

# Texas

## Demographic Characteristics and Trends

University of Texas  
Division of Statistics and  
Scientific Computation

Statistics in Action Series

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Demography – the study of the size, distribution, and composition of populations; the processes determining these – namely, fertility, mortality, and migration; and the determinants and consequences of all of the above.

~ Bogue, 1968; Murdock & Ellis, 1991

# 25 Million Reasons to be Proud of Texas (among a few more)

## Demographic Highlights

### TEXAS is:

**big.** The population of Texas is the second largest in the United States, with 25,145,561 million people.<sup>1</sup>

**young.** Approximately 27% of Texas' population is under 18 and only 10% of the population is older than 65 years.<sup>1</sup> Webb County in Texas, has the youngest population in the U.S. with children younger than 5 comprising 12.8% of the population.<sup>8</sup>

**embracing of culture and diversity.** Approximately 9.5 million or 38% of Texans are of Hispanic descent, 2.9 million or 12% are African Americans, and 1.4 million or 6% are other (non-Anglo mainly of Asian descent).<sup>1</sup> In about a decade, it is expected that Texas' population will have more persons of Hispanic descent than any other racial or ethnic group.<sup>5</sup>

**a desired place to live and work.** Net in-migration to Texas accounts for almost half of the population growth in recent years.<sup>2</sup> More than 171,900 college graduates moved into Texas each year between 2006 and 2008, placing Texas as 2nd in the Nation by this measure.

**urban.** Texas has three of the top 10 largest cities in the Nation. The Austin-Round Rock-San Marcos metropolitan area was the 8<sup>th</sup> most rapidly growing in the Nation.<sup>1</sup>

# 25 Million Reasons to be Proud of Texas (among a few more)

## Demographic Highlights

### TEXAS is:

**rural.** Texas is the second largest state in the Nation in terms of square miles (268,601) and approximately 17% of the population lives in rural areas.<sup>2</sup>

**a working state.** Texas has a civilian labor force of more than 12 million workers and an unemployment rate lower than in most States.<sup>7</sup>

**family oriented.** Texas ranks 3<sup>rd</sup> among states for the percent of households which are married-couple families with children (24.4%).<sup>3</sup>

**multigenerational.** Texas ranks 3<sup>rd</sup> among states for percent of households which are multigenerational (4.5%).<sup>3</sup>

**growing – fast.** Texas gained more population than any other state in the last Census year (between April 1, 2000 and April 1, 2010), adding 4,293,741 people.<sup>1</sup> Among cities over 100,000 population in the U.S., 4 of the 10 fastest growing areas are in Texas (2007-2008 change).<sup>8</sup>

- Disseminate demographic and related socioeconomic data to the State and general public.
- Produce annual estimates of total populations of counties and places (cities) in the state and estimates of county populations by age, sex, and race/ethnicity.
- Produce biennial projections of the population of the State and all counties by age, sex, and race/ethnicity

## Applying demographic methods and materials to government planning:

- Estimating and projecting the need for adult basic education
- Identifying geographic areas, and the characteristics of people within these areas, that are lacking public transportation

## Estimating & projecting the need for adult basic education



# Estimating & Projecting the Need for Adult Basic Education

Client: Texas Workforce Investment Council

Objective: to estimate and project the population in need of adult basic education services by age, sex, race, Hispanic ethnicity, and nativity at the state, local workforce development area level.





# Estimating & Projecting the Need for Adult Basic Education

## Defining Adult Basic Education

- 1998 Workforce Investment Act, Title II, Section 203(1)
  - At least 16 years old, not enrolled in secondary school, and lack basic educational skills to function effectively in society, not have a secondary diploma or equivalent, or be unable to speak, read, or write English.



# Estimating & Projecting the Need for Adult Basic Education

- NCES 2003 National Assessment of Adult Literacy
  - Document Basic Literacy – Find BMI given height, weight, and look-up table.
  - Quantitative Basic Literacy – Calculate price of sandwich & salad from menu.
  - Prose Basic Literacy – Find the name of someone who performed an action in a given narrative.
  - Below Basic, Basic, Intermediate, and Proficient Literacy
- NAAL 2003 confirmed a correlation between educational attainment and literacy.



