



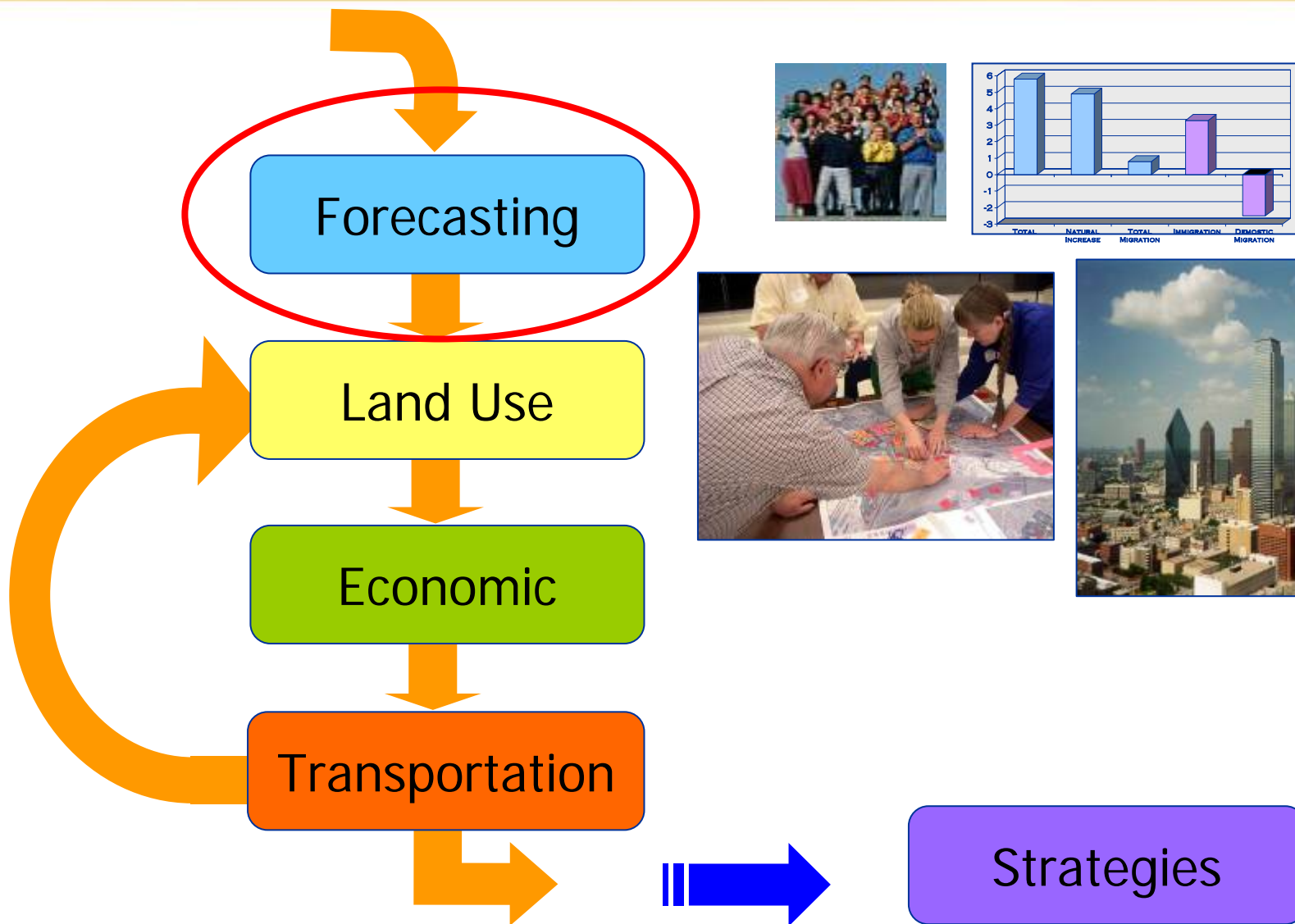
Current Conditions Analysis

August 2004





Scenario Planning





Forecasting

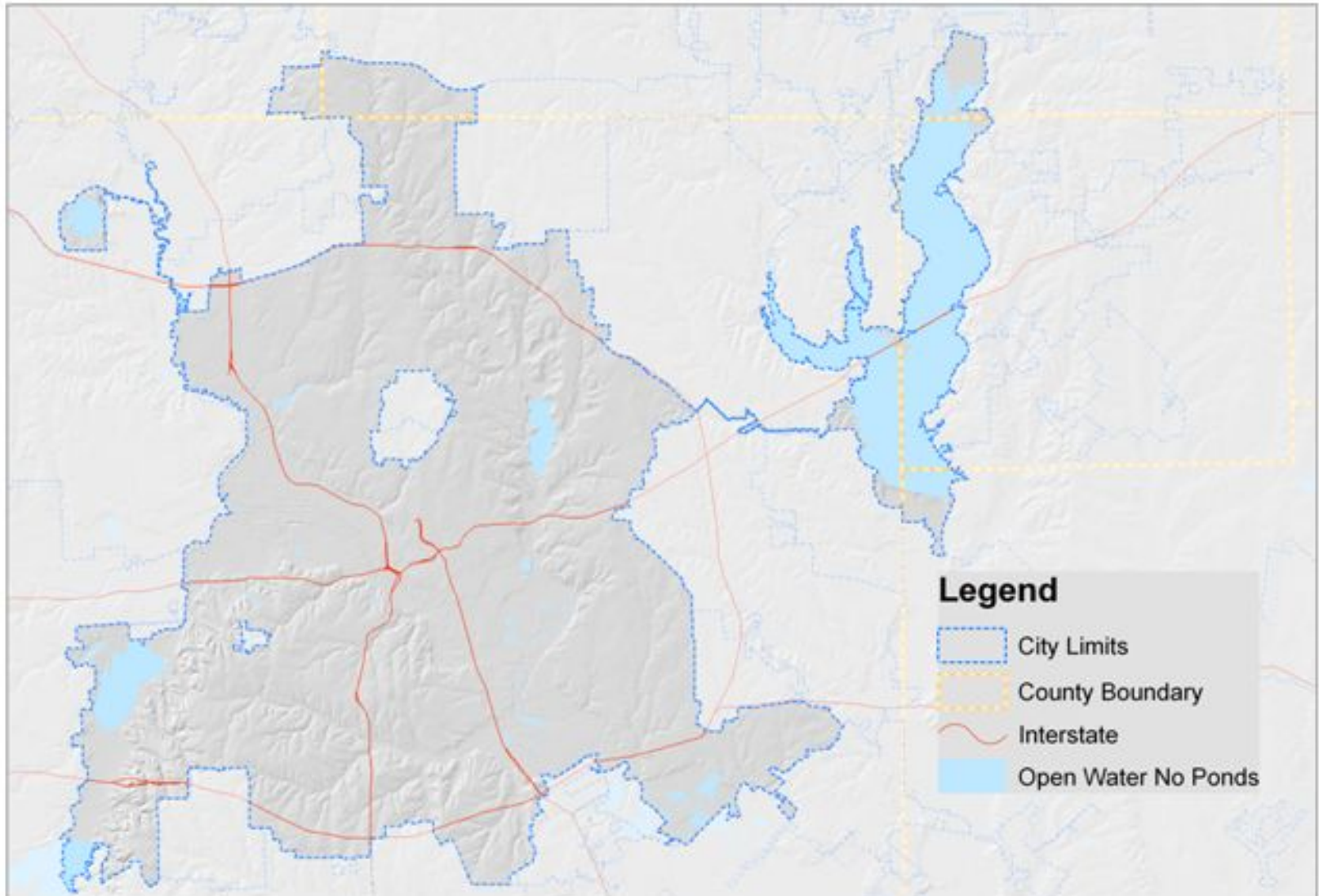
- Building the Virtual Present
- Capacity Analysis
- Forecast
- Census Trends
- Housing Model



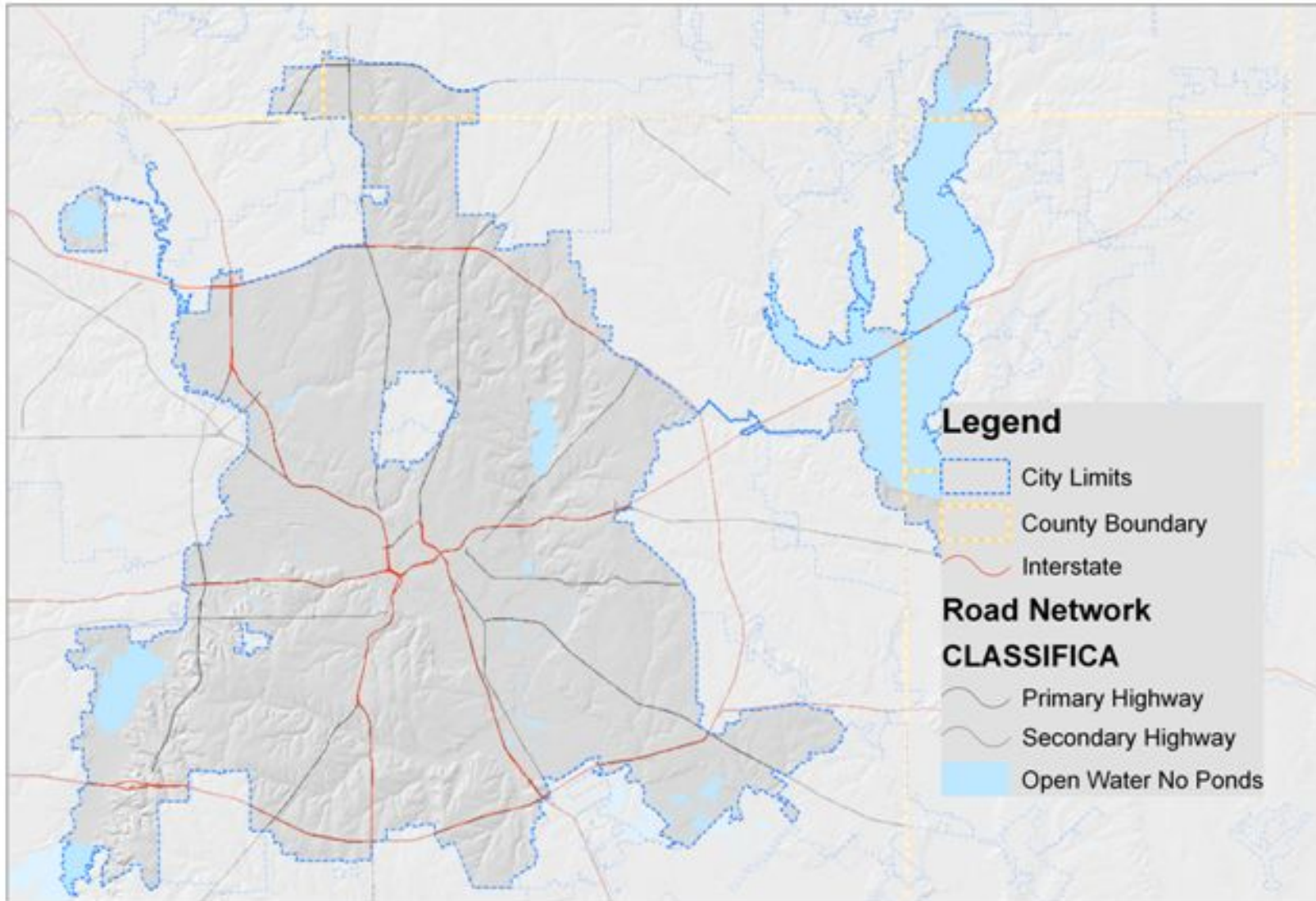
Building the “Virtual Present”

- Build geographic database for Dallas
- Create vacant and developed land inventory using 2002 Land Use
- Allocate current population and employment by TAZ to the developed land

