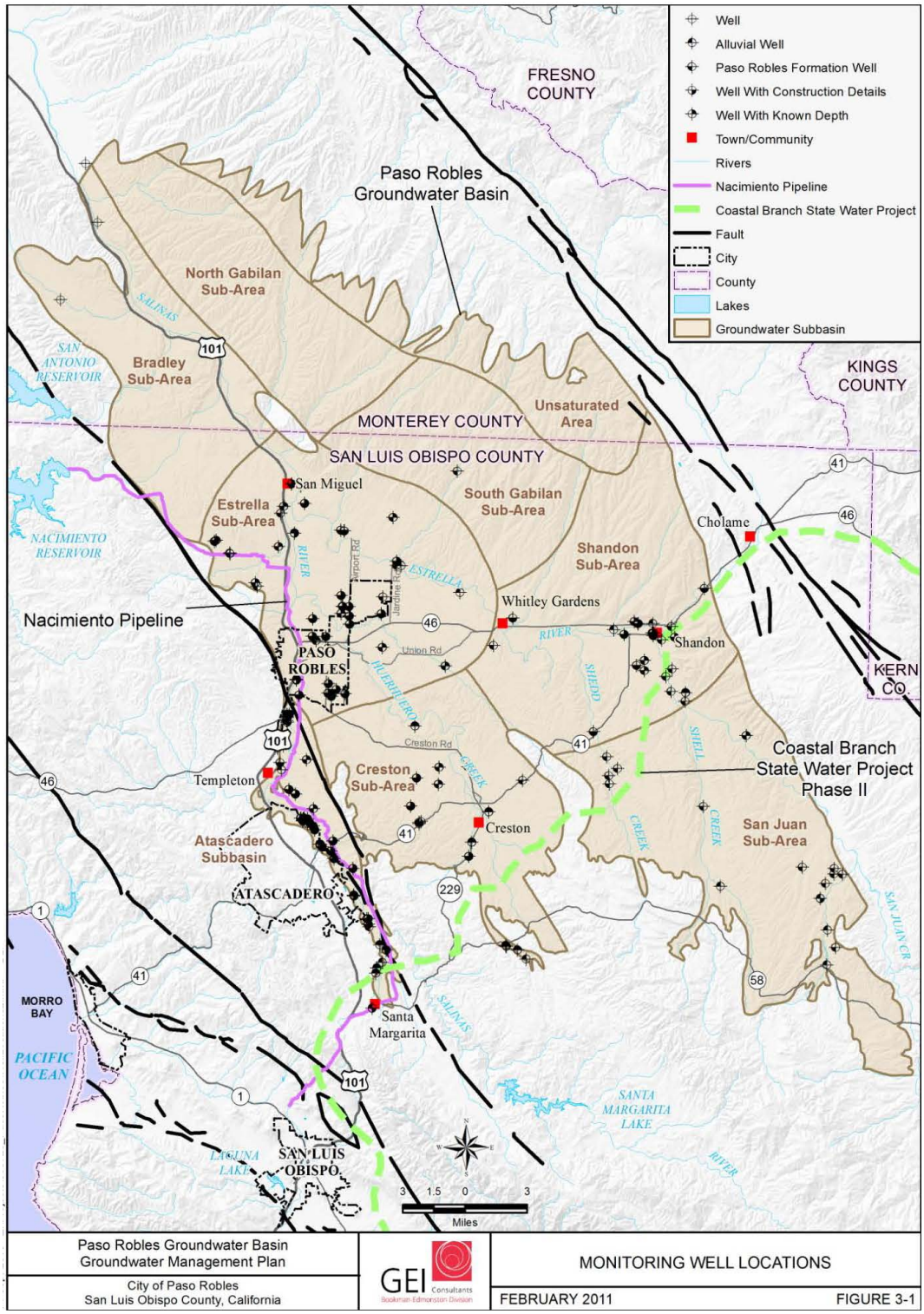
**Village Area.** Any area within the village reserve lines established by the Land Use Element of the general plan. (From LU Element: There are many areas in the county where homes are grouped in settlements of greater density than surrounding rural areas, but which are not self-sufficient communities. In past planning studies, such communities have often been overlooked, remaining undistinguished from the surrounding countryside. The LUE recognizes these villages as having both individual character and unique problems, as well as needing specialized solutions to their problems. People living in these villages identify with a local character and often feel protective of their village life-style.

**The Village Reserve Lines (VRL)** distinguish developed areas from the surrounding rural countryside. A land use plan has been developed for each village, with particular attention given to their unique problems, opportunities and development potentials. Village plans are found in the LUE area plans and village reserve lines are established for:

Black Lake Heritage Village Pozo
California Valley Los Berros Whitley Gardens

Callender/Garrett Los Ranchos/Edna Woodlands
Creston Oak Shores
Garden Farms Palo Mesa

**Exhibit C-1. Paso Robles Groundwater Basin**



# Appendix D ADDITIONAL DATA

**Section D.1** provides a brief overview of economic conditions in San Luis Obispo County. It focuses specifically on unemployment, employment growth, recent growth in specific sectors, real wages and income, consumer spending, and a summary of long-term economic conditions. **Section D.2** is an overview of the housing market in San Luis Obispo County. It provides a 20-year snapshot of the number of building permits issued in the unincorporated areas of the County. It also compares recent information about housing values and median rents, and average household size within the County and County subdivisions. **Section D.3** looks at key demographics that help describe the buying power and housing needs of residents in the County. **Section D.4** forecasts growth and housing capacity in unincorporated areas and cities within the County.

## D.1 ECONOMIC OVERVIEW OF SAN LUIS OBISPO COUNTY

Two reports provide the majority of the research that is the basis for this overview of economic conditions in San Luis Obispo County.

1. *San Luis Obispo County 2040 Population, Housing and Employment Forecast*, was prepared by AECOM on August 11, 2011, for the San Luis Obispo Council of Governments.
2. *2011 Central Coast Economic Forecast*, prepared by Beacon Economics, describes economic trends in San Luis Obispo County, California, and the U.S., and provides summaries of business activity, agriculture, residential and commercial real estate, demographics, and quality of life in County.

These reports draw from such sources such as the U.S. Census, California Department of Finance, California Employment Development Department, U.S. Bureau of Labor Statistics, and the U.S. Bureau of Economic Analysis. This section presents information about unemployment, employment growth, growth in specific industrial sectors, real wages and income, consumer spending, and the forecast for long-term economic conditions.

