Urbanized Area Definitional Changes

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Austin, TX
July 22, 2009
“Urban Area”-1910-1940

• Incorporated Place
• Minimum population of 2,500 persons
• Special rules in certain states
• Inequitable classification of densely settled areas across states based on differences in laws governing incorporation and annexation
Urban and Rural: 1950 Census

- Urbanized area concept adopted to identify densely settled territory adjacent to cities of 50,000 or more people
- Discontiguous, high density areas included, but linking corridors were not classified as urban
- Census designated places (CDPs) adopted
- Outside urbanized areas, incorporated places and CDPs of 2,500 or more people classified as urban.
Analytical Concept of Urban Areas

• Based on analytical measures of size and density
• Do not depend on incorporated status or city limits
• Implemented by a computer program with uniform application of rules
• Census Bureau defines urban areas for statistical purposes, but does NOT control other agencies use of the concept and designations
Urban and Rural: 2000

- Adoption of urban cluster concept, replacing urban places outside urbanized areas
- Place boundaries not taken into consideration
- No grandfathering
- Adoption of “hop” concept to account for short gaps;
- Extension of jump distance from 1.5 to 2.5 miles;
- Use of nationally consistent land use/land cover data to identify undevelopable or “exempted” territory.
- Splitting of large agglomerations based in part on metropolitan area definitions.
Urban Population in US, 1990 and 2000, based on current criteria

- Census 2000: 222,360,539 (79%)
- 1990 population: 194,097,220 (78%)
Building Blocks of Urban Areas

• Census blocks are statistical areas bounded by visible features, such as streets, roads, streams, and railroad tracks, and by nonvisible boundaries, such as city, town, township, and county limits, and short line-of-sight extensions of streets and roads.
• Block Groups  Population \emph{generally} 600 to 3,000
• Tracts: Population \emph{generally} 1,200 to 8,000, 4,000 optimal
• Finally defined AFTER Census data collection
Specific Rules: Density and Size

• “Densely-settled core”: One or more contiguous block groups or blocks with land area less than 2 square miles and a density of 1,000 persons per square mile (ppsqm)
• BGs/Blocks less than/equal to 2 square miles with 500 ppsqm contiguous to above
• Blocks contiguous to above with 500 ppsqm
• Enclaves less than 5 square miles within densely settled areas by above definitions
Specific Rules: Non-contiguous areas

- **Hops:**
  - Less than 0.5 miles from core along shortest road
  - 1,000 persons or population density of 500 persons per square mile

- **Jumps:**
  - Between 0.5 and 2.5 miles
  - 1,000 persons
  - 500 persons per square mile
Size-based classification of dense areas

- Urbanized Areas (UZA) – Urban Areas of 50,000 or more people

- Urban Clusters (UC) – Urban Areas of 2,500 – 49,999 people
Contrast to Metropolitan/Micropolitan Areas

• County-based
• Have Urbanized Areas or Urban Clusters as core, but include non-urbanized (rural) areas
• Counties linked by cross-commuting rules
Problems with Analytical Urban Definitions

- Block/Block group/Tract definitions are arbitrary
- Consistent use of land use cover information is difficult to define exempt area or urbanized area without residential population
- Defining “splits” of nearby dense settlements
- Urbanized areas are NOT the same as incorporated cities of the same name or may not have the same name as included cities
Changes Under Consideration

- Tracts vs. Block Groups (for initial start)
- Ancillary data (employment/land use)
- Household density vs. population density
- Changes in interpretation in hops and jumps
- Intercensal updates
- Use of Local Employment Dynamics/Longitudinal Employment Household Dynamics commuting data
- CTAC (Commercial Tract Analysis Core) vs. County for splitting of Urbanized Areas
Census Schedule

- **October 2009** - Proposed Criteria Published in Federal Register

  **WATCH FOR NOTICE – YOU CAN PROVIDE FEEDBACK**

- **2010 Census**: April 1, 2010 (February-July)
- **Dec. 31, 2010** – Apportionment Data to President
- **April 1, 2011** – Block Level Population (PL-94-171) Redistricting Data
- **Spring 2012** – Urbanized Areas Reported (tentative)
Population Trends in Texas

Mike Cline
Research Scientist,
Institute for Demographic &
Socioeconomic Research
University of Texas at San Antonio