★ Transportation Infrastructure

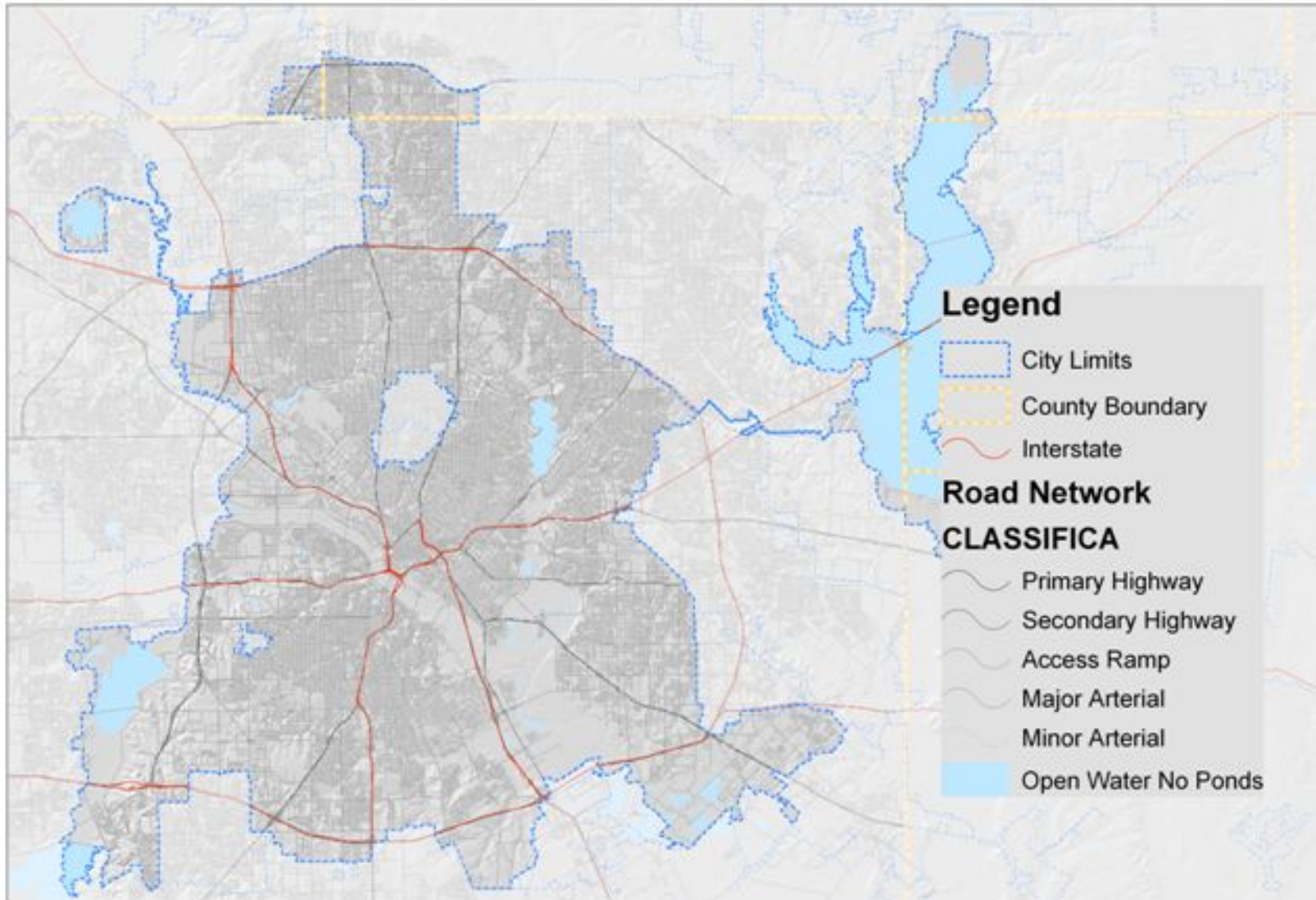


★ Transportation Infrastructure



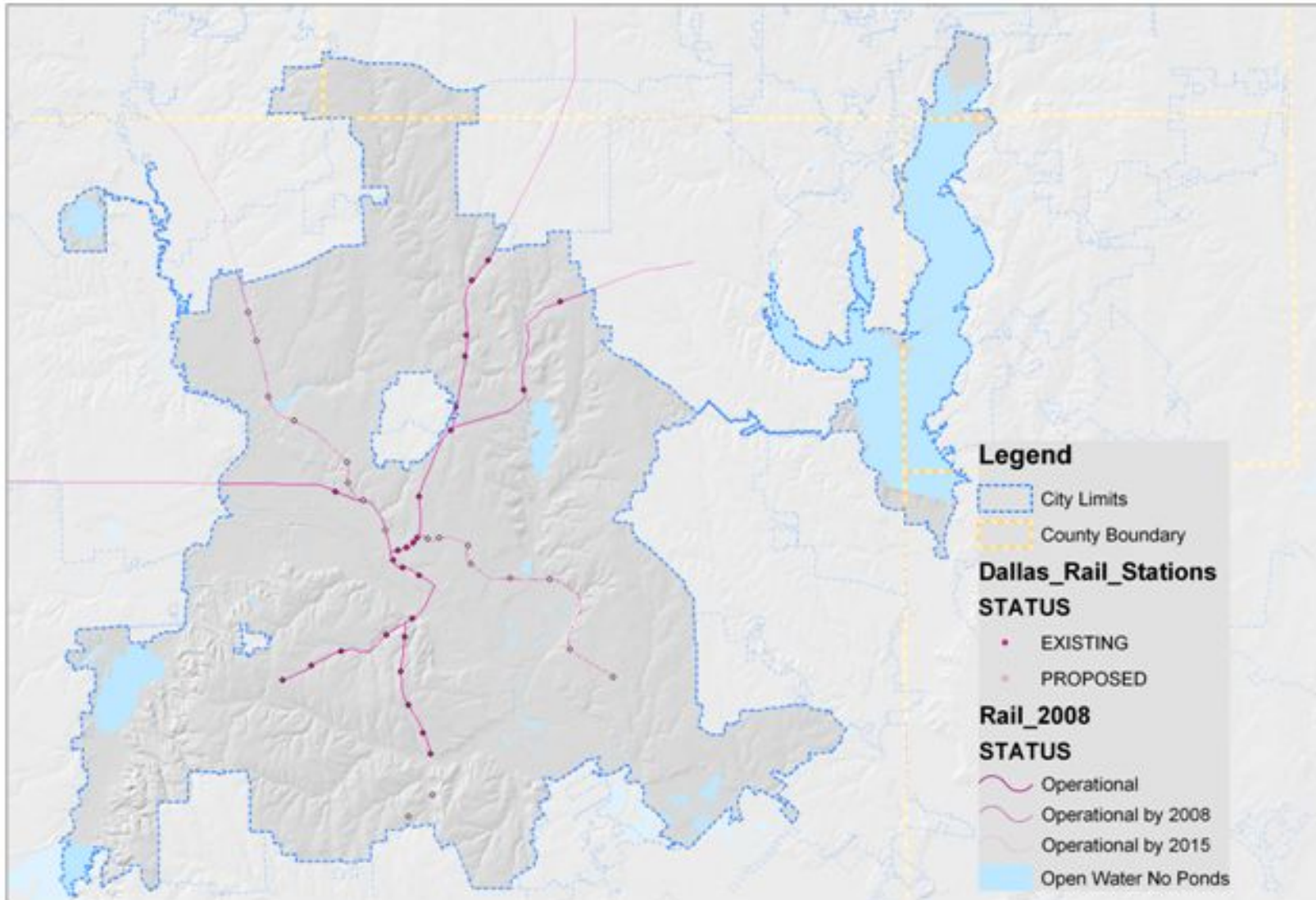


Transportation Infrastructure

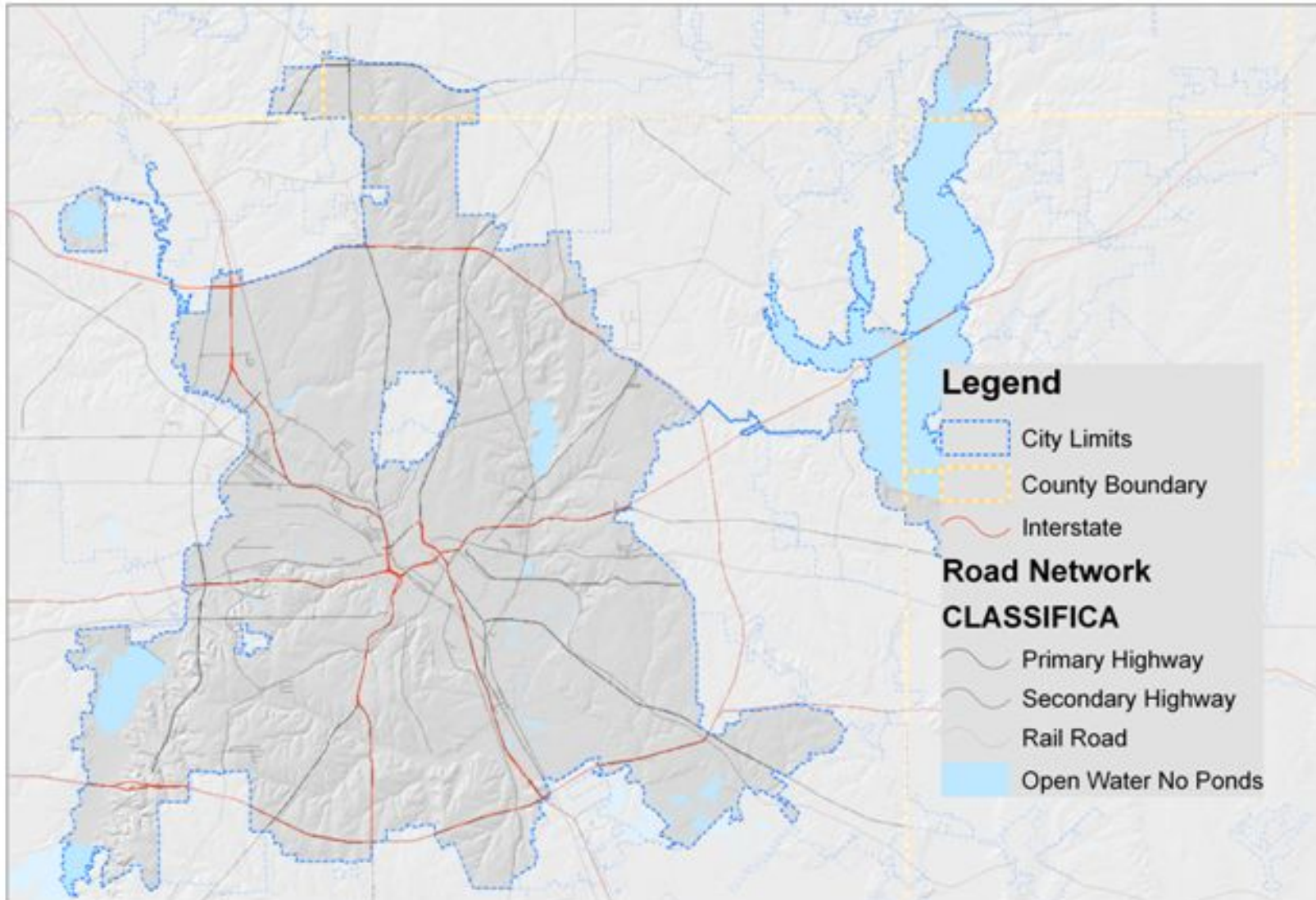




Transportation Infrastructure

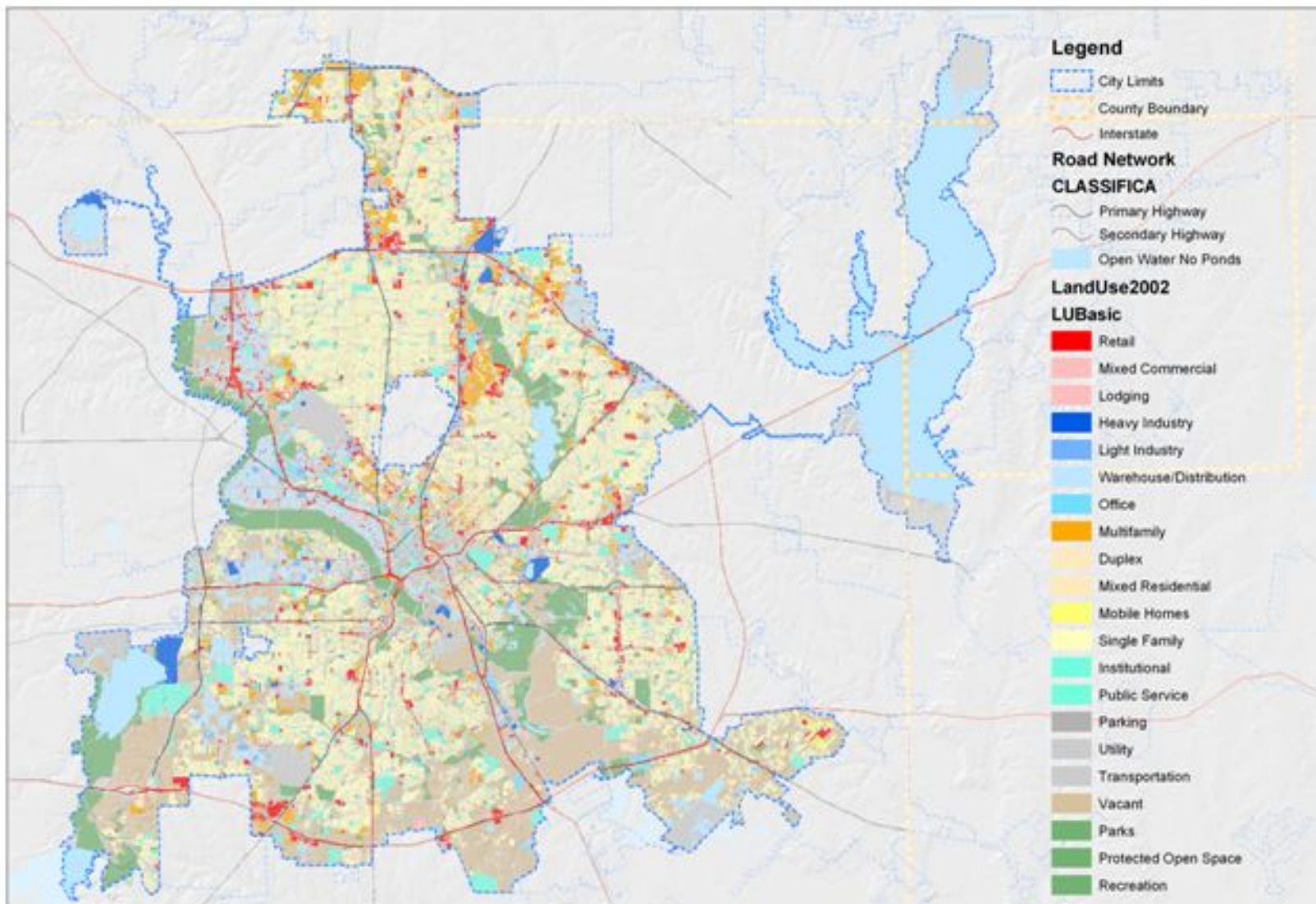


★ Transportation Infrastructure



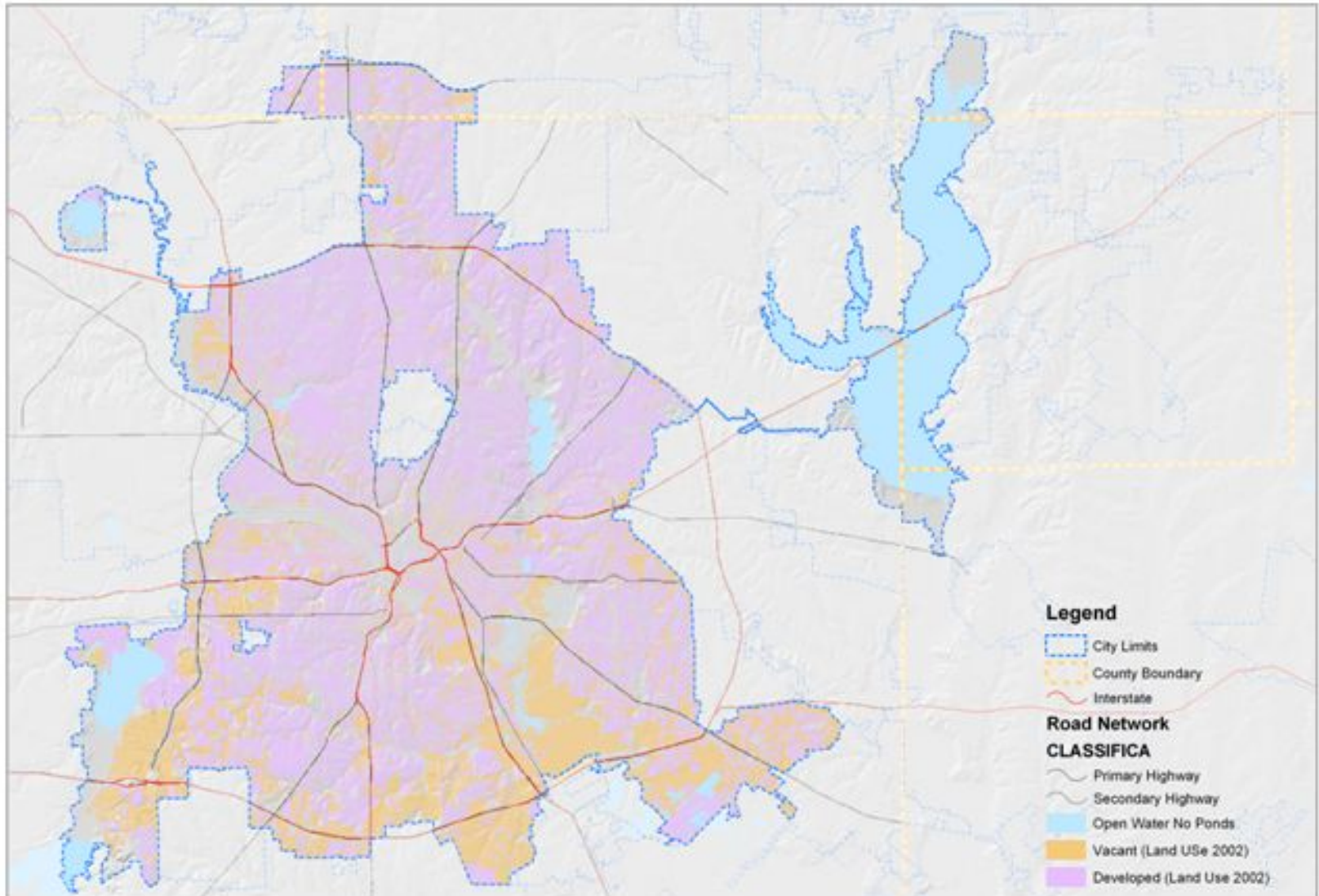


2002 Land Use



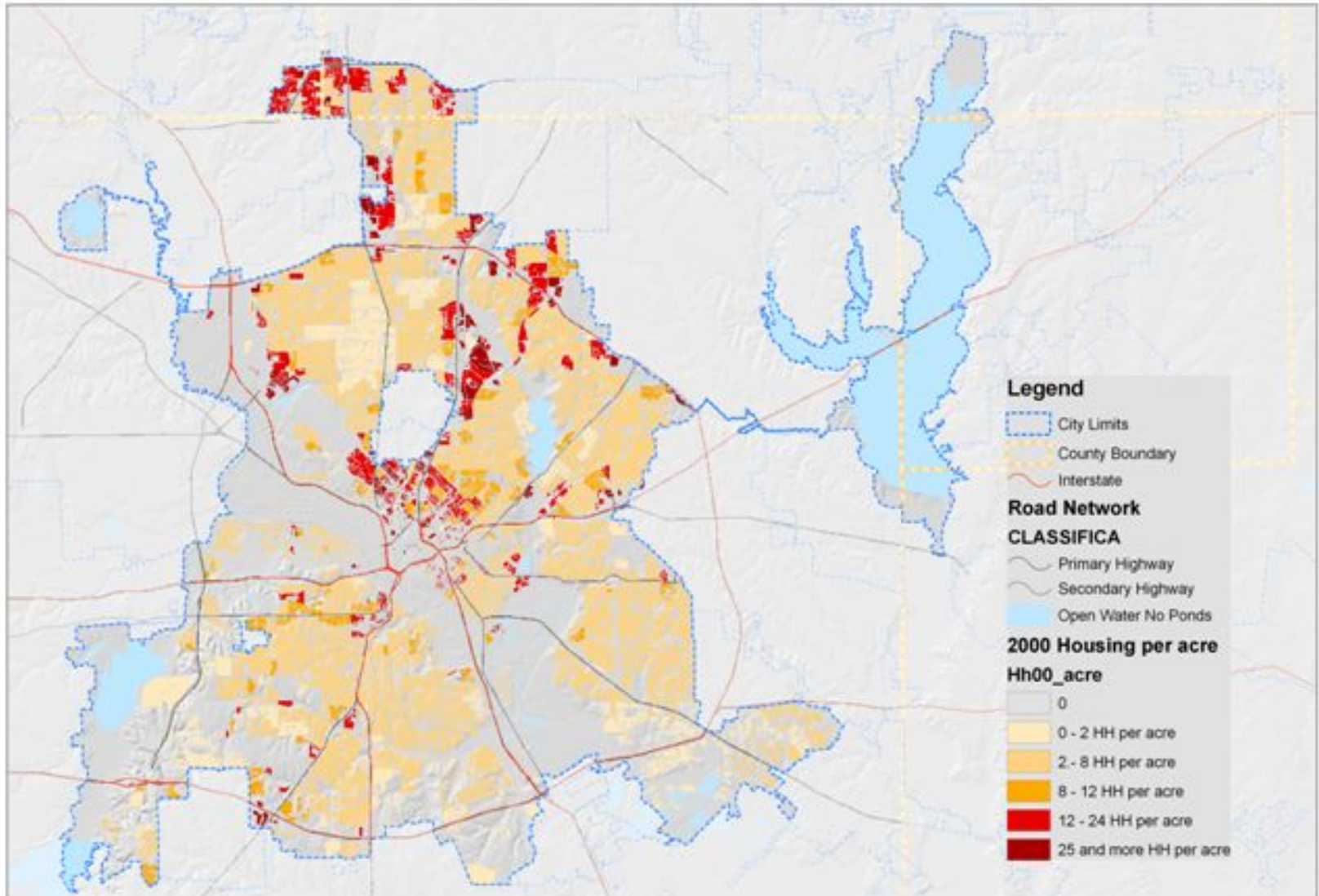


Vacant & Developed Land

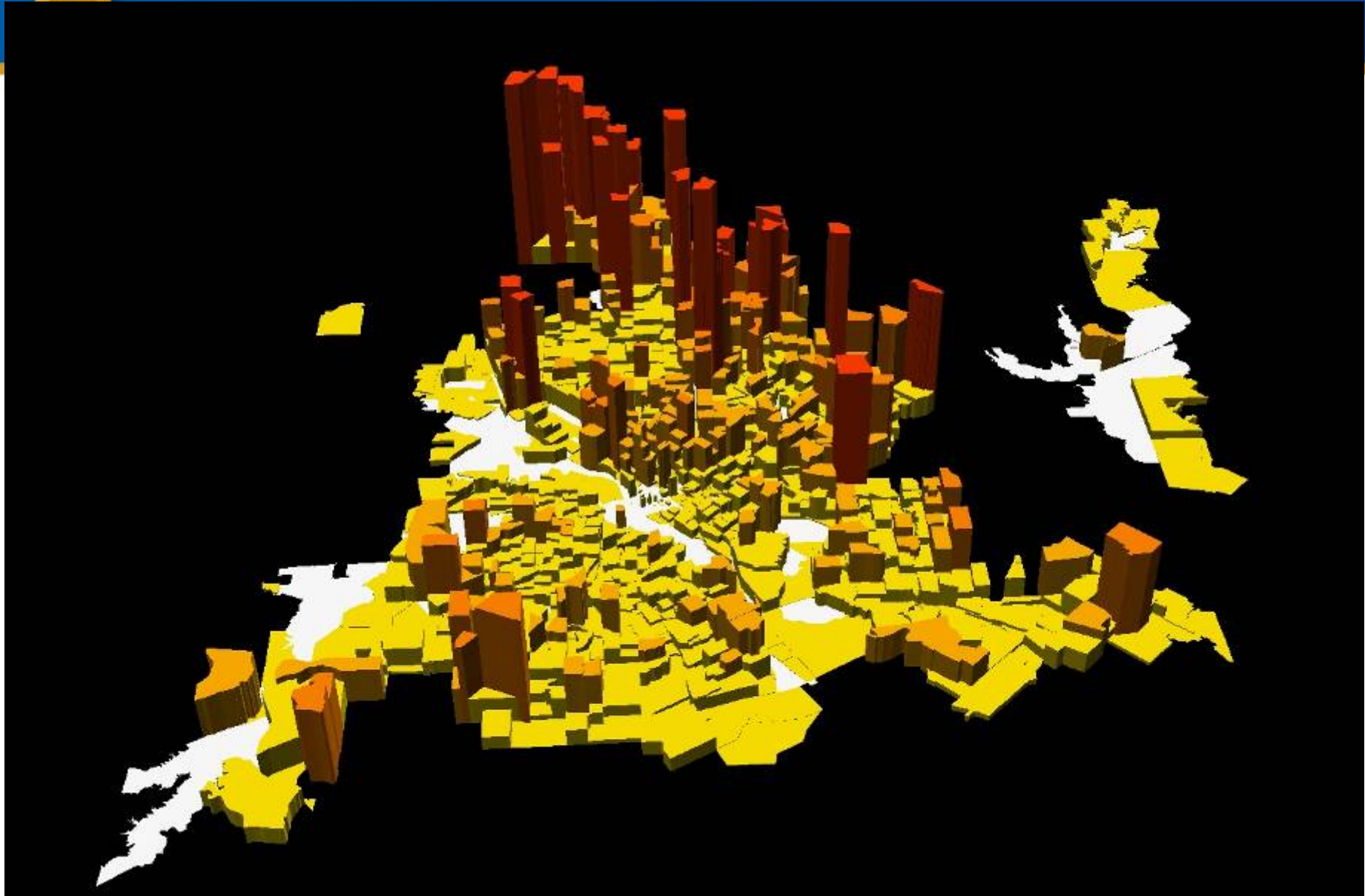




Current Distribution of Households

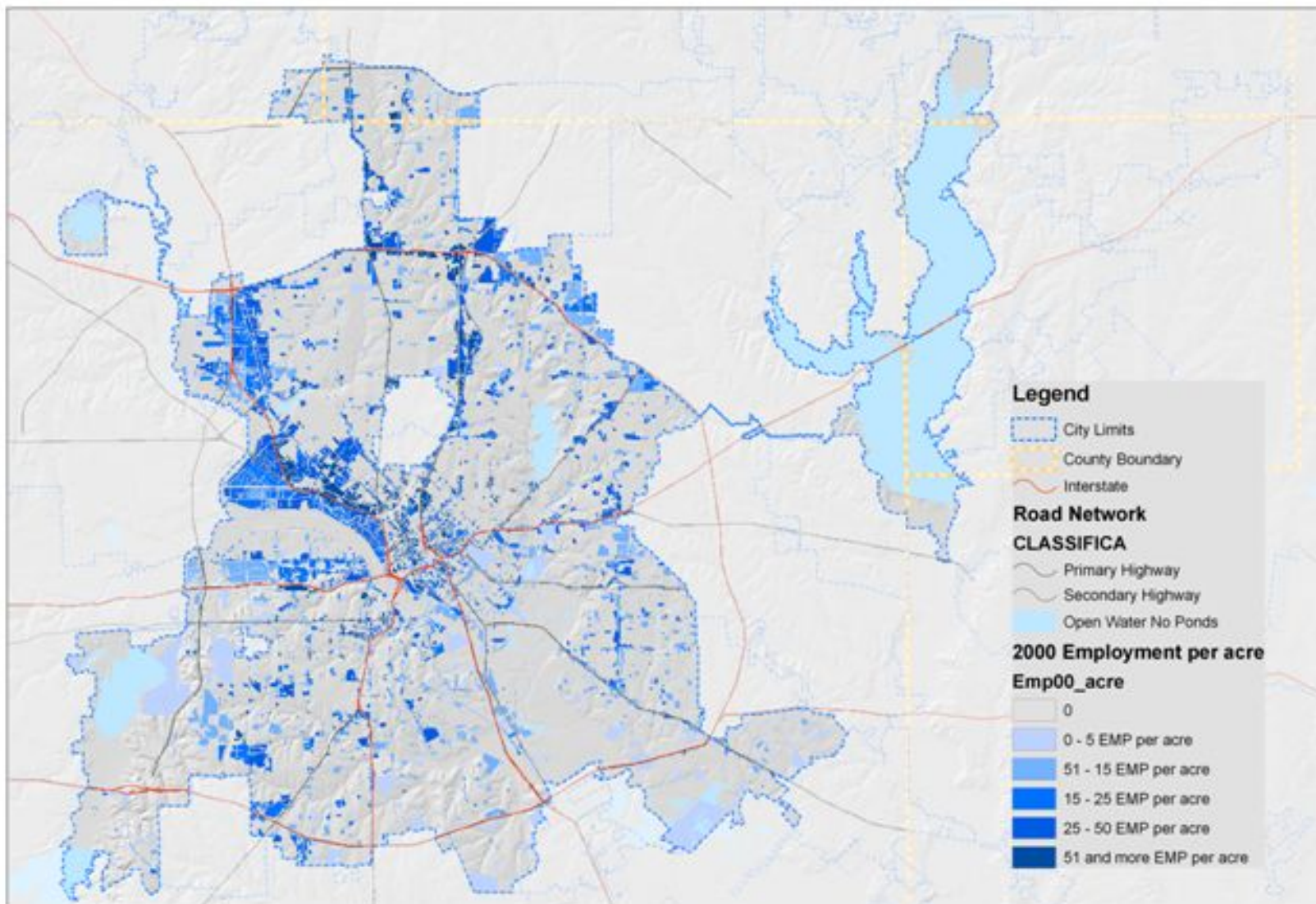


Households 2000



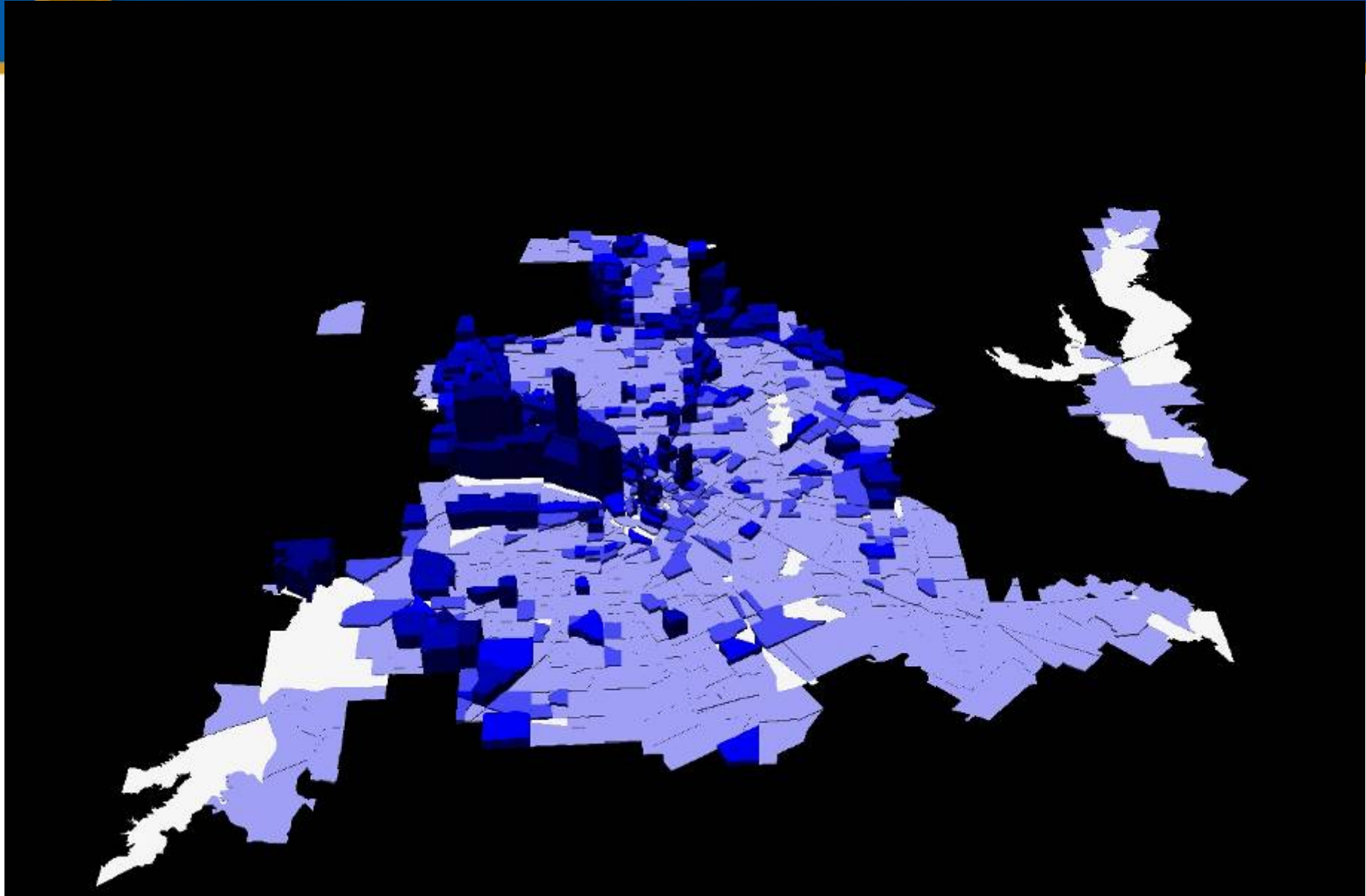


Current Distribution of Jobs





Employment 2000





Capacity Analysis

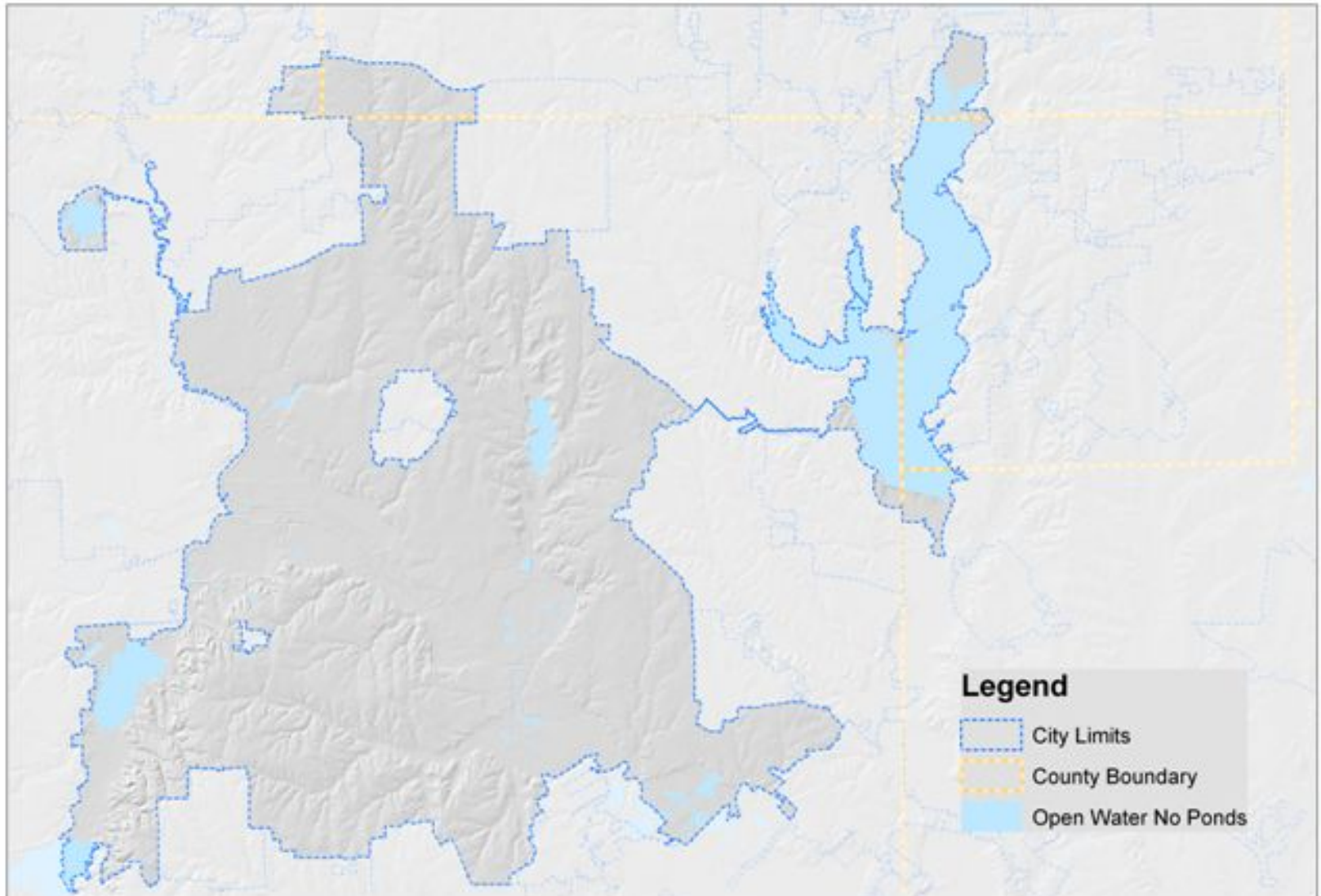
- “Build out” using zoning regulations applied to “buildable” land inventory
- Buildable land is
 - vacant
 - unconstrained
 - available



Constraints Analysis

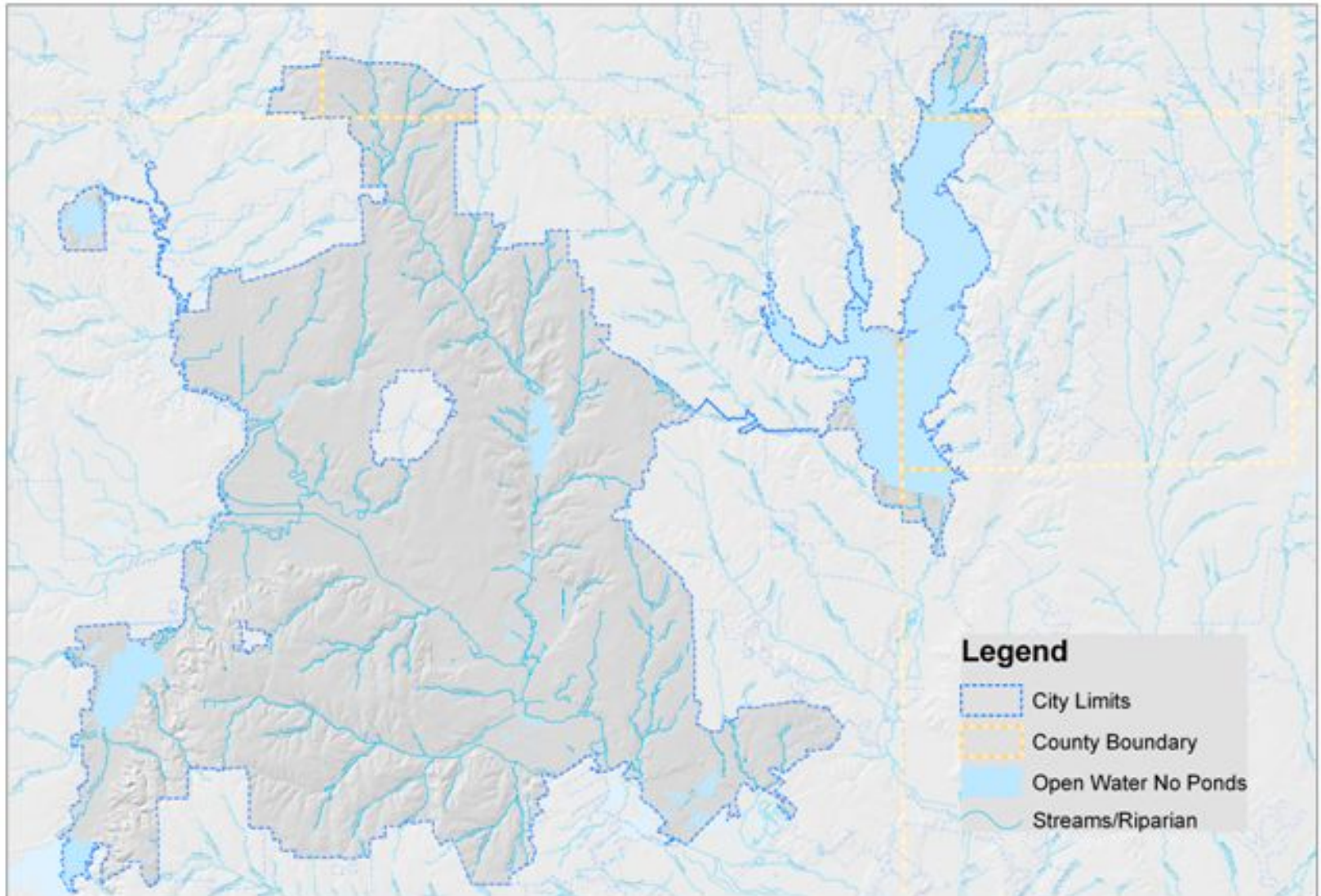
- City of Dallas: Escarpment and Floodplain only
- Suggested additional constraints:
 - Riparian areas--50 ft buffer
 - Slopes above 25%
- Capacity analysis shows results of both approaches
- Parks were counted as constraints for both calculations

★ FCA Constrained Land Analysis



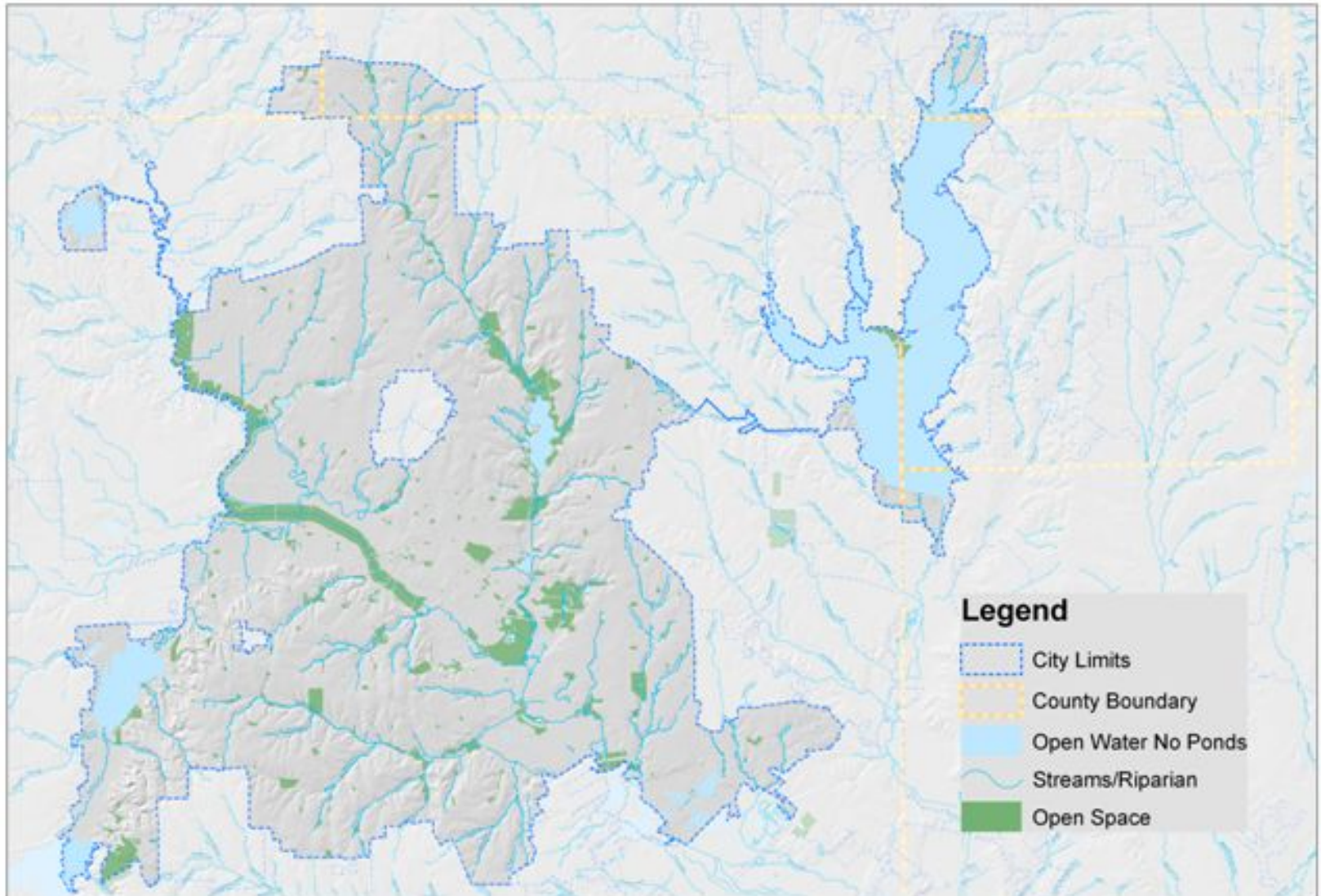


Riparian Zones



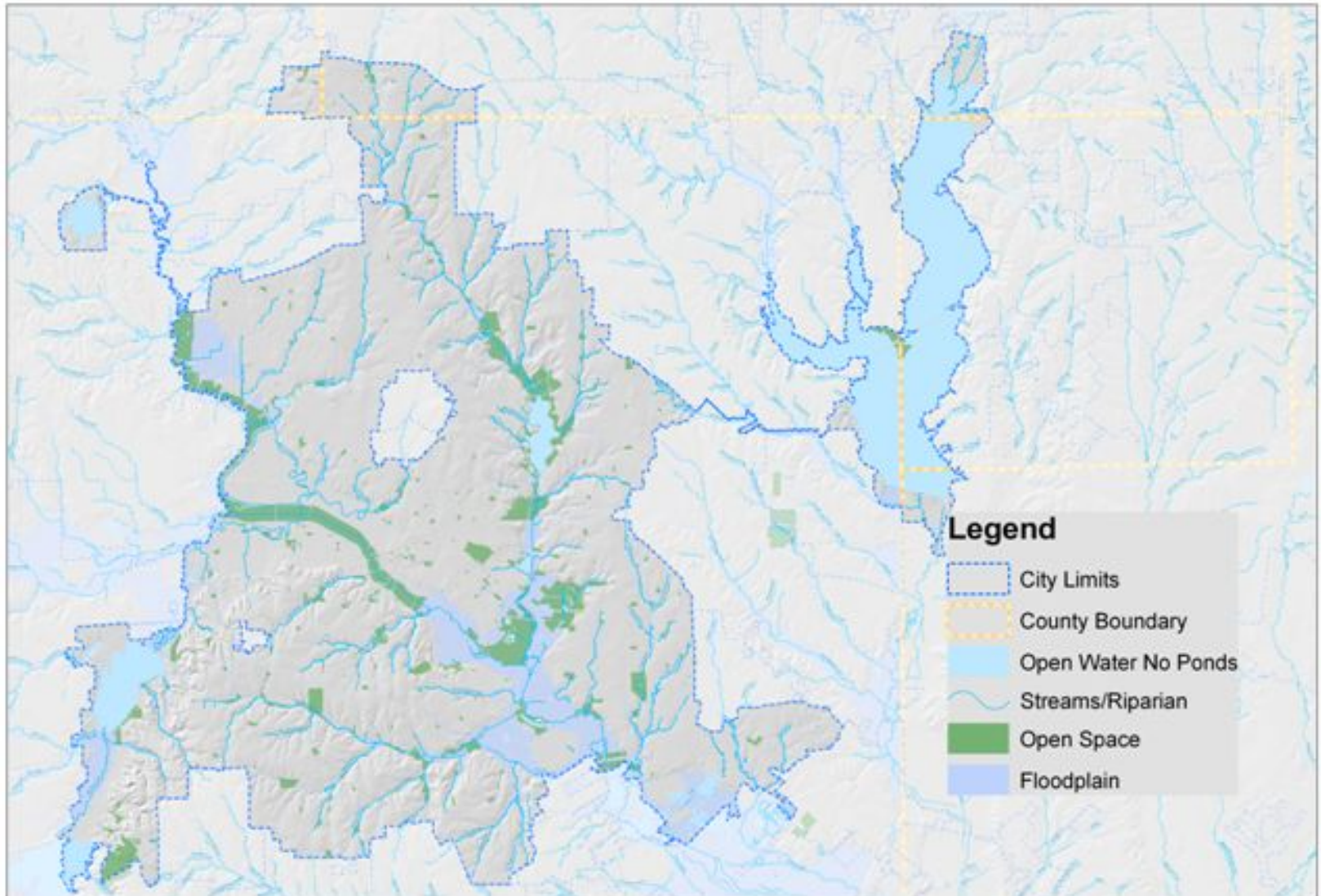


Open Space



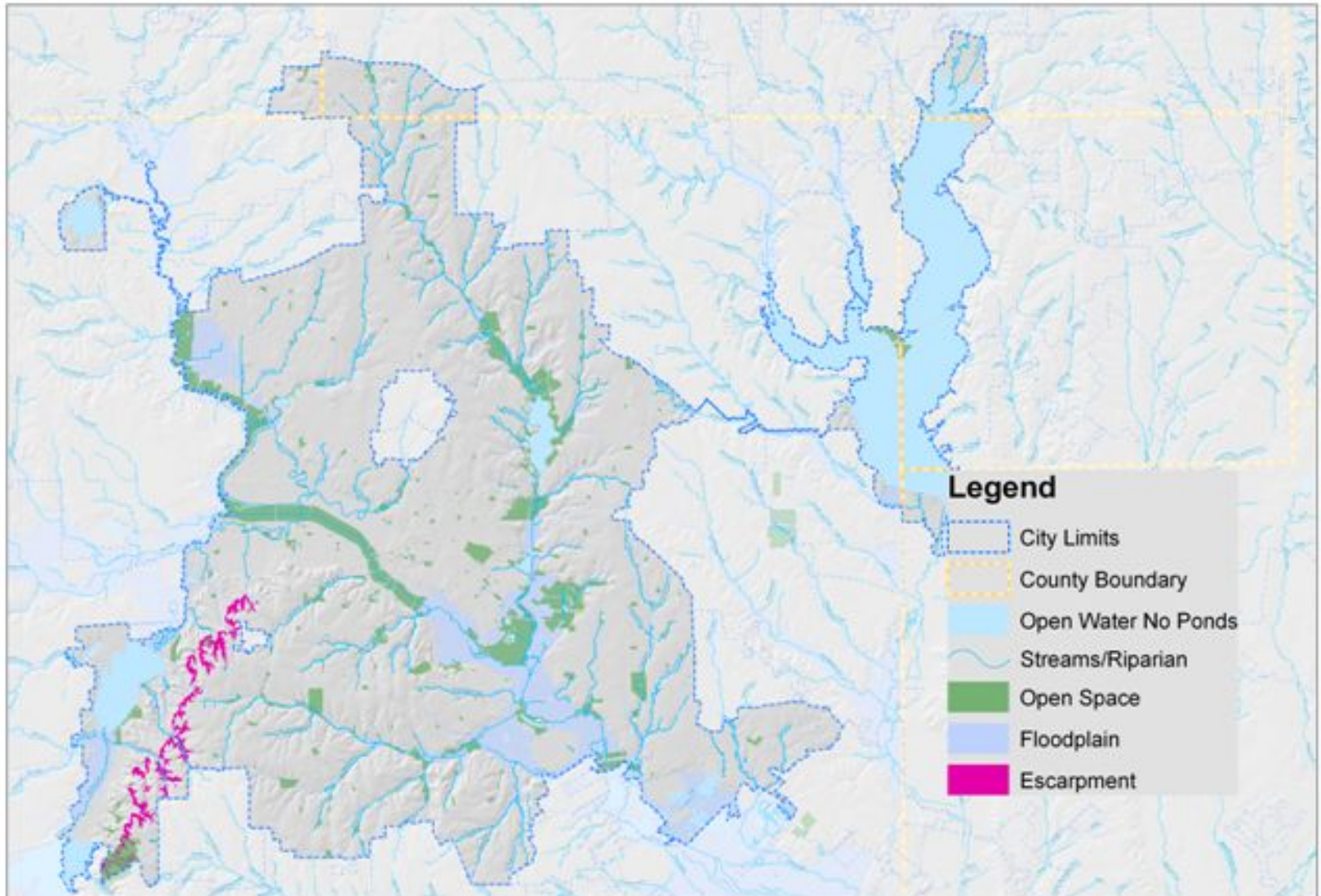


Floodplains



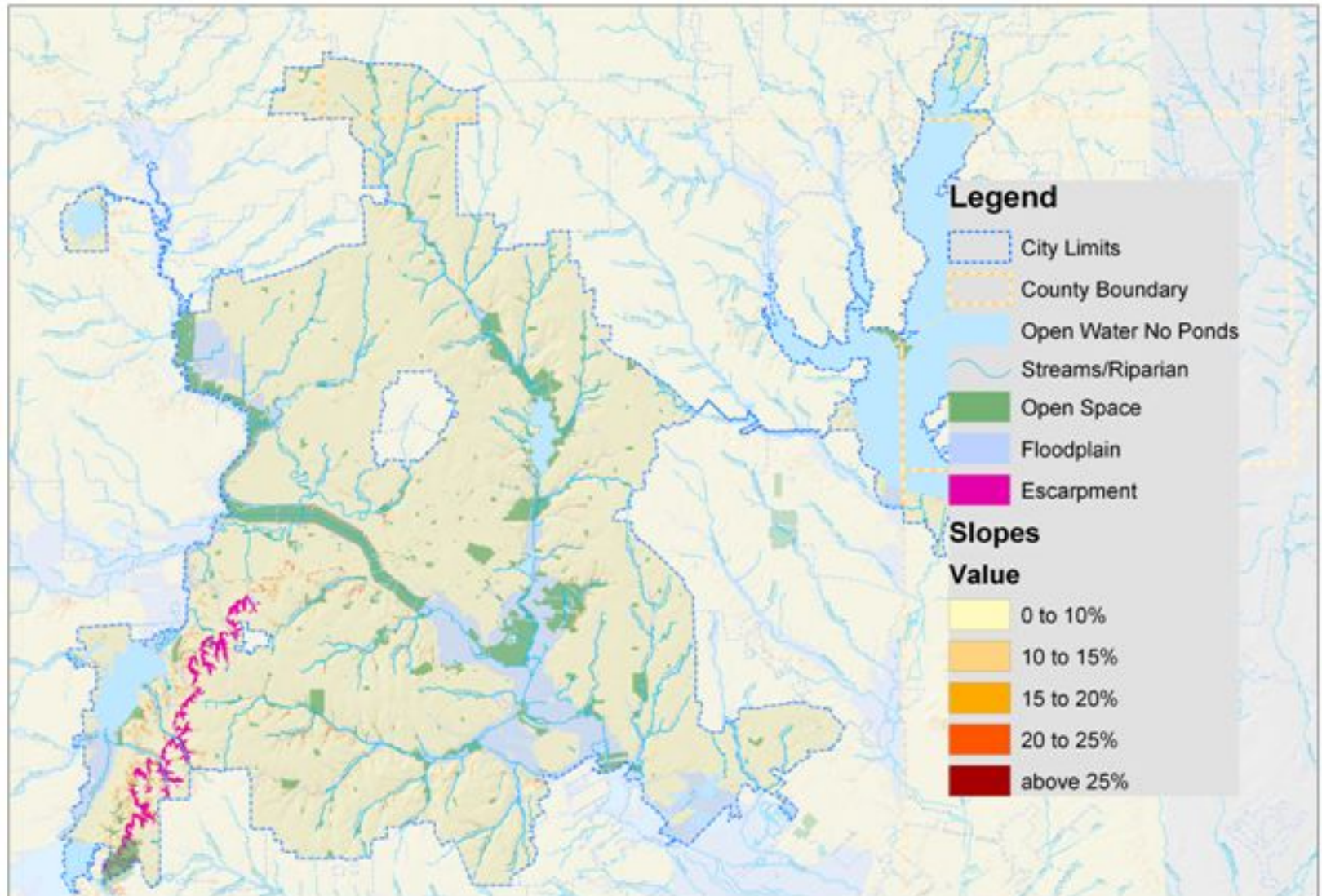


Escarpment



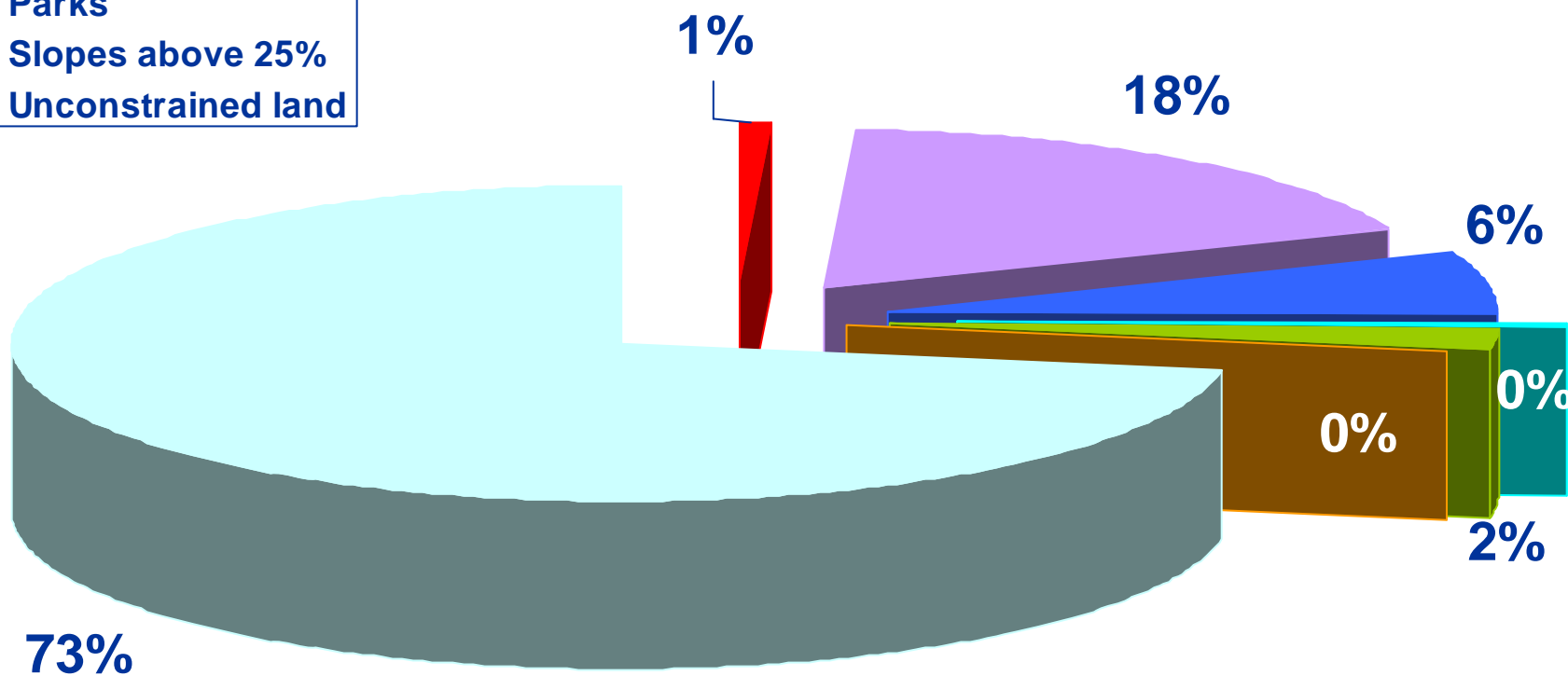
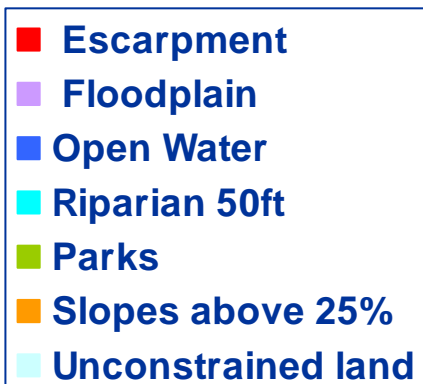