### *Unemployment*

- The seasonally adjusted unemployment rate in the County peaked in 2010 at approximately 10.8%.
- The unemployment rate as of August 2011 was 9.6%.
- During the same period, the State and nearby counties experienced very similar decreases.
- During the last twenty years, the unemployment rate in the County has stayed about 2% below that of the State.

- The unemployment rate for California is expected to be above 10% until 2013, from which we can conclude that unemployment in the County will stay above 8%.

### *Growth in employment*

- The County saw the number of new firms increase by 5.5% from 2010 to 2011, the largest year-over-year increase since the last quarter of 2008.
- Jobs in the "other services" (repair and maintenance for auto0mobiles, commercial and industrial equipment, laundry and other personal services, and several small industrial categories) sector grew the most - by nearly 14%, adding 230 jobs.
- The majority of this increase was in small businesses, which typically hire from the local labor force.[1]

### *Growth in specific sectors between August 2010 and August 2011*

- Leisure and hospitality, which accounts for 16% of all jobs in the County, grew by 2.9%. Average daily hotel rates in August 2011 were .5% below peak rates in 2007, an indication that tourism is increasing and influencing the local economy.
- The non-residential construction sector saw an increase of 10.2% new jobs.
- Jobs in local government declined 23.5% between August 2010 and 2011 – a much larger decline than seen in the State and surrounding counties. The California Budget Project cites the ongoing state and local budget cuts as the cause of these dramatic losses in local government employment. [2]

### *Real wages and real income*

- Real wages in the County declined 10.8% during the recession.
- This decline was larger than that of the State and most of the nearby counties.
- Real wages have begun to increase slowly – 2.2% between 2008 and 2011.
- Real incomes fell 2.1% from their peak in 2007, but grew slowly from 2009 to 2010.

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[1] 2009 County Business Patterns 2009, U.S. Census Bureau

[2] California Budget Project, *On the Edge.* http://www.cbp.org/pdfs/2011/110903_On_The_Edge.pdf

- Per capita real incomes experienced a greater decline since 2007 (4.8%), but the rate of decline slowed between 2009 and 2010.

### *Consumer spending*

- Taxable sales in the County have grown 21% since falling to a low point in 2009 – a larger increase than the State (15%) and surrounding counties (approximately 11%).

### *Forecast of long-term economic conditions*

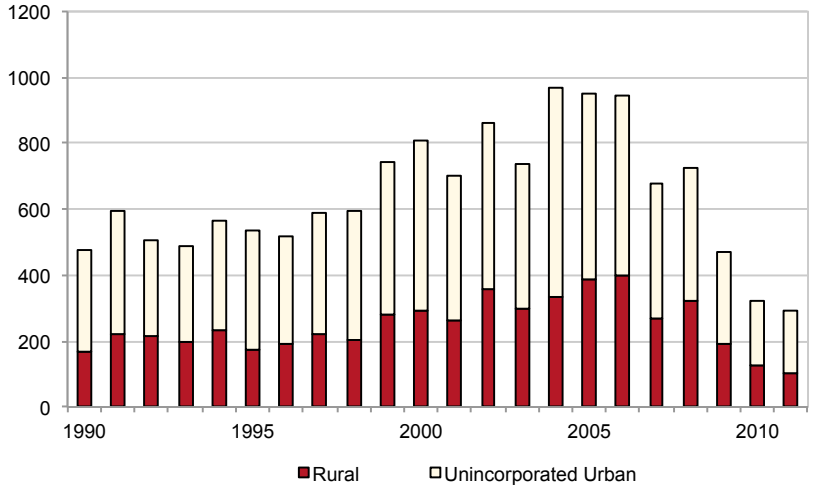
- The County's employment growth from 2008 to 2018 is forecasted to be between 9.6% and 9.7%, or about 11,600 jobs.
- The County is expected to add an average of 1,000 non-farm jobs per year between 2010 and 2040.
- The sectors expected to the experience sustained growth are health care, exports, technology, and residential construction.

## D.2 Overview of the Housing Market in San Luis Obispo County

This section presents a summary of recent and current housing market conditions in San Luis Obispo County.

Figure D-1 and Table D-1 show building permits issued in unincorporated San Luis Obispo County between 1990 and 2011. About 60% of permits were issued in urban areas (county urban and county village) and 40% in rural areas. On average, about 700 building permits were issued annually, with an average of 425 permits issued in urban areas annually and 270 permits issued in rural areas annually.

**Figure D-1. Building permits, issued 1990 to 2011, unincorporated San Luis Obispo County**




Source: San Luis Obispo County

**Table D-1. Building permits issued in unincorporated San Luis Obispo County 1990 to 2011.**

| Year | Rural | Unincorporated Urban | Total |
|---|---|---|---|
| 1990 | 167 | 311 | 478 |
| 1991 | 221 | 376 | 598 |
| 1992 | 215 | 290 | 508 |
| 1993 | 197 | 291 | 488 |
| 1994 | 236 | 330 | 566 |
| 1995 | 172 | 361 | 534 |
| 1996 | 192 | 325 | 517 |
| 1997 | 219 | 368 | 587 |
| 1998 | 202 | 394 | 597 |
| 1999 | 281 | 460 | 742 |
| 2000 | 291 | 519 | 812 |
| 2001 | 263 | 436 | 699 |
| 2002 | 359 | 504 | 867 |
| 2003 | 298 | 442 | 743 |
| 2004 | 332 | 638 | 973 |
| 2005 | 389 | 563 | 953 |
| 2006 | 402 | 540 | 945 |
| 2007 | 270 | 410 | 682 |
| 2008 | 325 | 398 | 726 |
| 2009 | 194 | 276 | 470 |
| 2010 | 125 | 197 | 323 |
| 2011 | 105 | 188 | 293 |
| **Total** | **5,534** | **8,775** | **14,340** |
| **Change in number of permits issued 1990 to 2011** | | | |
| Annual Average | 248 | 392 | 641 |
| Annual Average Percent of Total | 39% | 61% | |
| Minimum | 105 | 188 | 293 |
| Maximum | 402 | 638 | 973 |

Source: U.S. Census Bureau, 2010, ACS 1-yr estimates H030, 2000 SF3

Table D-2 shows the average household size in California and San Luis Obispo County in 2000 and 2010. Average household size in the state is approximately 17% larger than in the County. During this time average household size remained virtually unchanged. This suggests that household sizes and household composition has changed little in San Luis Obispo County over the last decade.

