A Brief Description of Forecast Methods

Mid-Region Council of Governments

June 17, 2015

MRCOG's socioeconomic forecast was created with the assistance of a land use modeling simulation system called UrbanSim. The UrbanSim model was estimated and calibrated specifically for the MRCOG region and implemented with the assistance of Synthicity, LLC in 2013 and 2014. The UrbanSim model is used by many large MPOs across the nation and is considered a leader among land use forecasting tools.

The primary factors that influence the location of future growth include existing and allowable land uses and densities, current land use constraints such as ownership or topography, near-term "pipeline" projects, and local land use plans and policies. Rooting the forecast in local zoning ensures that projected densities and uses are reasonable and consistent will existing policies. The integration of local plans into the forecast preserves the link between growth expectations and the policies set forth by decision-makers.

The location of future growth is also guided by variables such as access and infrastructure that have proven to be statistically significant in explaining where past growth has occurred. Land price and income are incorporated into demand and supply equations that enable the simulation of real market forces. In addition, the UrbanSim model is able to recognize redevelopment potential and the underutilization of attractive locations (e.g. vacant strip malls). In short, the MRCOG forecast combines local plans and policies with a robust element of market-based prediction that allows for a more realistic simulation of the forces that influence growth.

The 2040 forecast was created using the most up-to-date information available at the time of its development. Integral to this update is the 2040 population projection which incorporates recent demographic trends that amount to a reduction in the region's growth expectations by 240,000 people since the previous MTP. New development and recent growth activity has also been captured through database updates, development review processes, and through a series of agency and developer interviews. Recent building permits were added into model estimations in order to improve and update the equations that support the forecast. Lastly, new and revised local plans, policies and regulations have been added into the growth assumptions. It is important to note that future changes in any of these inputs will result in a different forecast. In order to remain as current as possible, MRCOG updates its forecasts every four years.

As part of its validation of forecast assumptions, MRCOG conducted a review of the 2040 population projections in terms of how they compare with projections among regions that are similar in size to MRCOG region. The results are shown in the following table.

A Comparison of Population Growth Projections for Select MPO's

Rank	MPO	Primary City	Base Population	Percent Change	Average Annual Growth Rate
1	North Front Range MPO	Fort Collins	488,513	83%	2.02
2	Pima Association of Governments	Tuscon	1,000,000	77%	1.90
3	Community Planning Association of Southwest Idaho	Boise	580,629	76%	1.88
5	Fresno Council of Governments	Fresno	912,521	51%	1.36
4	Mid-Region Council of Governments	Albuquerque	915,316	50%	1.46
6	Indian Nations Council of Governments	Tulsa	778,051	32%	1.13
7	El Paso MPO	El Paso	832,826	39%	1.09
8	Mid-America Regional Council	Kansas City	2,035,334	37%	1.05

The population projection for the MRCOG region appears moderate and reasonable when compared with surrounding metropolitan areas and suggests that MRCOG's growth assumptions for long-range transportation planning are well within range of peer agencies.

MRCOG would like to thank all of the organizations and stakeholders who have informed and shaped the forecasting process including: Synthicity LLC, University of New Mexico's Geospatial and Population Studies, University of New Mexico's Bureau of Business and Economic Research, the U.S. Census Bureau, the New Mexico Department of Workforce Solutions, Infogroup, local planning and development review teams, local news reporting agencies, individual permitting entities for local jurisdictions, and all who generously gave of their time though personal interviews including municipal planners, government officials, school facilities planners, local developers, planning and consulting firms, and the general public.