Steep Slopes



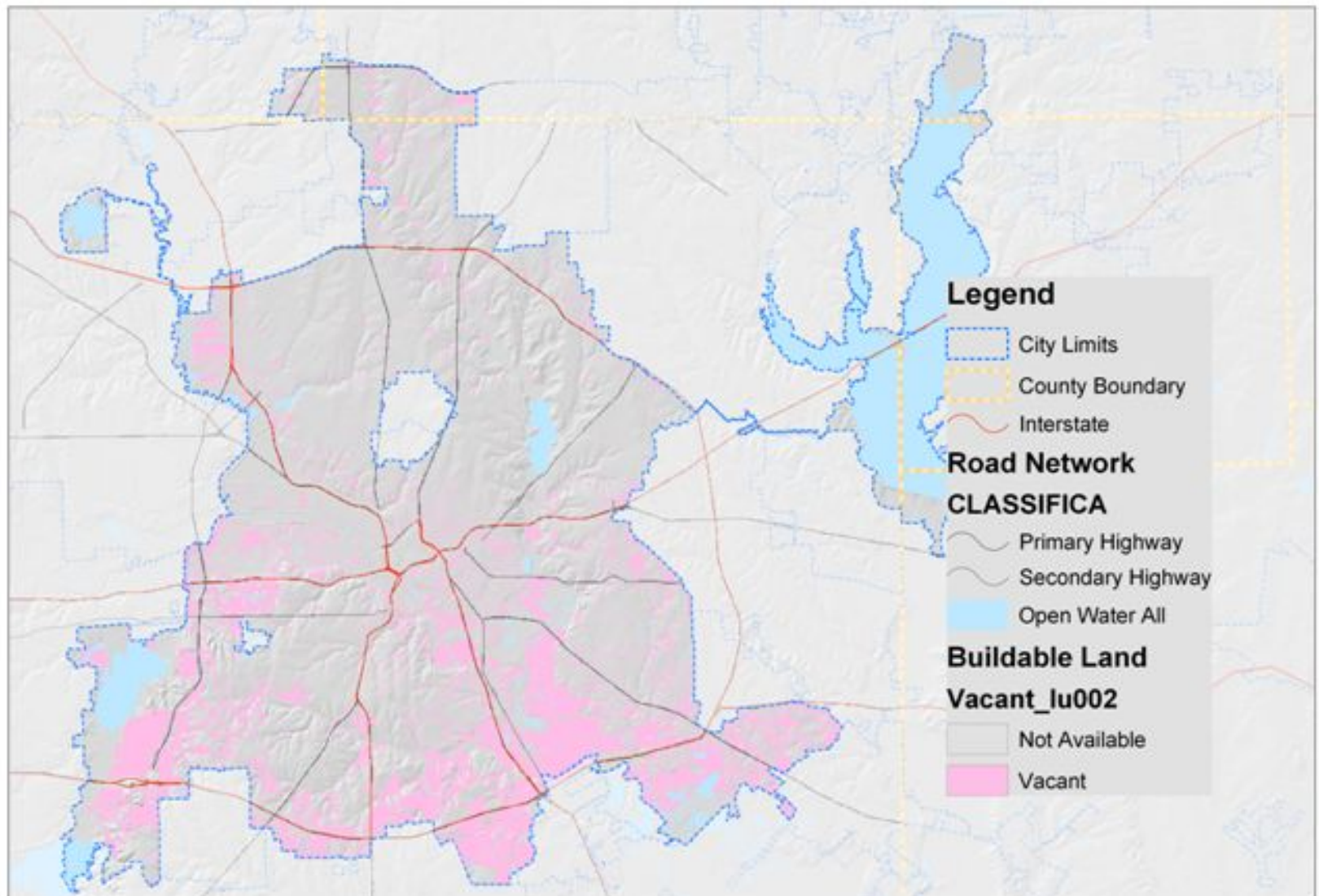


Constrained Land



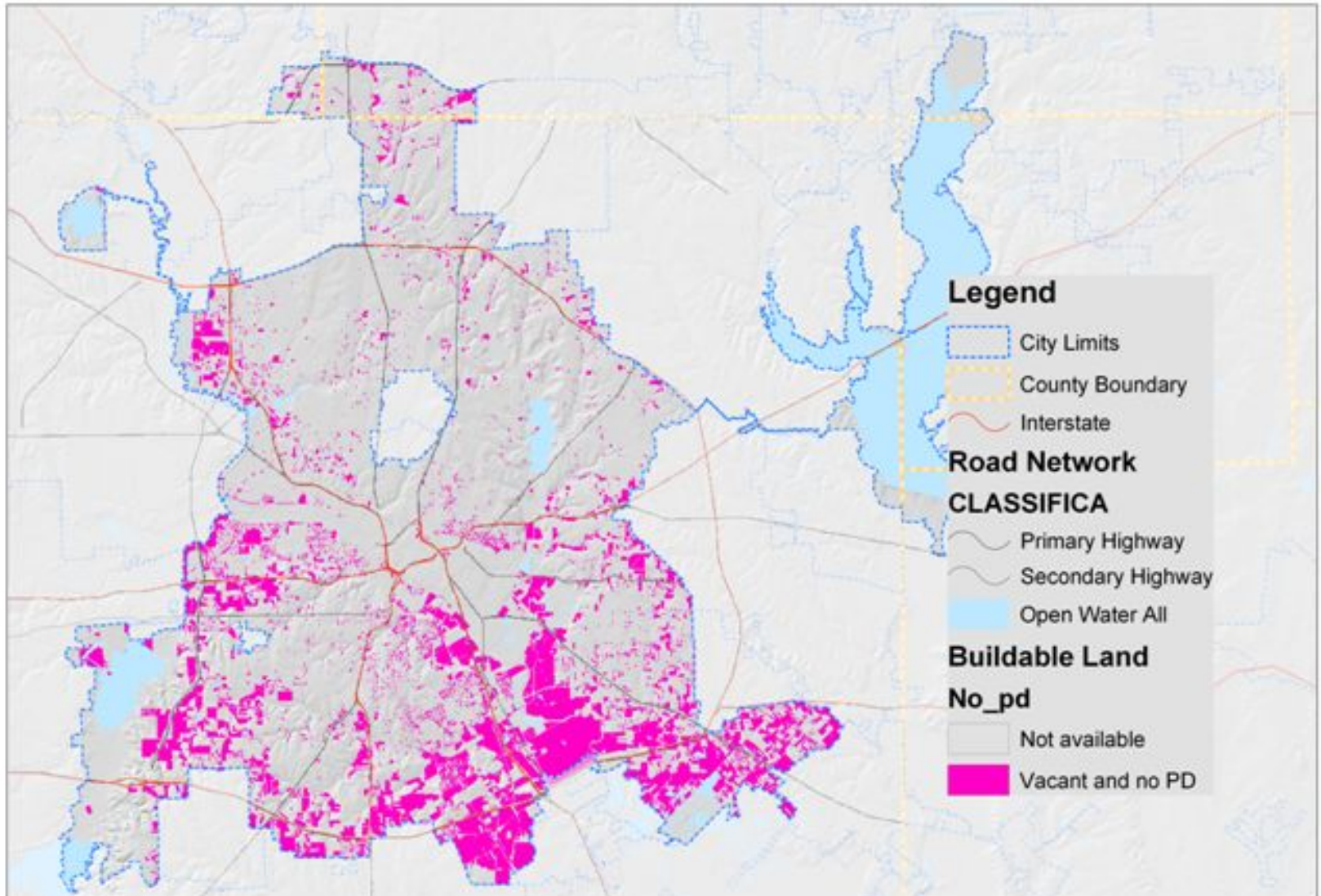


Vacant Land



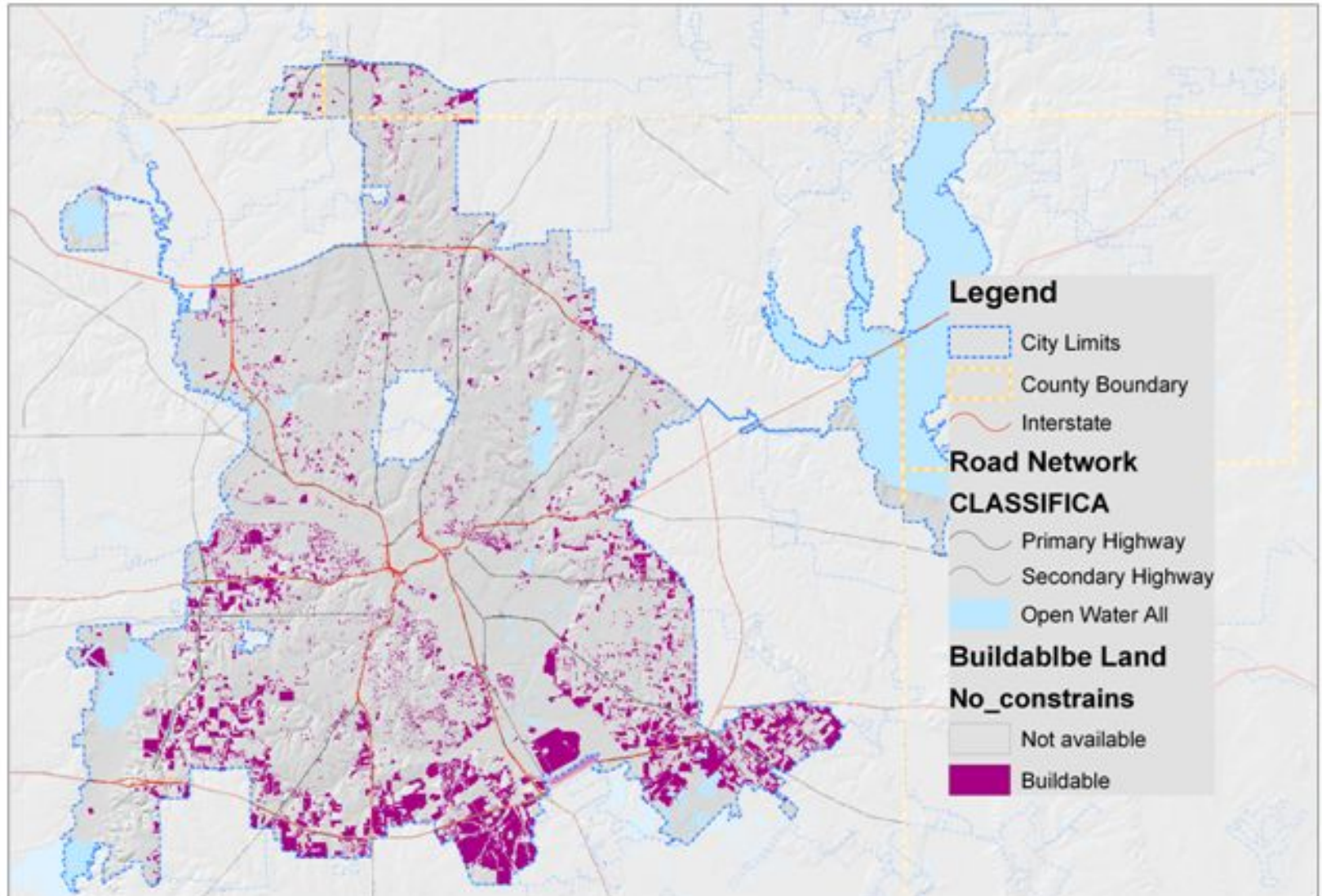


Vacant Land without Planned Developments





Buildable Land: Vacant, Unconstrained, and Available



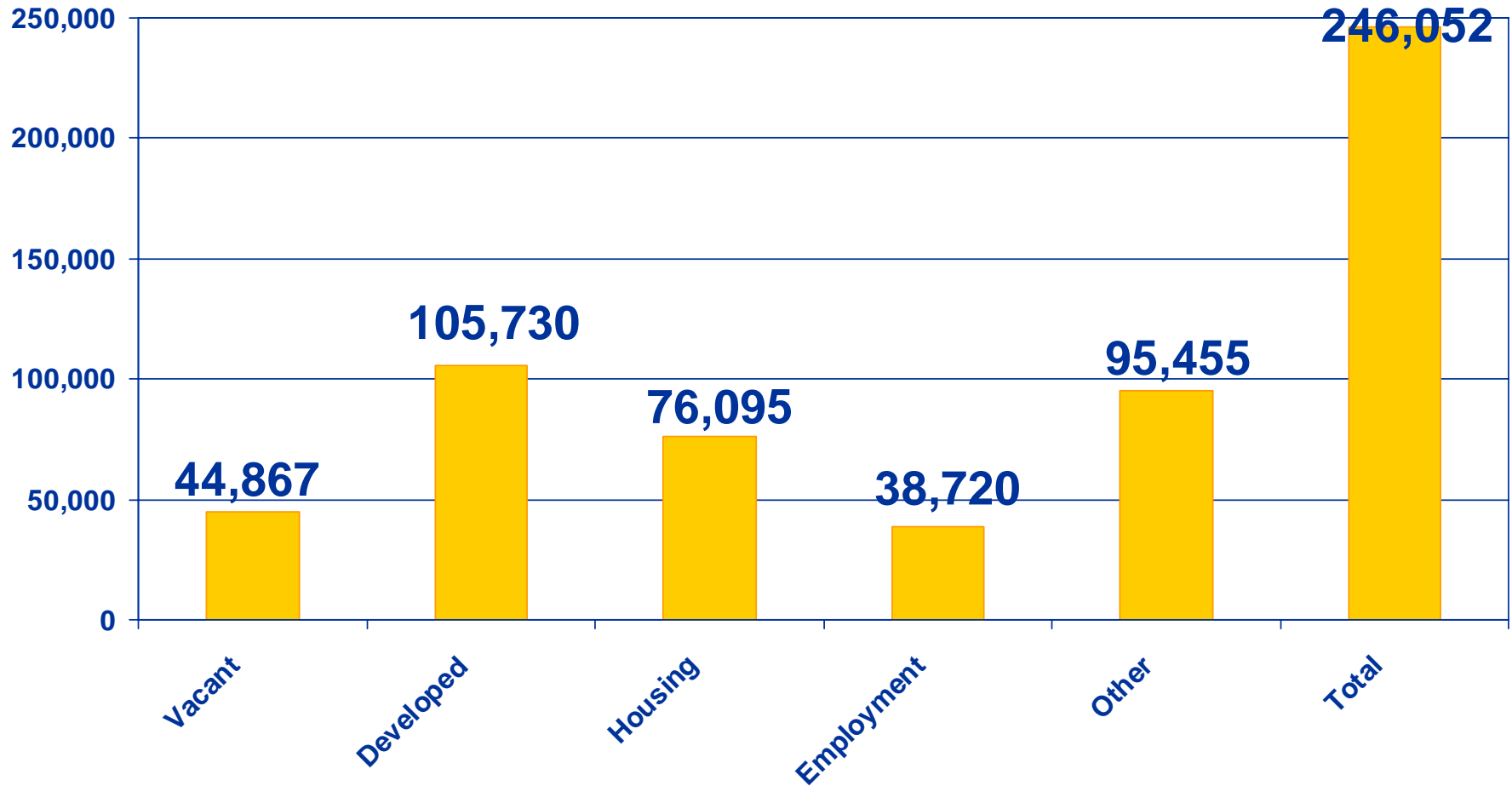


Vacant Land Inventory

- 20% of Dallas' land is vacant in the 2002 Land Use
- Less than half of Dallas' land is developed
- Housing covers less than a third of the landscape
- 16% of land is used for employment
- Planned Developments cover 38,797 acres or 16%

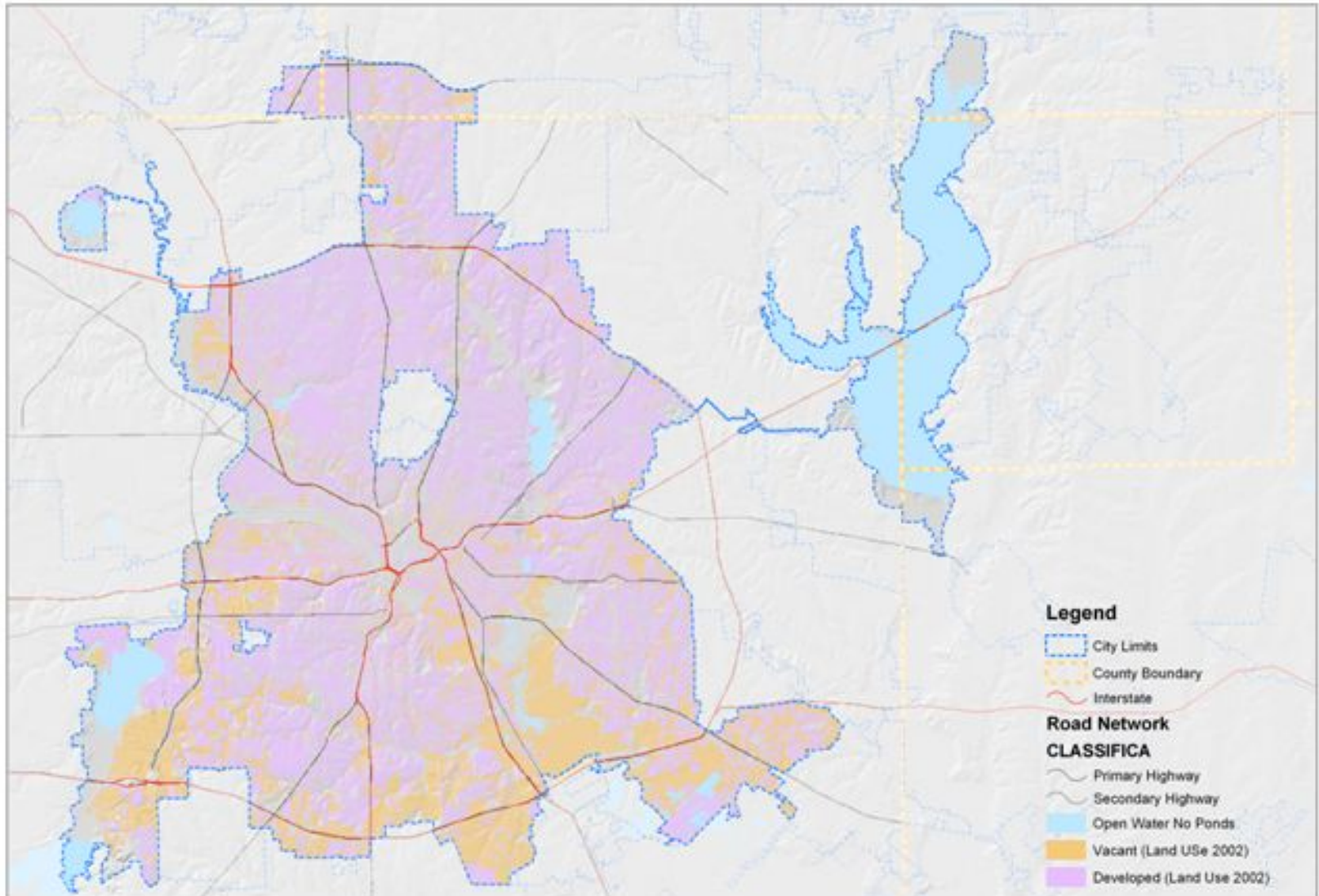


Land Consumption Land Use 2002

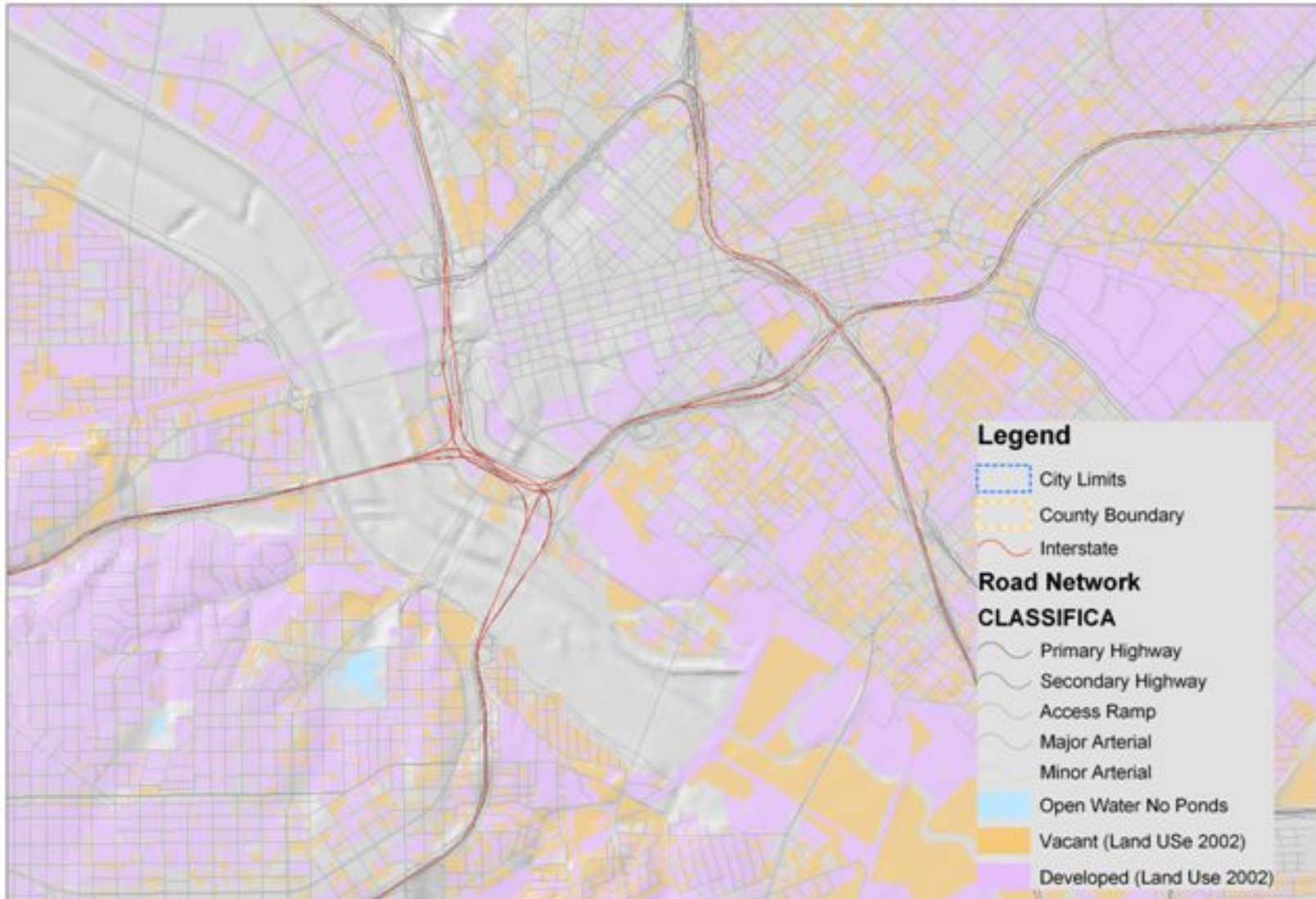




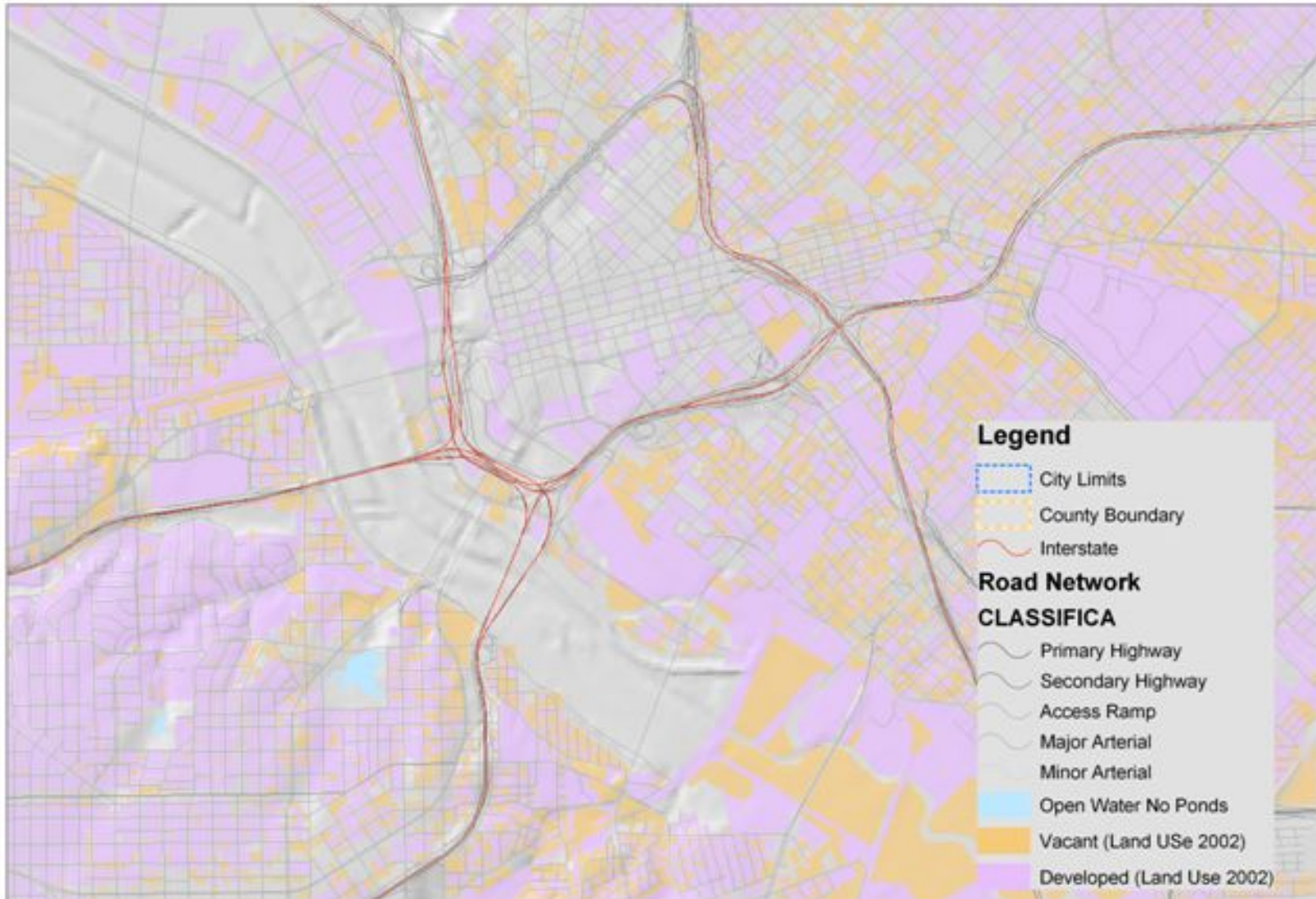
Vacant & Developed Land



★ Vacant & Developed Land (Zoom)

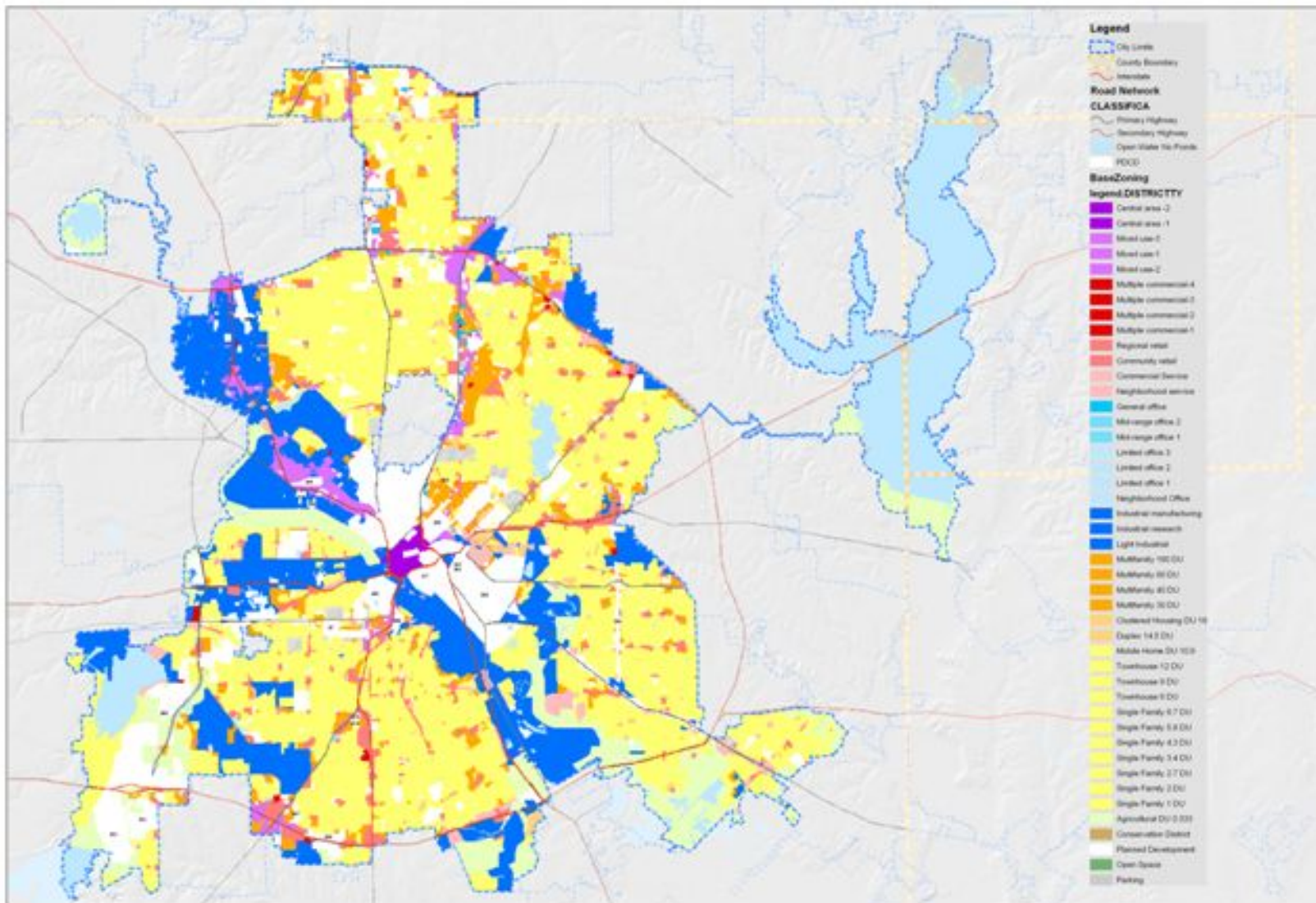


★ Vacant & Developed Land (Zoom)





Current Zoning





Capacity Analysis Worksheet

MF with storied Parking

Microsoft Excel - dallas_zone_cap_july29

File Edit View Insert Format Tools Data Window Help

Type a question for help

Type a question for help

Zone	DistrictType	Primary Uses	Land Use Error Check	Residential Parking (per avg. DU)	Retail Parking, avg. firm (1,000 s.f.)	Office Parking, avg. firm (1,000 s.f.)	Industrial Parking, avg. firm (1,000 s.f.)	Floor area per DU, avg. (assumptions)	Area per parking space	Open Space	Max. Lot Coverage	Gross to Net A (for parcels over # acres)	Gross to Net B (for parcels over # acres)	Max Code FAR	Max. (reference only)	Max Duf Acres	Parking Stories Outside	Parking Stories Underneath	Underbuild	Real FAR	Effect Units
special cases									400	%	sqft per DU	7.00	3.50	Basic*						80%	
CR	Community retail	Retail & personal service, office	ok	0.0	3.0	3.0	-	1000	400	5.0%	0	60%	75%	90%	0.75	0.75	0.00	1	0	90%	0.27
CS	Commercial Service	& personal service & office	ok	0.0	3.0	3.0	-	1000	400	5.0%	0	80%	75%	90%	0.75	0.75	0.00	1	0	90%	0.17
NS(A)	Neighborhood service	Retail & personal service, office	ok	0.0	3.0	3.0	-	1000	400	5.0%	0	40%	75%	90%	0.50	0.50	0.00	1	0	90%	0.27
GO(A)	General office	uses	ok	0.0	4.0	4.0	-	1000	400	5.0%	0	80%	75%	90%	4.00	4.00	0.00	1	0	90%	0.16
MO-2	Mid-range office - 2	uses	ok	0.0	5.0	2.0	-	1000	400	5.0%	0	80%	75%	90%	3.00	3.00	0.00	2	0	90%	0.42
MO-1	Mid-range office - 1	uses	ok	0.0	5.0	2.0	-	1000	400	5.0%	0	80%	75%	90%	2.00	2.00	0.00	2	0	90%	0.39
LO-3	Limited office - 3	uses	ok	0.0	3.0	3.0	-	1000	400	5.0%	0	80%	75%	90%	1.75	1.75	0.00	1	0	90%	0.20
LO-2	Limited office - 2	Office - limited retail & personal service uses	ok	0.0	5.0	3.0	-	1000	400	5.0%	0	80%	75%	90%	1.50	1.50	0.00	1	0	90%	0.18
LO-1	Limited office - 1	Office - limited retail & personal service uses	ok	0.0	5.0	3.0	-	1000	400	5.0%	0	80%	75%	90%	1.00	1.00	0.00	1	0	90%	0.17
NO(A)	Neighborhood Office	Office	ok	0.0	0.0	2.0	-	1000	400	5.0%	0	50%	75%	90%	0.50	0.50	0.00	1	0	90%	0.33
IR	Industrial research	supporting office & retail	ok	0.0	2.0	3.0	2	1000	400	5.0%	0	80%	75%	90%	2.00	2.00	0.00	1	0	90%	0.26
IM	Industrial manufacturing	supporting office & retail	ok	0.0	2.0	2.0	2	1000	400	5.0%	0	80%	75%	90%	2.00	2.00	0.00	1	0	90%	0.29
LI	Light Industrial	supporting office & retail	ok	0.0	2.0	3.0	2	1000	400	5.0%	0	80%	75%	90%	1.00	1.00	0.00	1	0	90%	0.24
MF-4(A)	Multifamily	Multifamily	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	80%	75%	90%	3.00	3.00	160.00	5	0	90%	1.26
MF-3(A)	Multifamily	Multifamily	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	1.50	1.50	90.00	2	0	90%	0.72
MF-3(A)(SAH)	Multifamily	Multifamily	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	1.50	1.50	90.00	2	0	90%	0.72
MF-2(A)	Multifamily	Multifamily, duplex, single family	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	1.00	1.00	40.00	1	0	90%	0.34
MF-2(A)(SAH)	Multifamily	Multifamily, duplex, single family	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	1.00	1.00	40.00	1	0	90%	0.34
MF-1(A)	Multifamily	Multifamily, duplex, single family	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	0.50	0.50	30.00	1	0	90%	0.34
MF-1(A)(SAH)	Multifamily	Multifamily, duplex, single family	ok	2.0	0.0	0.0	-	1000	400	5.0%	0	60%	75%	90%	0.50	0.50	30.00	1	0	90%	0.34
CH	Clustereed Housing	Multifamily, single family	ok	2.0	0.0	0.0	-	1400	400	5.0%	0	60%	75%	90%	0.30	0.30	18.00	1	0	90%	0.30
D(A)	Duplex	Duplex & single family	ok	2.0	0.0	0.0	2	1600	400	5.0%	0	60%	75%	90%	0.50	0.50	14.52	1	0	90%	0.47
MH(A)	Mobile Home	Manufactured homes	ok	1.5	0.0	0.0	-	1200	400	5.0%	0	20%	75%	90%	0.35	0.35	10.89	1	0	90%	0.35
TH-3(A)	Townhouse	Single family	ok	1.0	0.0	0.0	-	1800	400	5.0%	0	60%	75%	90%	0.50	0.50	12.00	1	0	90%	0.50
TH-2(A)	Townhouse	Single family	ok	1.0	0.0	0.0	-	1800	400	5.0%	0	60%	75%	90%	0.50	0.50	9.00	1	0	90%	0.50
TH-1(A)	Townhouse	Single family	ok	1.0	0.0	0.0	-	1800	400	5.0%	0	60%	75%	90%	0.50	0.50	6.00	2	0	90%	0.50
R-5(A)	Single Family	Single family	ok	1.0	0.0	0.0	-	2800	400	5.0%	0	45%	75%	90%	0.50	0.50	8.71	1	0	90%	0.50
R-7.5(A)	Single Family	Single family	ok	1.0	0.0	0.0	-	2800	400	5.0%	0	45%	75%	90%	0.50	0.50	5.81	1	0	90%	0.50
R-10(A)	Single Family	Single family	ok	2.0	0.0	0.0	-	2800	400	5.0%	0	45%	75%	90%	0.50	0.50	4.36	1	0	90%	0.50
R-13(A)	Single Family	Single family	ok	2.0	0.0	0.0	-	2800	400	5.0%	0	40%	75%	90%	0.50	0.50	3.35	1	0	90%	0.50

for powerpoint / Capacity Calcs / Zone Assumptions / Misc. Assumptions

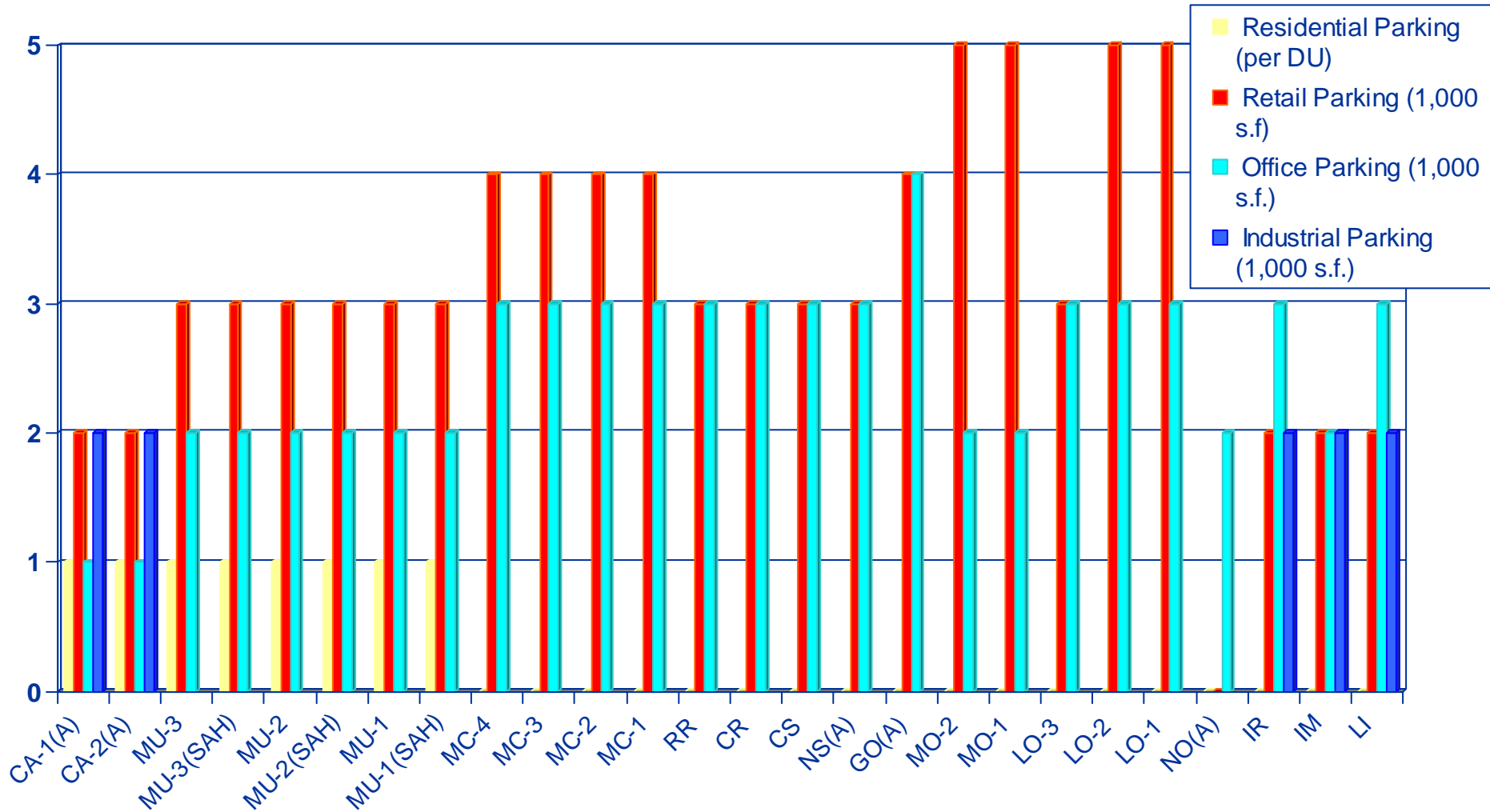
NUM

NUM



Capacity Inputs

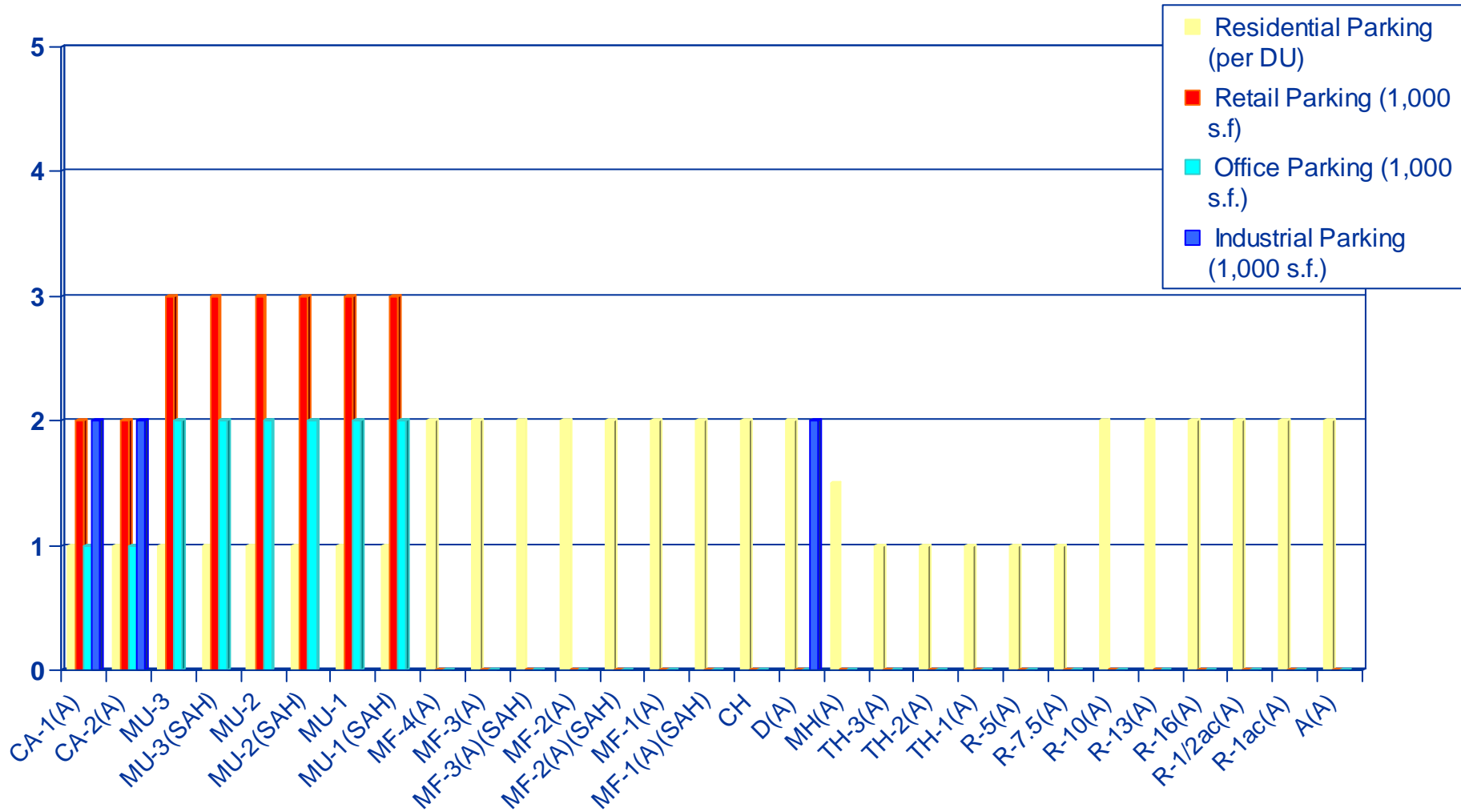
Parking - Employment Zones





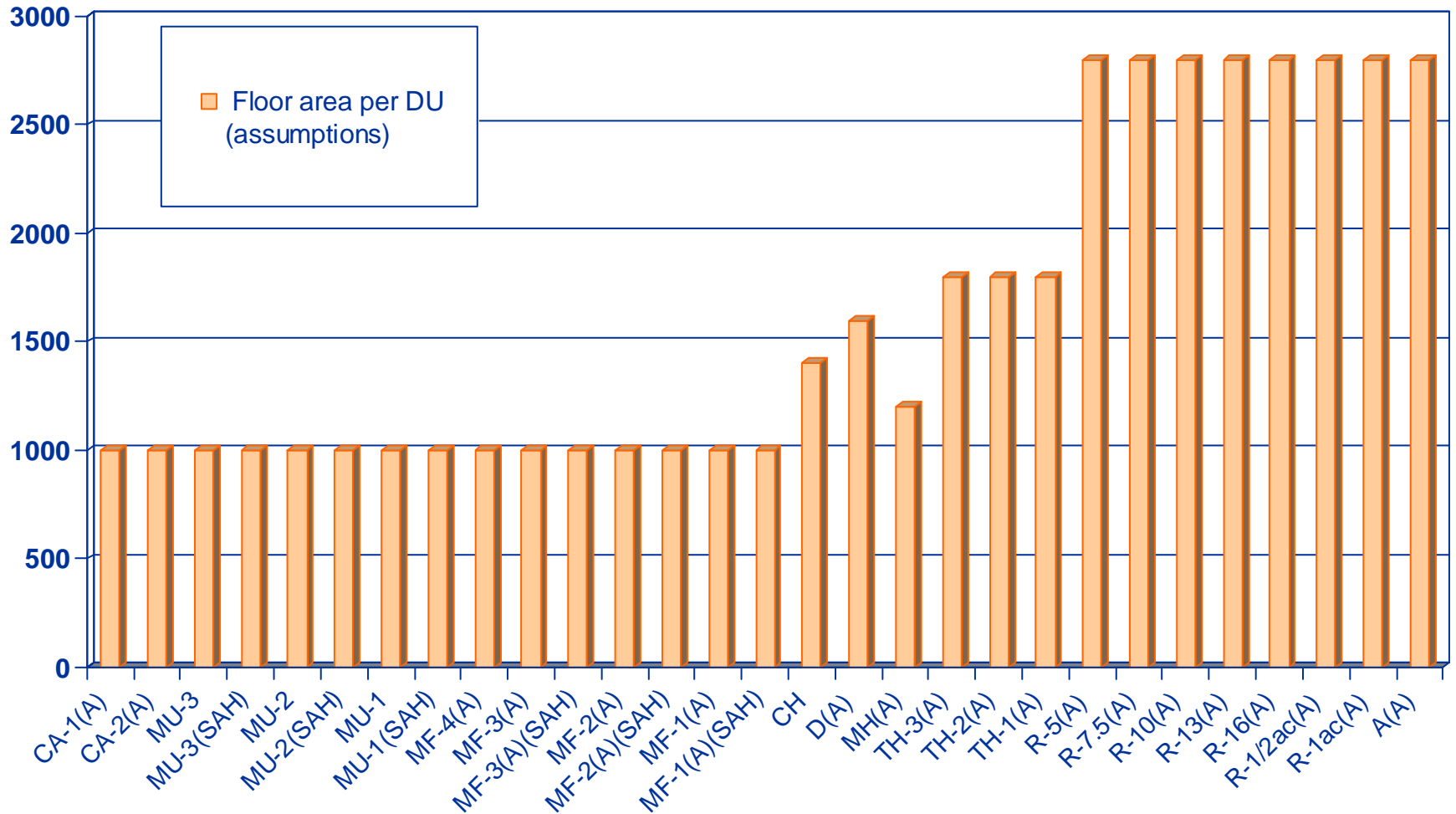
Capacity Inputs

Parking – Residential Zones





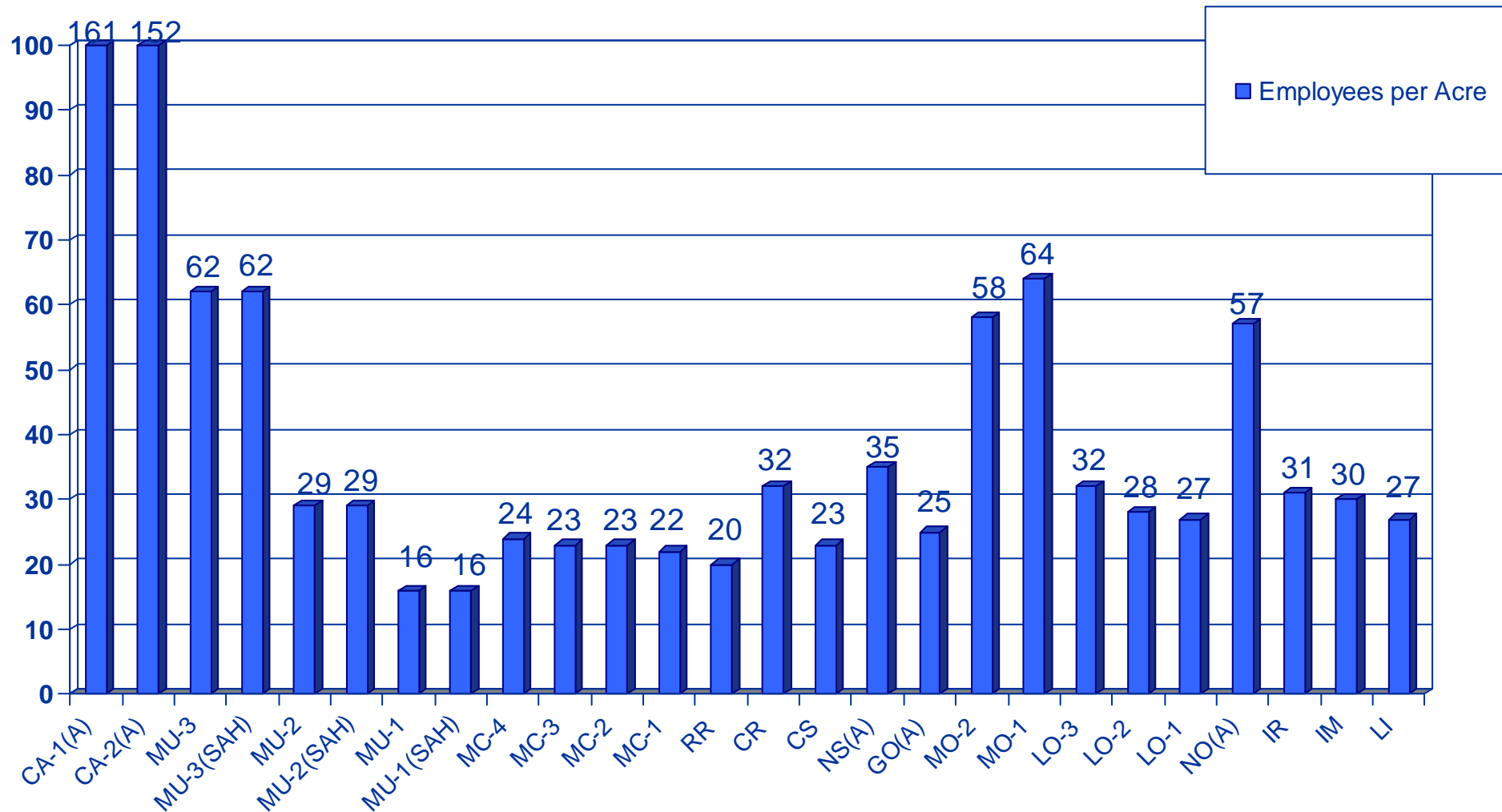
Capacity Input Square Feet per Dwelling Unit