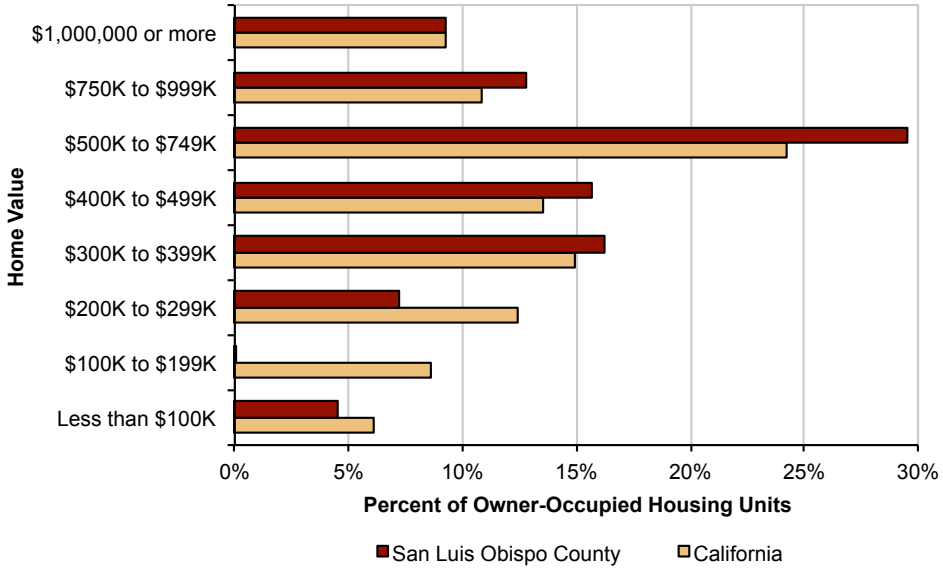
**Table D-2. Average household size, California, San Luis Obispo County, 2000 and 2010.**

| County Subdivisions & Subareas | 2000 | 2010 | Change 2000 to 2010 |
|---|---|---|---|
| **San Luis Obispo County** | 2.49 | 2.48 | -0.01 |
| **County Subdivisions and places** | | | |
| **Arroyo Grande** | 2.59 | 2.55 | -0.04 |
| Black Lake (Village) | | 1.97 | |
| Callendar - Garrett (Village) | | 2.87 | |
| Los Berros (Village) | | 3.02 | |
| Nipomo | 3.13 | 3.05 | -0.08 |
| Oceano | 2.96 | 2.8 | -0.16 |
| Woodlands (Village) | | 2.13 | |
| **Atascadero** | 2.65 | 2.55 | -0.1 |
| Garden Farms (Village) | | 2.43 | |
| Santa Margarita | | 2.48 | |
| Creston (Village) | | 2.61 | |
| Templeton | 2.98 | 2.68 | -0.3 |
| **North Coast** | 2.24 | 2.22 | -0.02 |
| Cambria | 2.21 | 2.48 | 0.27 |
| Cayucos | 2.08 | 1.97 | -0.11 |
| San Simeon (Village) | | 2.34 | |
| Baywood-Los Osos | 2.42 | 2.39 | -0.03 |
| **Paso Robles** | 2.74 | 2.73 | -0.01 |
| Oak Shores (Village) | | 2.15 | |
| San Miguel | 3.04 | 3.03 | -0.01 |
| Shandon | 3.67 | 3.49 | -0.18 |
| Whitley Gardens (Village) | | 2.59 | |
| **San Luis Obispo** | 2.29 | 2.29 | 0 |
| Avila Beach | | 1.93 | |
| Edna (Village) | | 2.8 | |

Source: US Census 2010, 2000, ACS 2005-2009

In 2010, the median home value for the County was $513,900 - about 12% higher than for the State ($458,500). Figure D-2 charts home values of owner occupied units in California and the County in 2010. Typically, home values are higher in the County than across the State. The County has 15% fewer homes valued at $299,999 or less.

**Figure D-2. Home values of owner-occupied units, California, San Luis Obispo County, 2010.**




Source: U.S. Census Bureau, Value, Owner-occupied units, 2010 ACS 1-year estimates

Table D-3 provides detail about housing values in the County subdivisions and subareas. Median housing values in the incorporated areas of the County typically grew faster than the County average between 2000 and 2010.

**Table D-3. Median housing values in county subdivisions and subareas, San Luis Obispo County, 2000 and 2010.**

| County Subdivisions & Subareas | 2000 | 2010 | Change 2000 to 2010 Amount | Change 2000 to 2010 Percent |
|---|---|---|---|---|
| **San Luis Obispo County** | $ 230,000 | $ 425,200 | $ 195,200 | 85% |
| **County Subdivisions and places** | | | | |
| **Arroyo Grande** | $ 218,600 | $ 545,700 | $ 327,100 | 150% |
| Black Lake (Village) | | $ 723,400 | | |
| Callendar - Garrett (Village) | | $ 735,100 | | |
| Los Berros (Village) | | $ 502,800 | | |
| Nipomo | $ 211,000 | $ 461,200 | $ 250,200 | 119% |
| Oceano | $ 166,800 | $ 332,600 | $ 165,800 | 99% |
| Woodlands (Village) | | $ 653,400 | | |
| **Atascadero** | $ 203,100 | $ 461,700 | $ 258,600 | 127% |
| Garden Farms (Village) | | $ 601,800 | | |
| Santa Margarita | | $ 380,000 | | |
| Creston (Village) | | - | | |
| Templeton | $ 219,500 | $ 453,400 | $ 233,900 | 107% |
| **North Coast** | $ 238,700 | $ 568,400 | $ 329,700 | 138% |
| Cambria | $ 305,600 | $ 719,200 | $ 413,600 | 135% |
| Cayucos | $ 305,500 | $ 713,000 | $ 407,500 | 133% |
| San Simeon (Village) | | $ 328,600 | | |
| Baywood-Los Osos | $ 209,800 | | | |
| **Paso Robles** | $ 173,700 | $ 430,700 | $ 257,000 | 148% |
| Oak Shores (Village) | | $ 545,000 | | |
| San Miguel | $ 119,300 | $ 292,800 | $ 173,500 | 145% |
| Shandon | $ 105,900 | $ 263,900 | $ 158,000 | 149% |
| Whitley Gardens (Village) | | $ 492,500 | | |
| **San Luis Obispo** | $ 272,400 | $ 616,300 | $ 343,900 | 126% |
| Avila Beach | | $ 568,200 | | |
| Edna (Village) | | $ 1,000,000 | | |

Source: US Census 2000, ACS 2006-2010

Table D-4 shows key details about housing sales in San Luis Obispo and selected unincorporated communities from 2006 to 2011, including the number of units sold, average sales price and average size of units sold.

