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To: ABAG Executive Board

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Subject: **Plan Bay Area 2040 Regional Forecast Approach**

What is the Regional Forecast?

The regional forecast provides estimates for 2040 of the region's population, jobs, households, and income, and where population, households, jobs and housing units will locate.

- The regional totals for population, employment and households are a realistic outlook based on projected national and international trends and competitiveness of the Bay Area.
- The regional housing control total consists of the housing associated with the forecast households plus the additional housing that would be required to accommodate the forecast increase in in-commuters, consistent with the Building Industry Association of the Bay Area (BIA Bay Area) legal settlement.
- The geographic distribution of the forecast within the region reflects local policy choices as well as the influence of existing circumstances on future levels of activity.

Why a Regional Forecast?

The forecast serves multiple purposes.

- The regional forecast provides a consistent, long-term estimate of the change in employment, population, households, and income to use as a basis for planning public and private services. Many other forecasts focus specifically on only one or two factors and are inconsistent when combined.
- The forecast provides the context for local general planning efforts. It provides projections of change at the jurisdiction level, for smaller geographic areas within a jurisdiction, and for the surrounding places among which the jurisdiction will grow.
- The regional forecast provides the regional growth for population, employment, and households used in Plan Bay Area 2040.

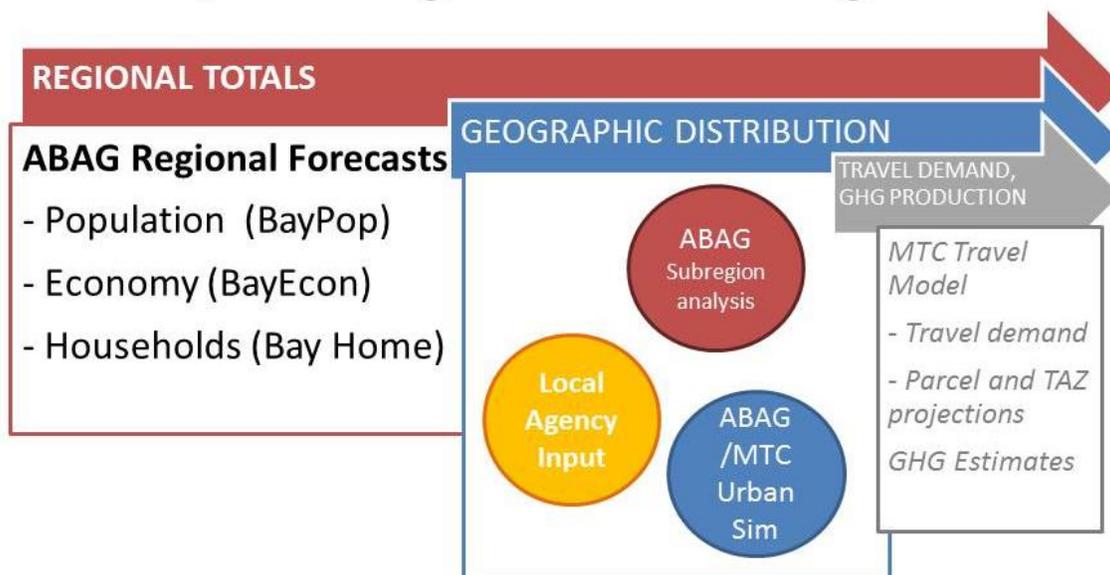
- The regional forecast combined with the regional housing control total will provide the full set of numbers that get distributed to the PDAs and local jurisdictions.

How is the Regional Forecast determined?

The regional forecast is a cooperative effort between ABAG research program, MTC, and local jurisdictions. ABAG develops regional totals for population, households, employment, output, and income, as well as a regional control total for housing. Geographic distribution of the forecast within the region is accomplished through efforts of ABAG and MTC modeling and planning staff with input at several stages from local jurisdictions. MTC then uses the information from the geographic distribution of the forecast for detailed travel demand analysis and estimates of greenhouse gas production. Figure 1 diagrams the overall analytic process.

Figure 1

ABAG/MTC Regional Forecasting Process



What tools and assumptions go into the forecast?

Our forecast of regional totals includes three components, a population component (BayPop), an economy component (BayEcon), and a household and income module (BayHome). A technical advisory committee is providing peer oversight of the forecasting tools and process.

BayPop projects population growth based on births, deaths, and moves into and out of the region. Demographic relationships estimated by John Pitkin and Dowell Myers take into account the unique characteristics of the Bay Area's population in terms of ethnicity, age distribution, place of origin, and likely moves by people based on age, ethnicity and place of origin.

BayEcon forecasts output (gross regional product), employment and total income. We estimate growth in regional economic factors based on overall national and international economic trends and the economic structure of the region (industry mix, for example). We use the REMI model,

customized for the region by ABAG staff, as one tool to estimate these relationships. We also consult alternative forecasts, including those of the Center for the Continuing Study of the California Economy, the Bureau of Labor Statistics, and simple trend analysis to reach a realistic outlook on employment by industry. The long range economic forecast does not include economic cycles.