Capacity Results

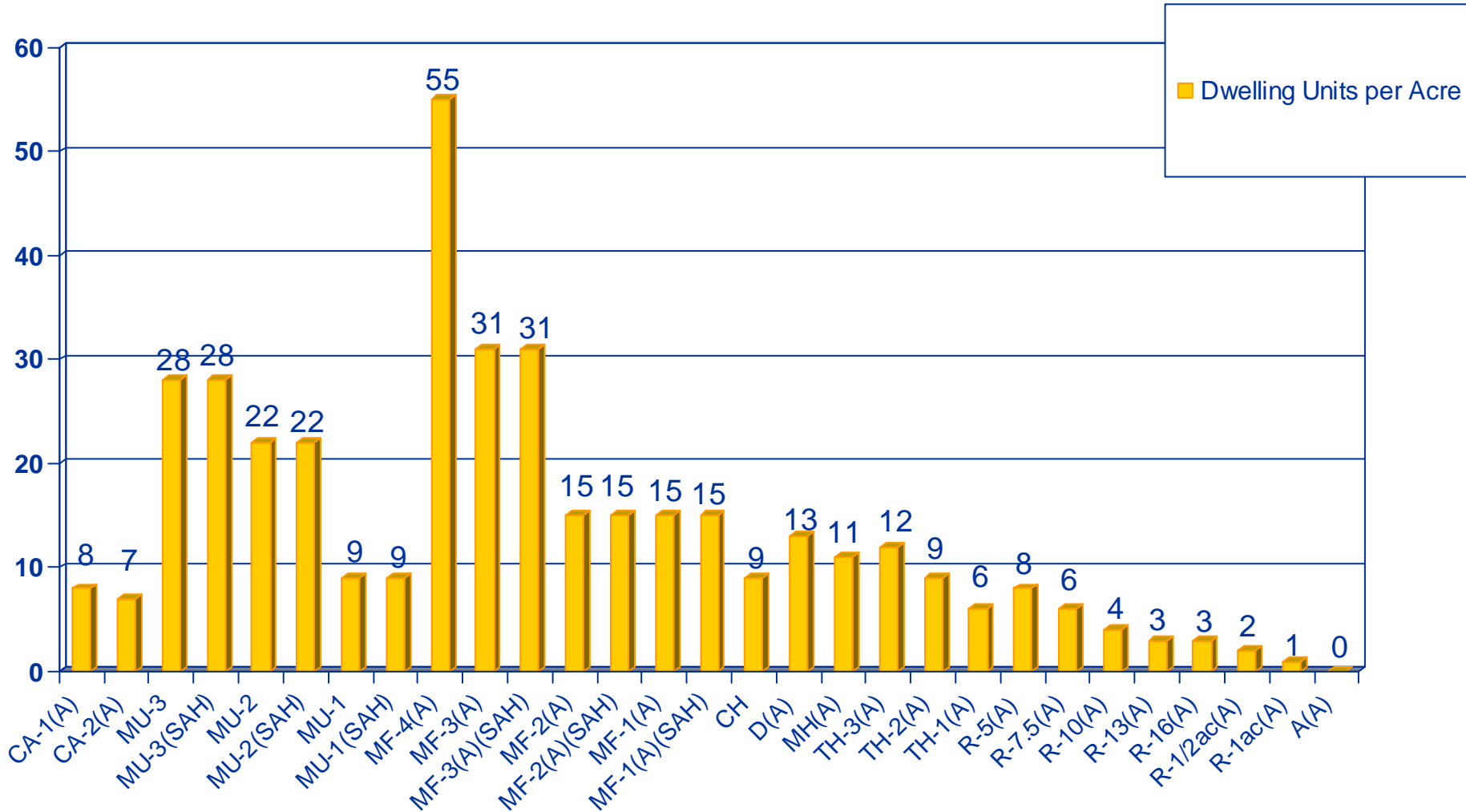
Employment Density





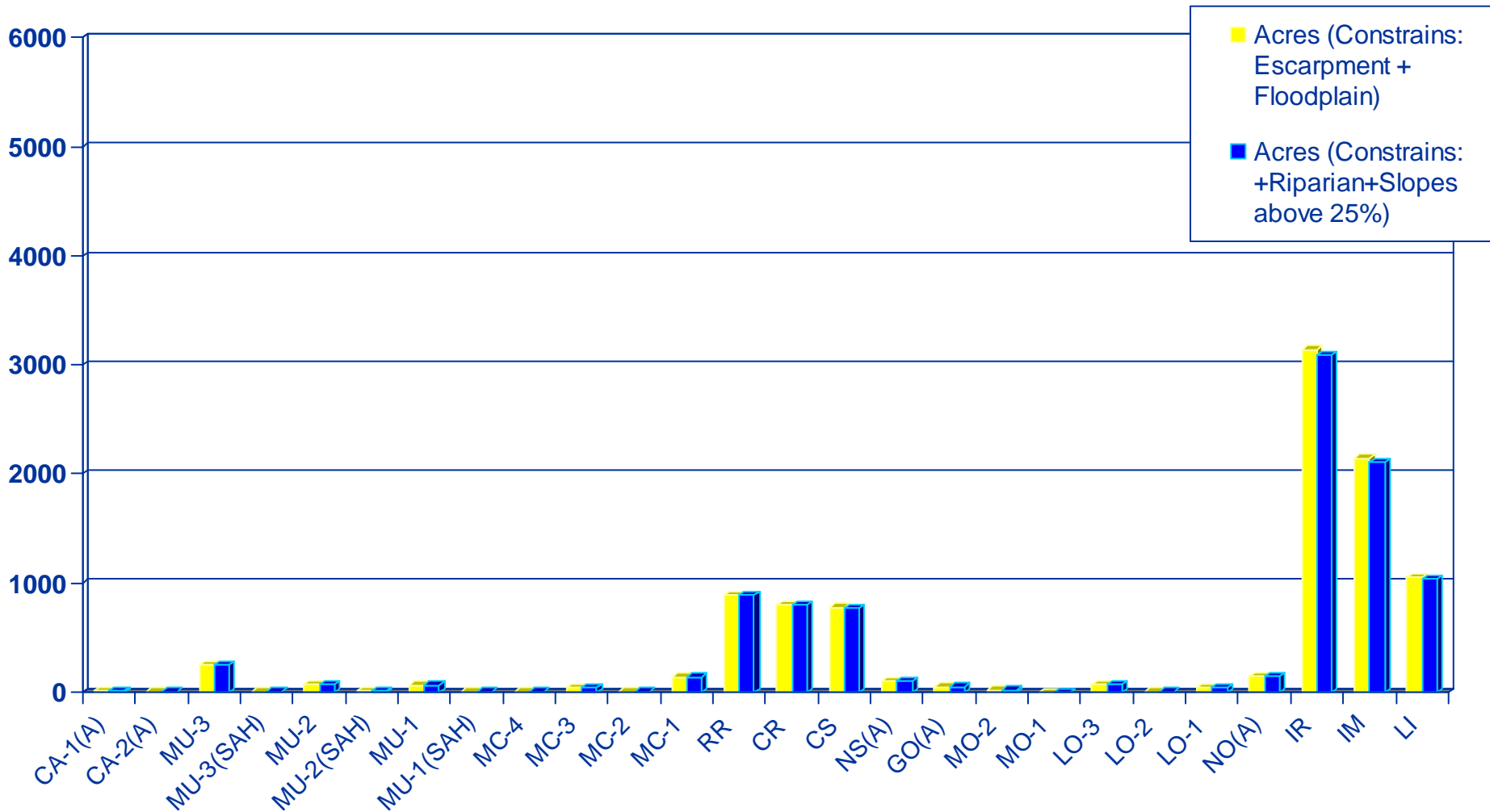
Capacity Results

Dwelling Unit Density



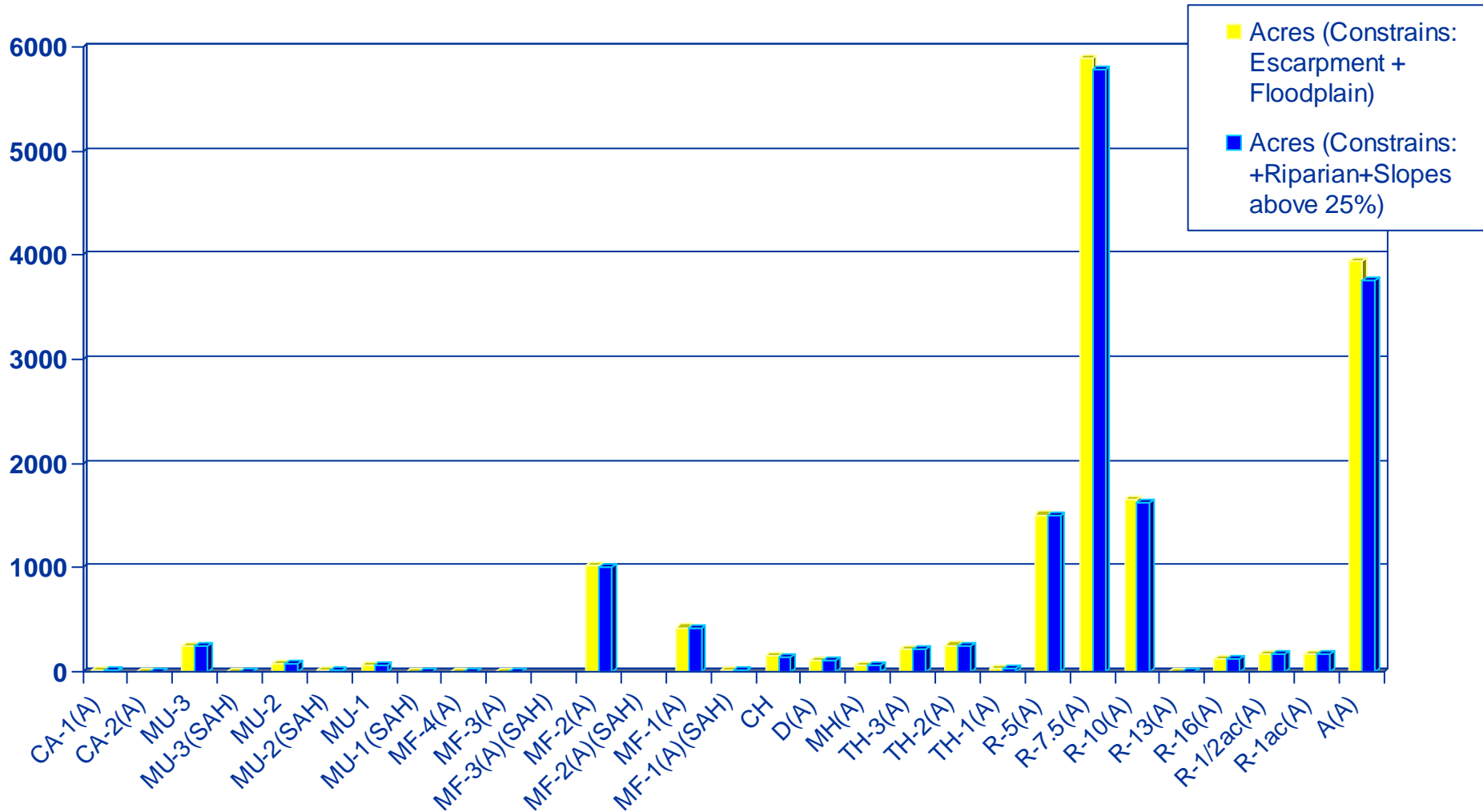


Capacity Results Employment Acres



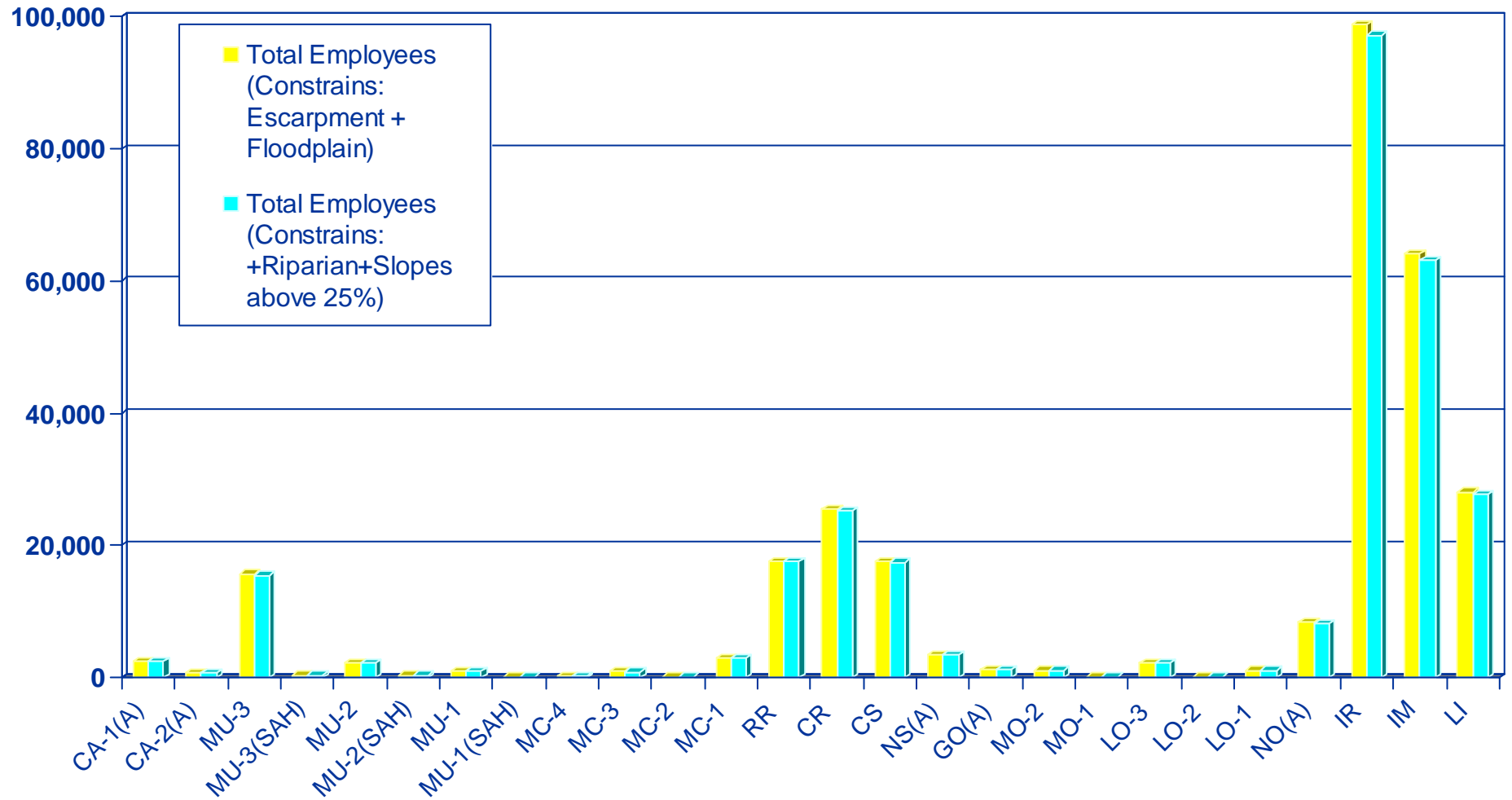


Capacity Results Residential Acres



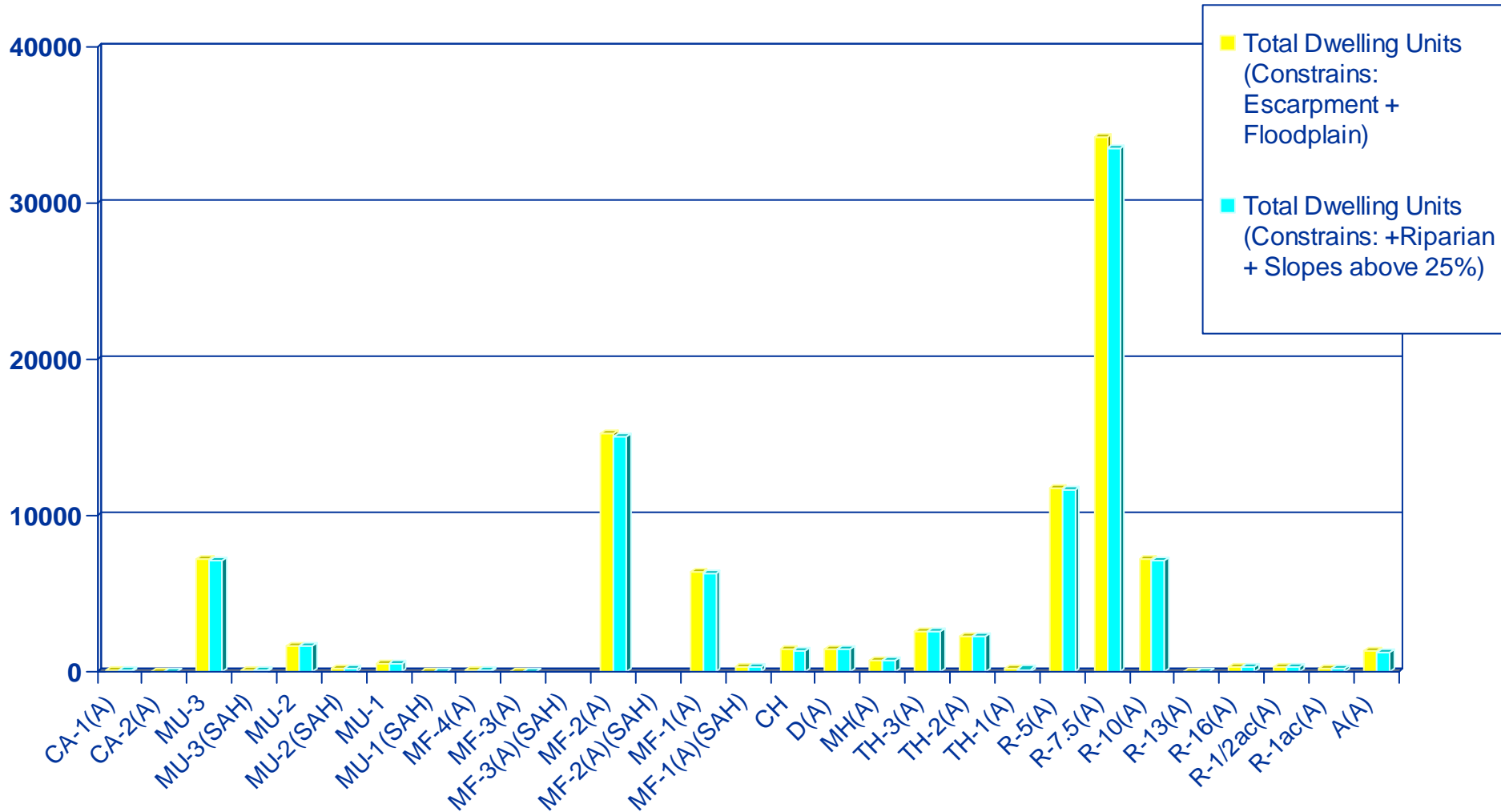


Capacity Results Employment Totals





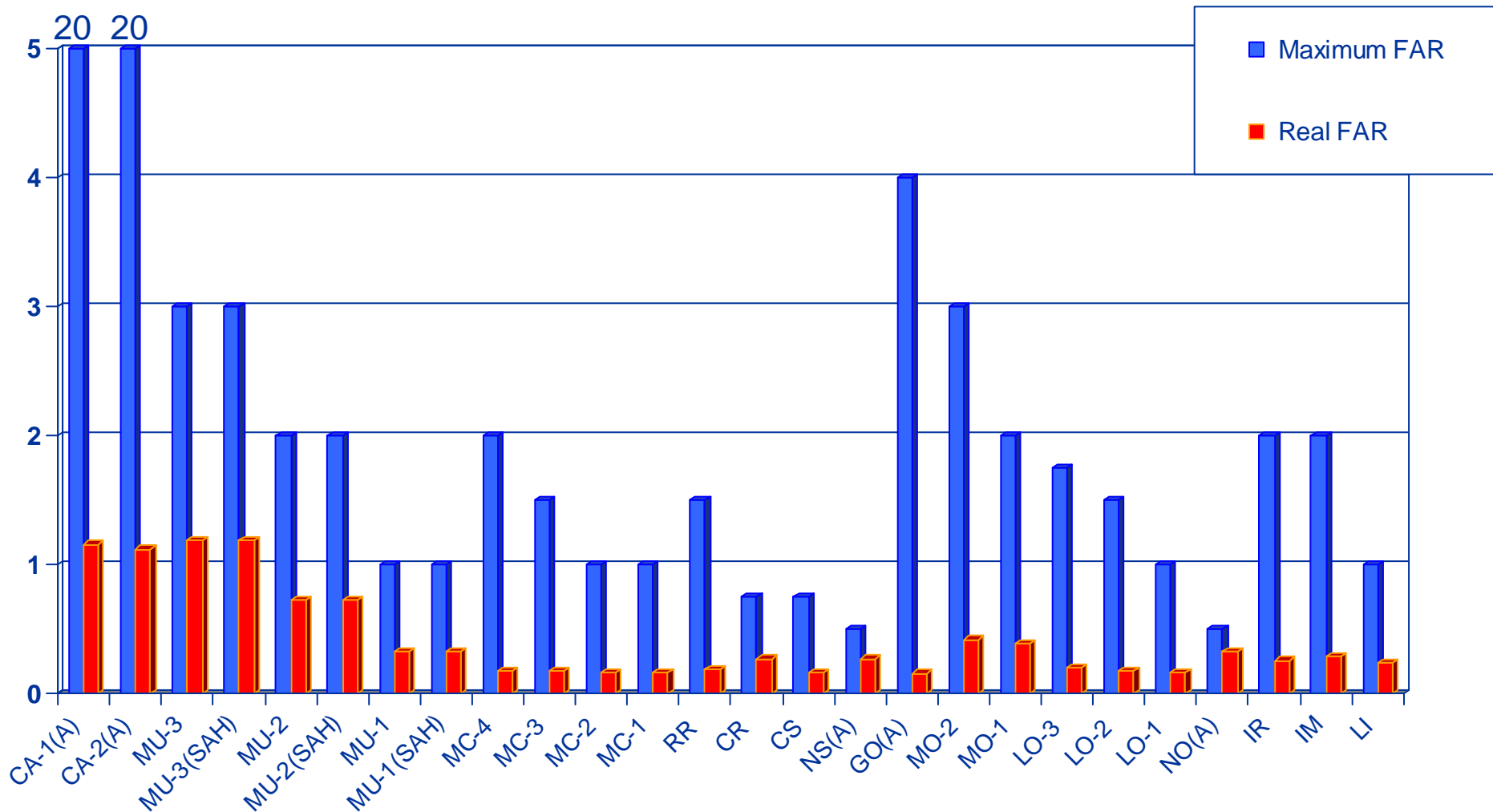
Capacity Results Residential Totals





Capacity Analysis Results

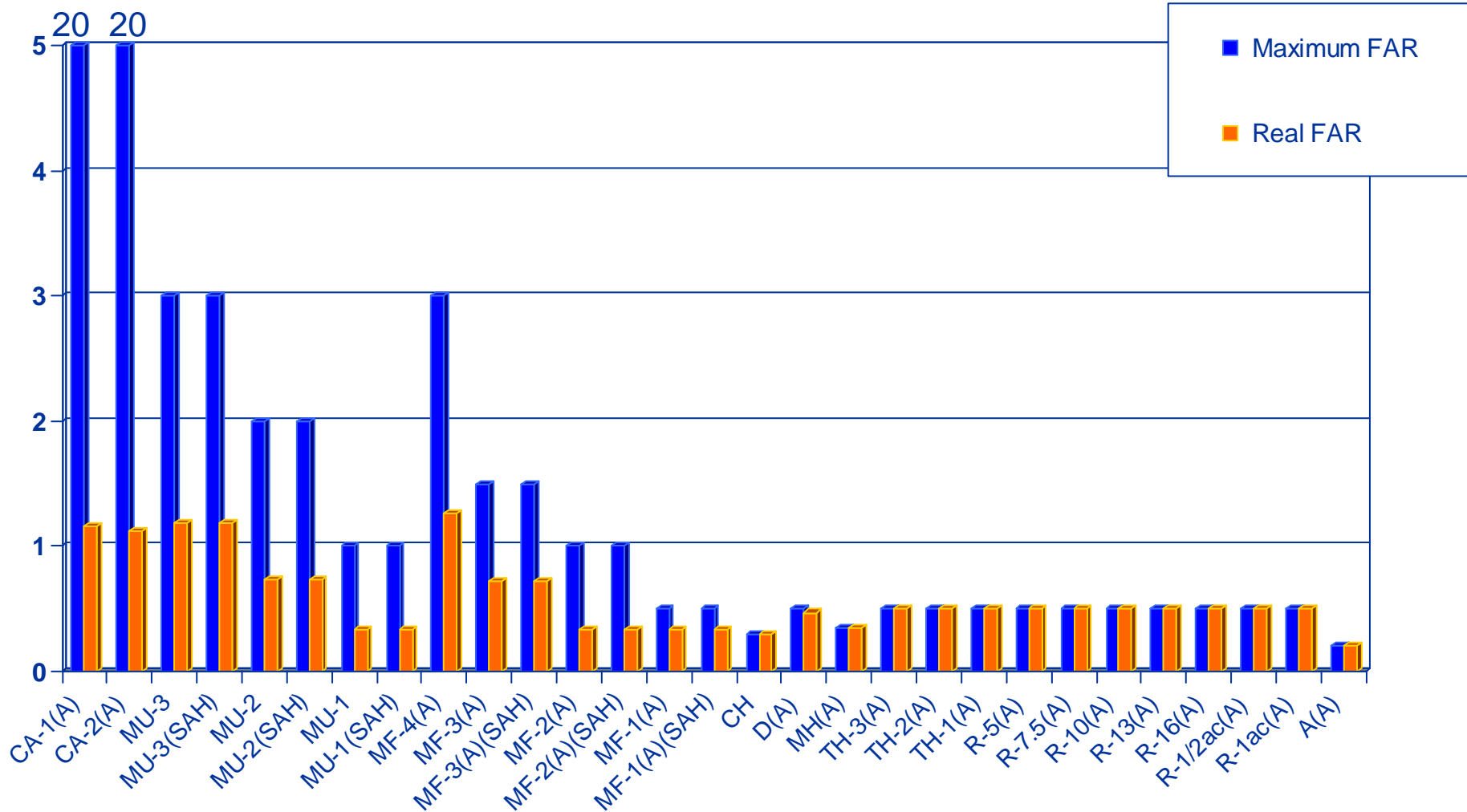
FAR - Employment Zones





Capacity Analysis Results

FAR – Residential Zones





Capacity Analysis Results

- Real buildable FAR is much lower than maximum FAR allowed in zoning code
- High parking and open space requirements diminish real buildable FAR



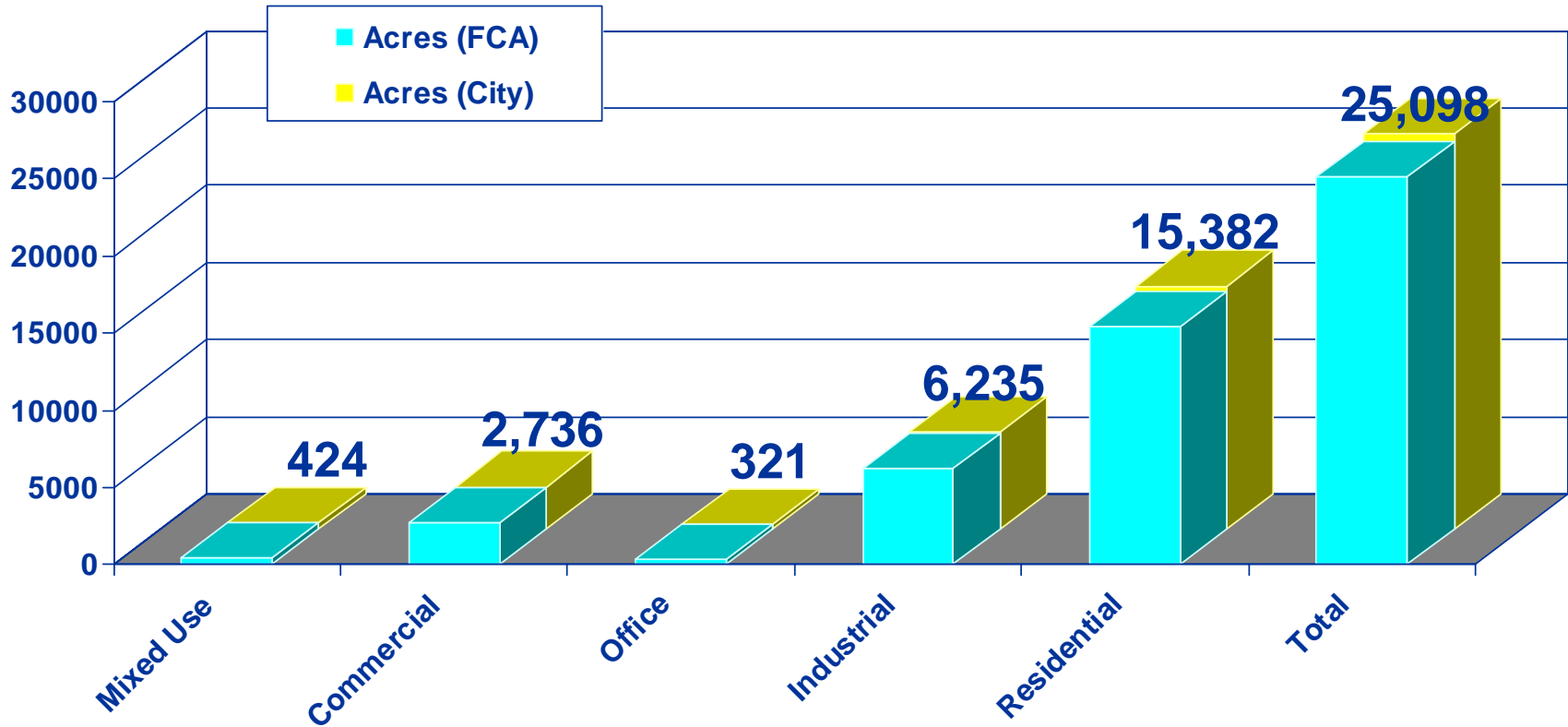
Base Zoning Types

- **Mixed Use:** Central Area (CA), Mixed Use (MU)
- **Commercial:** Multiple Commercial (MC), Regional Retail (RR), Community Retail (CR), Commercial Service (CS), Neighborhood Service (NS)
- **Office:** General Office (GO), Mid-range Office (MO), Limited Office (LO), Neighborhood Office (NO)
- **Industrial:** Industrial Research (IR), Industrial Manufacturing (IM), Light Industrial (LI)
- **Residential:** Multifamily (MF), Clustered Housing (CH), Duplex(D), Mobile Home (MH), Townhouse (TH), Single Family (R), Agricultural (A)
- **Others:** Parking (P), Open Space (O), Planned Development(PD), Conservation Districts (CD)



Capacity Analysis

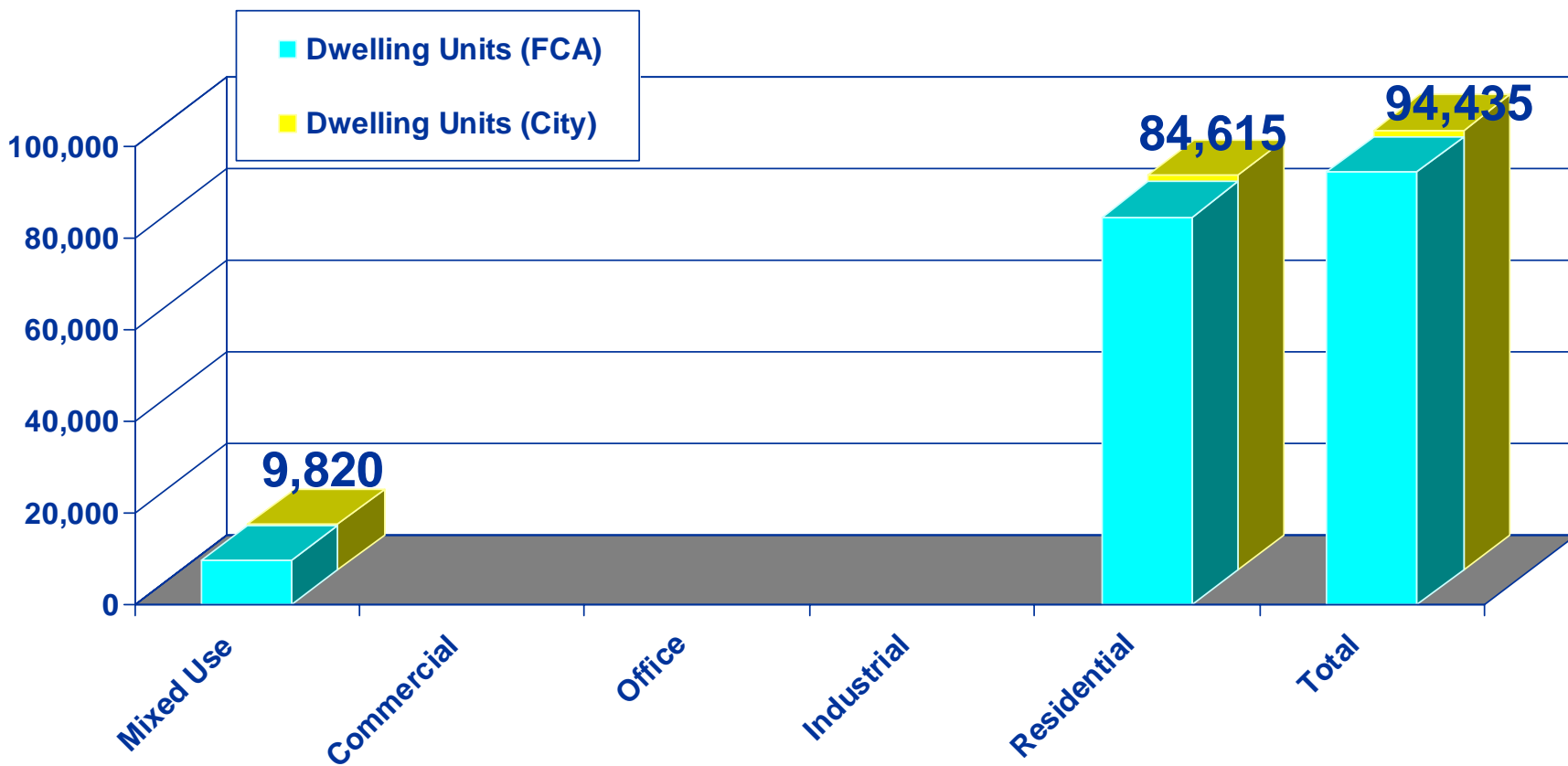
Acres (numbers given for FCA Constraints)





Capacity Analysis

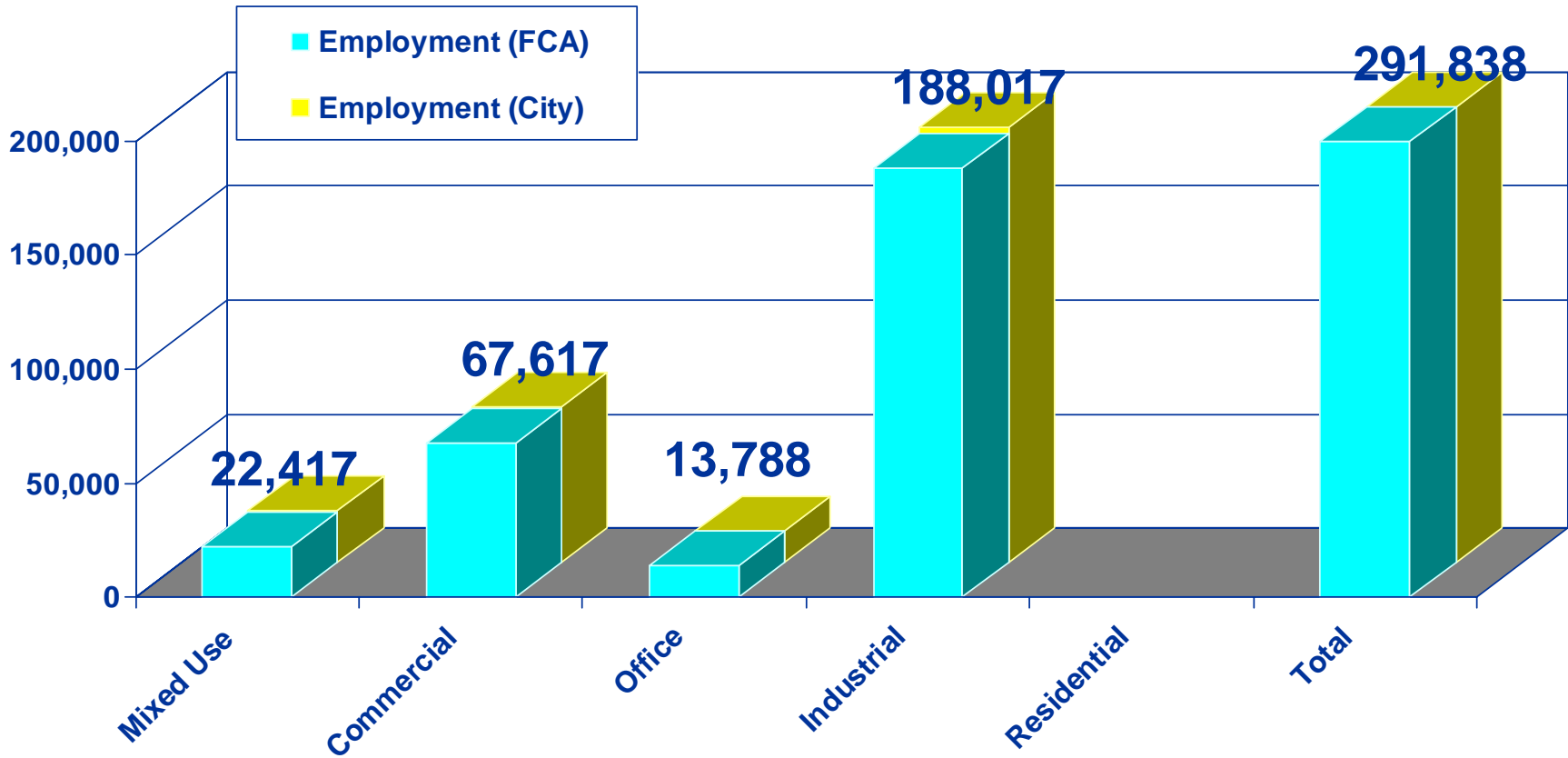
Dwelling Units (numbers are FCA Constraints)