**Table D-4. Housing sales, San Luis Obispo and selected unincorporated communities, 2006-2011**

| | SLOC | | | Avila Beach | | | Nipomo | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number of Units | Average Price | Average Size (SqFt) | Number of Units | Average Price | Average Size (SqFt) | Number of Units | Average Price | Average Size (SqFt) |
| 2006 | 2,613 | $682,254 | | 8 | $1,456,750 | 2,437 | 165 | $666,194 | 1,940 |
| 2007 | 2,195 | $653,045 | 2,212 | 14 | $1,312,071 | 2,405 | 167 | $646,989 | 2,100 |
| 2008 | 2,063 | $550,879 | 1,852 | 7 | $1,002,643 | 2,060 | 175 | $515,272 | 2,052 |
| 2009 | 2,211 | $478,593 | 1,858 | 13 | $789,731 | 2,183 | 220 | $435,554 | 1,965 |
| 2010 | 2,242 | $459,768 | 1,885 | 16 | $934,188 | 2,294 | 206 | $666,194 | 1,940 |
| 2011 | 2,703 | $434,910 | 1,877 | 14 | $920,314 | 2,175 | 167 | $646,898 | 2,100 |

| | San Miguel | | | Templeton | | |
|---|---|---|---|---|---|---|
| | Number of Units | Average Price | Average Size (SqFt) | Number of Units | Average Price | Average Size (SqFt) |
| 2006 | 47 | $529,440 | 1,564 | 101 | $729,806 | 2,086 |
| 2007 | 29 | $508,974 | 1,741 | 99 | $712,650 | 2,173 |
| 2008 | 37 | $272,973 | 1,525 | 86 | $630,706 | 2,119 |
| 2009 | 43 | $321,386 | 1,657 | 97 | $687,041 | 2,614 |
| 2010 | 47 | $262,013 | 1,577 | 71 | $505,044 | 2,144 |
| 2011 | 56 | $404,770 | 1,821 | 106 | $504,413 | 2,255 |

Source: MLS for San Luis Obispo

Table D-5 shows average sales price per square foot based on information in Table D-4.

**Table D-5. Average price per square foot, San Luis Obispo County, 2006-2011.**

| | County Average | Avila Beach | Nipomo | San Miguel | Templeton |
|---|---|---|---|---|---|
| 2006 | | $598 | $343 | $339 | $350 |
| 2007 | $295 | $546 | $308 | $292 | $328 |
| 2008 | $297 | $487 | $251 | $179 | $298 |
| 2009 | $258 | $362 | $222 | $194 | $263 |
| 2010 | $244 | $407 | $343 | $166 | $236 |
| 2011 | $232 | $423 | $308 | $222 | $224 |

Source: MLS for San Luis Obispo

Table D-6 shows median contract rent in California and the County for the year 2000, and years 2005 through 2010. Between 2000 and 2010, rents in California and the County grew by nearly the same amount, 53-54%. Between 2005 to 2010 growth was more modest reflected by an average annual growth rate was 1.4%.

**Table D-6. Median contract rent, California, San Luis Obispo County, 2000, 2005-2010.**

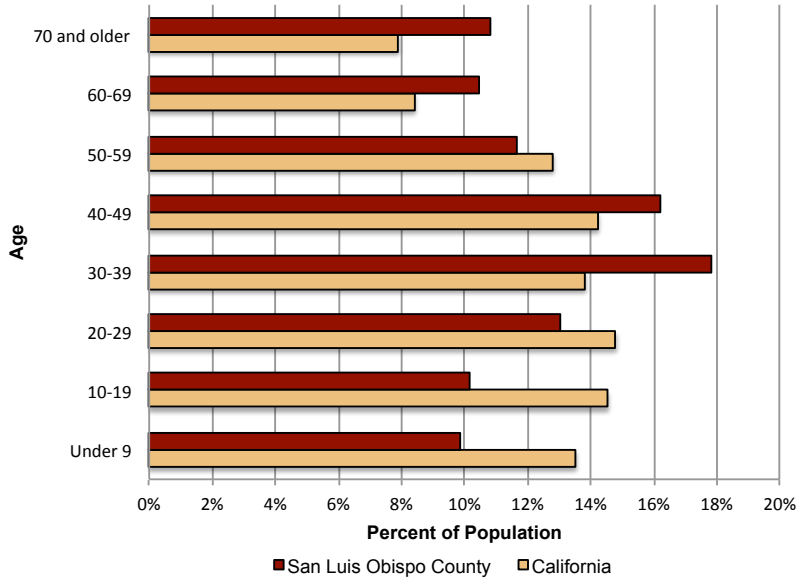
| | California | San Luis Obispo County |
|---|---|---|
| 2000 | $677 | $654 |
| 2005 | $894 | $936 |
| 2006 | $941 | $961 |
| 2007 | $984 | $990 |
| 2008 | $1,035 | $1,009 |
| 2009 | $1,058 | $1,011 |
| 2010 | $1,066 | $1,034 |

Source: U.S. Census Bureau 2007-2010 ACS 1-yr estimates, 2005 ACS, 2000 SF3

# D.3 DEMOGRAPHICS

Figure D-3 compares the populations of the County and the state of California by age, in 2010. The County generally has an older population than the State with a greater percentage of residents in nearly every age group over 30.

**Figure D-3. Population by age, California, San Luis Obispo County, 2010.**




Source: U.S. Census Bureau, DP-1, 2000, 2010

Table D-7 shows the median age for San Luis Obispo County and subdivisions of the County, based on Census areas. The median age in the County subdivisions grew approximately 8-11% with the exception of San Luis Obispo, which saw its median age decline by 6%.

