OneBayArea

Date: August 26, 2010

To: Regional Advisory Working Group

From: ABAG Staff

Subject: Calculating the Regional Housing Target

Summary
SB 375 requires each Metropolitan Planning Organization in California to develop a Sustainable Communities Strategy, a regional land use and transportation plan that demonstrates, amongst other things, areas within the region sufficient to house "all the population of the region." This memo describes this legislative requirement, the steps and formulas for estimating the amount of housing needed to house all of the region's population, as well as the demographic and economic assumptions incorporated into the housing estimate.

Staff requests that the Advisory Working Group provide input on:

1) The formula for calculating the region's 25 year housing need; and
2) The staff's economic and demographic assumptions, including employment growth and demographic changes, which are directly used to estimate the region's 25 year housing need.

SB 375 & Regional Housing Target
Senate Bill 375 states that the Sustainable Communities strategy must "identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan, taking into account net migration into the region, population growth, household formation and employment growth."

The Bay Area regional agencies, as well as the State Department of Housing and Community Development (HCD), interpret this requirement to mean that the region must plan for housing sufficient to meet total new demand, as generated by natural population increase (net births), household formation and employment growth. The region must demonstrate how all of the region's growth in housing demand can be met within the Bay Area's nine county borders, and not by surrounding counties via "spill-over". The purpose of this requirement is presumably to reduce vehicle miles traveled (VMT) attributed to people living just outside of the region, and commuting to jobs within the Bay Area.

The net effect of this legislative requirement is that the region must plan for more housing than it has traditionally planned. Before SB 375, when the regional agency prepares the economic and demographic forecast, staff assumes that there will continue to be a regional imbalance of jobs and housing and an insufficient number of homes to fully accommodate regional employment growth and population increase. To assume that the entire region's housing demand will be fully met within the region means to assume that there will be an increase in housing supply. The supply could be increased through modifications to local land use plans and expanded subsidies for below-market rate housing.

Calculating the Regional Housing Target
Estimating housing demand or need is a different process than what is used to traditionally estimate long-term household growth. Demand in housing is generated by natural increase, employment growth, and to some degree migration. When estimating demand, traditional or historical limitations on housing development are not taken into account, such as local land use constraints that limit housing production, e.g. zoning codes. Need is simply based on estimates of population and employment growth.

How to specifically calculate the number of units needed to "house all the population of the region" can be described best as a series of steps:

1. Estimate **demographic population growth**, as determined by natural increase;
2. Estimate **employment growth**;
3. Determine **in-migration,** mostly due to employment growth;
4. Add in-migration to demographic population to arrive at **total population**;
5. Determine **"household formation" rates**;
6. Apply household formation or headship rate to total population to determine **total housing need**.

Formulaically, the above steps could be summarized as:

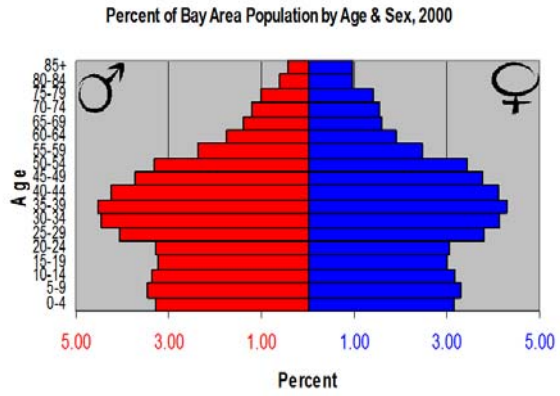
$$1)\ \text{Population}_{\text{Total}} = \text{Population}_{(\text{births-deaths})} + \text{Net Migration}_{(\text{jobs})}$$
$$2)\ \text{Housing}_{\text{Total Need}} = \text{Population}_{\text{Total}} \times \text{Household Formation}$$