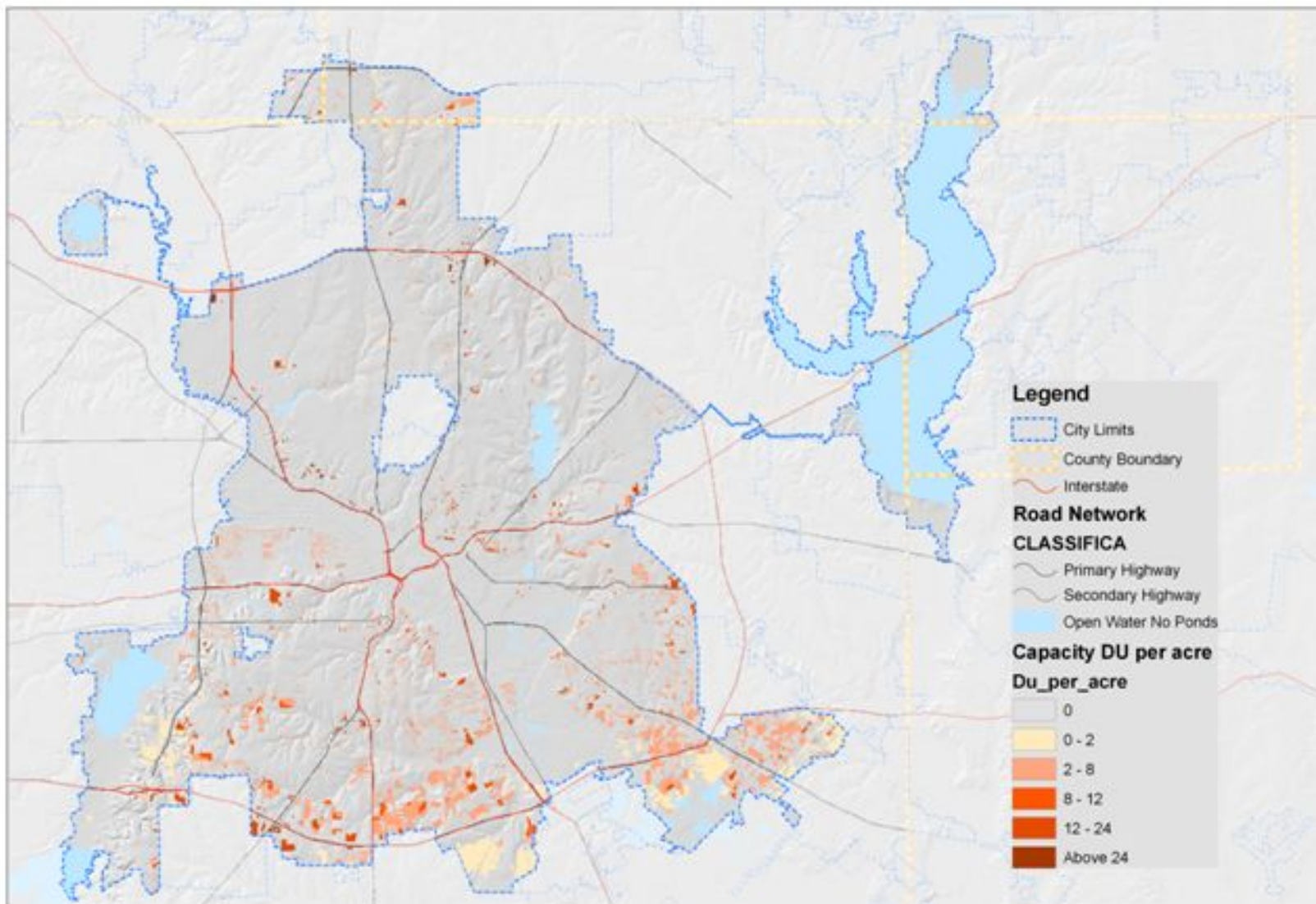
Capacity Analysis

Jobs (numbers given are FCA Constraints)



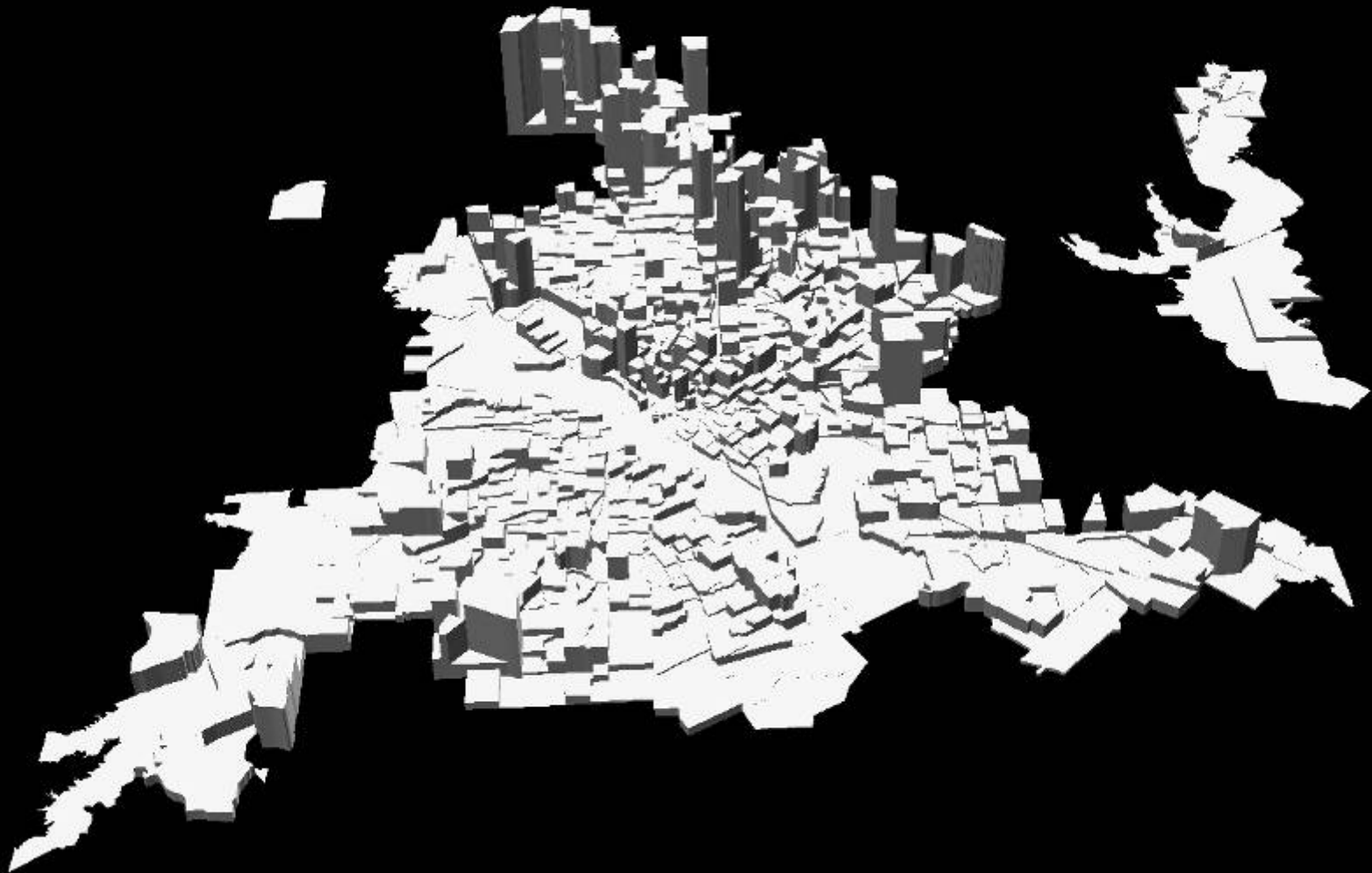


Capacity based on Zoning Dwelling Units per Acre





Households 2000

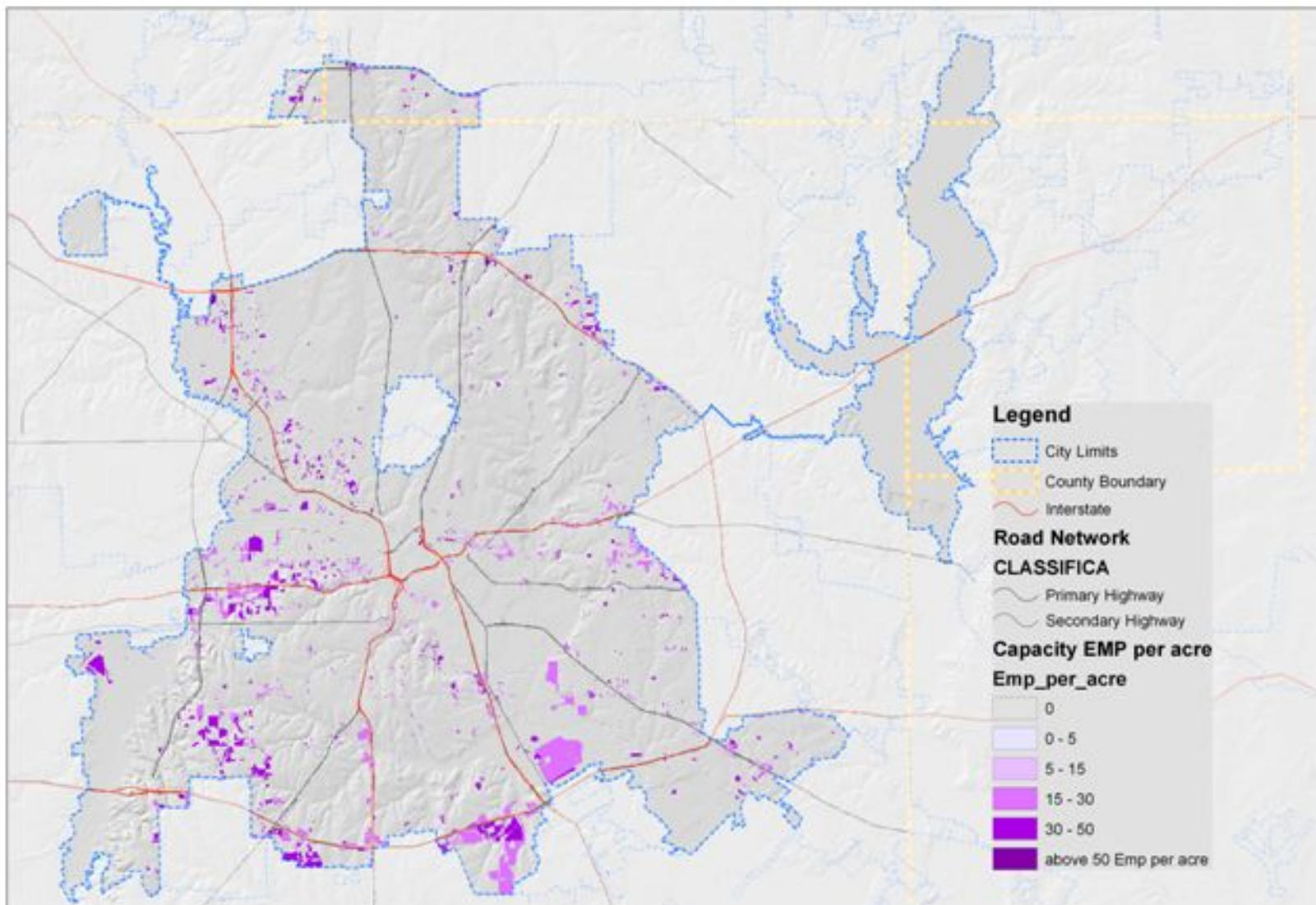


Capacity on Vacant Land Households





Capacity based on Zoning Employment per Acre

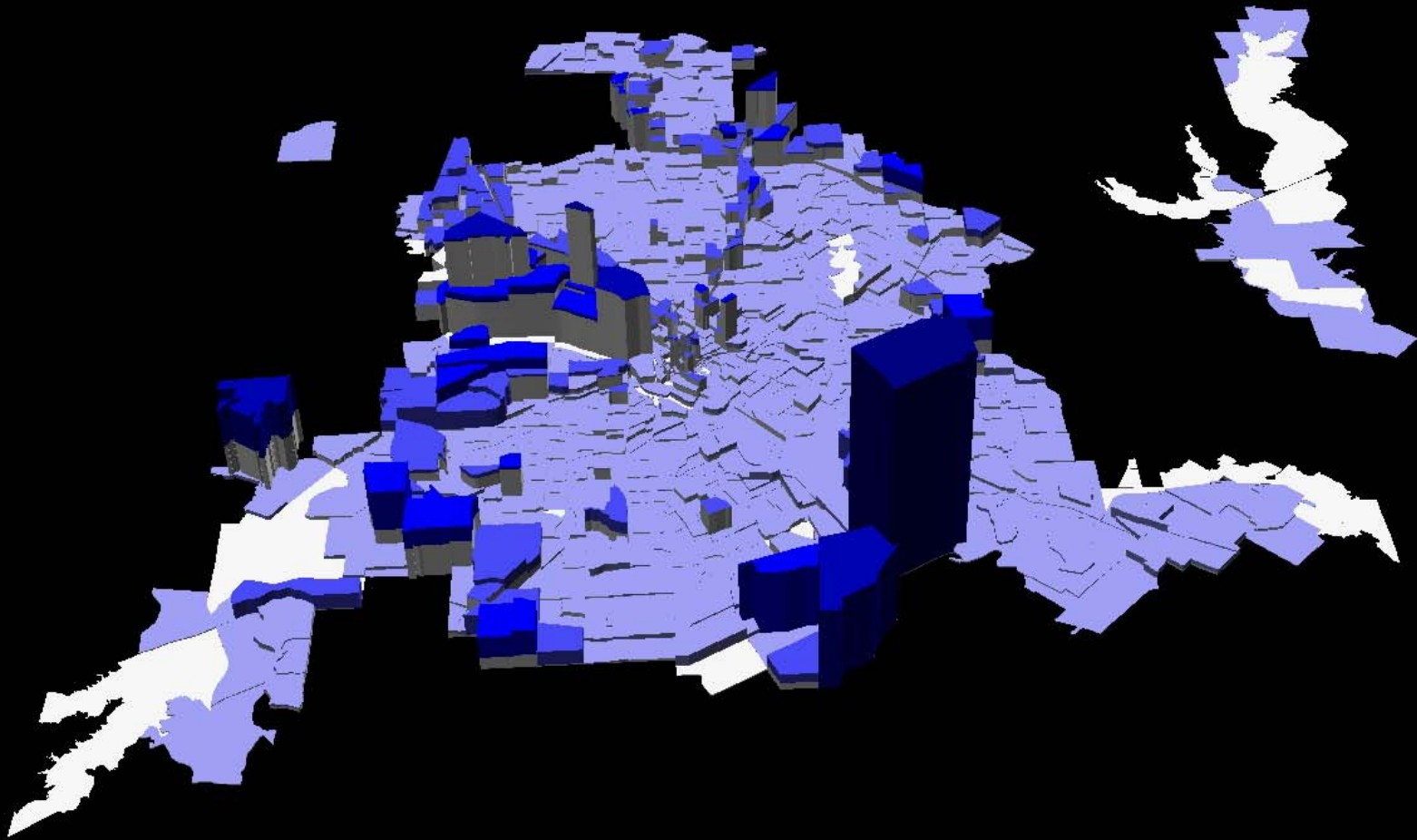




Employment 2000



Capacity on Vacant Land Employment



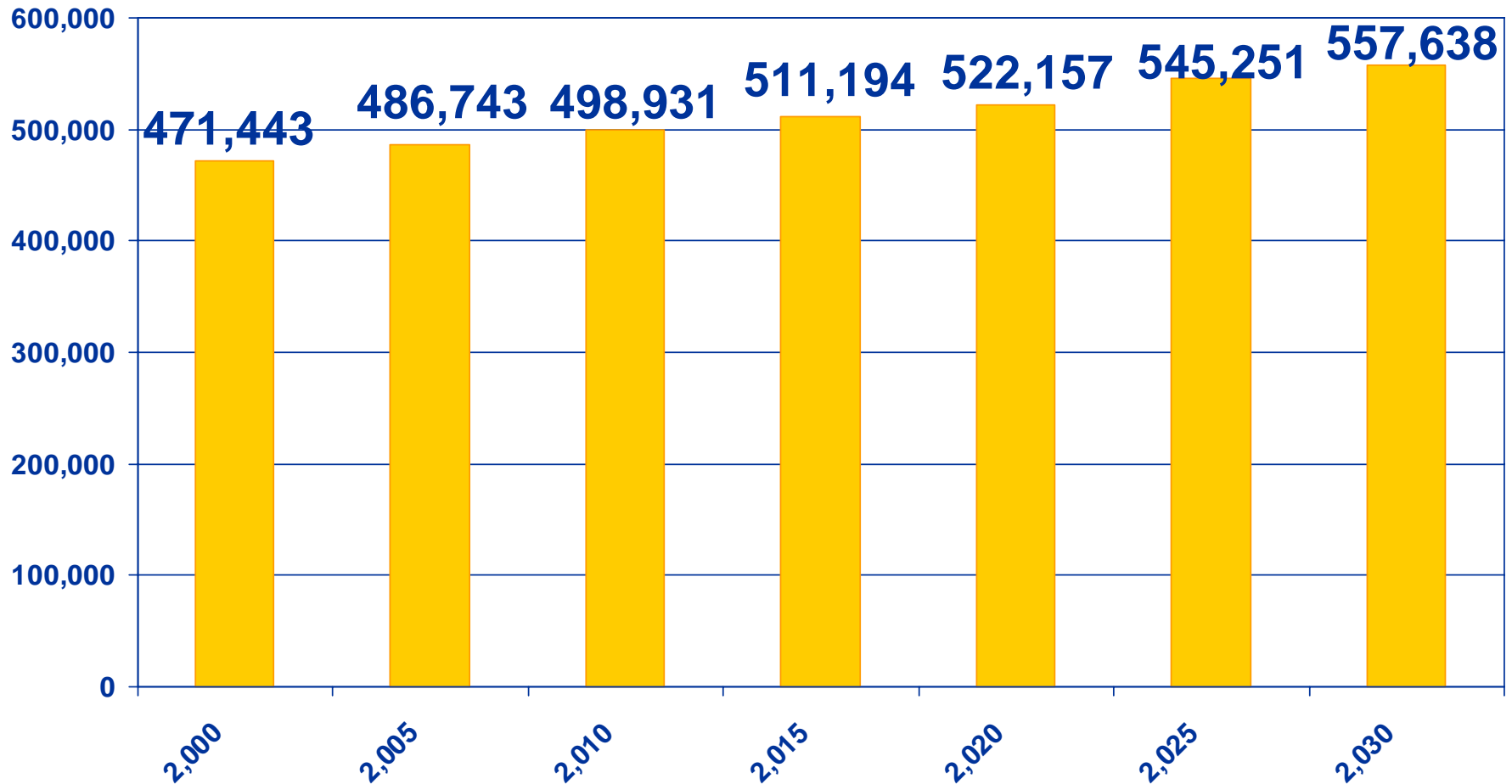


What is the Forecast?