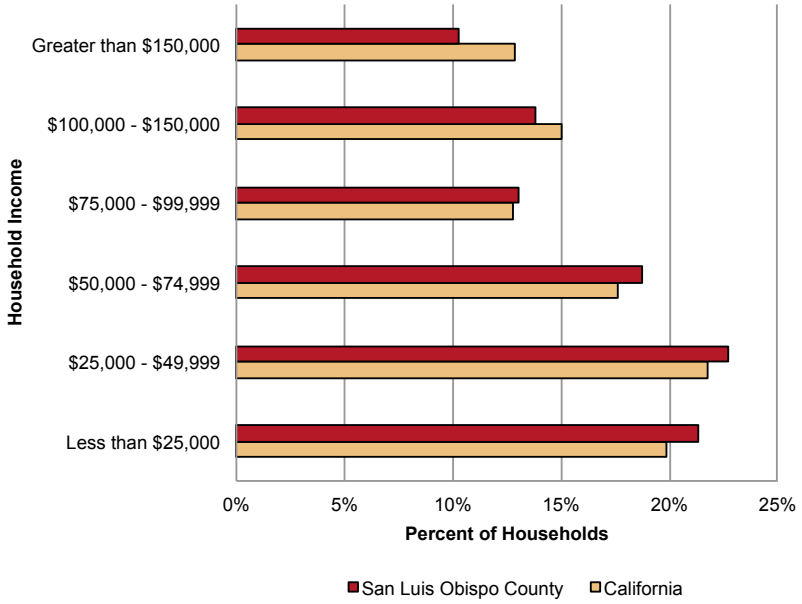
**Table D-7. Median age, County subdivisions, San Luis Obispo County, 2000 and 2010.**

| | 2000 | 2010 | Change 2000 to 2010 Amount | Change 2000 to 2010 Percent |
|---|---|---|---|---|
| **San Luis Obispo County** | **37.3** | **39.4** | 2.1 | 6% |
| **County Subdivisions and places** | | | | |
| Arroyo Grande | 39.4 | 42.7 | 3.3 | 8% |
| Atascadero | 38.7 | 42.1 | 3.4 | 9% |
| North Coast | 45.2 | 50.1 | 4.9 | 11% |
| Paso Robles | 35.8 | 38.2 | 2.4 | 7% |
| San Luis Obispo | 28.9 | 27.2 | -1.7 | -6% |

Source: US Census 2010 SF1

The median household income in San Luis Obispo County in 2010 was $53,987, compared with the state average of $57,708. Figure D-4 shows the percentage of households in six income brackets for California and the County in 2010. The State has a higher percentage of households with incomes above $100,000.

**Figure D-4. Household income, California, San Luis Obispo County, 2010.**




Source: U.S. Census, Household Income in the Past 12 Months, 2010 ACS 1-year estimates.

Table D-8 shows median household income in the County and subdivisions of the County.

**Table D-8. Median household income, County subdivisions, San Luis Obispo County, 2000 and 2010.**

| County Subdivisions & Subareas | 2000 | 2010 | Change 2000 to 2010 Amount | Change 2000 to 2010 Percent |
|---|---|---|---|---|
| **San Luis Obispo County** | $ 42,428 | $ 57,365 | $ 14,937 | 35% |
| **County Subdivisions and places** | | | | |
| **Arroyo Grande** | $ 45,849 | $ 59,417 | $ 13,568 | 30% |
| Black Lake (Village) | | $ 101,838 | | |
| Callendar - Garrett (Village) | | $ 77,768 | | |
| Los Berros (Village) | | $ 54,659 | | |
| Nipomo | $ 49,852 | $ 61,495 | $ 11,643 | 23% |
| Oceano | $ 38,014 | $ 39,843 | $ 1,829 | 5% |
| Woodlands (Village) | | $ 133,553 | | |
| **Atascadero** | $ 49,299 | $ 66,947 | $ 17,648 | 36% |
| Garden Farms (Village) | | $ 107,122 | | |
| Santa Margarita | | $ 60,737 | | |
| Creston (Village) | | $ 83,750 | | |
| Templeton | $ 53,438 | $ 69,426 | $ 15,988 | 30% |
| **North Coast** | $ 42,247 | $ 57,482 | $ 15,235 | 36% |
| Cambria | $ 45,000 | $ 72,066 | $ 27,066 | 60% |
| Cayucos | $ 42,841 | $ 53,882 | $ 11,041 | 26% |
| San Simeon (Village) | | $ 43,092 | | |
| Baywood-Los Osos | $ 46,558 | | | 0% |
| **Paso Robles** | $ 42,263 | $ 59,530 | $ 17,267 | 41% |
| Oak Shores (Village) | | $ 65,764 | | |
| San Miguel | $ 33,264 | $ 42,176 | $ 8,912 | 27% |
| Shandon | $ 35,000 | $ 63,920 | $ 28,920 | 83% |
| Whitley Gardens (Village) | | $ 125,563 | | |
| **San Luis Obispo** | $ 34,608 | $ 45,596 | $ 10,988 | 32% |
| Avila Beach | | $ 70,513 | | |
| Edna (Village) | | $ 250,000 | $ 250,000 | |

Source: US Census 2000, ACS 2006-2010

Table D-9 shows the ratio of median household income to median housing value in the County and subdivisions of the County.