Austin, TX
July 22, 2009
Population Growth
## Fastest Growing States, 2000-2008

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>20,851,820</td>
<td>24,326,974</td>
<td>3,465,154</td>
<td>16.7</td>
</tr>
<tr>
<td>California</td>
<td>33,871,648</td>
<td>36,756,666</td>
<td>2,885,018</td>
<td>8.5</td>
</tr>
<tr>
<td>Florida</td>
<td>15,982,378</td>
<td>18,328,840</td>
<td>2,346,462</td>
<td>14.7</td>
</tr>
<tr>
<td>Georgia</td>
<td>8,186,453</td>
<td>9,685,744</td>
<td>1,499,291</td>
<td>18.3</td>
</tr>
<tr>
<td>Arizona</td>
<td>5,130,632</td>
<td>6,500,180</td>
<td>1,369,548</td>
<td>26.7</td>
</tr>
<tr>
<td>North Carolina</td>
<td>8,049,313</td>
<td>9,222,414</td>
<td>1,173,101</td>
<td>14.6</td>
</tr>
<tr>
<td>Virginia</td>
<td>7,078,515</td>
<td>7,769,089</td>
<td>690,574</td>
<td>9.8</td>
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<tr>
<td>Washington</td>
<td>5,894,121</td>
<td>6,549,224</td>
<td>655,103</td>
<td>11.1</td>
</tr>
<tr>
<td>Nevada</td>
<td>1,998,257</td>
<td>2,600,167</td>
<td>601,910</td>
<td>30.1</td>
</tr>
<tr>
<td>Colorado</td>
<td>4,301,261</td>
<td>4,939,456</td>
<td>638,195</td>
<td>14.8</td>
</tr>
</tbody>
</table>

* Population values are decennial census counts for April 1 for 2000 and estimates for July 1 for 2008.

Source: Derived from U.S. Bureau of the Census Estimates for dates indicated by the Texas State Data Center, University of Texas at San Antonio.
States Ranked by Share of Total U.S. Population, 2000 & 2010

Source: U.S. Census Bureau Census 2000 & 2005 Interim Projections
Ten Fast Growing States Ranked by Percentage Change (Forecasted), 2010-2025

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Numerical Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arizona</td>
<td>2,894,156</td>
<td>43.6%</td>
</tr>
<tr>
<td>1</td>
<td>Nevada</td>
<td>1,172,767</td>
<td>43.6%</td>
</tr>
<tr>
<td>3</td>
<td>Florida</td>
<td>6,660,767</td>
<td>34.6%</td>
</tr>
<tr>
<td>4</td>
<td>Texas</td>
<td>6,216,246</td>
<td>25.2%</td>
</tr>
<tr>
<td>5</td>
<td>Utah</td>
<td>630,667</td>
<td>24.3%</td>
</tr>
<tr>
<td>6</td>
<td>North Carolina</td>
<td>2,103,330</td>
<td>22.5%</td>
</tr>
<tr>
<td>7</td>
<td>Washington</td>
<td>1,454,437</td>
<td>22.2%</td>
</tr>
<tr>
<td>8</td>
<td>Idaho</td>
<td>335,336</td>
<td>22.1%</td>
</tr>
<tr>
<td>9</td>
<td>Oregon</td>
<td>745,422</td>
<td>19.7%</td>
</tr>
<tr>
<td>10</td>
<td>Georgia</td>
<td>1,849,542</td>
<td>19.3%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, Interim Projections by State, 2005.
## Total Population and Components of Population Change in Texas, 1950-2008

<table>
<thead>
<tr>
<th>Year*</th>
<th>Population</th>
<th>Numerical Change</th>
<th>Natural Increase</th>
<th>Net Migration</th>
<th>Percent Change</th>
<th>Percent Change Due to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>7,711,194</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1960</td>
<td>9,579,677</td>
<td>1,868,483</td>
<td>1,754,652</td>
<td>113,831</td>
<td>24.2</td>
<td>93.91</td>
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<tr>
<td>1970</td>
<td>11,196,730</td>
<td>1,617,053</td>
<td>1,402,683</td>
<td>214,370</td>
<td>16.9</td>
<td>86.74</td>
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<tr>
<td>1980</td>
<td>14,229,191</td>
<td>3,032,461</td>
<td>1,260,794</td>
<td>1,771,667</td>
<td>27.1</td>
<td>41.58</td>
</tr>
<tr>
<td>1990</td>
<td>16,986,510</td>
<td>2,757,319</td>
<td>1,815,670</td>
<td>941,649</td>
<td>19.9</td>
<td>65.85</td>
</tr>
<tr>
<td>2000</td>
<td>20,851,820</td>
<td>3,865,310</td>
<td>1,919,281</td>
<td>1,946,029</td>
<td>22.8</td>
<td>49.65</td>
</tr>
<tr>
<td>2008</td>
<td>24,326,974</td>
<td>3,475,154</td>
<td>1,884,947</td>
<td>1,563,694</td>
<td>16.7</td>
<td>54.20</td>
</tr>
</tbody>
</table>

* All values for the decennial dates are for the indicated census year. Values for 2008 is for July 1 as estimated by the U.S. Bureau of the Census.