# Estimating & Projecting the Need for Adult Basic Education

Credential	Quantitative			Prose			Document		
	Below Basic	Basic	Int. +	Below Basic	Basic	Int. +	Below Basic	Basic	Int. +
< high school	64	25	11	50	33	17	45	29	27
GED	26	43	31	10	45	46	13	30	57
Diploma	24	42	34	13	39	48	13	29	57
Trade	18	41	41	10	36	49	9	26	66
Some Coll.	10	36	54	5	25	60	5	19	75
Assoc.	7	30	63	4	20	75	3	15	82
Bachelor's	4	22	74	3	14	84	2	11	87
Graduate	3	18	79	1	10	89	1	9	90

Source: NAAL 2003 Literacy in Everyday Life



# Estimating & Projecting the Need for Adult Basic Education

- American Community Survey 2006-2008
  - Age:
    - 16 to 64 years old (workforce ages),
    - 65 years plus.
  - School enrollment: not attended in last 3 months.
  - Educational attainment:
    - 1) Less than high school,
    - 2) High school and above,
    - Proportion for GED was extrapolated from ACS 1-YR 2008 and applied to ACS 3-YR estimate.
  - Ability to speak English:
    - 1) Not well & not at all,
    - 2) Well and very well.



# Estimating & Projecting the Need for Adult Basic Education

- Need for adult basic education services largely driven by immigration in Texas.
- Immigrants to Texas more often undocumented, non-English speaking, lower levels of education.
- Migration component of Texas State Data Center projections does not include international migration.
- Incorporated foreign, native born rates from ACS 3-YR estimates.



# Estimating & Projecting the Need for Adult Basic Education

- Adopted State Data Center's (SDC) current rates based on age, sex, race, and Hispanic ethnicity.
- Modified SDC's rates in order to separate the migration component into foreign born and native born.
- Used the 2006-2008 ACS to find the age, sex, race, and Hispanic ethnicity structure of foreign born.



# Estimating & Projecting the Need for Adult Basic Education

## Cohort Component Method

- Used the 2008 ACS to get our base population.
- After reviewing trends, used a 60%-40% split foreign versus native born migration component.
- Assumed equal survival rates for foreign and native born and by definition, were able to ignore fertility rates for foreign born.
- Aged the population and calculated two migration scenarios: 0.5 and 2.0.



# Estimating & Projecting the Need for Adult Basic Education

	Foreign Born			Native Born		
	Low Ed, Fluent	Low Ed, Not Fluent	High Ed, Not Fluent	Low Ed, Fluent	Low Ed, Not Fluent	High Ed, Not Fluent
ACS2008	496,643	1,106,745	418,206	1,666,345	115,109	51,822
2010	509,897	1,178,349	443,904	1,876,708	127,056	59,692
2015	573,346	1,333,482	484,964	2,108,779	155,098	69,791
2020	635,446	1,492,330	523,007	2,393,320	191,742	82,105
2030	753,493	1,826,164	591,667	3,043,037	287,652	111,286
2040	859,811	2,165,572	664,598	3,680,269	405,214	144,436

0.5 Migration Scenario






# Estimating & Projecting the Need for Adult Basic Education

	Foreign Born			Native Born		
	Low Ed Fluent	Low Ed Not Fluent	High Ed Not Fluent	Low Ed Fluent	Low Ed Not Fluent	High Ed Not Fluent
ACS2008	496,643	1,106,745	418,206	1,666,345	115,109	51,822
PJ2008	484,998	1,118,971	426,095	1,773,940	118,480	54,603
2010	520,301	1,200,154	453,462	1,911,241	131,599	64,541
2015	616,348	1,423,822	524,001	2,179,198	163,726	77,766
2020	721,874	1,674,291	600,528	2,512,795	207,072	93,949
2030	966,003	2,276,556	777,663	3,337,276	331,254	135,160
2040	1,260,359	3,023,997	1,005,710	4,261,991	509,204	185,632





























