Methods for the Colorado State, County, Municipal and Special District Population Estimates

Colorado Department of Local Affairs
State Demography Office

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State and County Population Estimates Method
The Colorado State Demography Office (SDO) applies a basic Components of Change Method to create annual (July 1) State and County Population Estimates.

For example:
> July 1 2008 Population
> + July 1 2008 to June 30 2009 Births
> – July 1 2008 to June 30 2009 Deaths
> <u>+ July 1 2008 to June 30 2009 Net Migration and Change in Group Quarters</u>
> July 1 2009 Population

Birth and Death data are provided by the Colorado Department of Public Heath and Environment. Net Migration data are from the U.S. Census Bureau (IRS, Medicare and Immigration Statistics). Changes in Group Quarters facilities (such as dormitories and barracks) are provided by local governments and other agencies.

Municipal and Unincorporated Area Population Estimates Method
The SDO applies a Housing Unit Method along with the County Population Estimates to create annual Municipality and Unincorporated Area Population Estimates.

For example:
> Step 1: Split the Municipality into its parts that overlap different Counties
>
> Step 2: $HouseholdPopulation09_c = Population09_c - GroupQuartersPopulation09_c$
>
> Step 3: $InitialEstimate09_m = TotalHousingUnits09_m \times OccupancyRate08_m \times PersonsPerHousehold08_m$
>
> Step 4: $Proportion09_m = InitialEstimate09_m / CountySum(InitialEstimate09_m)$
>
> Step 5: $FinalEstimate09_m = (Proportion09_m \times HouseholdPopulation09_c) + GroupQuartersPopulation09_m$
>
> Where "$_c$" represents a County and "$_m$" represents a Municipality or the Unincorporated Area in that County

Housing Unit data are provided by local governments whenever possible and the U.S. Census Bureau if there is no direct local source. Changes in Group Quarters facilities (such as dormitories and barracks) are provided by local governments and other agencies.

Special District Population Estimates Method 1
When reliable Housing Unit data is available, the SDO applies a Housing Unit Method along with the Municipality and Unincorporated Area Population Estimates to create annual Special District Population Estimates.

For example:
  Step 1: Split the Special District into its parts that overlap different Municipalities and/or Unincorporated Areas

  Step 2: $HouseholdPopulation09_m = Population09_m - GroupQuartersPopulation09_m$

  Step 3: $InitialEstimate09_d = TotalHousingUnits09_d$ x $OccupancyRate08_d$ x $PersonsPerHousehold08_d$

  Step 4: $Proportion09_d = InitialEstimate09_d$ / $MunicipalSum(InitialEstimate09_d)$

  Step 5: $FinalEstimate09_d = (Proportion09_d$ x $HouseholdPopulation09_m) + GroupQuartersPopulation09_d$

  Where "$_m$" represents a Municipality or Unincorporated Area, and "$_d$" represents a Special District in that Municipality or Unincorporated Area

Housing Unit data are provided by local governments whenever possible and the U.S. Census Bureau if there is no direct local source. Changes in Group Quarters facilities (such as dormitories and barracks) are provided by local governments and other agencies.

Special District Population Estimates Method 2
In the absence of reliable Housing Unit and/or Group Quarters data (as is the case for most Special Districts), simple proportional adjustments to each of the Municipalities and/or Unincorporated Areas that the Special District overlaps are made to update the Special District Population and Household Estimates.

For example:
  Step 1: Split the Special District into its parts that overlap different Municipalities and/or Unincorporated Areas

  Step 2: $TotalPopulation09_d = (TotalPopulation08_d$ / $TotalPopulation08_m)$ x $TotalPopulation09_m$

  Where "$_m$" represents a Municipality or Unincorporated Area, and "$_d$" represents a Special District in that Municipality or Unincorporated Area

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