**Table D-9. Ratio of housing value to income in County subdivisions, San Luis Obispo County, 2010.**

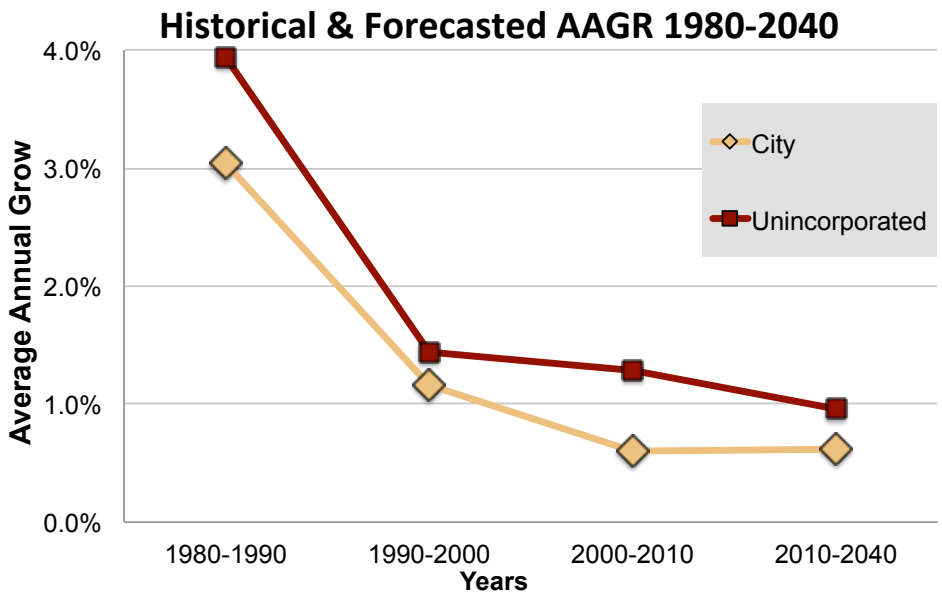
| County Subdivisions & Subareas | 2000 | 2010 | 2000 to 2010 Change |
|---|---|---|---|
| **San Luis Obispo County** | 5.4 | 7.4 | 2.0 |
| **County Subdivisions and places** | | | |
| **Arroyo Grande** | 4.8 | 9.2 | 4.4 |
| Black Lake (Village) | | 7.1 | |
| Callendar - Garrett (Village) | | 9.5 | |
| Los Berros (Village) | | 9.2 | |
| Nipomo | 4.2 | 7.5 | 3.3 |
| Oceano | 4.4 | 8.3 | 4.0 |
| Woodlands (Village) | | 4.9 | |
| **Atascadero** | 4.1 | 6.9 | 2.8 |
| Garden Farms (Village) | | 5.6 | |
| Santa Margarita | | 6.3 | |
| Creston (Village) | | | |
| Templeton | 4.1 | 6.5 | 2.4 |
| **North Coast** | 5.7 | 9.9 | 4.2 |
| Cambria | 6.8 | 10.0 | 3.2 |
| Cayucos | 7.1 | 13.2 | 6.1 |
| San Simeon (Village) | | 7.6 | |
| Baywood-Los Osos | 4.5 | | |
| **Paso Robles** | 4.1 | 7.2 | 3.1 |
| Oak Shores (Village) | | 8.3 | |
| San Miguel | 3.6 | 6.9 | 3.4 |
| Shandon | 3.0 | 4.1 | 1.1 |
| Whitley Gardens (Village) | | 3.9 | |
| **San Luis Obispo** | 7.9 | 13.5 | 5.6 |
| Avila Beach | | 8.1 | |
| Edna (Village) | | 4.0 | |

Source: US Census 2000, ACS 2006-2010

## D.4 FORECASTS OF GROWTH IN UNINCORPORATED SAN LUIS OBISPO COUNTY

The basis for San Luis Obispo County's population forecast is the AECOM report, *San Luis Obispo County 2040 Population, Housing and Employment Forecast.* AECOM's average annual growth rate for county population from 2010 to 2040 (0.8%) is consistent with the growth rate implied by its forecast of county employment for the same period (0.9%). The rate is similar to rates in the county over the past two decades (Figure D-5). AECOM expects the future growth rate to be slightly below those of the last two decades, and expects the unincorporated area to grow slightly faster than cities, assumptions that reflect (and are probably based on) historical trends.

**Figure D-5. Population growth, average annual rates by decade, cities, and the unincorporated area in San Luis Obispo County, 1980-2010**




Source: San Luis Obispo County 2040 Population, Housing, and Employment Forecast, AECOM, 2011

Table D-10 presents AECOM's mid-point population forecast for San Luis Obispo County for incorporated cities and unincorporated areas of the County. Table D-10 shows that the County is forecast to grow by 64,740 people between 2010 and 2040 at an average annual growth rate of 0.8%.

**Table D-10. Forecast of population by type of community, San Luis Obispo County, 2010-2040**

| | 2010 | | 2040 | | Change 2010-2040 | |
|---|---|---|---|---|---|---|
| | Population | % of total | Population | % of total | Population | AAGR |
| **City** | **148,307** | **59%** | **178,727** | **56%** | 30,420 | 0.6% |
| **Unincorporated** | **104,324** | **41%** | **138,644** | **44%** | 34,320 | 1.0% |
| Urban (County) | 60,944 | 24% | 79,034 | 25% | 18,090 | 0.9% |
| Village | 10,966 | 4% | 14,868 | 5% | 3,902 | 1.0% |
| Rural | 32,414 | 13% | 44,742 | 14% | 12,328 | 1.1% |
| **Total** | **252,631** | **100%** | **317,371** | **100%** | **64,740** | **0.8%** |

Source: AECOM San Luis Obispo County 2040 Population, Housing and Employment Forecast, Table 23
Note: Does not include group quarters

AECOM's forecast is based on:

- Evaluation of other forecasts, including the population forecasts for the State of California and other forecasts of growth in Southern California
- Assumptions about the share of Statewide growth that the County may have over the next 30-years

- Historical information about the County's population growth trends since 1990, including growth from natural increase (births minus deaths) and net migration
- Demographic changes in the population, such as the aging population and growth in young working age people
- Other trends, such as housing prices and development trends and regional economic trends

AECOM allocated population growth to the seven incorporated cities and unincorporated areas within the County by converting from population to a forecast for housing units, using an estimate of household size and vacancy rates. AECOM allocated housing units to the incorporated cities based on historical population growth rates and the Cities' estimates of annual housing capacity and absorption. AECOM's forecast shows growth of 30,420 people in incorporated areas and 34,320 people in unincorporated areas within the County.

The County allocated the 34,320 persons or 13,561 dwelling units in unincorporated San Luis Obispo County to villages, urban reserves, and rural parts of the County, summarized in Table D-11. The County's allocations of population (and housing) in unincorporated areas within the County are based on an analysis of the capacity for buildable land. The County's analysis considered factors such as physical constraints (e.g., soil class, topography, or geologic stability) and policy constraints (fire response time, open space, conservation easements, or airport safety zones).

Table D-11 shows the allocation of population to sub-areas within the County, grouped by planning area and community.