2.0 Migration Scenario

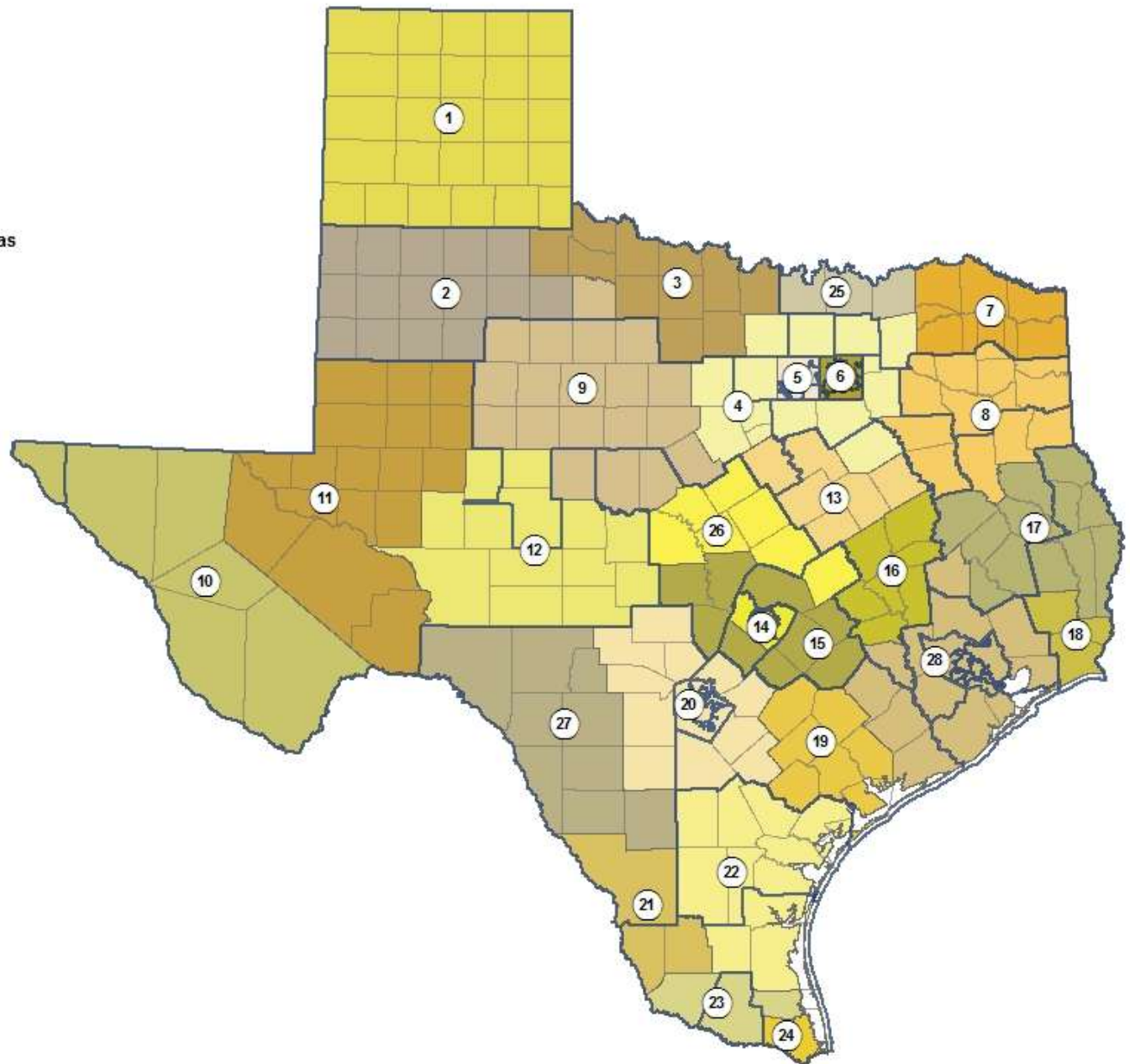
# Texas Local Workforce Development Areas & ACS PUMAs

## Legend

-  County
-  ACS PUMA

## Local Workforce Development Areas

-  01. PANHANDLE
-  02. SOUTH PLAINS
-  03. NORTH TEXAS
-  04. NORTH CENTRAL
-  05. TARRANT COUNTY
-  06. DALLAS
-  07. NORTH EAST
-  08. EAST TEXAS
-  09. WEST CENTRAL
-  10. UPPER RIO GRANDE
-  11. PERMIAN BASIN
-  12. CONCHO VALLEY
-  13. HEART OF TEXAS
-  14. CAPITALAREA
-  15. RURAL CAPITAL
-  16. BRAZOS VALLEY
-  17. DEEP EAST TEXAS
-  18. SOUTH EAST TEXAS
-  19. GOLDEN CRESCENT
-  20. ALAMO
-  21. SOUTH TEXAS
-  22. COASTAL BEND
-  23. LOWER RIO GRANDE VALLEY
-  24. CAMERON COUNTY
-  25. TEXOMA
-  26. CENTRAL TEXAS
-  27. MIDDLE RIO GRANDE
-  28. GULF COAST