**Source:** Derived from U.S. Bureau of the Census Estimates for dates indicated by the Texas State Data Center, University of Texas at San Antonio.
Net Migration Indexed to Natural Increase, by Decade

More Population Growth as a Result of Net Migration

More Population Growth as a Result of Natural Increase

Index

1950s 1960s 1970s 1980s 1990s 2000s
### Population Change by Components of Change in the State, 1990-2000 and 2000-2008

<table>
<thead>
<tr>
<th></th>
<th>State of Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1990-2000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Numerical Change</strong></td>
<td>3,865,485</td>
</tr>
<tr>
<td>Natural Increase</td>
<td>1,922,044</td>
</tr>
<tr>
<td>Domestic Migration</td>
<td>1,166,570</td>
</tr>
<tr>
<td>International Migration</td>
<td>776,871</td>
</tr>
<tr>
<td><strong>2000-2008</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Numerical Change</strong></td>
<td>3,475,154</td>
</tr>
<tr>
<td>Natural Increase</td>
<td>1,884,947</td>
</tr>
<tr>
<td>Domestic Migration</td>
<td>711,785</td>
</tr>
<tr>
<td>International Migration</td>
<td>851,909</td>
</tr>
</tbody>
</table>
Annual Net Migration to Texas, 2000 to 2008

Source: U.S. Bureau of the Census 2008 Estimates
County Population Change 2000-10

Source: U.S. Census, Texas SDC (Mig. Scenario 2.0)
Household Change - 2000 to 2008

Legend
HUD - USPS Address Change
Household Change 2000-2008
-999 to -100
-99 to -99
99 to 99
100 to 699
1,000 to 3,499
1,000 to 3,499
3,500 to 7,090
Trends & Potential Changes – Urbanized and Non-Urbanized (Rural) Areas
Urbanized Areas, 1990

- **3 areas of 1 million or people**
  - Dallas/Ft. Worth
  - Houston
  - San Antonio

- **4 areas of 200,000 to 1 million people**
  - Austin
  - Corpus Christi
  - El Paso
  - McAllen/Edinburg/Mission

- **25 areas of 50,000 to 200,000 people**
  - Abilene
  - Amarillo
  - Beaumont
  - Brownsville
  - Bryan/College Station
  - Denton
  - Galveston
  - Harlingen
  - Killeen
  - Laredo
  - Lewisville
  - Longview
  - Lubbock
  - Midland
  - Odessa
  - Port Arthur
  - San Angelo
  - Sherman/Denison
  - Temple
  - Texarkana
  - Texas City
  - Tyler
  - Victoria
  - Waco
  - Wichita Falls
Urbanized Areas, 2000

- **3 areas of 1 million or people**
  - Dallas/Ft. Worth/Arlington
  - Houston
  - San Antonio

- **6 areas of 200,000 to 1 million people**
  - Austin
  - Corpus Christi
  - El Paso
  - McAllen
  - Denton/Lewisville
  - Lubbock

- **25 areas of 50,000 to 200,000 people**
  - Abilene
  - Amarillo
  - Beaumont
  - Brownsville
  - College Station/Bryan
  - Denton
  - Galveston
  - Harlingen
  - Killeen
  - Laredo
  - Lewisville
  - Longview
  - Lubbock
  - Midland
  - Odessa
  - Port Arthur
  - San Angelo
  - Sherman
  - Temple
  - Texarkana
  - Texas City
  - Tyler
  - Victoria
  - Waco
  - Wichita Falls
  - Lake Jackson/Angleton
  - McKinney
  - The Woodlands
# Urbanized and Rural Population Comparisons 1990 vs. 2000

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Urbanized Areas</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>Total Urbanized Population</td>
<td>11.4 Million</td>
<td>14.8 Million</td>
</tr>
<tr>
<td>Population in UZAs (%)</td>
<td>67%</td>
<td>71%</td>
</tr>
<tr>
<td>Total Rural Population</td>
<td>5.6 Million</td>
<td>6.0 Million</td>
</tr>
<tr>
<td>Population in Rural Areas (%)</td>
<td>33%</td>
<td>29%</td>
</tr>
<tr>
<td>Total Population</td>
<td>17.0 Million</td>
<td>20.9 Million</td>
</tr>
</tbody>
</table>

*Notes: Rural defined as all areas not inside of an urbanized area.*
Urbanized Areas, 2010?