## Table D-11. Allocation of population, sub-areas of San Luis Obispo County, 2010-2040

| Population in Households by Planning Area & Community | 2010 | 2040 | Change 2010 to 2040 Persons | Percent Change | AAGR |
|---|---|---|---|---|---|
| **Adelaida** | 2,882 | 3,934 | 1,052 | 37% | 1.0% |
| **El Pomar-Estrella** | 8,731 | 12,604 | 3,873 | 44% | 1.2% |
| Creston Village | 94 | 141 | 47 | 50% | 1.4% |
| Rural | 8,637 | 12,463 | 3,826 | 44% | 1.2% |
| **Estero** | 27,585 | 30,586 | 3,001 | 11% | 0.3% |
| Morro Bay (city) | 10,073 | 11,381 | 1,308 | 13% | 0.4% |
| Cayucos | 2,541 | 3,358 | 817 | 32% | 0.9% |
| Los Osos | 13,908 | 14,409 | 501 | 4% | 0.1% |
| Rural | 1,063 | 1,438 | 375 | 35% | 1.0% |
| **Huasna-Lopez** | 528 | 731 | 203 | 38% | 1.1% |
| **Las Pilitas** | 1,108 | 1,512 | 404 | 36% | 1.0% |
| Pozo Village | 21 | 47 | 26 | 124% | 2.7% |
| Rural | 1,087 | 1,465 | 378 | 35% | 1.0% |
| **Los Padres** | 191 | 243 | 52 | 27% | 0.8% |
| **Nacimiento** | 2,961 | 3,977 | 1,016 | 34% | 1.0% |
| Heritage Ranch Village | 2,386 | 3,180 | 794 | 33% | 1.0% |
| Oak Shores Village | 337 | 466 | 129 | 38% | 1.1% |
| Rural | 238 | 331 | 93 | 39% | 1.1% |
| **North Coast** | 6,845 | 7,490 | 645 | 9% | 0.3% |
| Cambria | 6,020 | 6,490 | 470 | 8% | 0.3% |
| San Simeon Village | 450 | 492 | 42 | 9% | 0.3% |
| Rural | 375 | 508 | 133 | 35% | 1.0% |
| **Salinas River** | 74,319 | 96,963 | 22,644 | 30% | 0.9% |
| Atascadero (city) | 26,986 | 32,486 | 5,500 | 20% | 0.6% |
| Urban Atas. (unincorp.) | 160 | 287 | 127 | 79% | 2.0% |
| Garden Farms Village | 296 | 392 | 96 | 32% | 0.9% |
| Paso Robles (city) | 29,624 | 40,596 | 10,972 | 37% | 1.1% |
| Urban PR (unincorp.) | 2,054 | 2,663 | 609 | 30% | 0.9% |
| San Miguel | 2,337 | 3,680 | 1,343 | 57% | 1.5% |
| Santa Margarita | 1,259 | 1,475 | 216 | 17% | 0.5% |
| Templeton | 6,976 | 9,174 | 2,198 | 32% | 0.9% |
| Rural | 4,627 | 6,210 | 1,583 | 34% | 1.0% |
| **San Luis Bay** | 51,632 | 63,192 | 11,560 | 22% | 0.7% |
| Arroyo Grande (city) | 17,078 | 20,928 | 3,850 | 23% | 0.7% |
| Urban AG (unincorp.) | 339 | 347 | 8 | 2% | 0.1% |
| Avila Beach | 1,464 | 2,121 | 657 | 45% | 1.2% |
| Grover Beach (city) | 12,967 | 14,638 | 1,671 | 13% | 0.4% |
| Oceano | 7,108 | 9,239 | 2,131 | 30% | 0.9% |
| Pismo Beach (city) | 7,642 | 9,211 | 1,569 | 21% | 0.6% |
| Rural | 4,992 | 6,641 | 1,649 | 33% | 1.0% |
| Rural Coastal Zone | 42 | 67 | 25 | 60% | 1.6% |
| **San Luis Obispo** | 47,269 | 53,603 | 6,334 | 13% | 0.4% |
| San Luis Obispo (city) | 43,937 | 49,487 | 5,550 | 13% | 0.4% |
| Urban SLO (unincorp.) | 216 | 300 | 84 | 39% | 1.1% |
| Edna Village | 1,563 | 1,744 | 181 | 12% | 0.4% |
| Rural | 1,553 | 2,072 | 519 | 33% | 1.0% |
| **Shandon-Carrizo** | 2,735 | 6,589 | 3,854 | 141% | 3.0% |
| California Valley Village | 356 | 636 | 280 | 79% | 2.0% |
| Shandon | 1,295 | 4,500 | 3,205 | 247% | 4.2% |
| Whitley Gardens Village | 274 | 345 | 71 | 26% | 0.8% |
| Rural | 810 | 1,108 | 298 | 37% | 1.0% |
| **South County** | 25,845 | 35,947 | 10,102 | 39% | 1.1% |
| Black Lake Village | 867 | 872 | 5 | 1% | 0.0% |
| Calender Garrett Village | 1,192 | 1,703 | 511 | 43% | 1.2% |
| Los Berros Village | 213 | 221 | 8 | 4% | 0.1% |
| Nipomo | 15,267 | 20,991 | 5,724 | 37% | 1.1% |
| Palo Mesa Village | 2,341 | 2,540 | 199 | 9% | 0.3% |
| Woodlands Village | 576 | 2,089 | 1,513 | 263% | 4.4% |
| Rural | 5,329 | 7,427 | 2,098 | 39% | 1.1% |
| Rural Coastal Zone | 60 | 104 | 44 | 73% | 1.9% |
| **County Total Persons in Households** | **252,631** | **317,371** | **64,740** | **26%** | **0.8%** |

Source: AECOM San Luis Obispo County 2040 Population, Housing and Employment Forecast, Table 23

Tables D-12, D-13, and D14 present the estimate of residential housing capacity available in cities and unincorporated areas of San Luis Obispo County developed by staff at San Luis Obispo County. To determine persons per dwelling unit in rural areas, the County used the average of "remainder" Census County Divisions from the 2000 U.S. Census report *Occupancy, Equipment, and Utilization Characteristics of Occupied Housing Units*. The County then calculated existing dwelling units by dividing 2011 population estimates[3] by persons per dwelling units. Existing parcels and potential parcels were calculated in GIS using land ordinance parcel size standards for land use categories (zoning) on individual parcels.[4] The County then determined the number of potential dwellings by multiplying the total number of existing and potential parcels and a multiplier specific to each land-use category (Ag, Rural Lands, Residential Rural, Residential Suburban).