ABAG reconciles results of *BayPop* and *BayEcon* to ensure that economic aspects of migration are considered in the population projection.

BayHome, designed by ABAG research staff, builds on population estimates from *BayPop* and *BayEcon*, historic household formation rates by ethnicity and age cohort, research indicating how these rates may change over time, and economic input from *BayEcon* on relative housing costs and building activity. Household income is separately estimated through *BayHome*, calculated using ABAG analysis of the relationship between household demographic characteristics, overall personal income levels and household income.

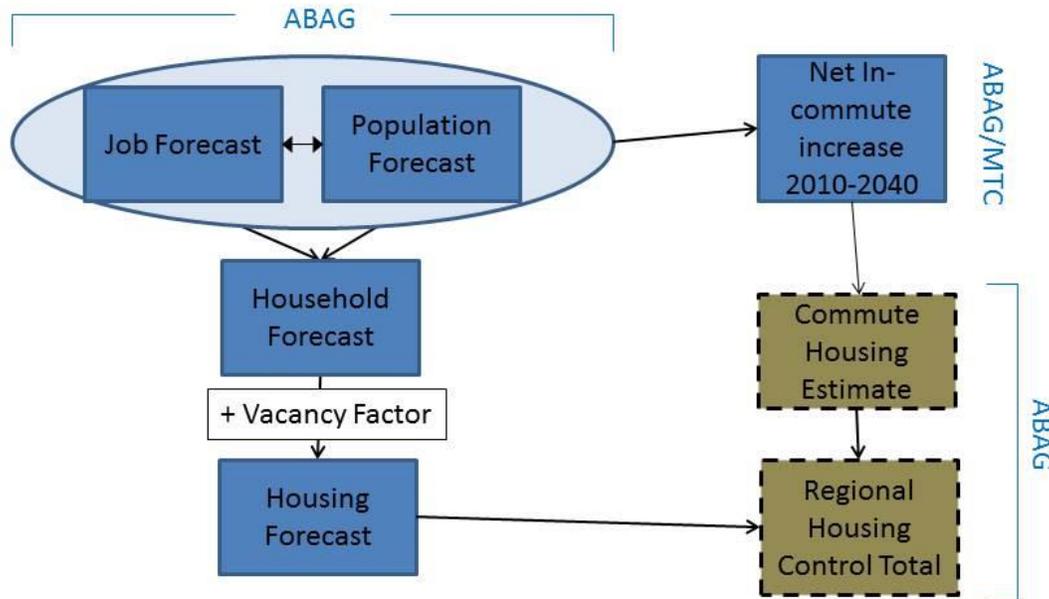
An iterative process between local government, ABAG staff, and MTC modeling services will work with UrbanSim and other tools to distribute the regional totals for population, employment, and households by income level. Underlying data on existing buildings, zoning, and community characteristics will be augmented, model results "ground truthed," and new information added through work of MTC and consultant modeling staff and local government. MTC staff is responsible for the travel model results. ABAG staff is responsible for the growth allocation pattern. These results reflect the choices of local jurisdictions in their long-term planning efforts. Periodic workshops will provide the opportunity for broader public participation in this effort.

Commute Analysis and Regional Housing Control Total

BayEcon and *BayPop* will be used to estimate the total number of jobs and of employed residents in the region in 2040. The difference between these two numbers will indicate the net number of jobs that would be filled by in-commuters. MTC has estimated the in-commute number to be 120,000 in 2010. ABAG will estimate the number of commuters in 2040 based on the population and employment forecasts. The difference between the number of in-commuters projected in 2040 and the number estimated in 2010 will determine the additional housing units to add to the regional housing forecast for the region, according to the settlement agreement reached by MTC and ABAG in February 2014 with the BIA Bay Area.

The Regional Housing Control Total will estimate the total number of units needed to accommodate all of the families in the region plus the number of housing units that correspond to the in-commute increase. The number of units will include a reasonable vacancy level for circulation of units among movers. Figure 2 diagrams the overall regional forecast process that leads to a regional housing control total.

Figure 2
**Regional Forecast, Commute,
 and Regional Housing Control Forecast**



Plan Bay Area 2040 Scenarios

Three alternative scenarios will be developed for distribution of household, employment and population, for which impacts can be evaluated. The three scenarios will consider a single set of regional forecast totals and will be integrated with transportation and investment approaches aligned with the growth pattern for each scenario.

Schedule

The preliminary regional forecast will be released by Fall 2015 and the final regional forecast will be adopted by Winter 2016. The forecast methodology, its key assumptions, and preliminary numbers will be shared with local planning staff and stakeholders and will be presented at various regional meetings, public meetings and workshops.

The scenario approach will be released in Fall 2015. The preliminary growth allocation numbers will be released by the end of 2015 and the preferred scenario will be adopted by June 2016. Between July 2015 and June 2016, the scenarios will be discussed with local planning staff and stakeholders. They will also be presented at regular regional meetings, public meetings and public workshops.

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Recommended Action

Information