- **4 areas of 1 million or people**
  - Dallas/Ft. Worth/Arlington
  - Houston
  - San Antonio
  - Austin

- **9 areas of 200,000 to 1 million people**
  - Corpus Christi
  - El Paso
  - McAllen
  - Denton/Lewisville
  - Lubbock
  - Laredo
  - Brownsville
  - Amarillo
  - Killeen

- **26 areas of 50,000 to 200,000 people**
  - Abilene
  - Beaumont
  - College Station/Bryan
  - Galveston
  - Harlingen
  - Longview
  - Midland
  - Odessa
  - Port Arthur
  - San Angelo
  - Sherman
  - Temple
  - Texarkana
  - Texas City
  - Tyler
  - Victoria
  - Waco
  - Wichita Falls
  - Lake Jackson/Angleton
  - McKinney
  - The Woodlands
  - San Marcos/Kyle
  - New Braunfels
  - Conroe
  - Cleburne/Burleson
  - Georgetown
Urbanized Areas, 2010?

• **Potential Mergers**
  – Cleburne/Burleson UC with Dallas/Ft. Worth/Arlington
  – McKinney with Dallas/Ft. Worth/Arlington
  – Galveston with Texas City
  – Tomball UC with Houston
  – Impacts from Changes in Definitions?
    • Use of Tracts vs. Block Groups
    • Land Use / Employment Data?
## Urbanized and Rural Population Comparisons
### 2000 vs. 2010 (preliminary)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Urbanized Areas</td>
<td>34</td>
<td>39</td>
</tr>
<tr>
<td>Total Urbanized Population</td>
<td>14.8 Million</td>
<td>18.4 Million</td>
</tr>
<tr>
<td>Population in UZAs (%)</td>
<td>71%</td>
<td>73%</td>
</tr>
<tr>
<td>Total Rural Population</td>
<td>6.0 Million</td>
<td>6.9 Million</td>
</tr>
<tr>
<td>Population in Rural Areas (%)</td>
<td>29%</td>
<td>27%</td>
</tr>
<tr>
<td>Total Population</td>
<td>20.9 Million</td>
<td>25.4 Million</td>
</tr>
</tbody>
</table>

**Notes:** Rural defined as all areas not inside of an urbanized area.
Texas Shares of Estimated Urbanized & Total Population

Urbanized Area Changes 1990-2000 (Theoretical)
Urbanized Areas 1990-2000

• The Following Are Examples of Changes That Would Have Occurred if 2000 Criteria Were Applied in 1990

• The 1990 UAs (in Gold) are defined by applying 2000 Criteria (NOT actual 1990 Defined UAs)

• Areas in Yellow are those areas added to theoretical 1990 UA in 2000

• Areas in Black are 2000 Urban Clusters
Examples of UA “Growth” Areas
Examples of “Growth Areas”

• Blue: UA in 2000
• Yellow: Census TAZ areas of 350 - 500 persons per square mile
• Green: Census TAZ areas of 500 – 750 persons per square mile
• Orange: Census TAZ areas of 750 – 1,000 persons per square mile
• Red: Census TAZ areas of 1,000 or more persons per square mile
Examples of “Growth Areas”

• At Urban Fringe, UAs defined at Census Block NOT TAZ, but maps provide areas of potential change
  – Some high density blocks may be located in low density TAZ
  – Some low density blocks may be located in high density TAZ
Trends in Special Needs Groups
States Ranked by U.S. Share of Population within 150% of Poverty, 2000 & 2007

<table>
<thead>
<tr>
<th>States</th>
<th>U.S. Share of Persons Age 5+ with Disabilities, 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>25.0</td>
</tr>
<tr>
<td>Texas</td>
<td>20.0</td>
</tr>
<tr>
<td>Florida</td>
<td>15.0</td>
</tr>
<tr>
<td>New York</td>
<td>10.0</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>7.0</td>
</tr>
<tr>
<td>Ohio</td>
<td>6.0</td>
</tr>
<tr>
<td>Michigan</td>
<td>6.0</td>
</tr>
<tr>
<td>Illinois</td>
<td>5.0</td>
</tr>
<tr>
<td>North Carolina</td>
<td>5.0</td>
</tr>
<tr>
<td>Georgia</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2007

Note: Due to significant changes in question wording and order, ACS not directly comparable to Census 2000
States Ranked by U.S. Share of Persons Age 65+, 2000 & 2007

Thank You

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Michael.cline@utsa.edu  
210-458-6537

For an overview of Demographic Trends for Texas, See:  
• http://idser.utsa.edu/projects/txdot/