Identifying geographic areas, and the characteristics of people within these areas, that are lacking public transportation



# Identifying Urban Gaps

Client: Texas Department of Transportation

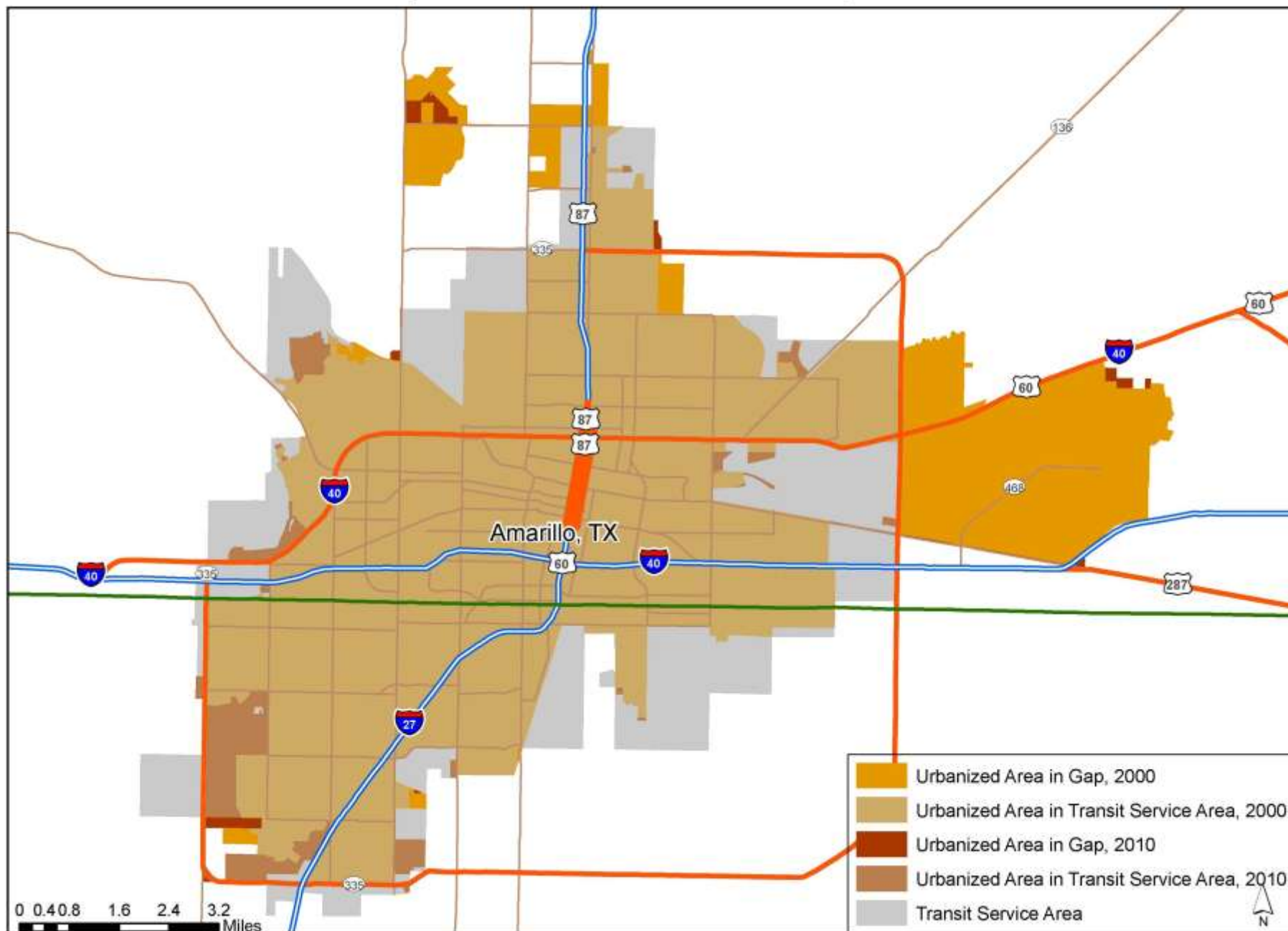
Objective: to quantify the size and composition of transit “urban gaps” present in urbanized areas (UZAs) in 2000 and projected for 2010