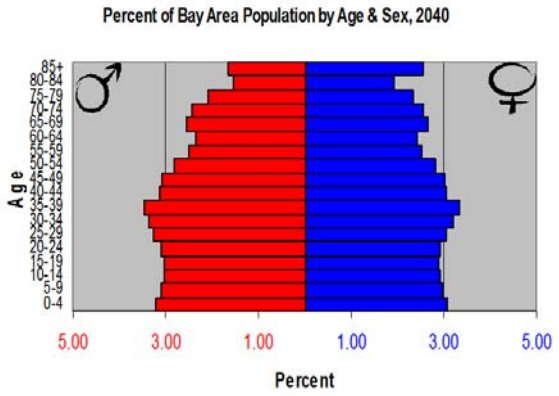
Step 1: Demographic Population Growth

Estimating long-term growth in the demographic population is perhaps the most straightforward aspect of estimating total housing need. Demographic population growth refers to growth attributed exclusively to natural increase, or the number of new births, less deaths. Migration into the region is not taken into account in the demographic population.

The growth in the demographic population is estimated through a cohort-survival model. The model works by starting with a beginning population for each Bay Area county, identified by age cohorts, and growing it over time using age-specific information about birth rates, birth timing and death rates. Cohort-survival is a robust methodology, with few if any alternative methodologies offering similarly accurate empirical modeling output.

In looking at the details of the projected population for the region, specific policy implications emerge, the most significant of which is the projected aging of the population. Over the next several decades, the number of people over 65 and over 80 years old will nearly triple. By 2035, one quarter of the population, almost 2.3 million people will be 65 years or older. Over three million people will be over 55; this is one-third of the Bay Area's projected population. As we plan our communities, and move forward with the development of the Sustainable Communities Strategy, we will need to consider the needs of a much older, and perhaps significantly greater non-driving population, including the need for non-auto dependent mobility and smaller homes.





Step 2: Employment Growth
The region's total projected population is directly impacted by economic growth. Population growth is attributed to two fundamental factors: natural increase and net in-migration. Economic opportunities are a key driver to in-migration. Therefore, to understand migration you first need to understand how the regional economy will grow, specifically how many jobs the Bay Area will have in the next 25 years.

Staff assumes that there will be a long-term decline in employment growth, over previous forecast periods. Considering the magnitude of the recession and anticipated slow recovery, in 2009 ABAG reduced its long-term forecast by nearly 140,400 jobs for the year 2035, compared to earlier forecasts. As we approach the next revision to the job forecast, we are again considering retracting the region's long-term economic outlook.

Once job estimates are determined, they will be used to demonstrate total housing need for the region. In addition, draft employment estimates will be used to construct land use scenarios for the Sustainable Communities Strategy. We expect to refine the job forecast during the next year to incorporate the release of U.S. Census data and additional economic information.

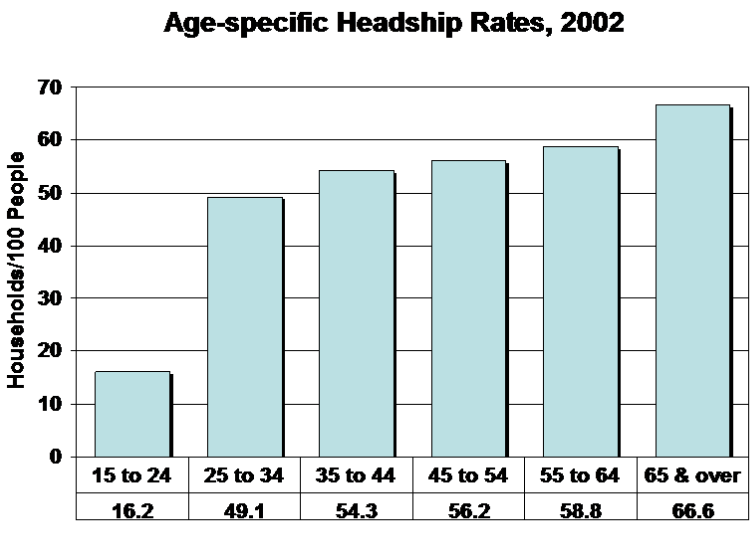
Step 3: In-Migration
As stated above, migration is driven by economic opportunities in the Bay Area relative to opportunities outside the region. A primary driver of in-migration occurs when a tight labor market causes people (economic migrants) to relocate to obtain employment. Once employment growth is estimated, labor force participation rates are applied to the demographic population. The difference between the available labor force and the number of new jobs is the unmet demand for labor. The demand for labor is supplied by migrants into the region and in-commuters.