TAZ Forecast

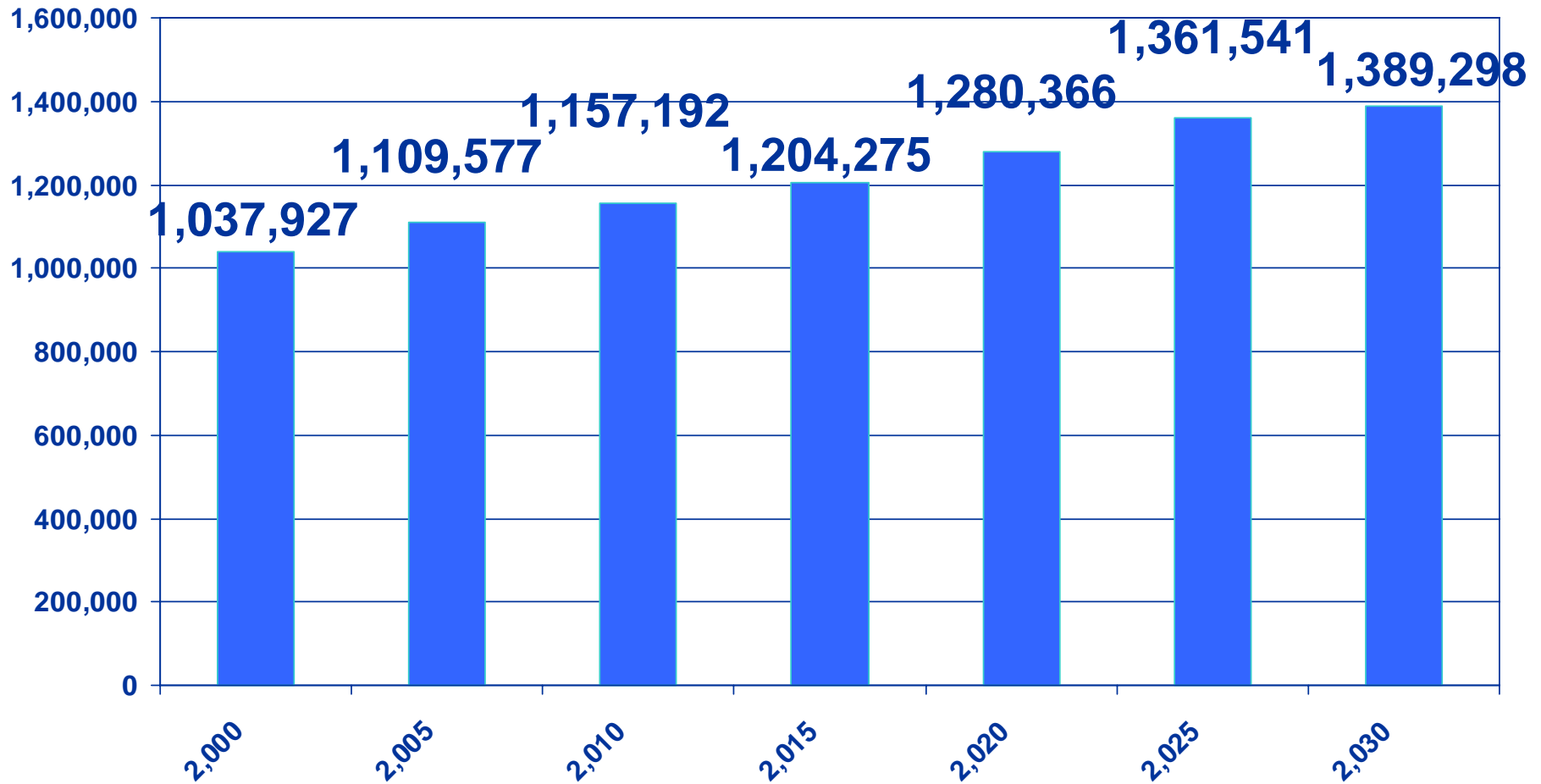
Households: City of Dallas





TAZ Forecast

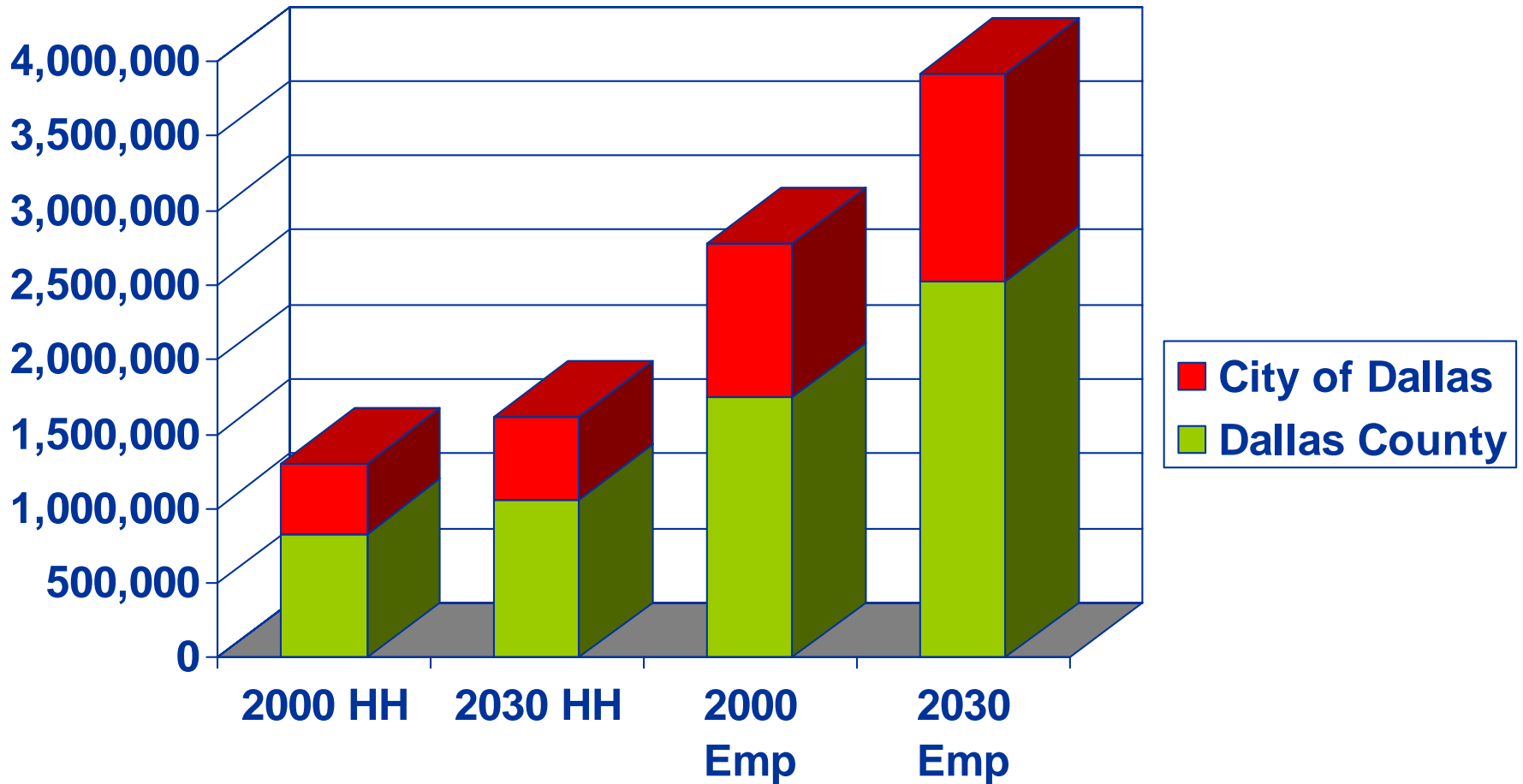
Employment: City of Dallas





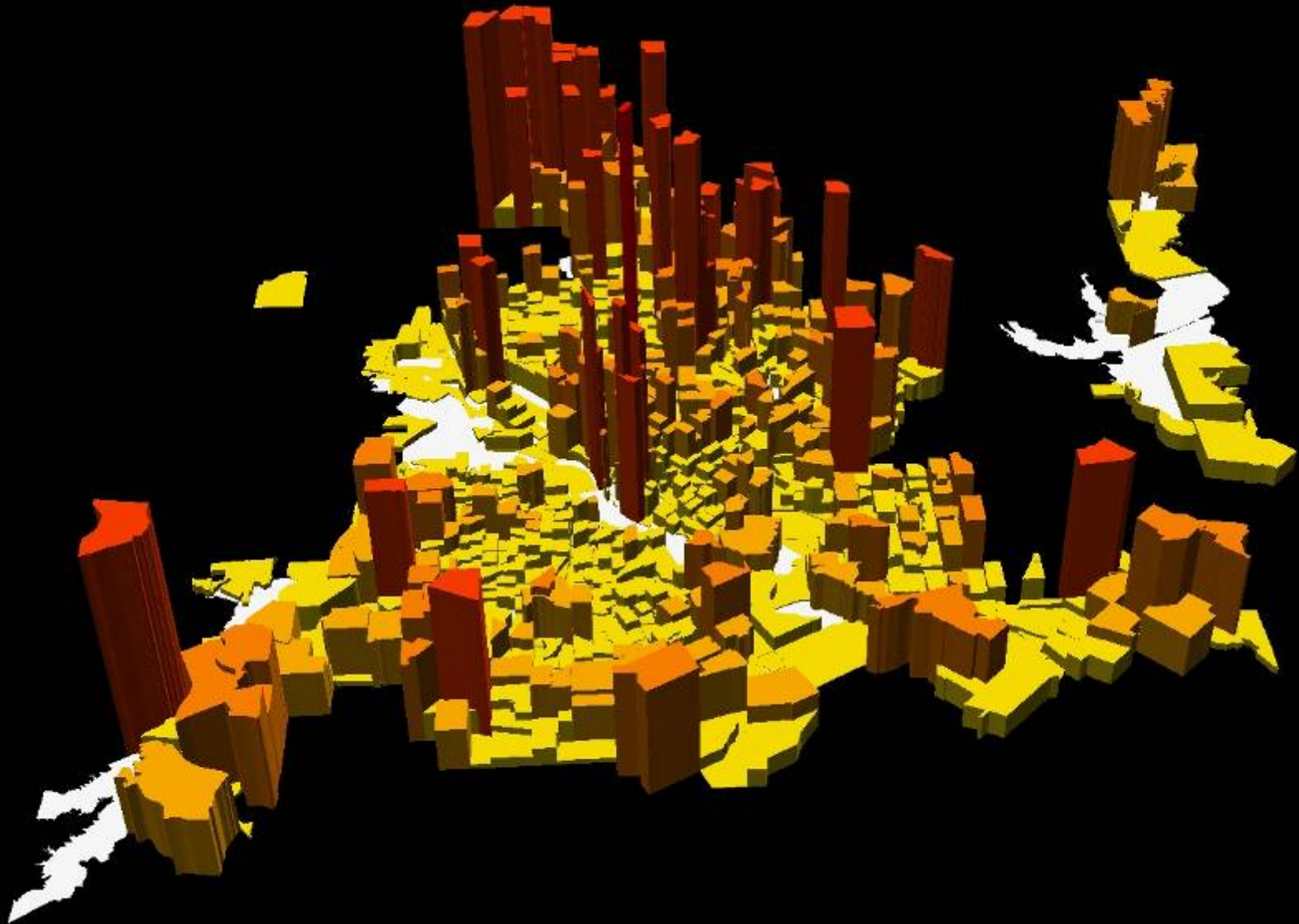
Forecast

City of Dallas vs. Dallas County

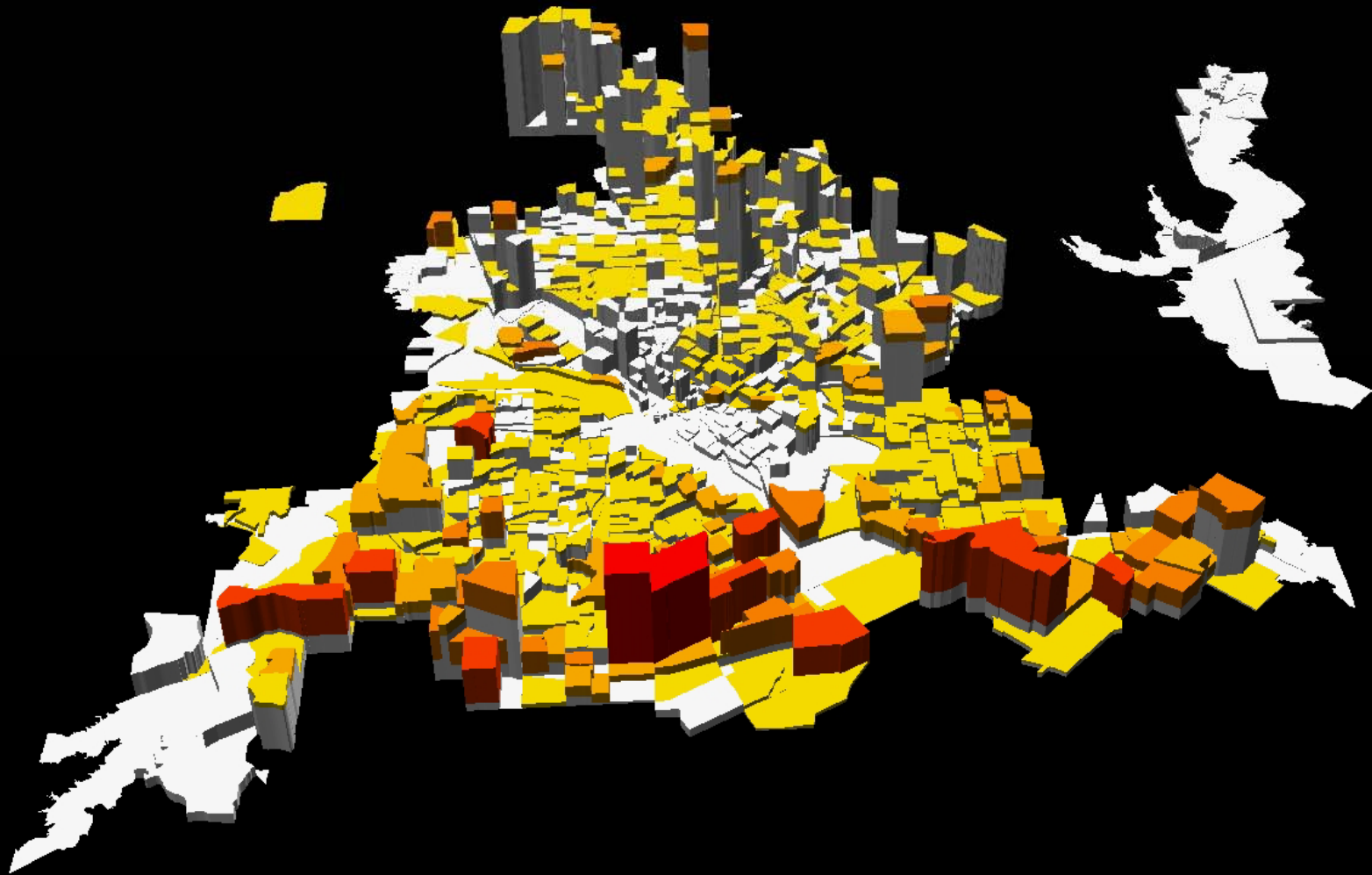




Forecast Households 2030

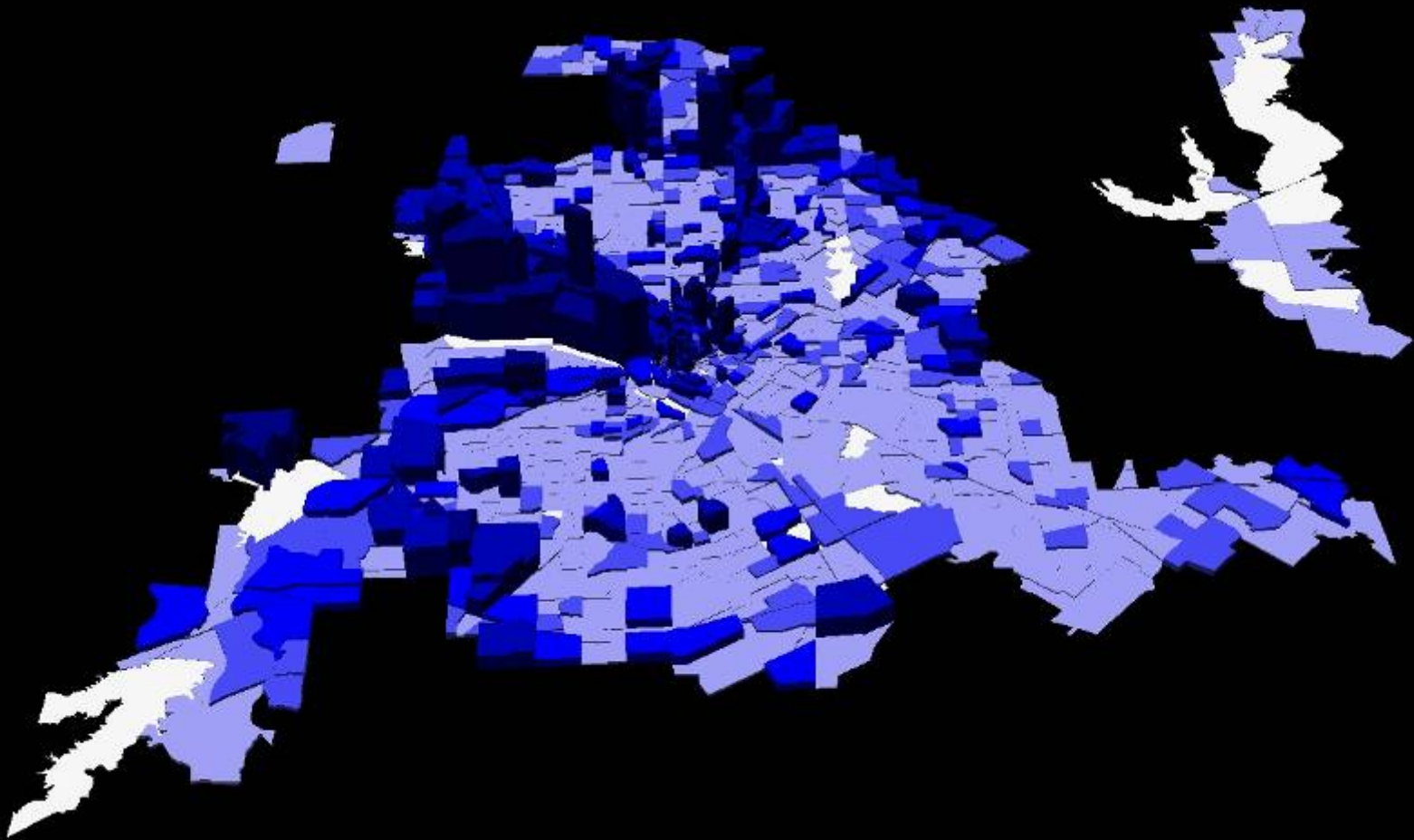


Capacity on Vacant Land Households

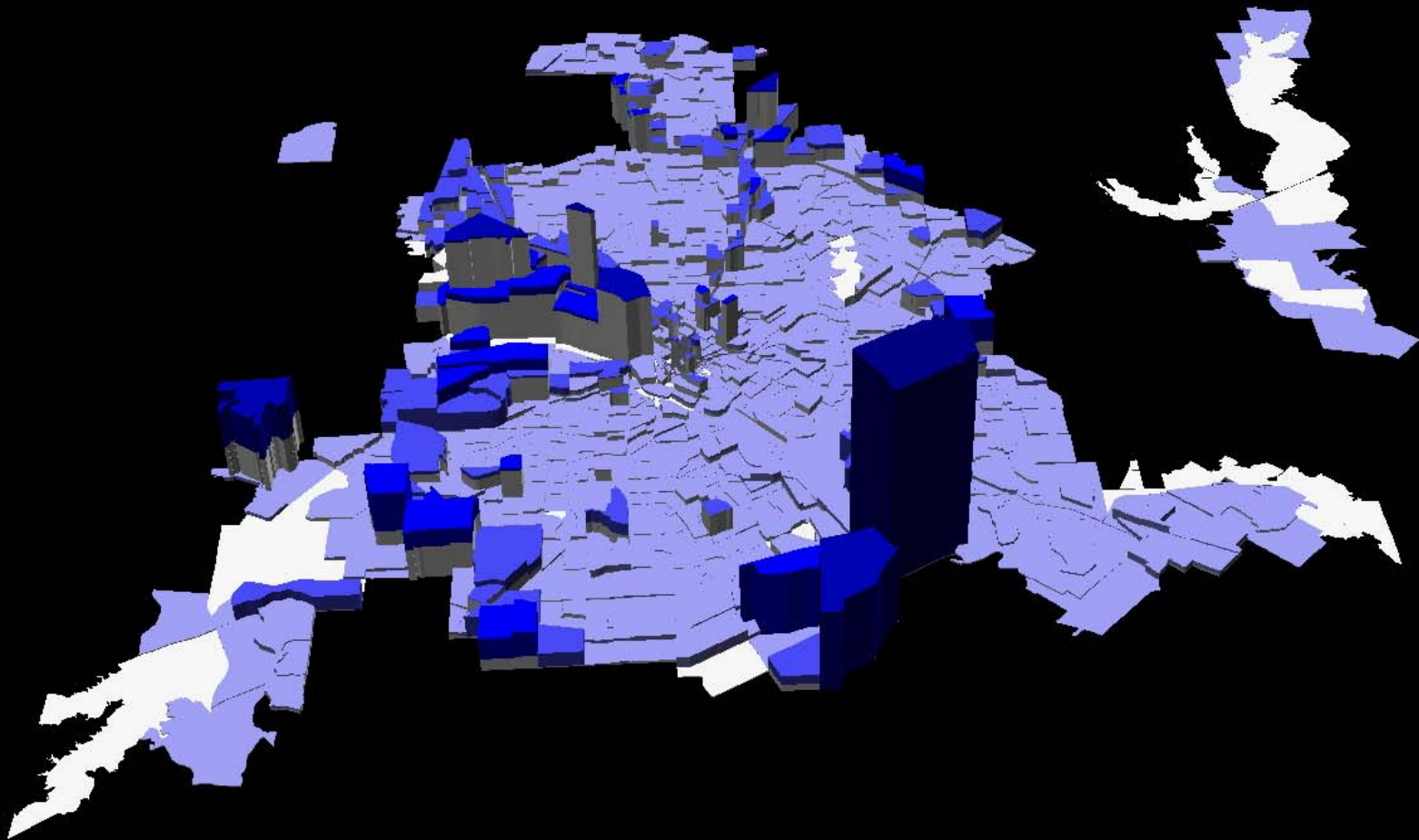




Forecast Employment 2030



Capacity on Vacant Land Employment





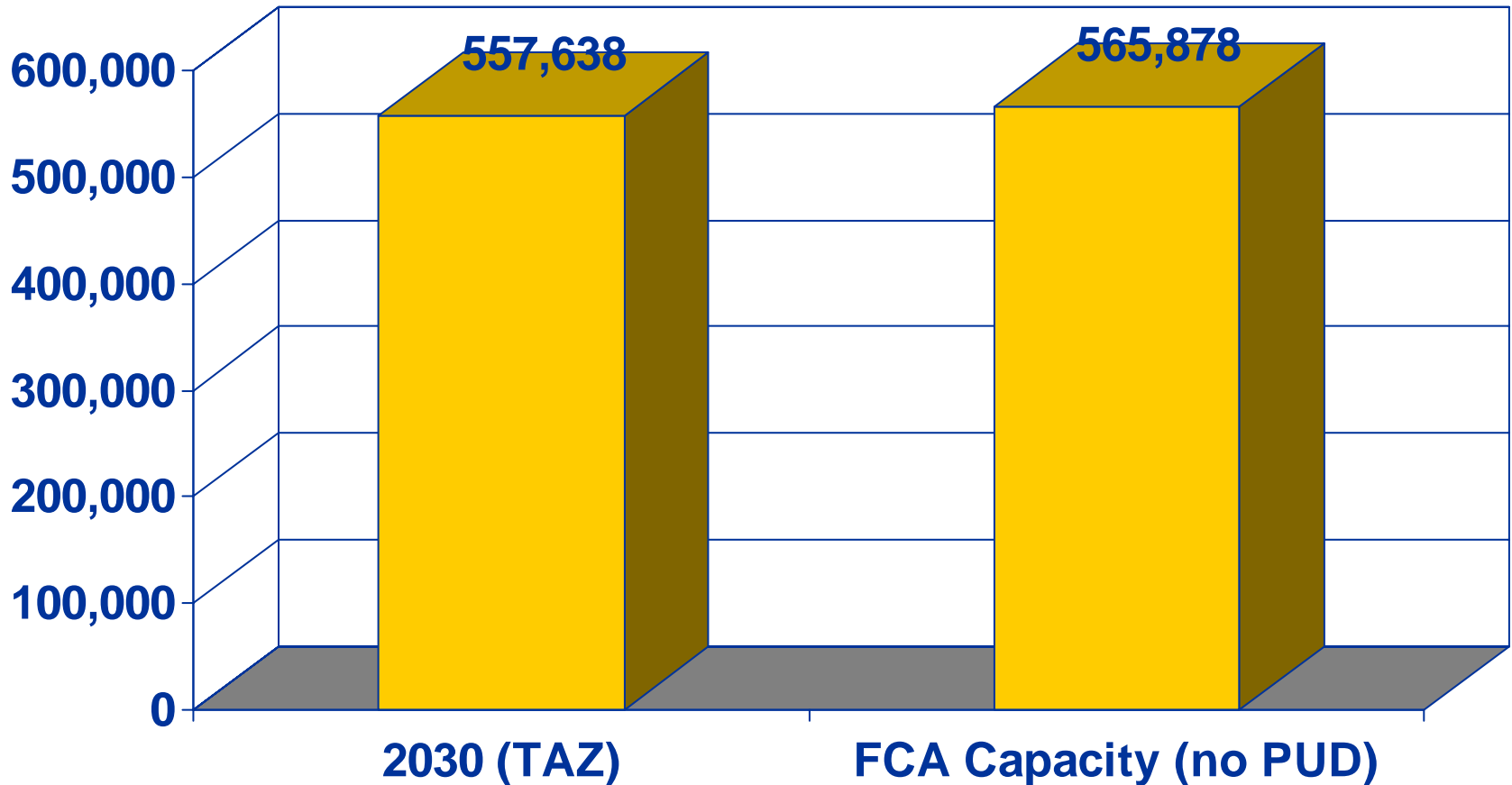
Forecast vs. Capacity

- Redevelopment will be necessary downtown
- Capacity is high on the fringe



TAZ Forecast and Capacity Households/Dwelling Units

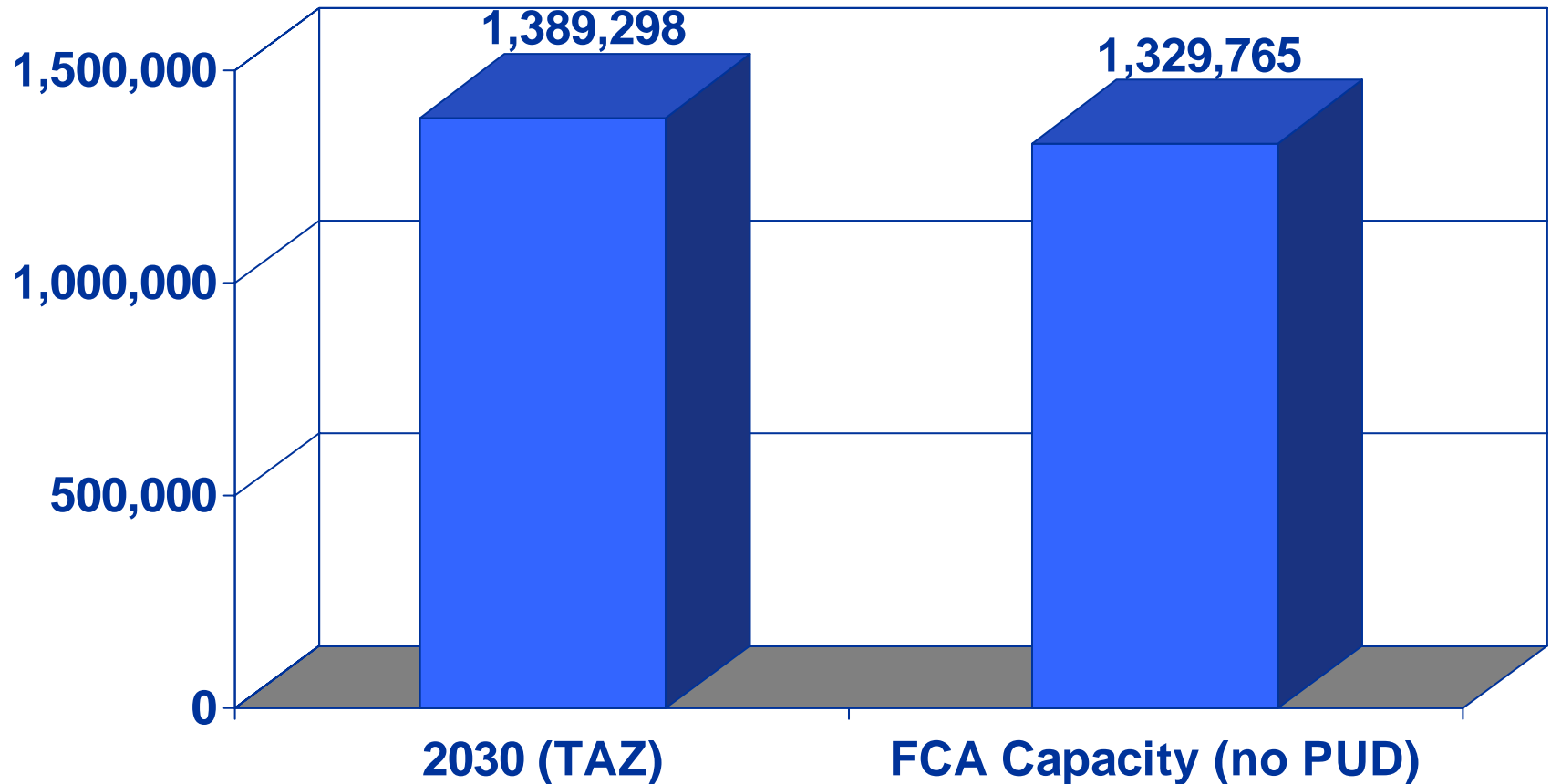
(numbers given for Capacity are FCA Constraints)





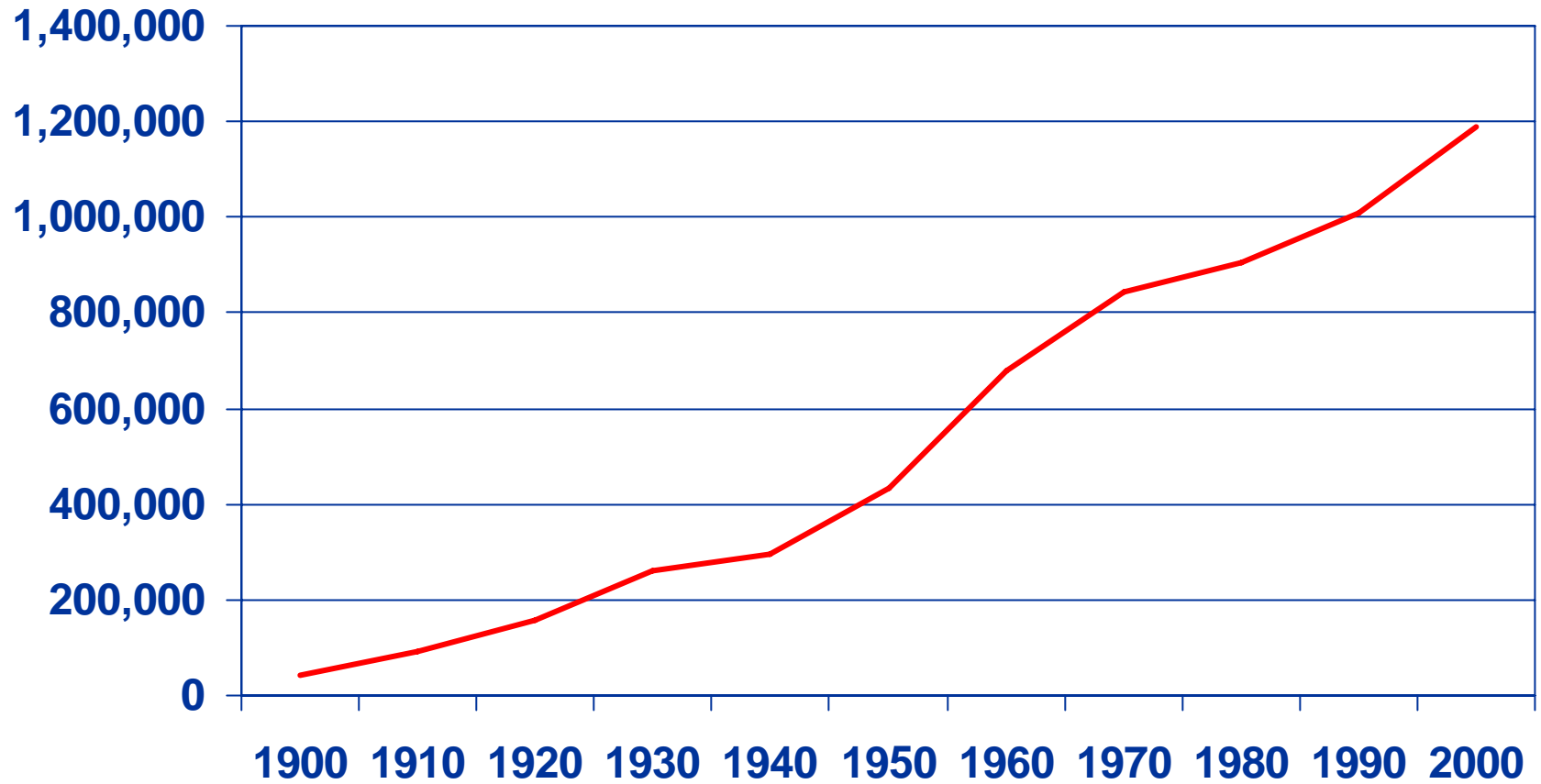
TAZ Forecast and Capacity Employment

(numbers given for Capacity are FCA Constraints)





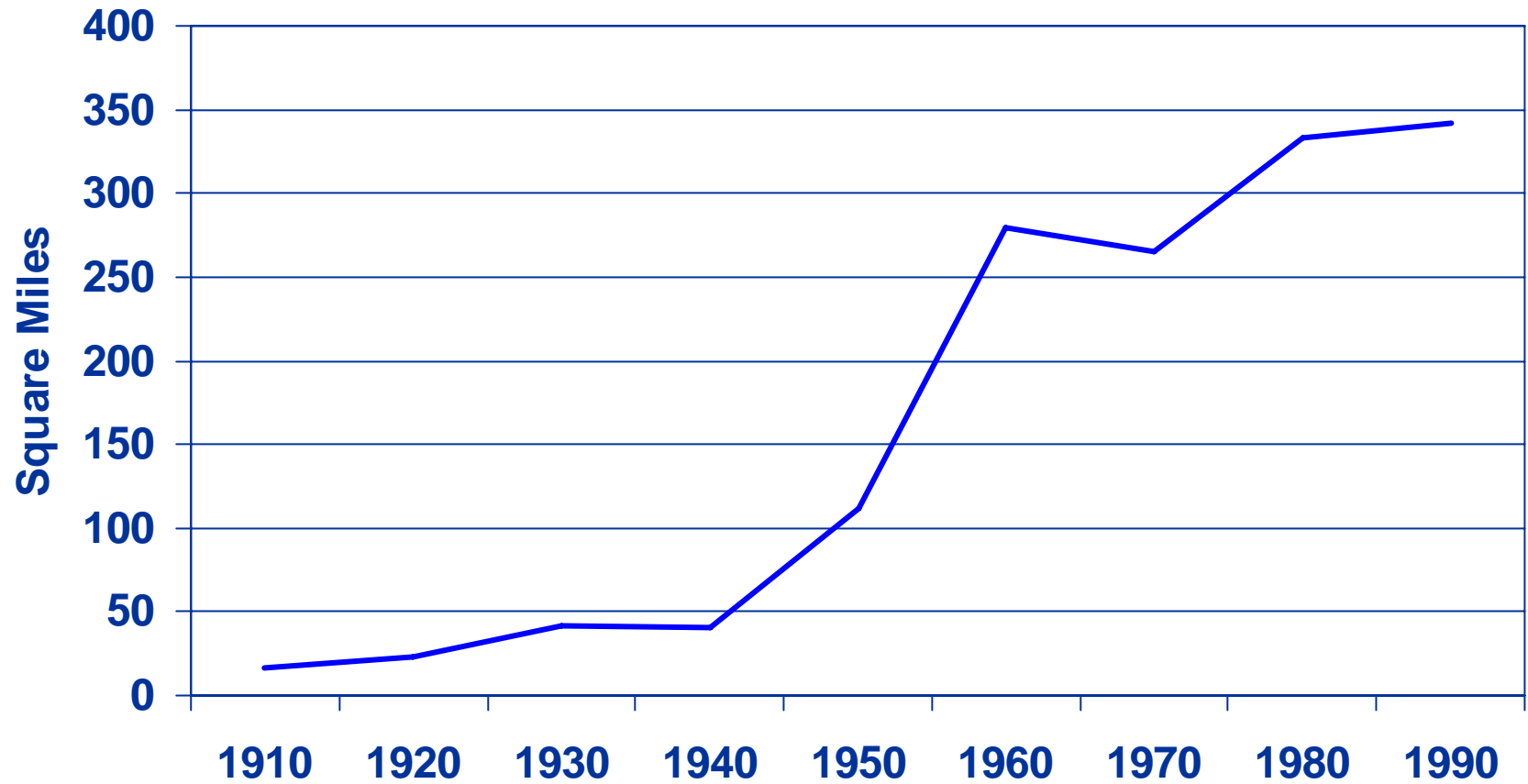
City of Dallas Population



Growth Trends



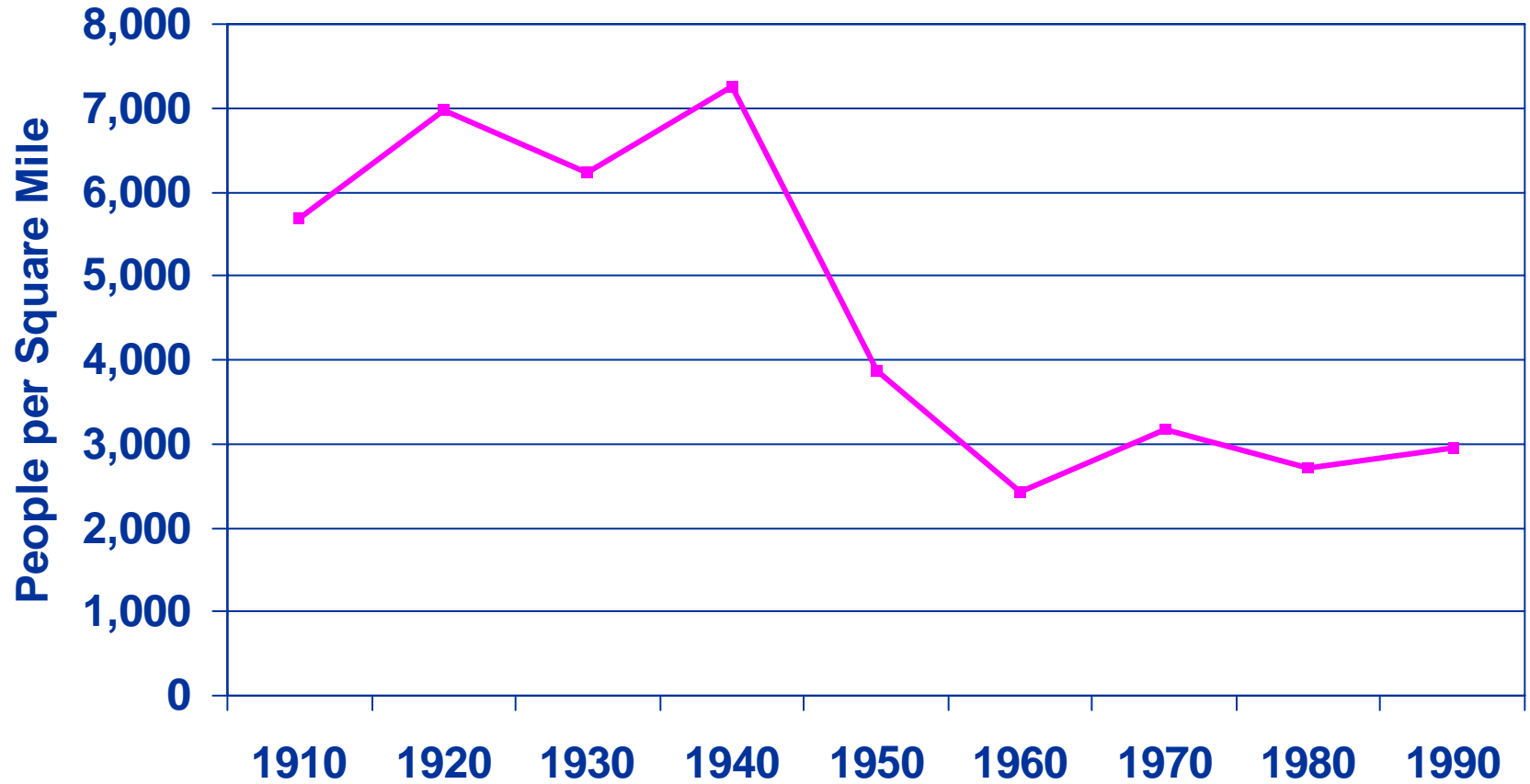
City of Dallas Land Area



Growth Trends



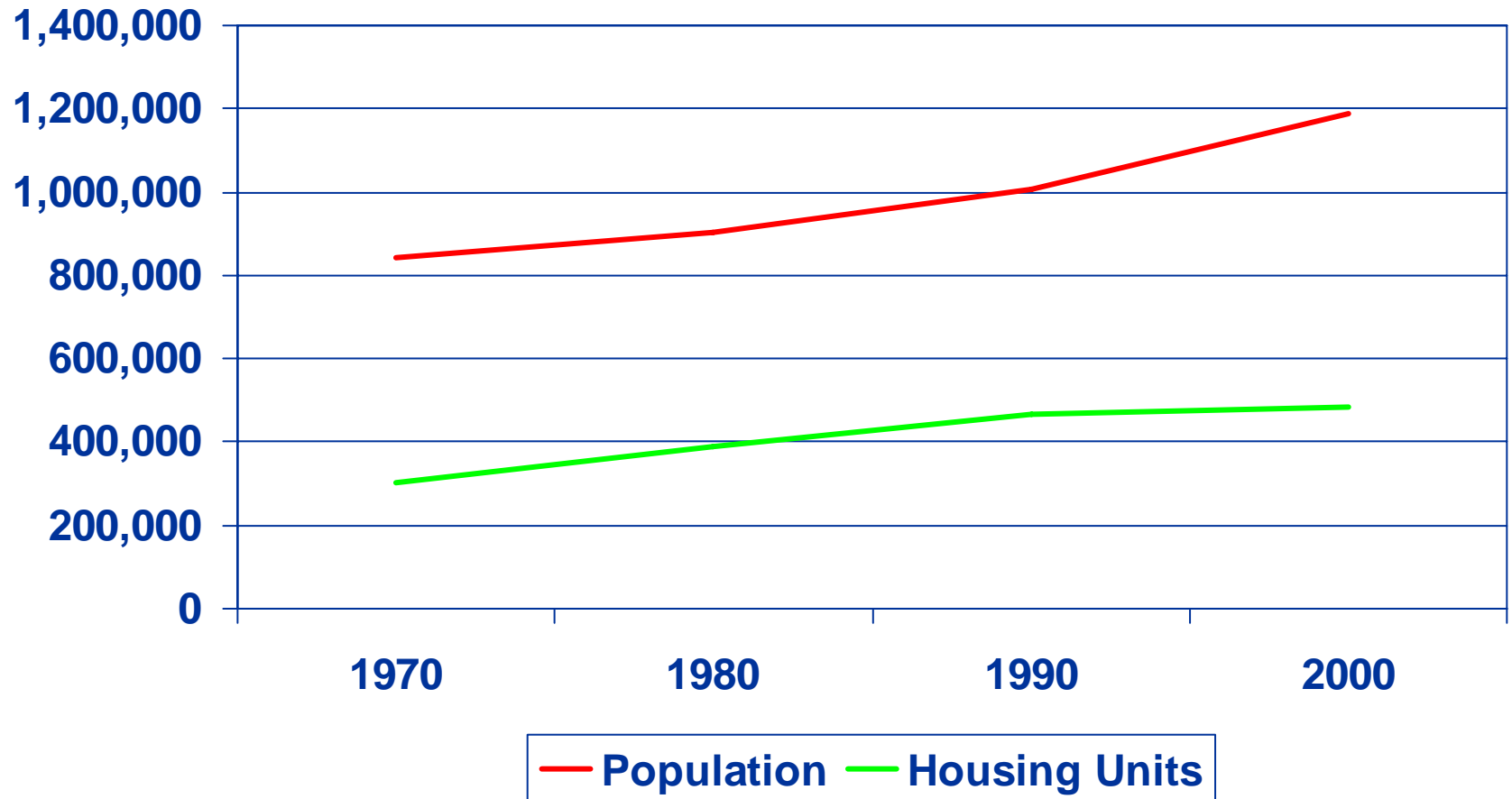
City of Dallas Density



Growth Trends



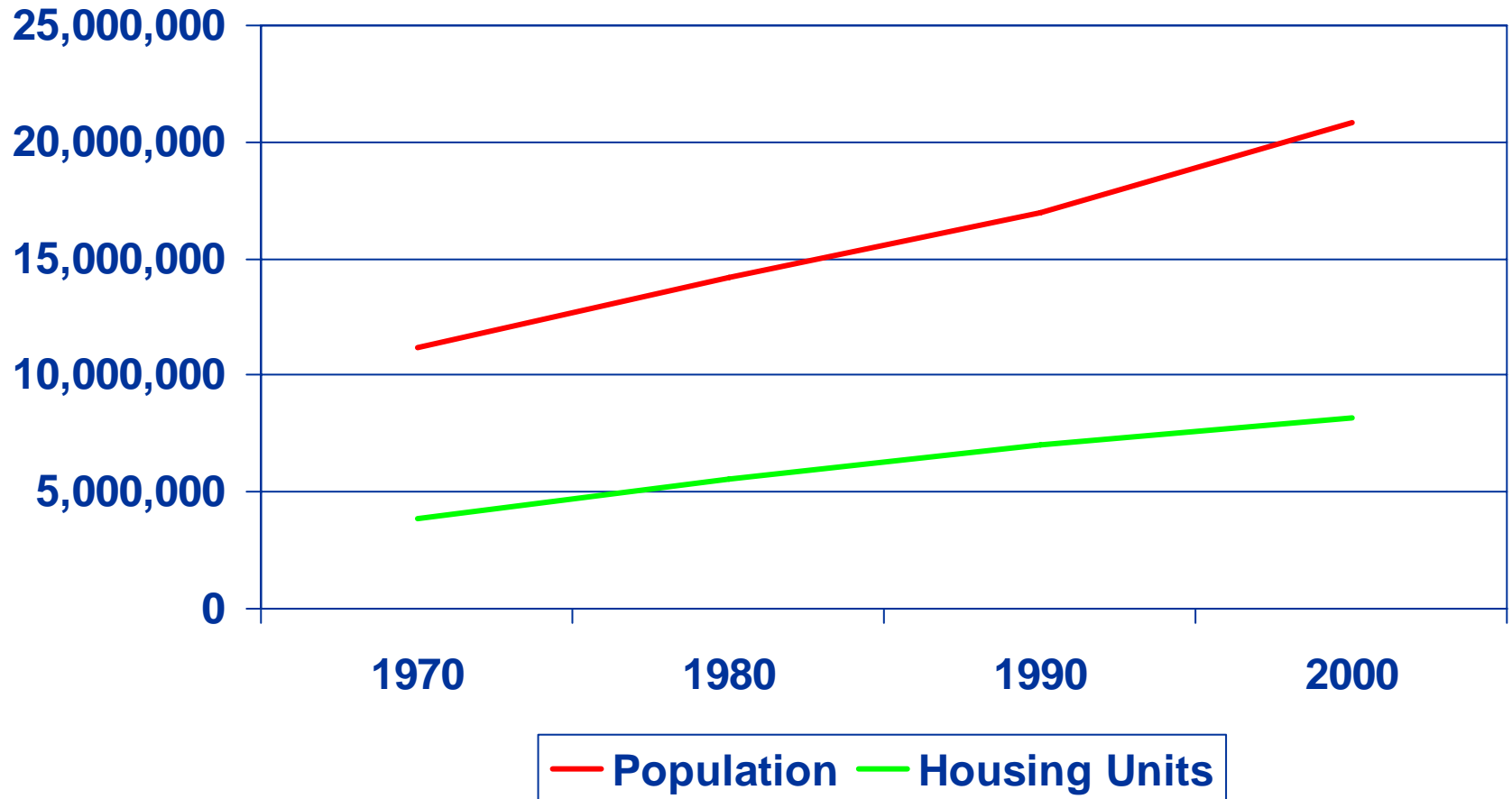
City of Dallas Population & Housing Units



Growth Trends



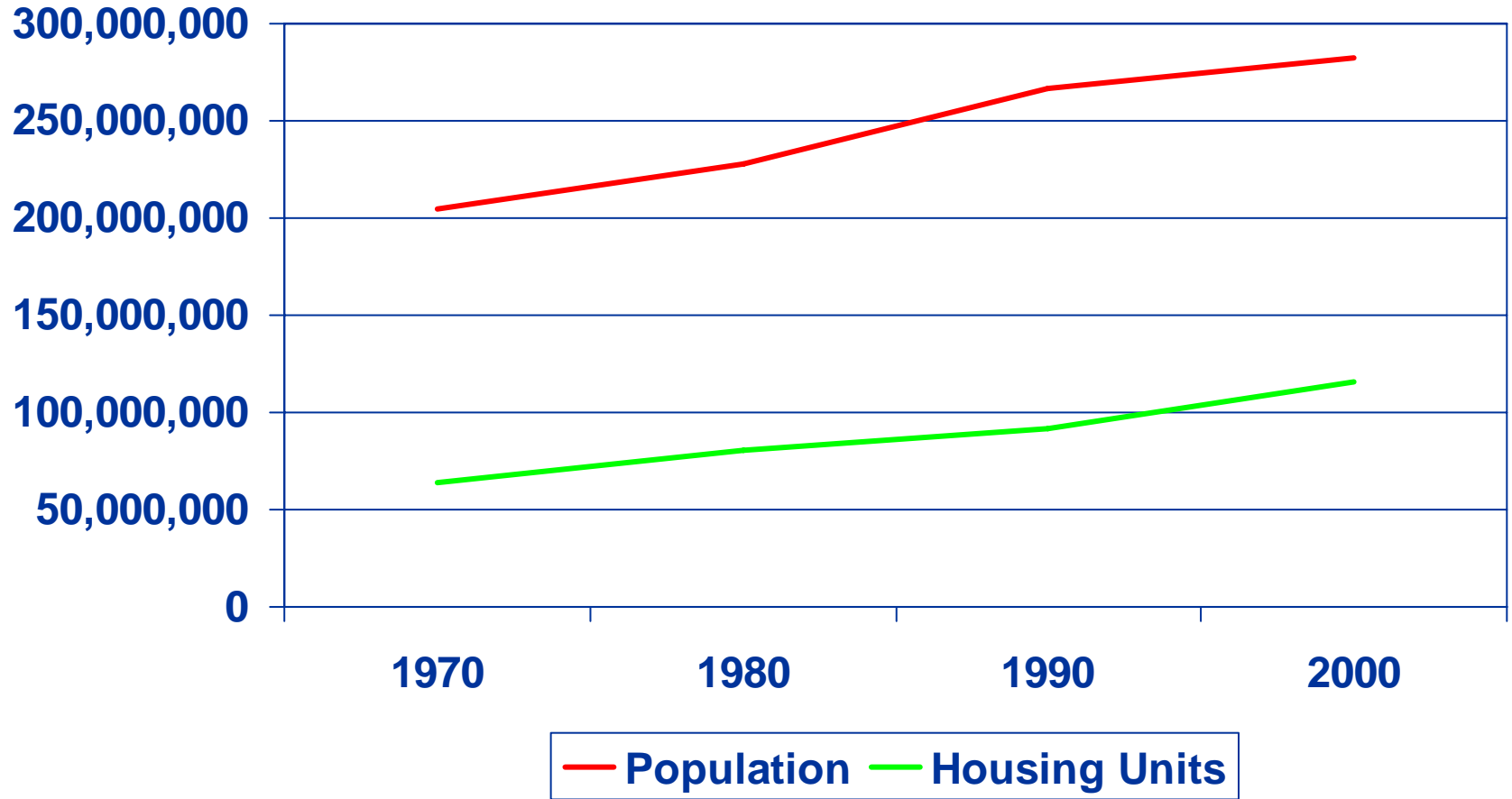
Texas Population & Housing Units



Growth Trends



United States Population & Housing Units



Growth Trends



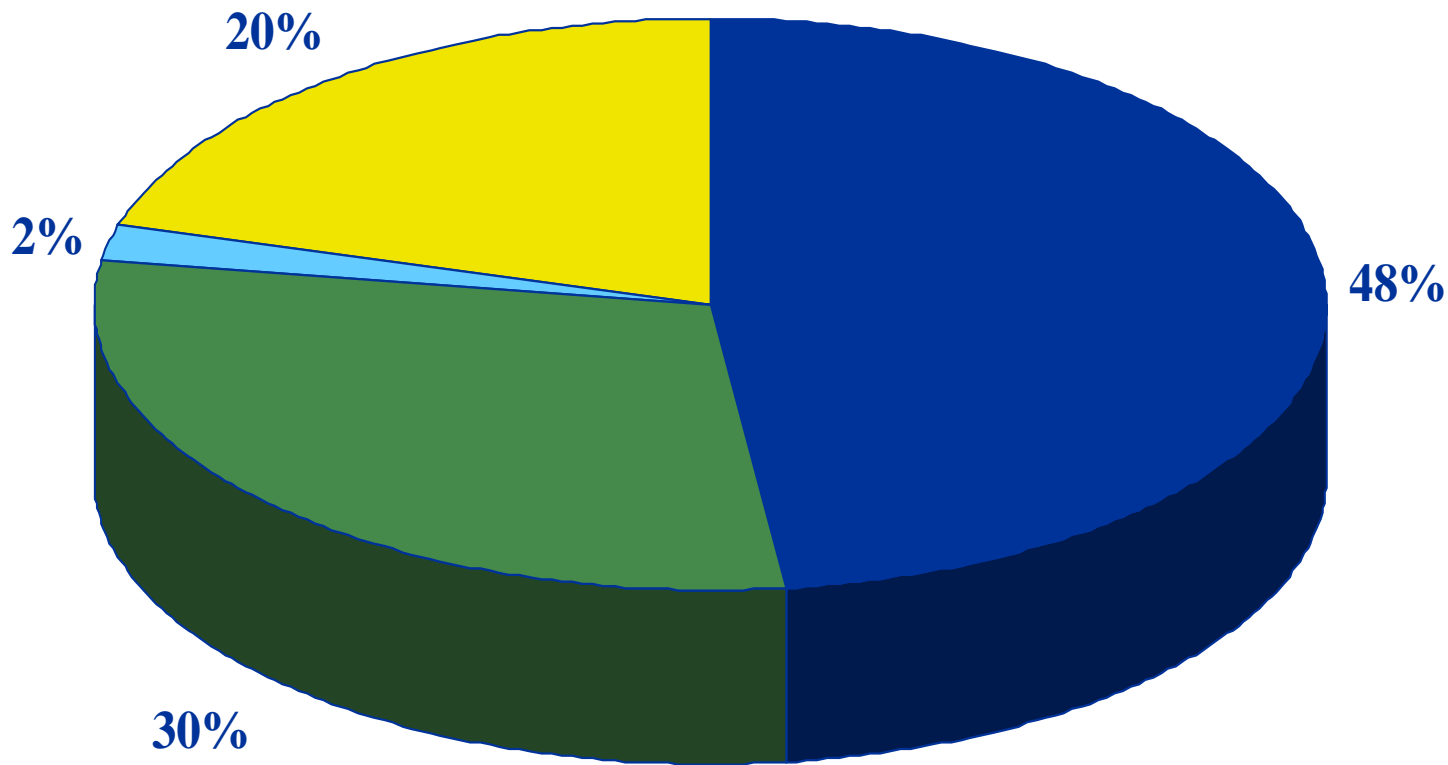
Historical Growth Trends

- Use of land has slowed, despite continued increase in population
- Population growth in Dallas and in Texas is stronger than in rest of U.S.



