



# Connecticut State Data Center

## 2005 Population Projections Methodology

1. Statewide Level:
  - a. All modeling was done separately by race
  - b. Cohort-component methodology using the Census Bureau's [Rural/Urban Projection](#) (RUP) software
  - c. Vital statistics on Connecticut births and deaths from the most recent CT Department of Public Health data
    - i. Fertility rates are specific to CT
    - ii. Lifespan is allowed to increase for population through 2030
  - d. Population data from Census 1990 and Census 2000
  - e. Net-Migration calculated from a combination of:
    - i. Calculating a closed-population from 1990 to 2000
    - ii. Subtracting Census 2000 counts from survived population to obtain domestic migration.
    - iii. Using OIS (formerly INS) data for foreign-born in-migration counts
2. Town-Level
  - a. All modeling was done separately by race for each town.
  - b. Hamilton-Perry (H-P) methodology was implemented in Excel and used to calculate a maximum of seven (7) extrapolation scenarios for each racial group in each town.
  - c. The selection of the most appropriate combination of extrapolations was optimized to 2005 Department of Education enrollment counts and 2005 Census estimates for each town.
3. Model Comparisons
  - a. The median extrapolation for each town, using Hamilton-Perry, was summed and compared to the statewide projection using RUP
  - b. The projected counts from the two methods were within 2% of each other.
  - c. Consistent results from the separate methods provided some certainty that no "math" errors were made and that the results are defensible.

However, the use of separate methods for statewide versus towns does create some idiosyncrasies in how the projections can be used. The town- and county-level projections were optimized to each individual town and/or county. We did not limit the town-level and county-level count to the statewide total obtained from RUP. The justification is that we want to get the most optimal projection for each level of geography. Consequently, the town-level projections do not sum to the state-level projections. The same is true for county-level and the 5 CT groups.

Using weather forecasting as an analogy provides a good interpretation of this limitation. Assume that a weather forecast for Connecticut predicts a total of 5 inches of rainfall throughout the state the following day. In addition, assume that each town has its own independent weather forecast. What are the odds that all 169 separate forecasts will average to the statewide forecast of 5 in? The odds are quite long! Furthermore, you do not want to constrain a town's forecast based on what may or may not happen in other towns.

In contrast, for a statewide forecast, the 5-inches prediction is most likely better than the average from 169 towns. By optimizing projections to each separate geographic level we get a count that is optimal for that level.