# Identifying Urban Gaps

- Began with two sets of maps
  - 2000 urbanized areas
  - 2010 urbanized areas
- Plus maps of the transit service area boundaries for each of the transit service providers
- Overlaid transit service area boundaries onto each urbanized area
- Portions of the urbanized areas outside of the transit service area boundaries identified “urban gaps” in service

# Transit Service Gaps in Amarillo Urbanized Area, 2000 and 2010





# Identifying Urban Gaps

Urban gaps were identified in the following urbanized areas:

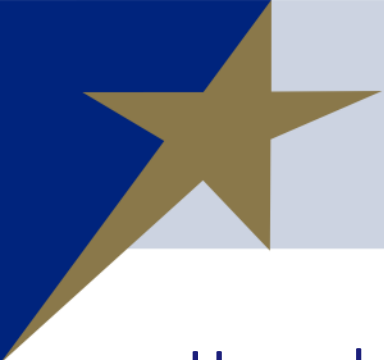
- Amarillo
- Austin
- Beaumont
- College Station – Bryan
- Corpus Christi
- Dallas – Fort Worth – Arlington
- Denton – Lewisville
- El Paso
- Galveston
- Houston
- Killeen
- Longview
- Lubbock
- Midland
- Odessa
- Port Arthur
- San Antonio
- Temple
- Texarkana
- Tyler
- Victoria
- Waco
- Wichita Falls



# Characteristics of People in Urban Gaps

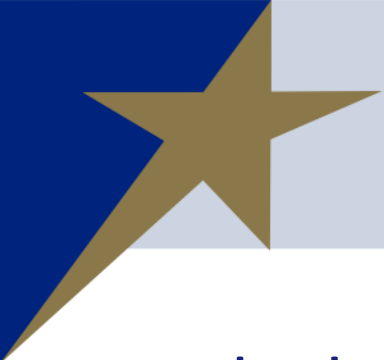
- Developed Transit Needs Index :
  - Households without automobiles
  - Percentage of seniors
  - Percentage of persons with disabilities
  - Household income
- Indicators estimated using 2000 Census Summary File 3 aggregate tables at the block group level.





# Characteristics of People in Urban Gaps

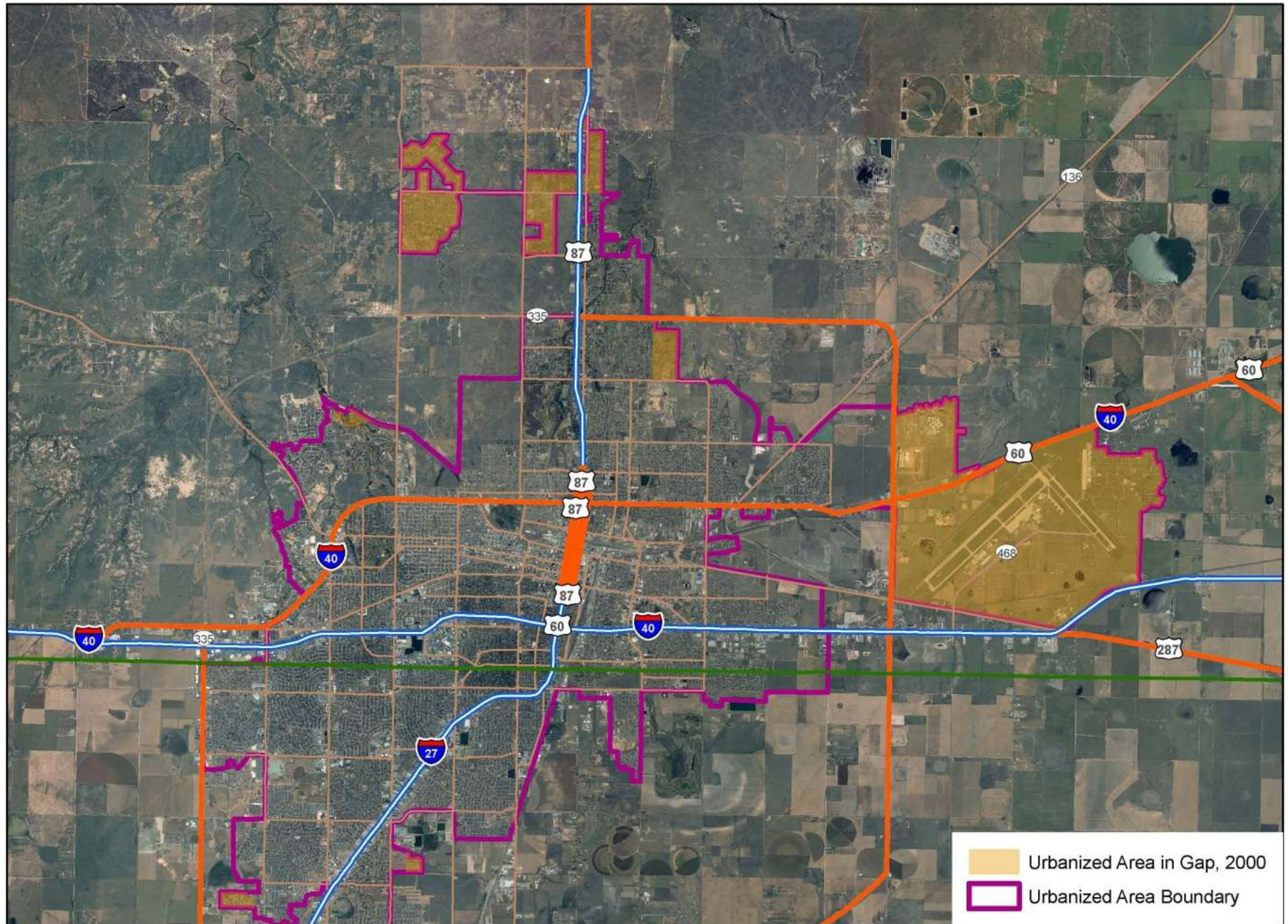
- Households without vehicles
- Percent seniors
- Percent persons with disabilities
- Household income
- SF-3 Table P30: Means of Transportation to work
- SF-3 Table P11: Household type, including living alone, by relationship for the population 65 years plus
- SF-3 Table P42: Sex by age by disability status by employment status for civilian non-institutionalized population 5 years plus
- SF-3 Table P88: ratio of income in 1999 to poverty level  $\leq 1.5$