Census Trends

1990 Ethnicity

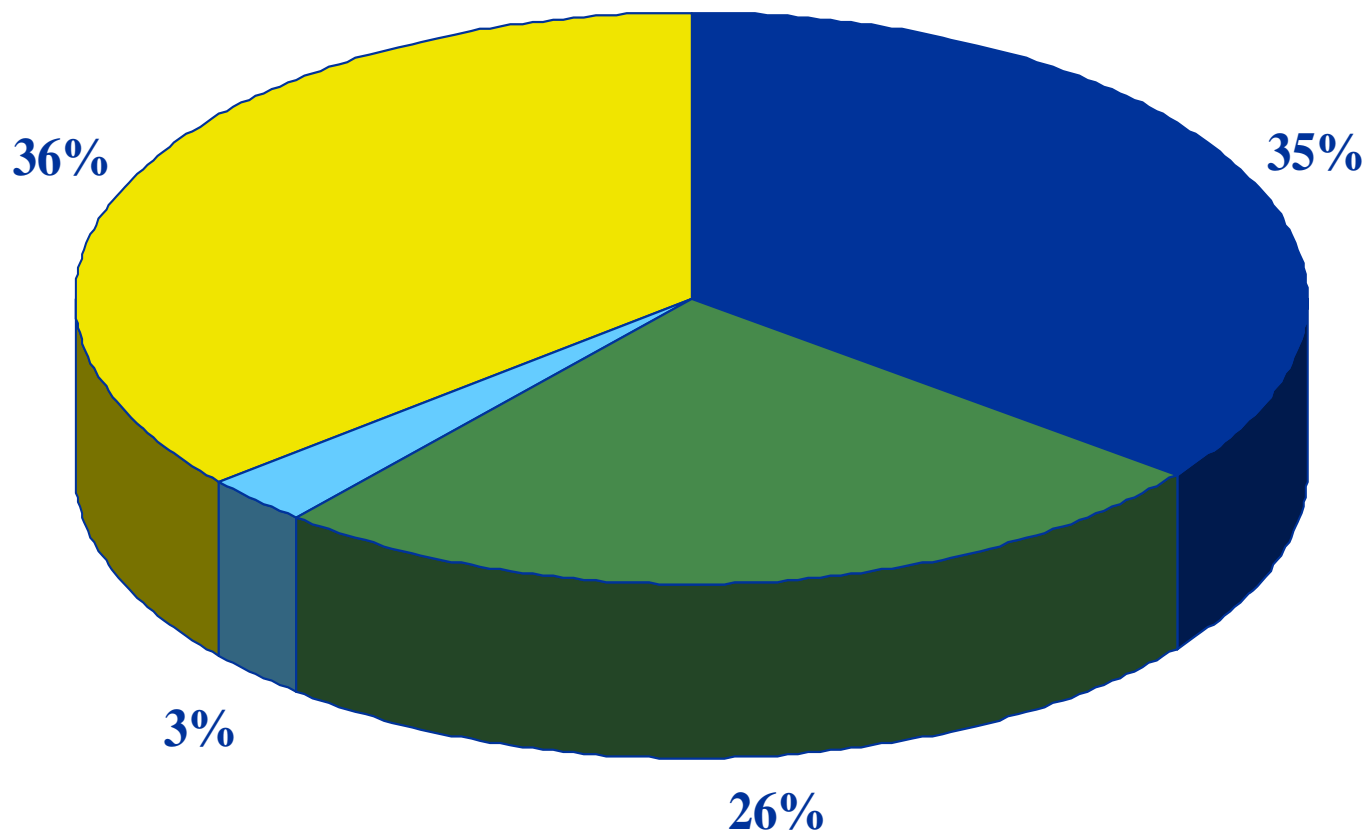


■ White ■ African American ■ Asian ■ Hispanic

Source: Census Bureau



Census Trends 2000 Ethnicity

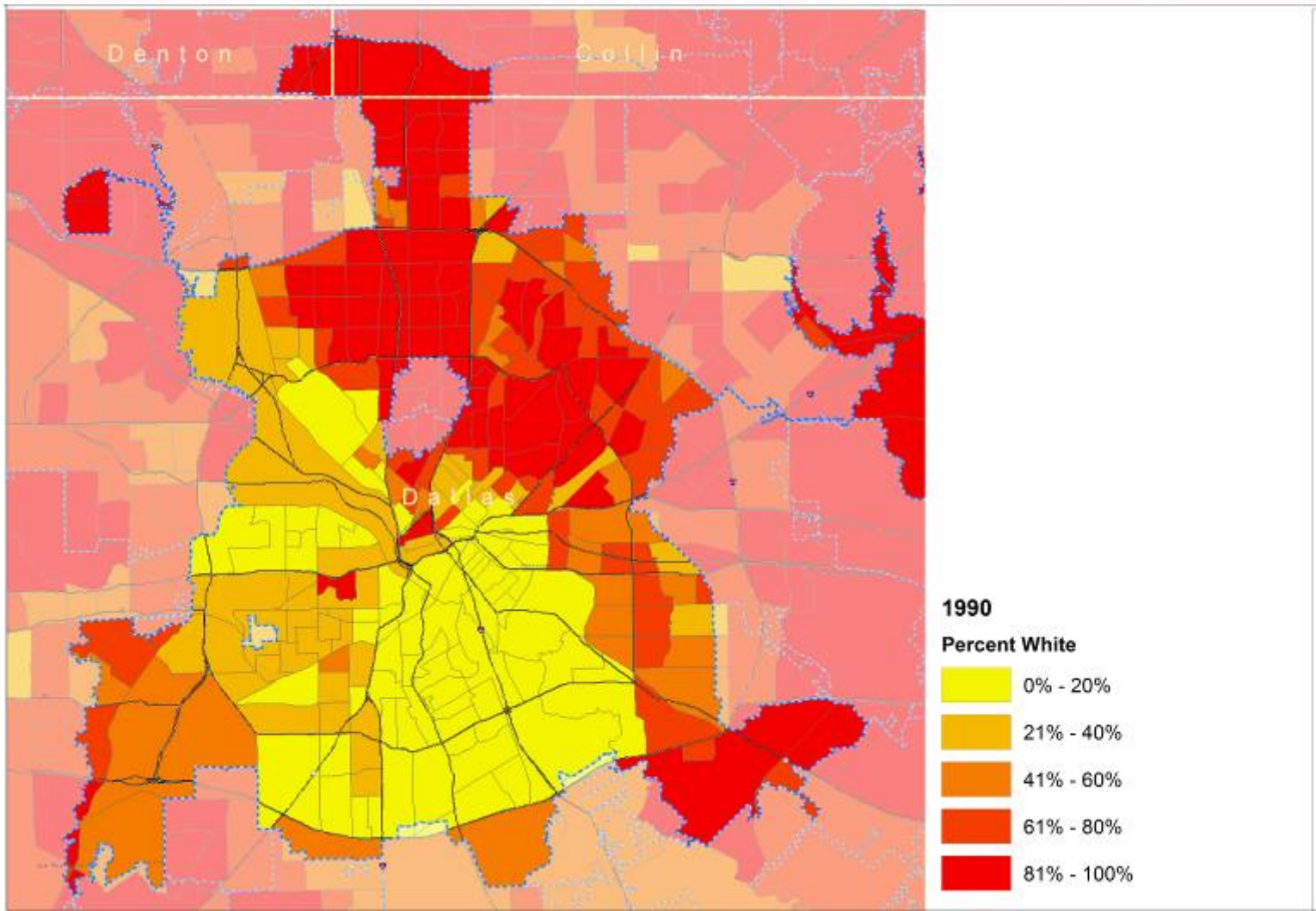


■ White ■ African American ■ Asian ■ Hispanic

Source: Census Bureau



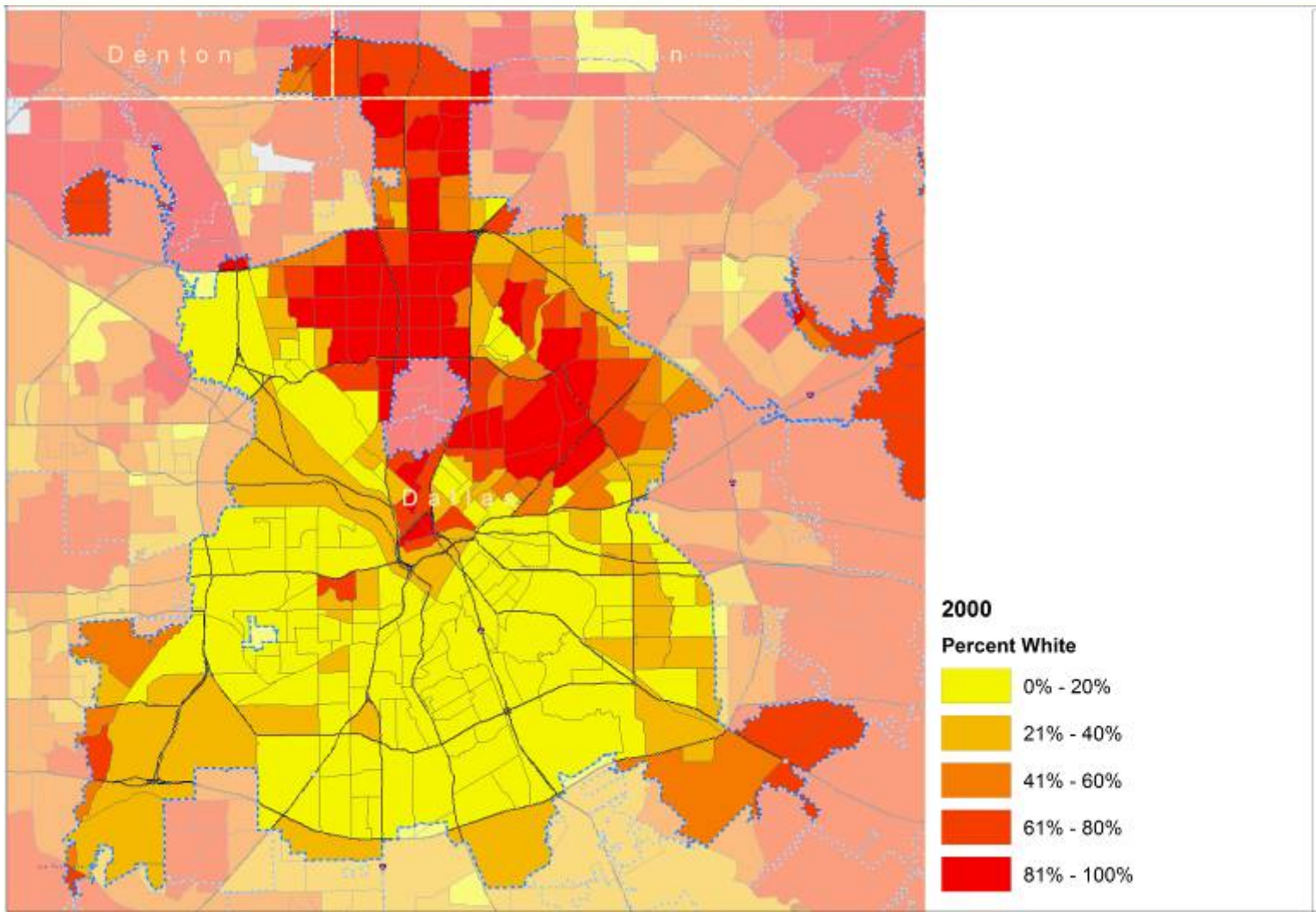
Percent White only 1990



Source: Census Bureau



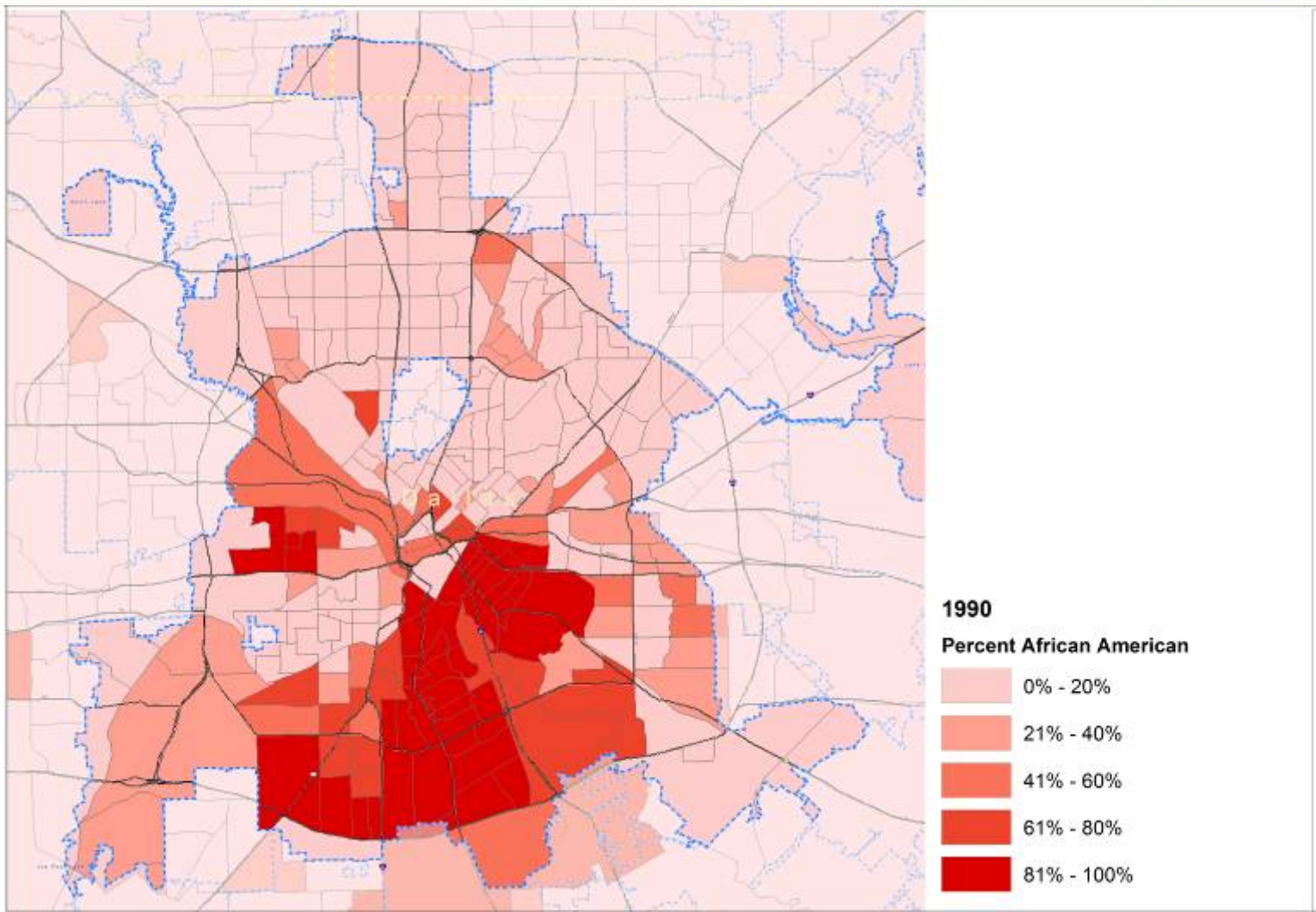
Percent White only 2000



Source: Census Bureau



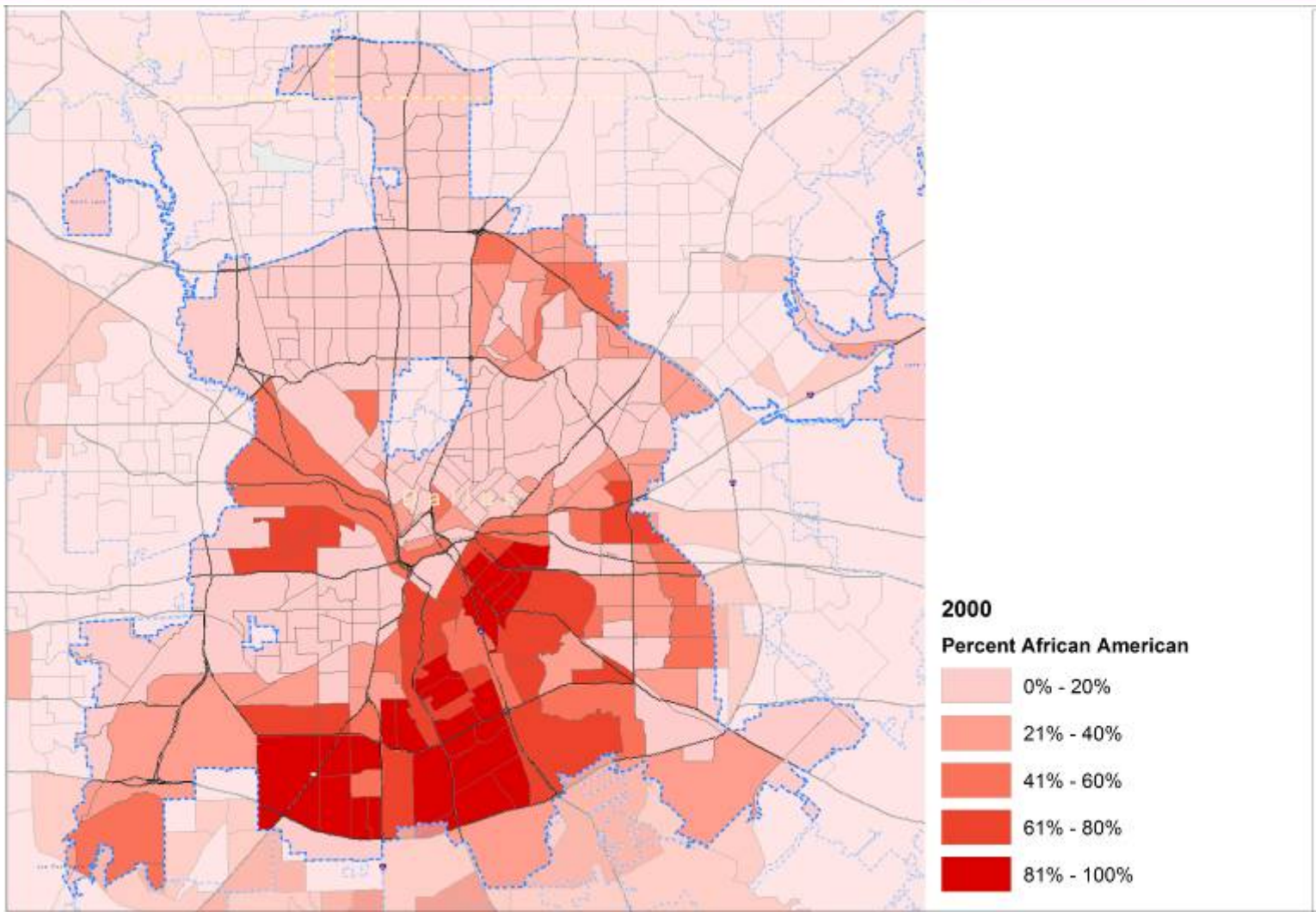
% African American 1990



Source: Census Bureau



% African American 2000

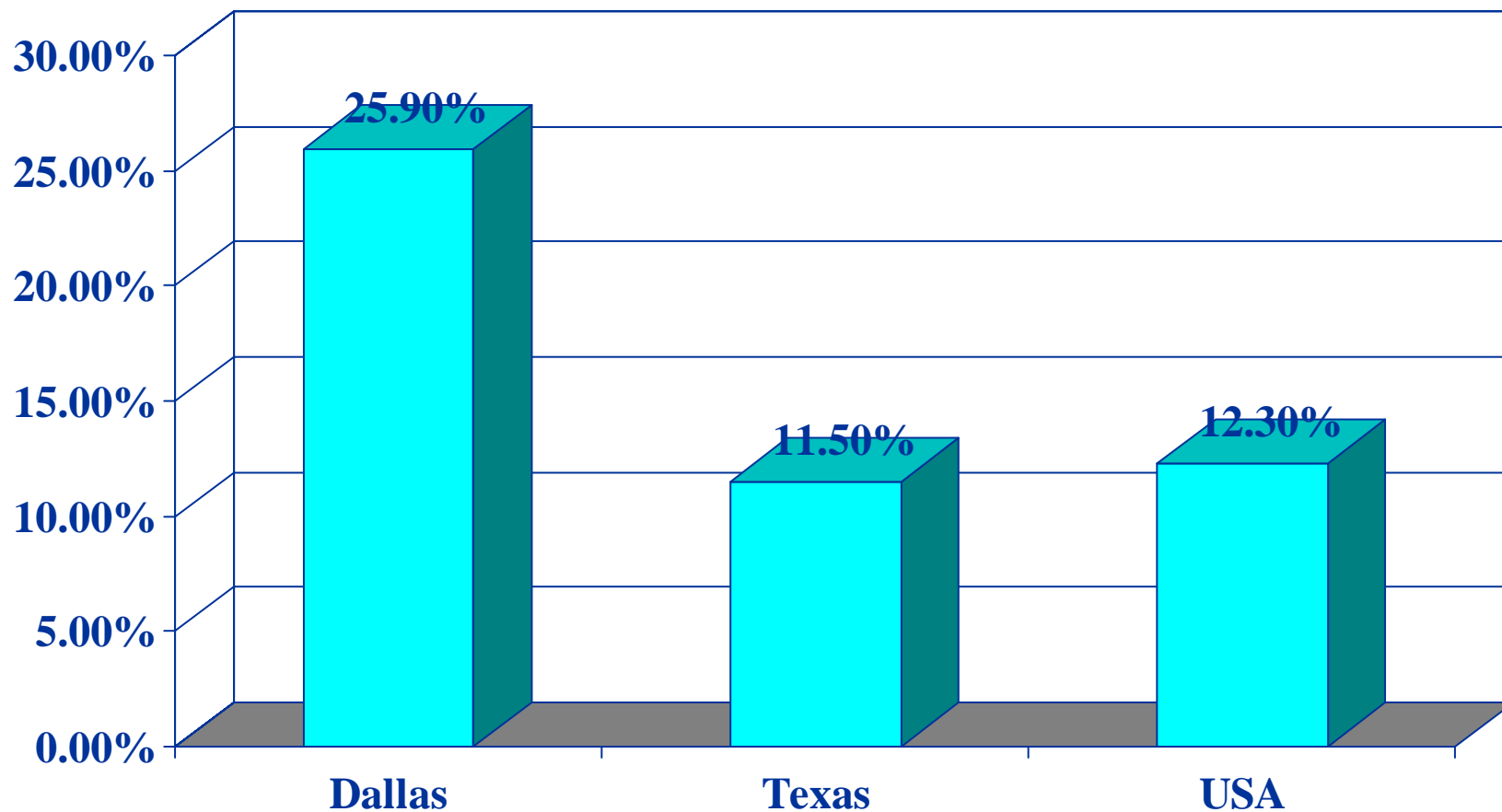


Source: Census Bureau



2000 Census Trends

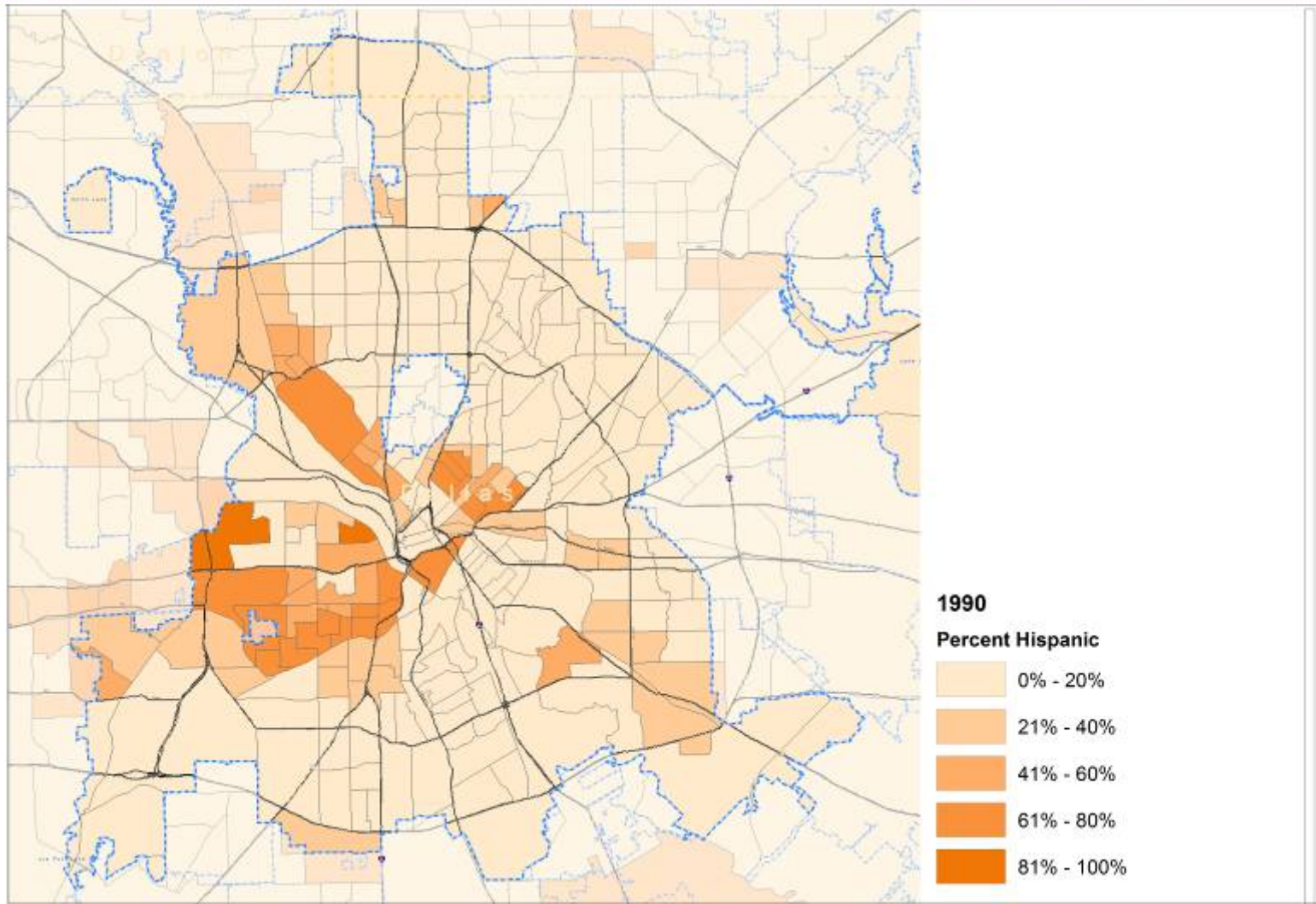
Percent African American



Source: Census Bureau



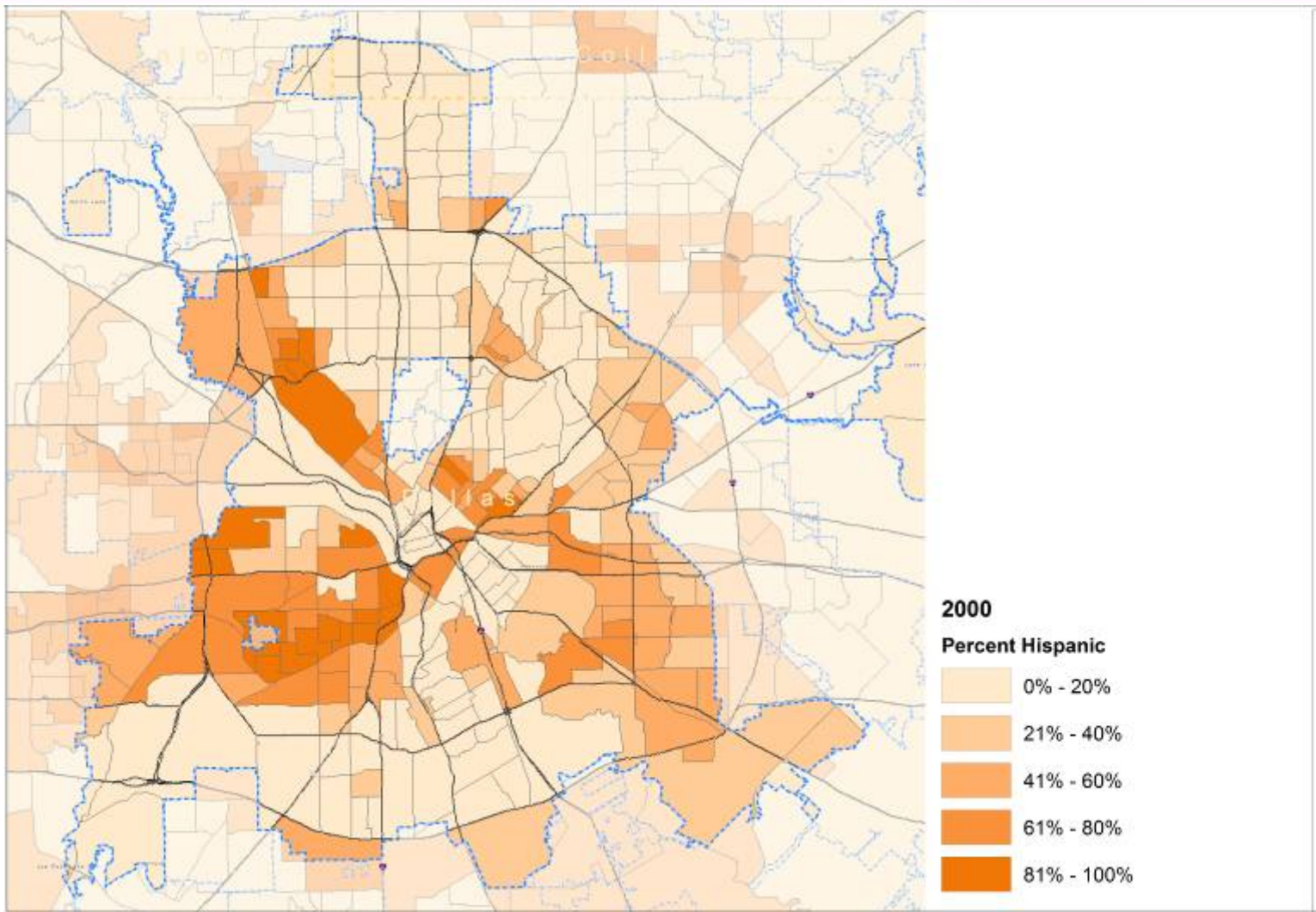
% Hispanic 1990



Source: Census Bureau



% Hispanic 2000

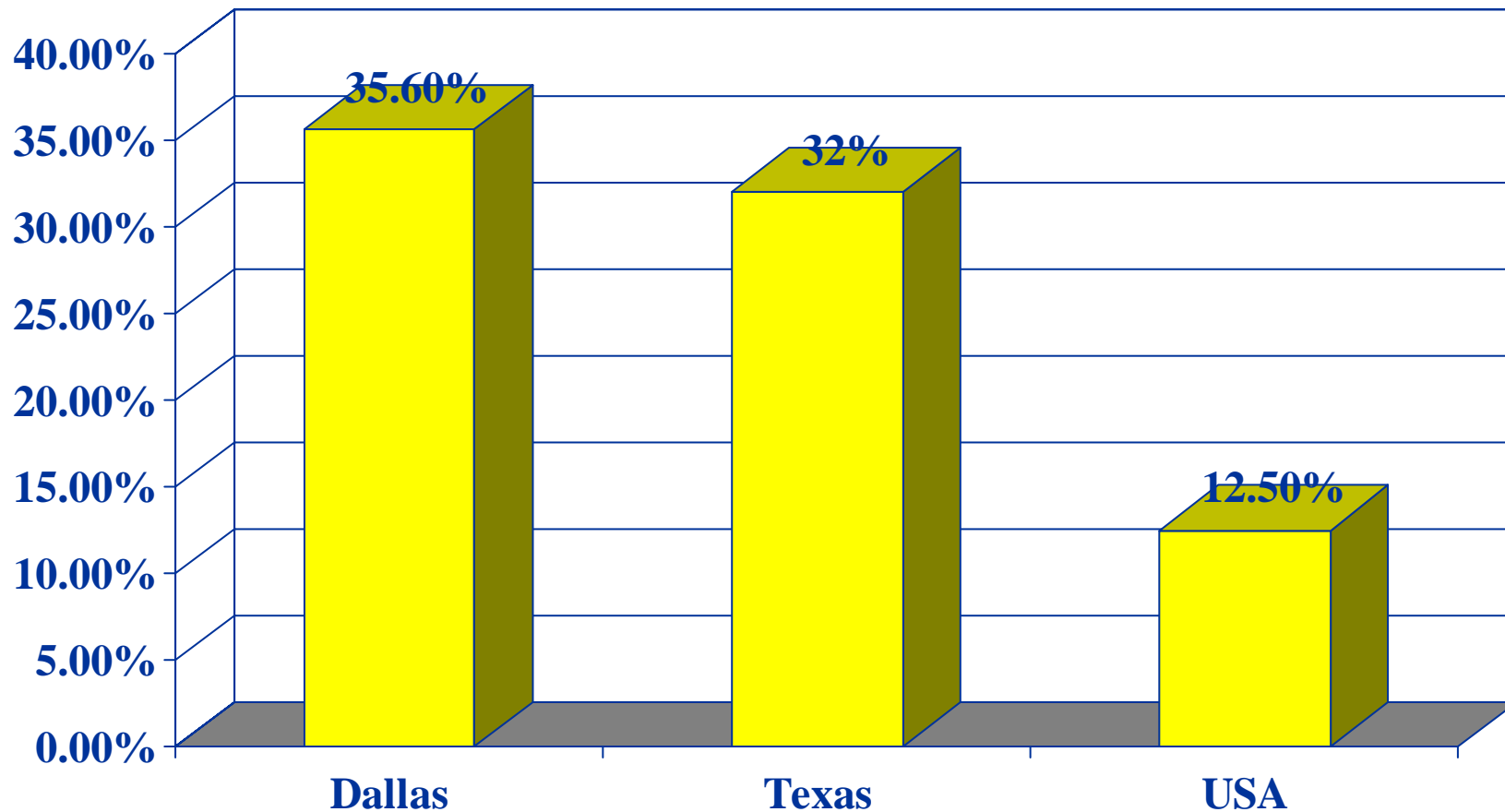


Source: Census Bureau



2000 Census Trends

Percent Hispanic

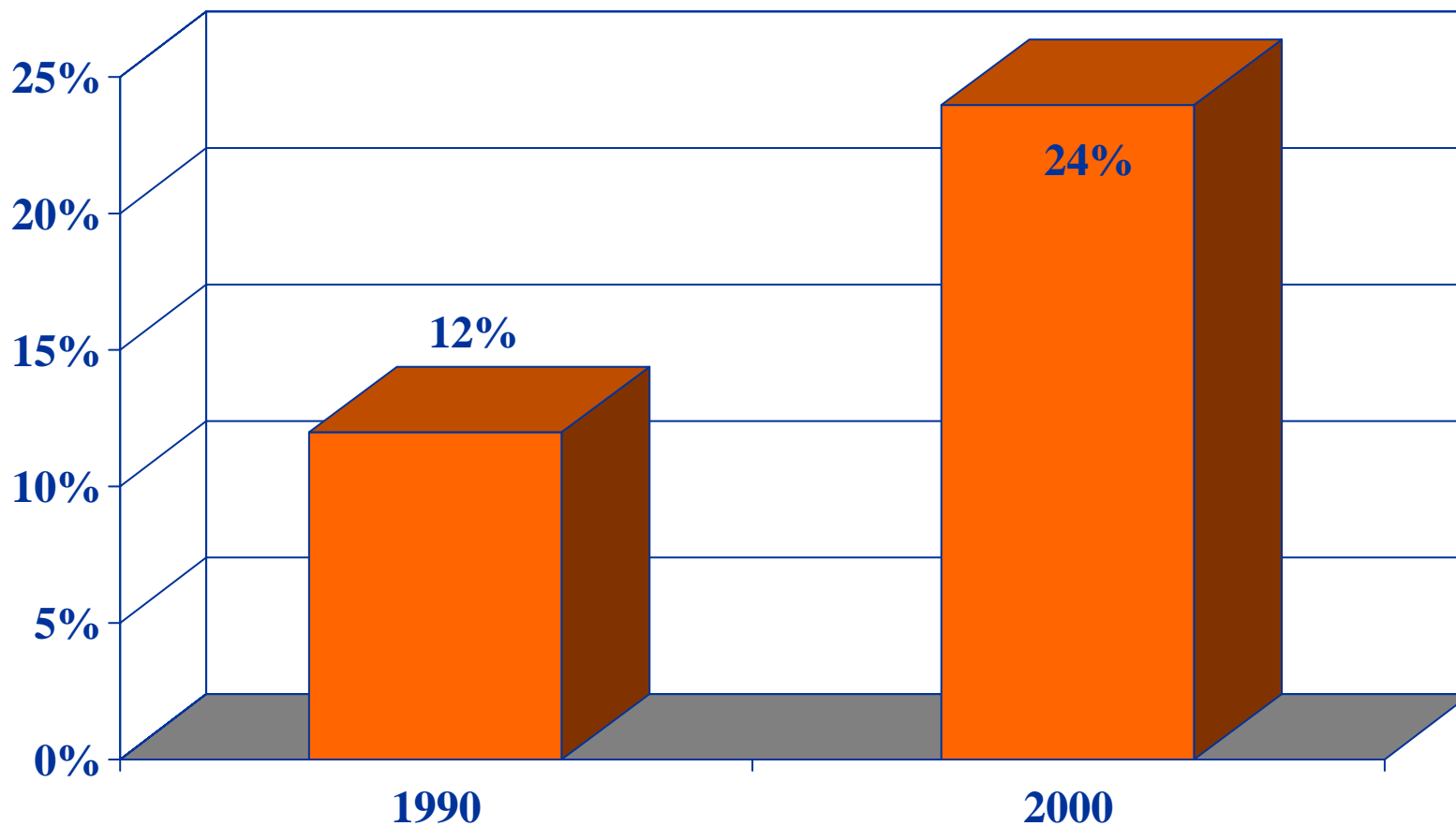