**Table D-12. Forecast of housing growth in cities and unincorporated areas in San Luis Obispo County, 2010-2040.**

| | | | Change 2010 to 2040 | | |
|---|---|---|---|---|---|
| | 2010 | 2040 | Dwelling Units | Percent Change | AAGR |
| Cities | 68,765 | 82,834 | 14,069 | 20% | 0.6% |
| Unincorporated Areas | 45,423 | 58,983 | 13,561 | 30% | 0.9% |
| **County Total** | **114,188** | **141,817** | **27,630** | **24%** | **0.7%** |

Source: San Luis Obispo County 2011.

Table D-13 shows the forecast of housing growth and the estimate of build-out capacity by type of community in the County. Assuming a build-out estimate of 90,262 units, by 2040, the unincorporated area will be at 65% of capacity. Unincorporated urban areas of the County and rural areas will be at 67% capacity or greater, while village areas will be under 45%.

**Table D-13. Forecast of housing growth and estimate of build-out capacity by type of community, San Luis Obispo County, 2010-2040.**

| | 2010 | | 2040 | | Buildout | Change 2010-2040 | |
|---|---|---|---|---|---|---|---|
| | Dwellings | % of total | Dwellings | % of total | Estimate | Population | AAGR |
| Unincorporated | | | | | | | |
| Urban (County) | 25,980 | 57% | 32,825 | 56% | 44,709 | 6,845 | 0.8% |
| Village | 6,228 | 14% | 7,912 | 13% | 18,295 | 1,684 | 0.8% |
| Rural | 13,215 | 29% | 18,246 | 31% | 27,158 | 5,031 | 1.1% |
| **Total** | **45,423** | **100%** | **58,983** | **100%** | **90,162** | **13,561** | **0.9%** |

Source: San Luis Obispo County 2011

[3] Source: AECOM and SLO County

[4] *San Luis Obispo County GIS Subdivision Potential, Constraints, and Suitability Models Method.*

## Table D-14. Capacity by planning area and community

| Capacity by Planning Area & Community | 2010 | 2040 | Buildout Capacity | DU Growth 2010-2040 | Capacity beyond 2040 (DU) |
|---|---|---|---|---|---|
| **Adelaida** | 1,172 | 1,599 | 2,379 | 427 | 780 |
| **El Pomar-Estrella** | | | | | |
| Creston Village | 33 | 50 | 118 | 17 | 68 |
| Rural | 3,549 | 5,124 | 5,223 | 1,575 | 99 |
| **Estero** | | | | | |
| Cayucos | 2,106 | 2,783 | 2,566 | 677 | (217) |
| Los Osos | 6,076 | 6,295 | 10,857 | 219 | 4,562 |
| Rural | 432 | 585 | 1,755 | 153 | 1,170 |
| **Huasna-Lopez** | 215 | 297 | 767 | 82 | 470 |
| **Las Pilitas** | | | | | |
| Pozo Village | 11 | 25 | 82 | 14 | 57 |
| Rural | 442 | 596 | 1,069 | 154 | 473 |
| **Los Padres** | 78 | 99 | 259 | 21 | 160 |
| **Nacimiento** | | | | | |
| Heritage Ranch Village | 1,631 | 2,174 | 2,922 | 543 | 748 |
| Oak Shores Village | 646 | 893 | 2,010 | 247 | 1,117 |
| Rural | 97 | 135 | 743 | 38 | 608 |
| **North Coast** | | | | | |
| Cambria | 3,789 | 4,085 | 7,967 | 296 | 3,882 |
| San Simeon Village | 219 | 239 | 576 | 20 | 337 |
| Rural | 152 | 207 | 636 | 55 | 429 |
| **Salinas River** | | | | | |
| Urban Atas. (unincorp.) | 61 | 109 | 232 | 48 | 123 |
| Garden Farms Village | 120 | 159 | 175 | 39 | 16 |
| Urban PR (unincorp.) | 835 | 1,083 | 1,587 | 248 | 504 |
| San Miguel | 686 | 1,080 | 2,005 | 394 | 925 |
| Santa Margarita | 486 | 569 | 566 | 83 | (3) |
| Templeton | 2,580 | 3,393 | 3,392 | 813 | (1) |
| Rural | 1,881 | 2,524 | 2,102 | 643 | (422) |
| **San Luis Bay** | | | | | |
| Urban AG (unincorp.) | 141 | 141 | 188 | 0 | 47 |
| Avila Beach | 827 | 1,198 | 1,245 | 371 | 47 |
| Oceano | 2,931 | 3,810 | 3,805 | 879 | (5) |
| Rural | 2,046 | 2,727 | 3,377 | 681 | 650 |
| **San Luis Obispo** | | | | | |
| Urban SLO (unincorp.) | 88 | 122 | 1,120 | 34 | 998 |
| Edna Village | 607 | 677 | 692 | 70 | 15 |
| Rural | 631 | 842 | 1,184 | 211 | 342 |
| **Shandon-Carrizo** | | | | | |
| California Valley Village | 177 | 316 | 7,905 | 139 | 7,589 |
| Shandon | 336 | 1,230 | 1,437 | 894 | 207 |
| Whitley Gardens Village | 97 | 122 | 139 | 25 | 17 |
| Rural | 329 | 450 | 4,332 | 121 | 3,882 |
| **South County** | | | | | |
| Black Lake Village | 559 | 562 | 559 | 3 | (3) |
| Calender Garrett Village | 356 | 509 | 396 | 153 | (113) |
| Los Berros Village | 54 | 56 | 74 | 2 | 18 |
| Nipomo | 5,038 | 6,927 | 7,742 | 1,889 | 815 |
| Palo Mesa Village | 1,068 | 1,159 | 1,326 | 91 | 167 |
| Woodlands Village | 650 | 972 | 1,320 | 322 | 348 |
| Rural | 2,191 | 3,061 | 3,332 | 870 | 271 |
| **Total** | **45,423** | **58,984** | **90,161** | **13,561** | **31,177** |

Source: San Luis Obispo County, 2011