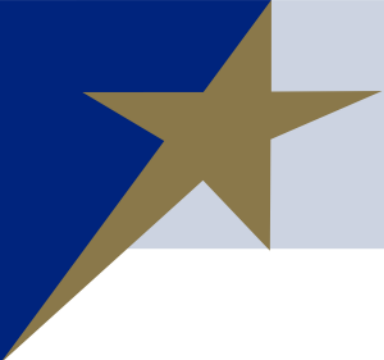


# Characteristics of People in Urban Gaps

- Block groups containing urban gaps were visually inspected using aerial photography to determine estimated proportion of total block group population contained within the gaps.
- Estimates were made using a 20% category scale, with possible estimates equal to 0%, 20%, 40%, 60%, 80%, and 100%.
- These rates were applied to total block group population 2000 and 2010 to obtain estimated urban gap population.

# Aerial Image of Urban Gaps in Amarillo Urbanized Area, 2000





# Characteristics of People in Urban Gaps

- Transit needs characteristic rates were calculated from 2000 Census population and SF-3 aggregate tables.
- Rates were applied to estimated urban gap population at block group level.



# Projected Population in Urban Gaps

	UZAs, 2000	UZAs, 2010
Total Population	15,085,079	18,601,000
Urban Gap Population Estimate	2,942,783 (19.5%)	4,169,641 (22.4%)
Urban Gap Population 65 years plus	207,433 (1.4%)	273,419 (1.7%)
Urban Gap Workers 16 years plus with transit needs	211,534 (1.4%)	291,976 (1.6%)
Urban Gap Population 5 years plus with at least one disability	424,417 (2.8%)	569,567 (3.1%)
Urban Gap Population with known poverty status at 150% poverty level and below	460,997 (3.1%)	596,453 (3.2%)
	2000	Projected 2010
Texas Population	20,851,820	25,373,947

2000-2007 Migration Scenario

## Challenges & Future Developments

- International and domestic migration components in SDC estimates & projections program
- Small area estimation models in light of ACS data
- Parcel level data to facilitate estimation of small geographic areas

# Demographics & Destiny

## Office of the State Demographer

Office: (512) 463-8390 or (210) 458-6530

E-mail: [State.Demographer@osd.state.tx.us](mailto:State.Demographer@osd.state.tx.us)

Website: <http://osd.state.tx.us>