Migration is also composed of (although to a much lesser extent) social migration and retirement migration, which is dependent on employment, income and the cost of living. Data from the Department of Finance on projected migration by age cohort demonstrates that an increasing number of seniors will be migrating out of the region by 2040. In 2000, approximately 2,270 people aged 65 years and older moved into the region. However, by 2040, nearly 300 people in this same age cohort are projected to leave the region. Even considering the increase in retirement migration, we project the 65 years and older age group to see the greatest growth rates in the coming decades.

Step 4: Compute Total Population
Once employment growth is estimated, net migration can be computed. The net number of new migrants into the region is added to the demographic population to make up the region's total projected population.

$$\text{Population}_{\text{Total}} = \text{Population}_{(\text{births-deaths})} + \text{Net Migration}_{(\text{jobs})}$$

Step 5: Headship Rates/Household Formation
Headship rate is the percentage of people in the population who are heads of household. Every head of household, theoretically, requires a separate housing unit. If there were no restrictions on the number of housing units available, i.e. those that exist due to local land use policies or other financial and/or environmental constraints on development, every head of household would form new "households" or need a home. The rate of new households that are formed is called the household formation rate. It is these rates that are applied to the total population to determine how many housing units



are needed to house the entire population.

The chart above, constructed from data compiled by a housing economist at the National Association of Home Builders (NAHB), shows U.S. age-specific headship rates for 2002. Notice that those age 65 and over have a headship rate four times that of 15- to 24-year olds, and about third larger that those in the 25- to 34-year old category. As the senior age group grows, this difference in headship rates really begins to matter. That the Bay Area's population is dramatically aging over the next 25 years, therefore, has significant implications for the region's total housing need.

Step 6: Apply Headship Rate to Total Population
Once total population is determined, the second formula uses household formation rates to determine how many house units are needed to house the total population.

$$\text{Housing}_{\text{Total Need}} = \text{Population}_{\text{Total}} \times \text{Household Formation}$$

Housing Need and the In-Commute
A related component of the population forecast is inter-regional commuting. People working in the Bay Area, but living outside the region are motivated by factors similar to economic migrants. However, housing costs and opportunities cause them to make different choices, i.e. to live just outside of the region in surrounding counties, rather than within the region. If the region were to supply sufficient housing to meet all demand, as generated by both demographic changes and migration, then inter-regional commuting would be obviated. If the total need is not supplied, then people will continue to choose to live just outside of the region, and commute in to their place of employment. Therefore, the amount of housing supplied by the region has a direct impact on the numbers of people who commute into the region.

Housing Need and Jobs/Housing Balance
As with in-commuting, jobs/housing balance is also directly impacted by the number of housing units the region supplies relative to the estimated housing need. Jobs-housing balance means that there are a sufficient number of homes to house everyone with a job in the Bay Area. The literature on jobs-housing balance suggests that the ideal jobs-housing balance is 1.5 jobs for every household. If the region builds more homes, than the region would have better jobs/housing balance. Conversely, the fewer homes that are built, relative to job growth, the worse jobs/housing balance would be. For 2010, the region's jobs/housing balance is estimated at 1.30. By 2035, according to the *Projections 2009* forecast, the region was projected to have a jobs/housing balance of 1.55.

Jobs/housing fit is another way to describe jobs/housing balance, and some would argue a more comprehensive view of the planning issue regarding adequate homes for workers and their families in a community or region. Job/housing fit is similar to jobs/housing balance, but it goes beyond the simple metric of total jobs versus total housing units. Jobs/housing fit is about whether or not the homes "fit" the jobs in a community, in regards to income earned in the jobs relative to housing costs in the community. In an ideal situation, there would be sufficient homes in all the income categories earned by the wages in the available jobs in a community. Jobs/housing fit is a bit more complex to calculate, for data is needed about occupational wages as well as housing costs. Housing costs are also not easily forecasted via existing economic models. However, through the SCS process, regional agency staff will be attempting to better convey and discuss with the RAWG and other stakeholder groups, the impact various land use scenarios have on jobs/housing fit.