

# Method and Notes for preparation of annual municipality population projections for 2013 to 2040

June 2013

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## Data sources

### 1) *Annual county-level population projections*

Annual population projections for Maricopa County were provided by the Arizona State Demographers Office (SDO) and are the official state and county-level projections. The County projections were approved by MAG Regional Council in December 2012 and were utilized as the Control totals for the RAZ and MPA projections recommended for approval by MAG POPTAC in May 2013.

### 2) *Annual municipality resident population updates for 2010, 2011 and 2012*

Annual July 1, resident population updates by jurisdiction are approved by MAG and approved by Arizona Department of Economic Security in December. The annual projections are required to utilize the annual population updates as the base.

### 3) *Resident population projections by Municipal Planning Area (MPA) for 2020, 2030, and 2040*

MAG POPTAC recommended resident population projections by MPA and Regional Analysis Zones (RAZ) for 2020, 2030, and 2040 in May 2013. These projections along with the data in the AZSMART model system are utilized to develop the annual municipality projections.

### 4) *Place-level group quarter and household population projections for 2020, 2030 and 2040*

These are derived from the AZSMART modeling system by aggregating group quarter and household population by Census incorporated place, Indian Community, and unincorporated County.

## Method

The goal of the method is to develop annual, place-level projections that respect (1) the adopted population updates for 2010, 2011, and 2012, (2) annual county-level projections from the State Demographers Office and (3) the decadal, RAZ and MPA projections recommended by POPTAC on May 28, 2013. This is performed using a constant share interpolation approach.

The interpolation is performed for three intervals: 2013-2019, 2021- 2029 and 2031-2039. Population in households and group quarters are interpolated independently and then summed to obtain the total resident population. The years within each interval are interpolated through the following steps:

- 1) Determine the total change in the county for the interpolation
- 2) For each place:
  - a. Determine the total change in each place for the interpolation interval

- b. Calculate the share of the County's growth for the place by dividing the total place change by the total county change
  - c. For each year to be interpolated:
    - i. Obtain the total annual county change (e.g. 2013-2014)
    - ii. Multiply the annual county change by the place's share of county change for the interval
    - iii. Add the interpolated change to the projection from the previous year to obtain the interpolated total
- 3) Adjust interpolated place-level values for the 2013-2019 interval for cases where the interpolated values for 2013 differ from the growth implied by the change in estimates for 2010-2012 and residential completions in the last fiscal year.

#### **Notes**

1. The notes and caveats for the 2013 MAG Socioeconomic Projections by RAZ and MPA apply to the annual population projections
2. The population projections are for resident population only and do not include nonresident seasonal or transient population.
3. The population projections are for the July 1, 2012 jurisdiction incorporated boundaries and are held constant for the projections period.
4. The projections include the Maricopa County portion of Apache Junction, Gila River Indian Community, Peoria, Queen Creek and Wickenburg only.