Source: Census Bureau



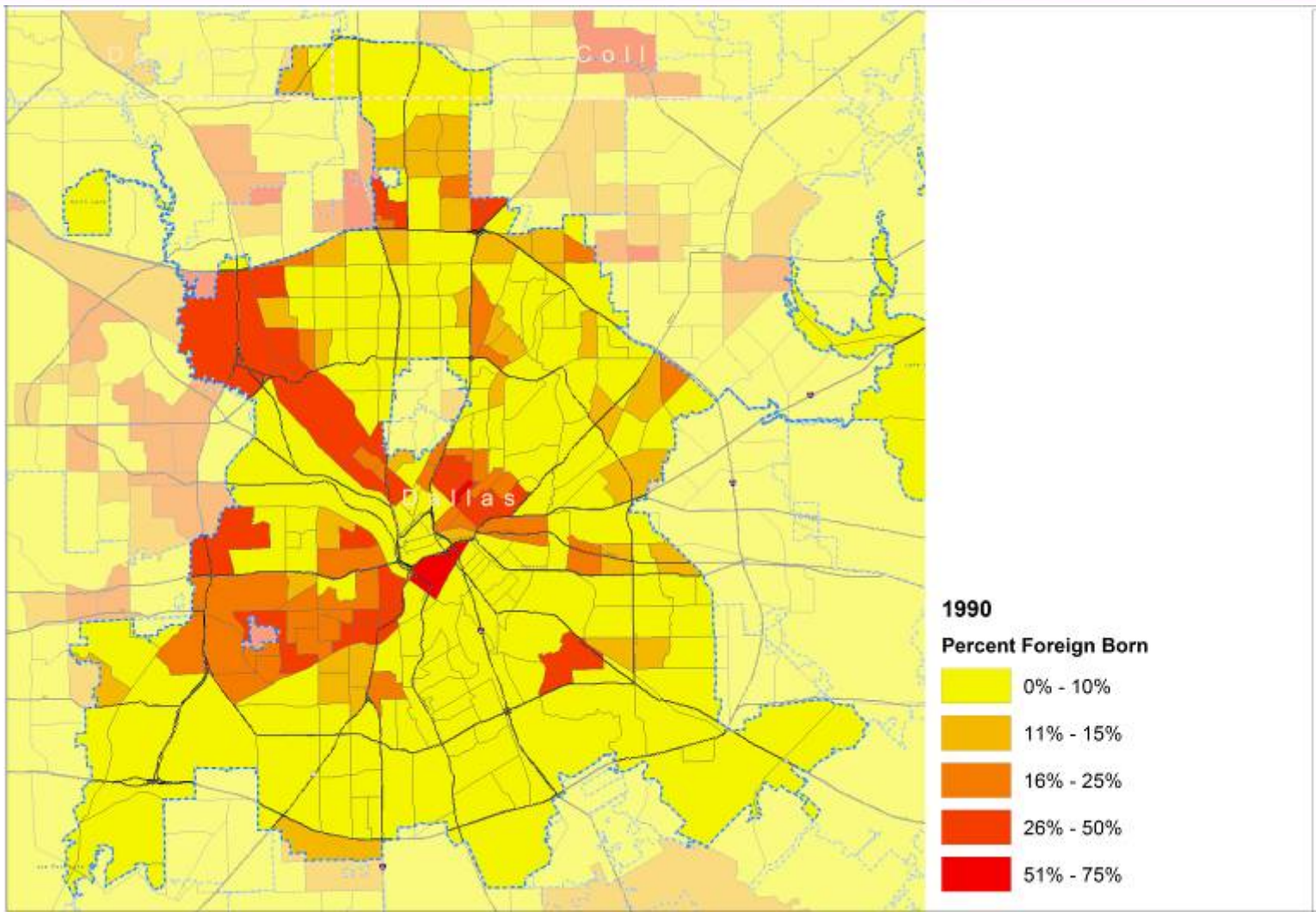
Census Trends

Percentage Foreign Born





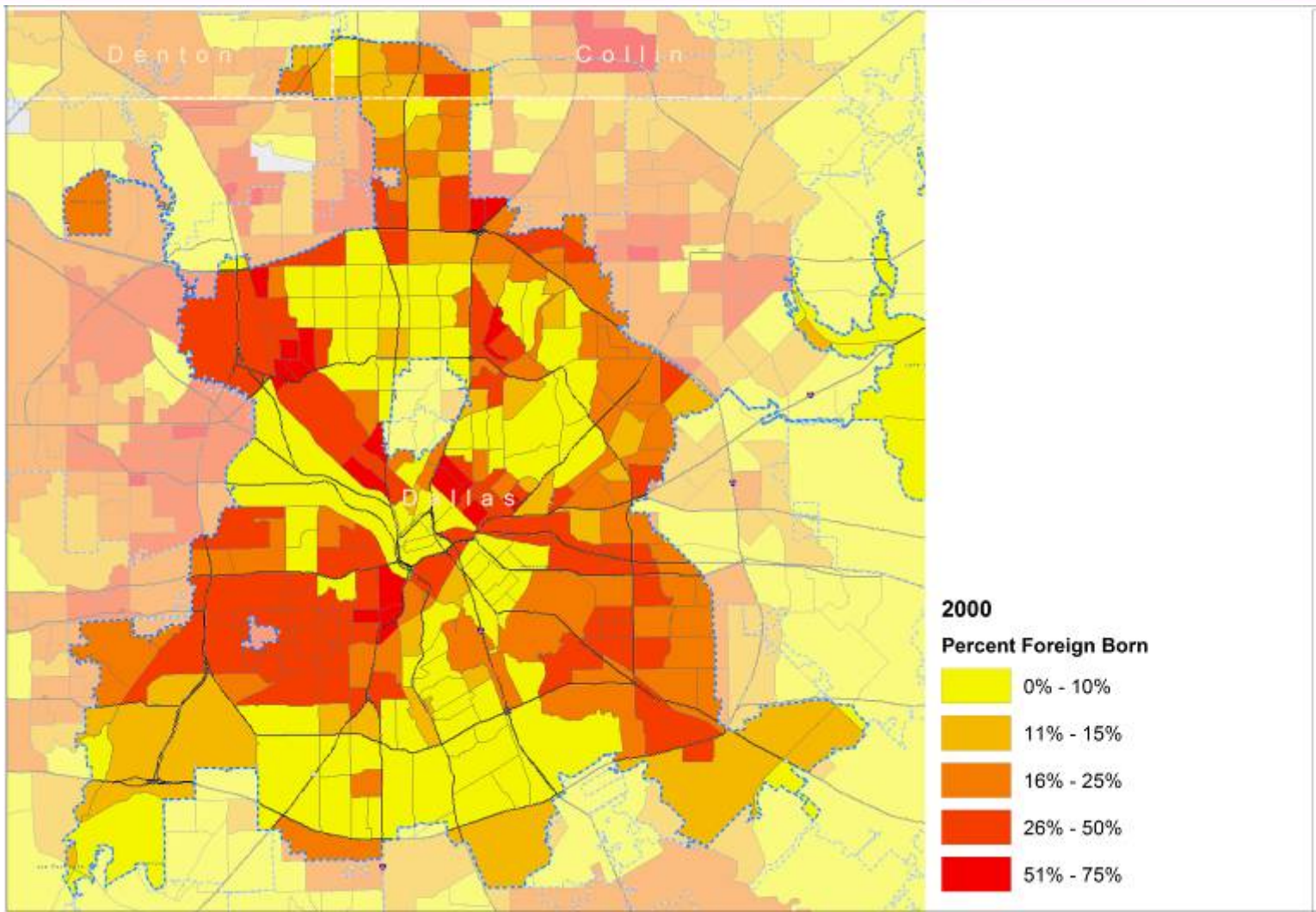
% Foreign Born 1990



Source: Census Bureau



% Foreign Born 2000

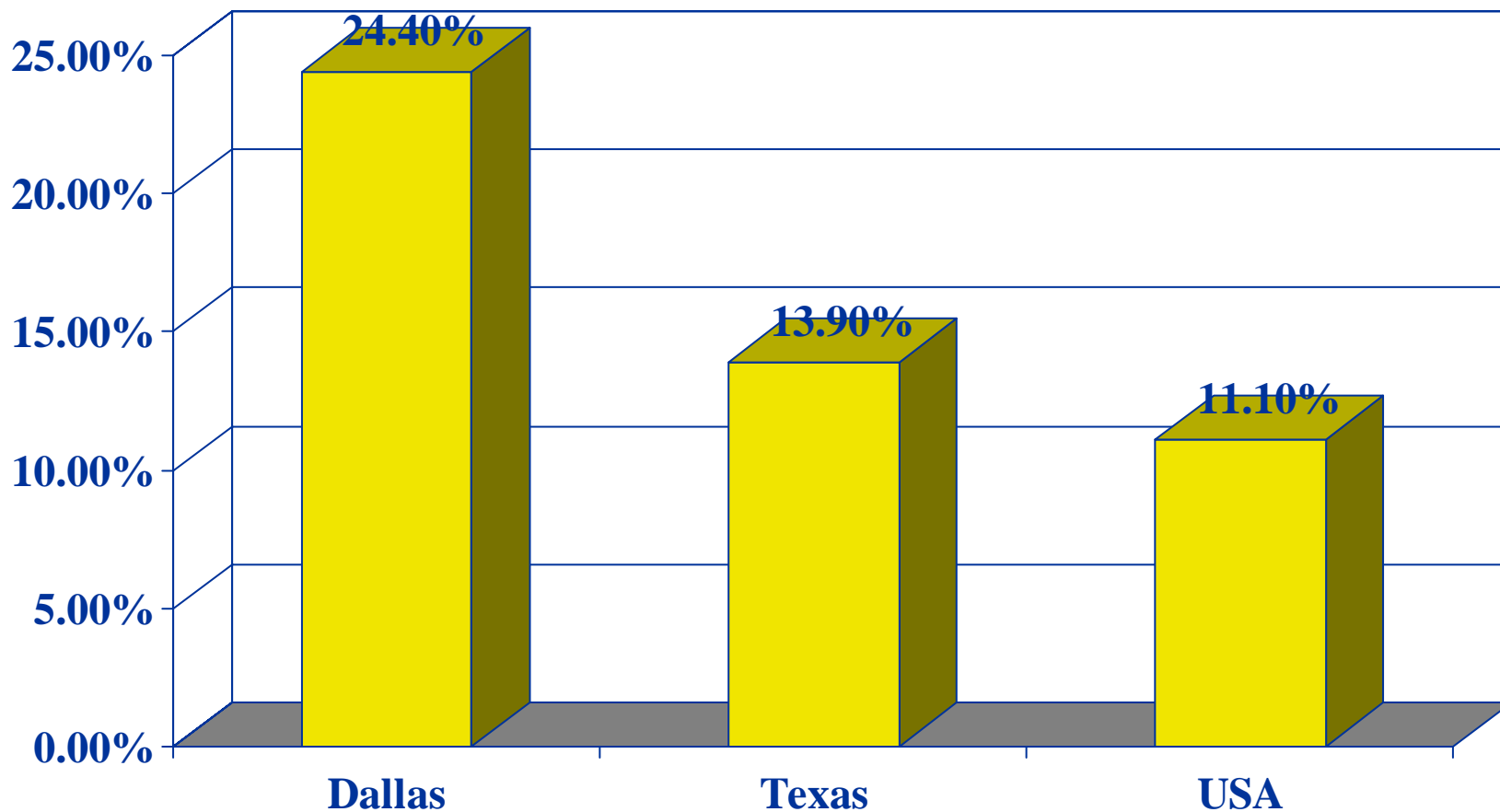


Source: Census Bureau



2000 Census Trends

Percent Foreign Born

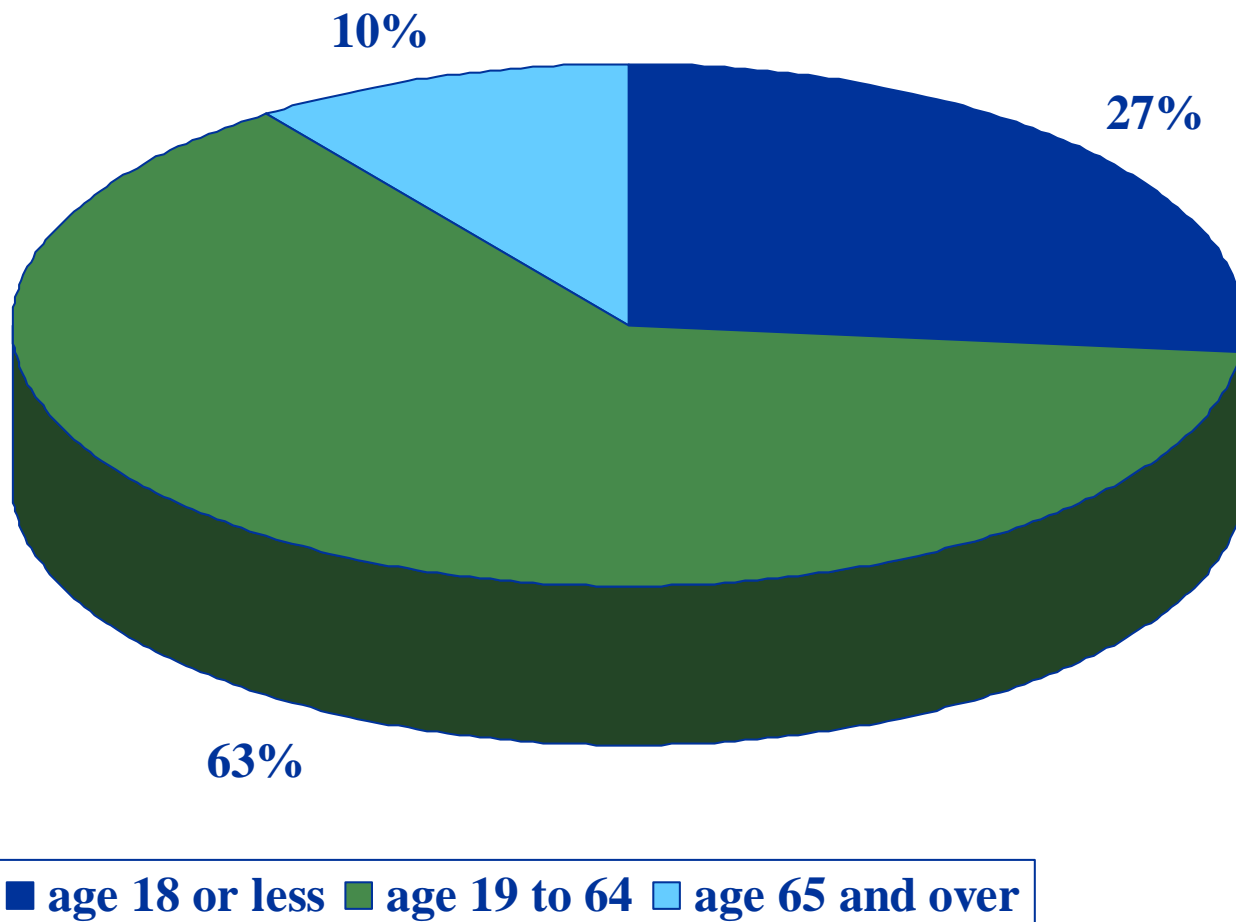


Source: Census Bureau



Census Trends

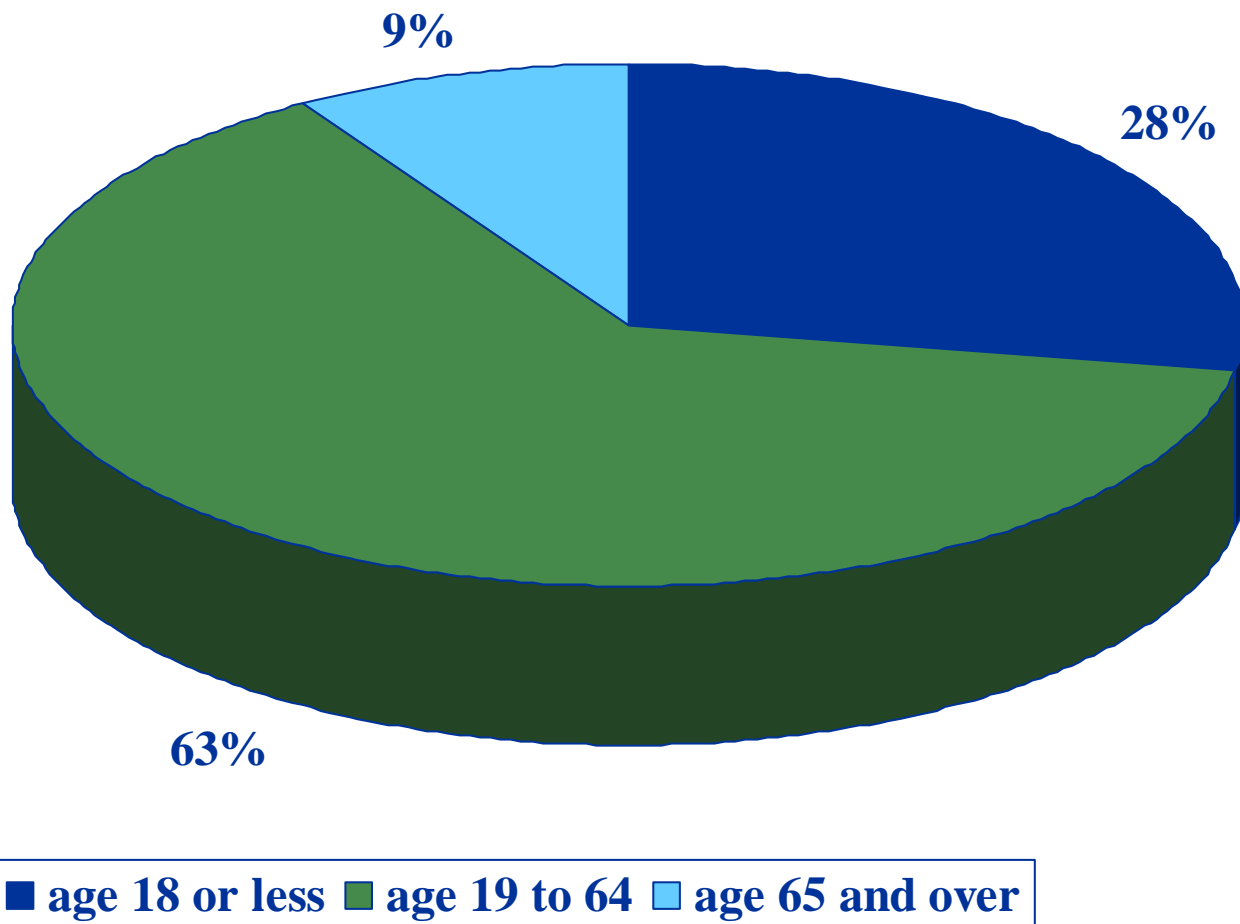
1990 Age





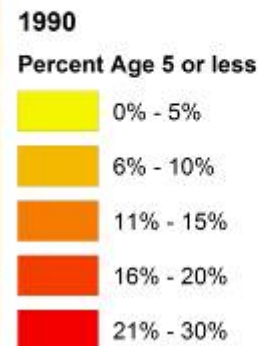
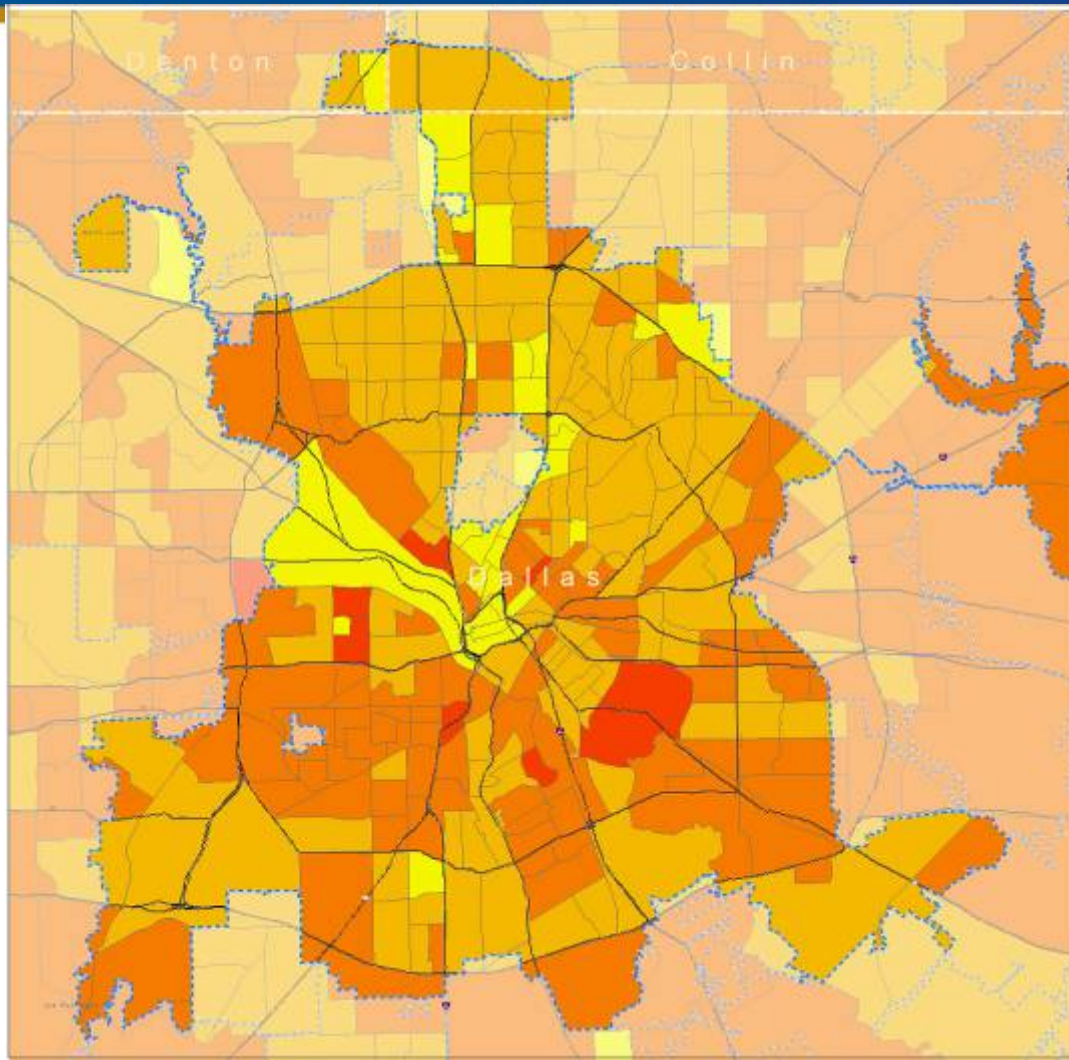
Census Trends

2000 Age



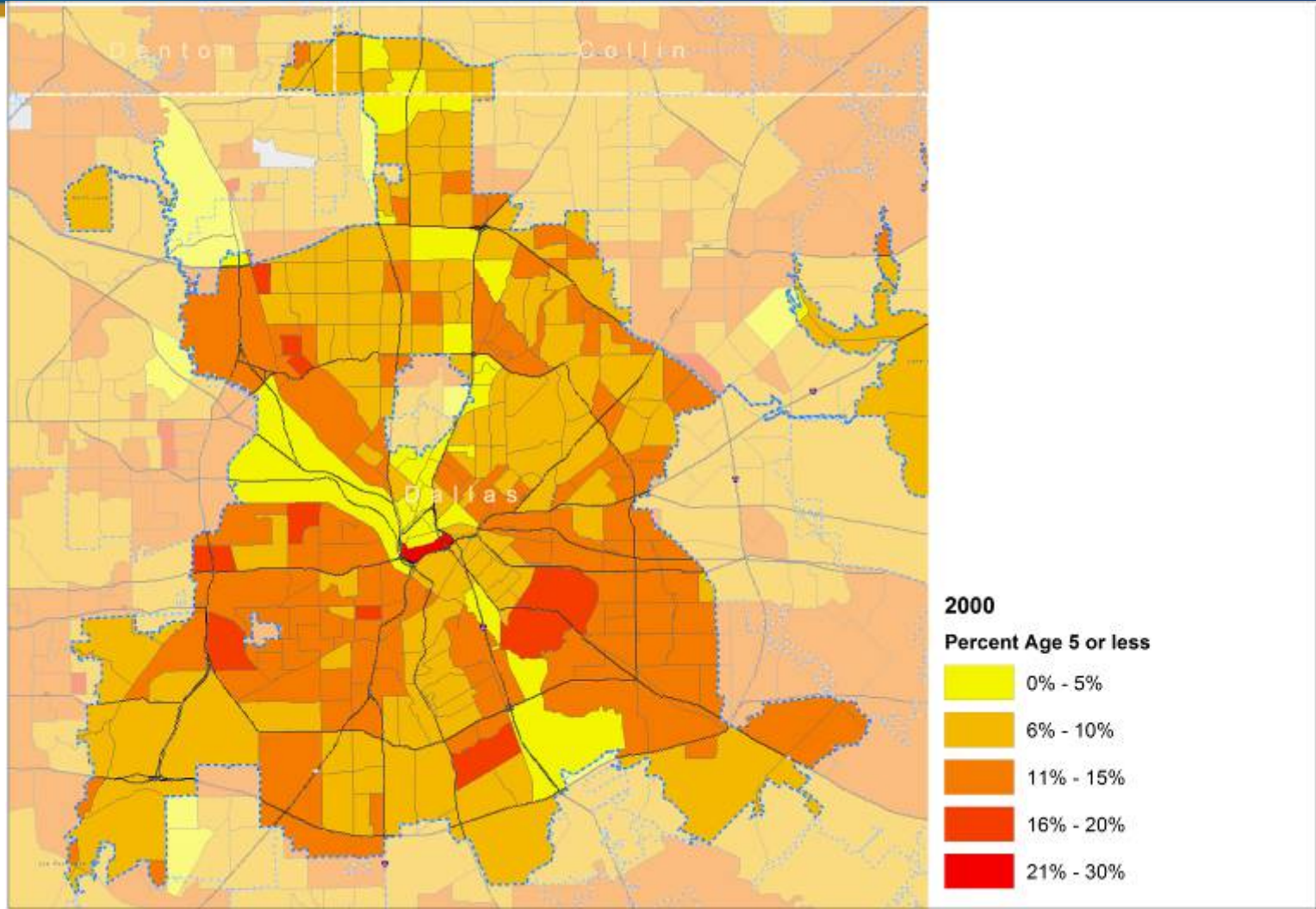


Census Trends





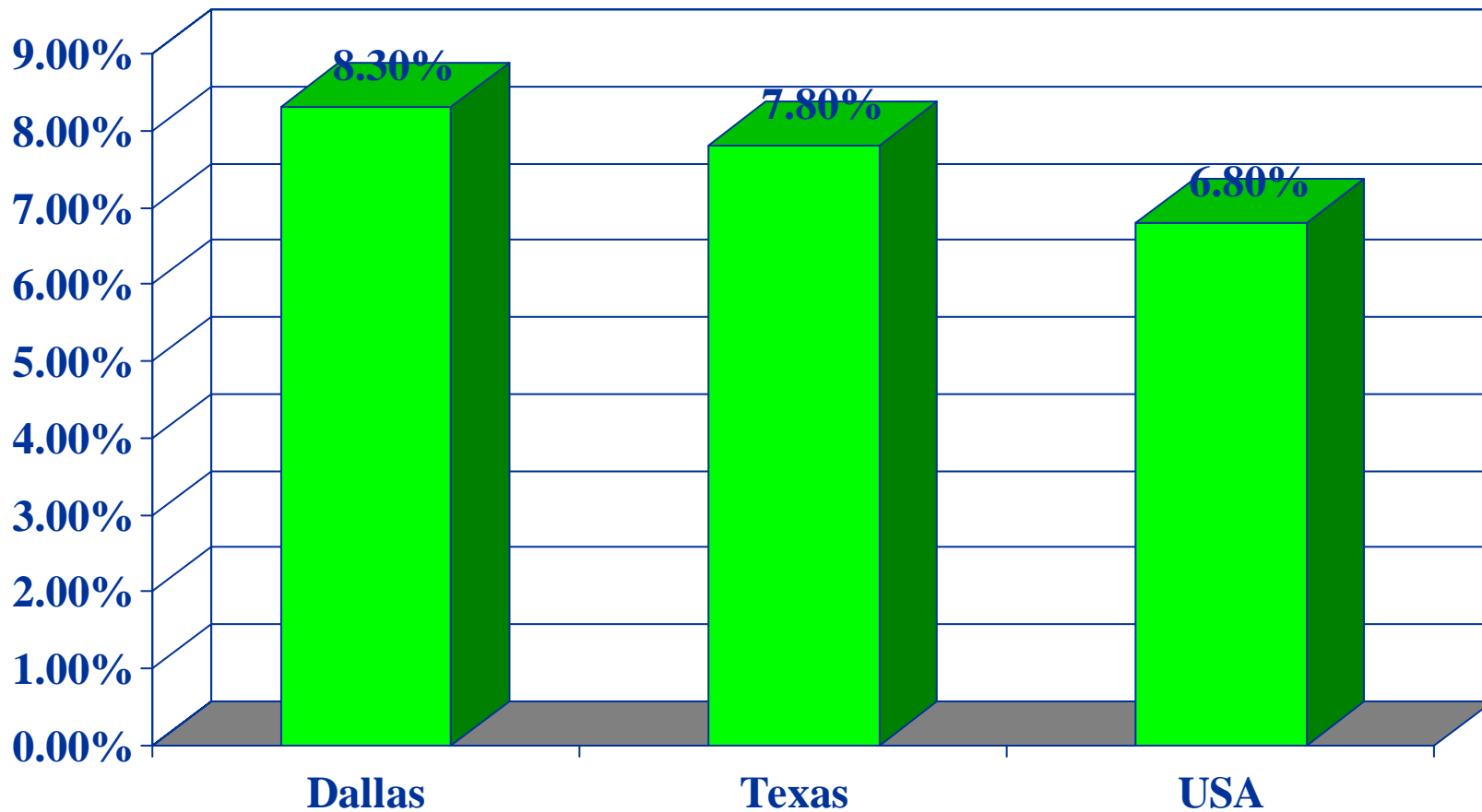
Census Trends





2000 Census Trends

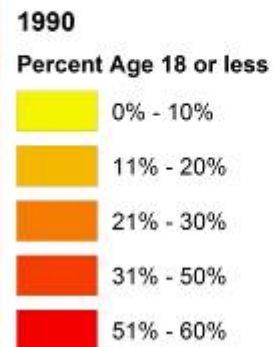
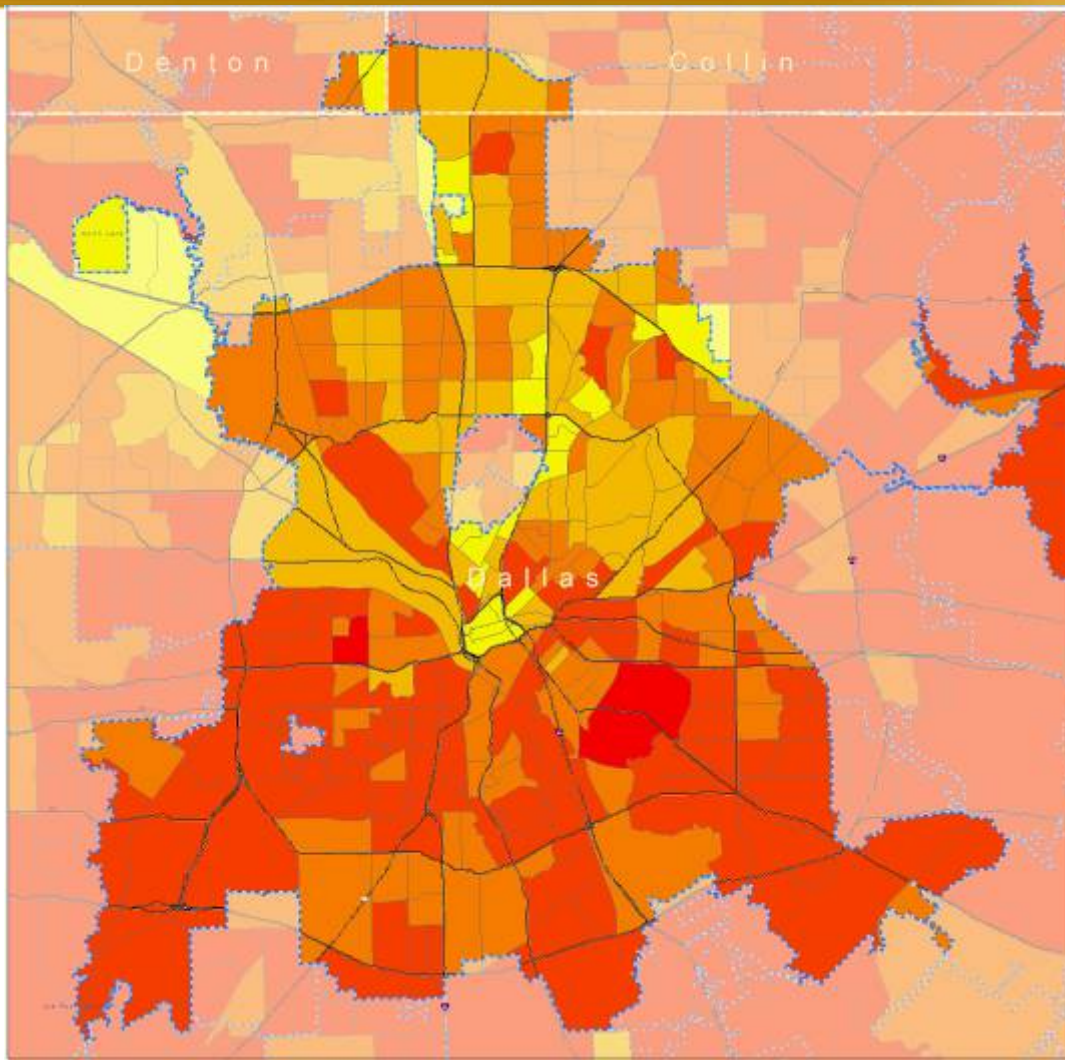
Age Under 5



Source: Census Bureau

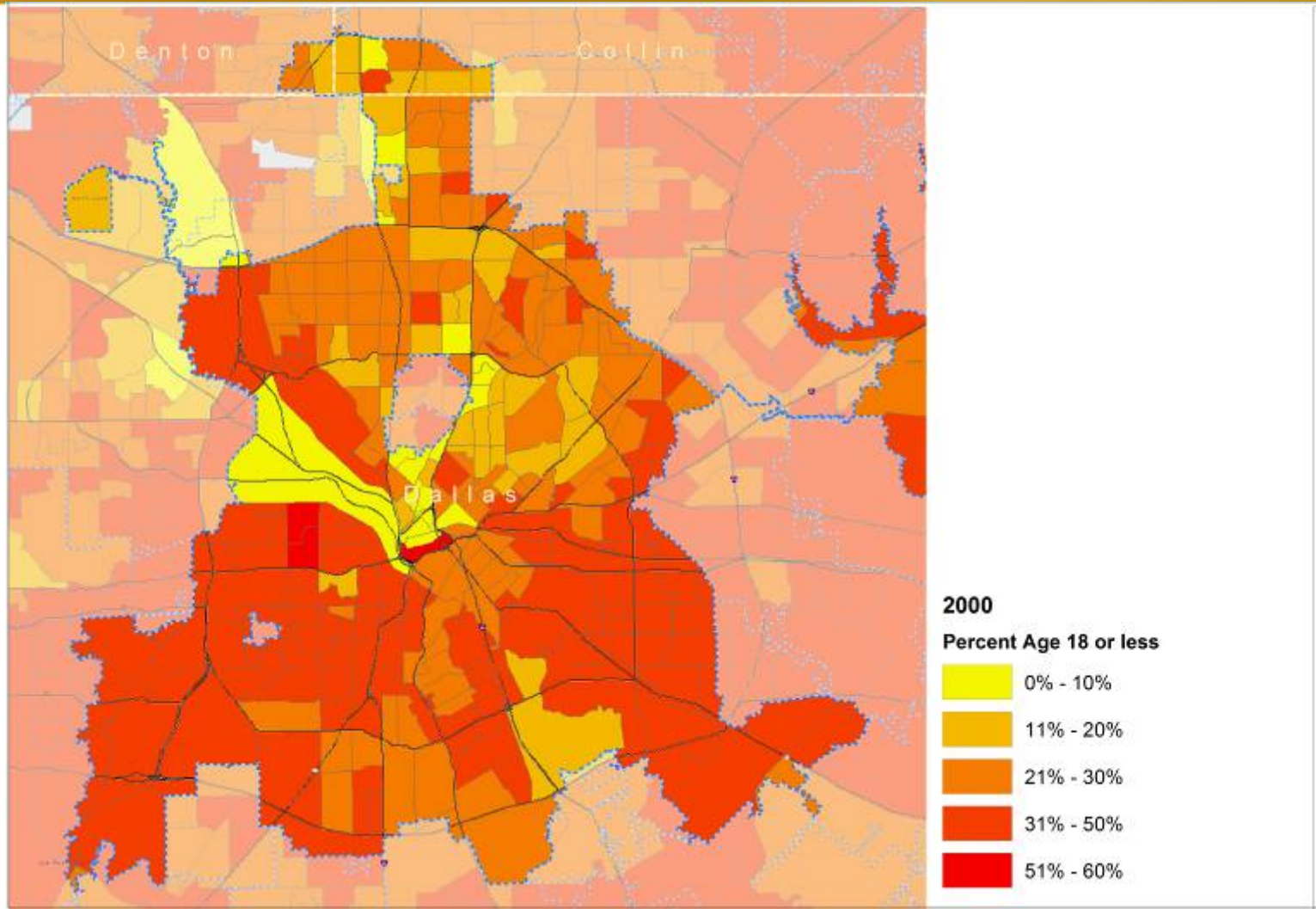


Census Trends



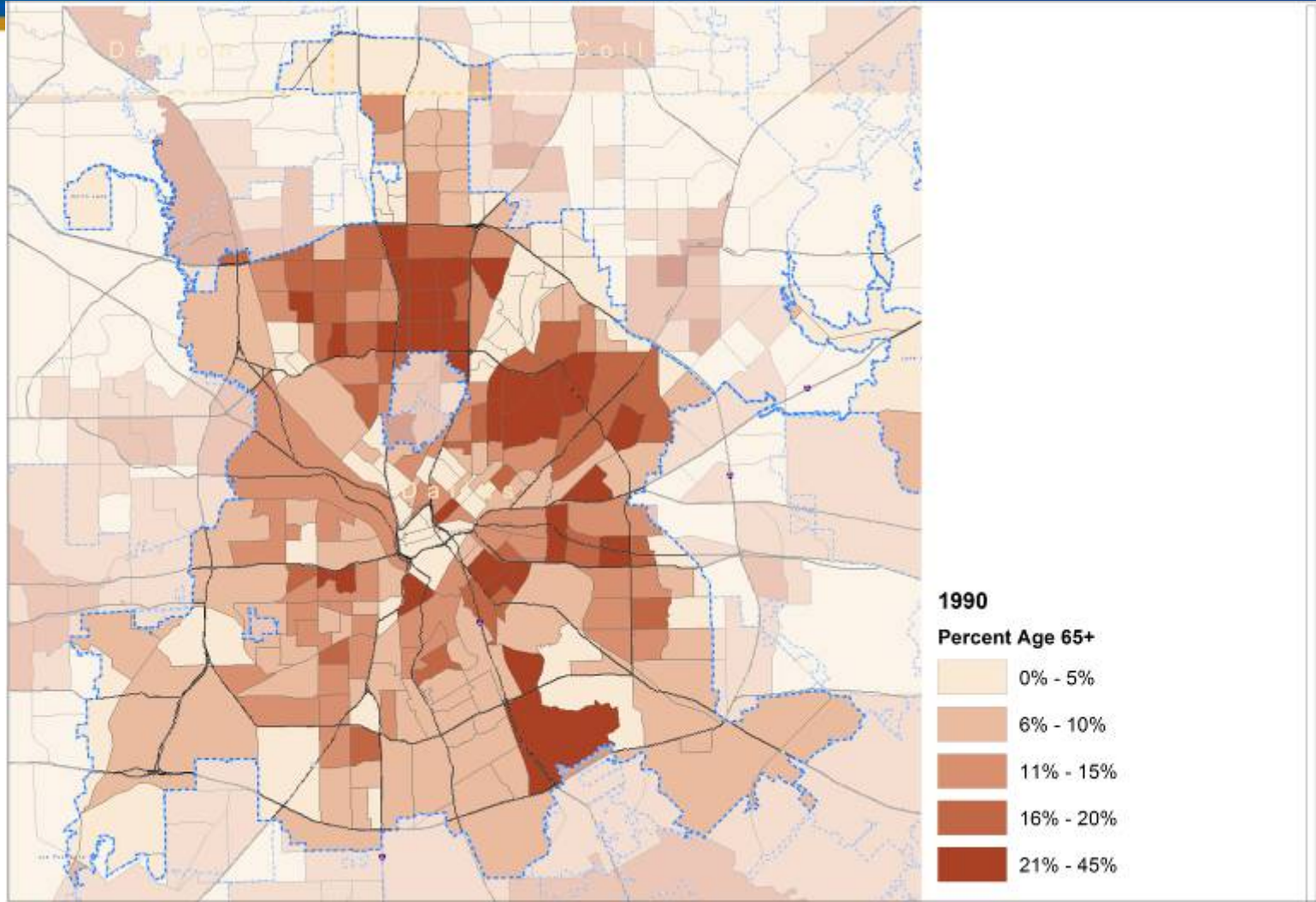


Census Trends



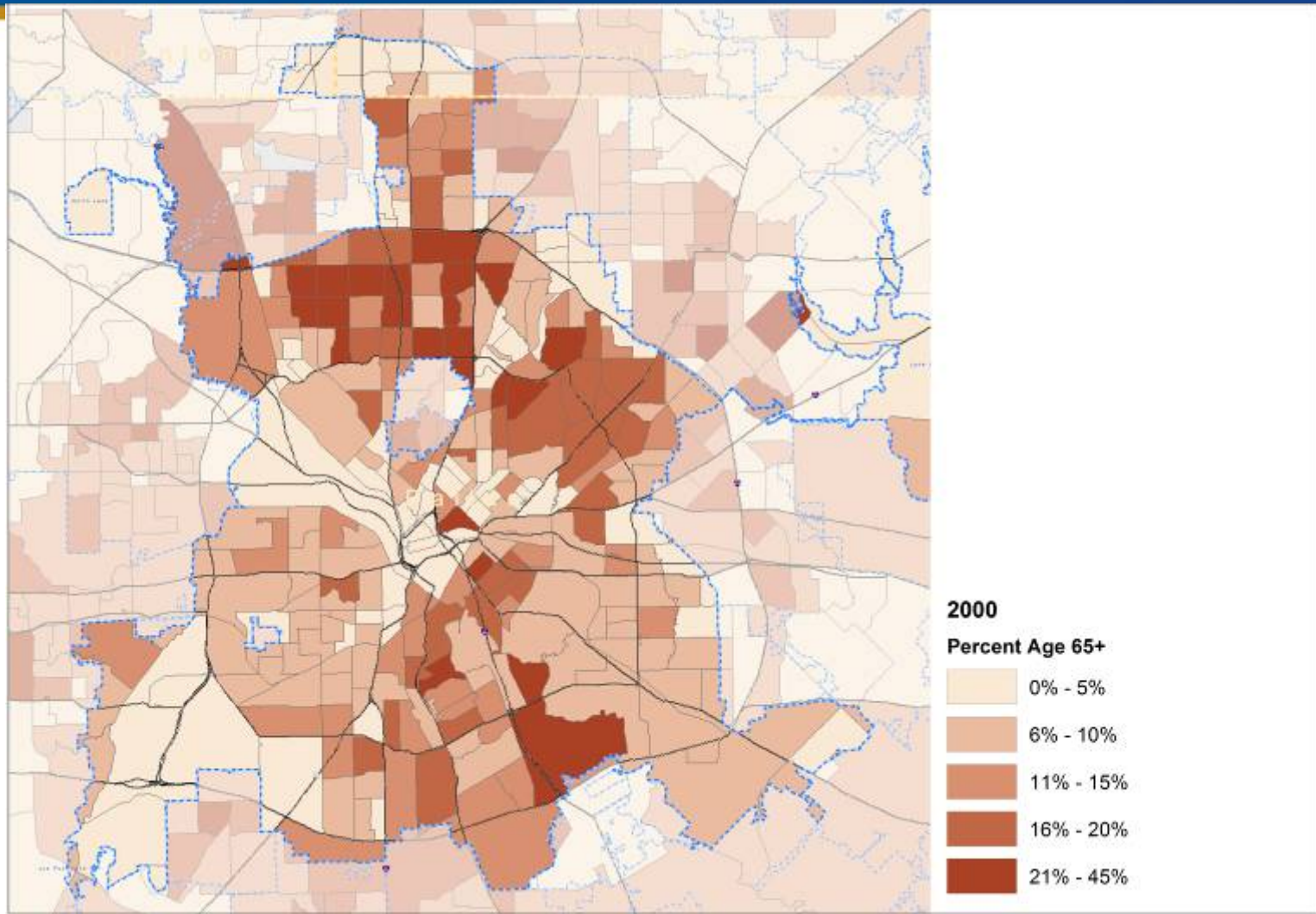


Census Trends





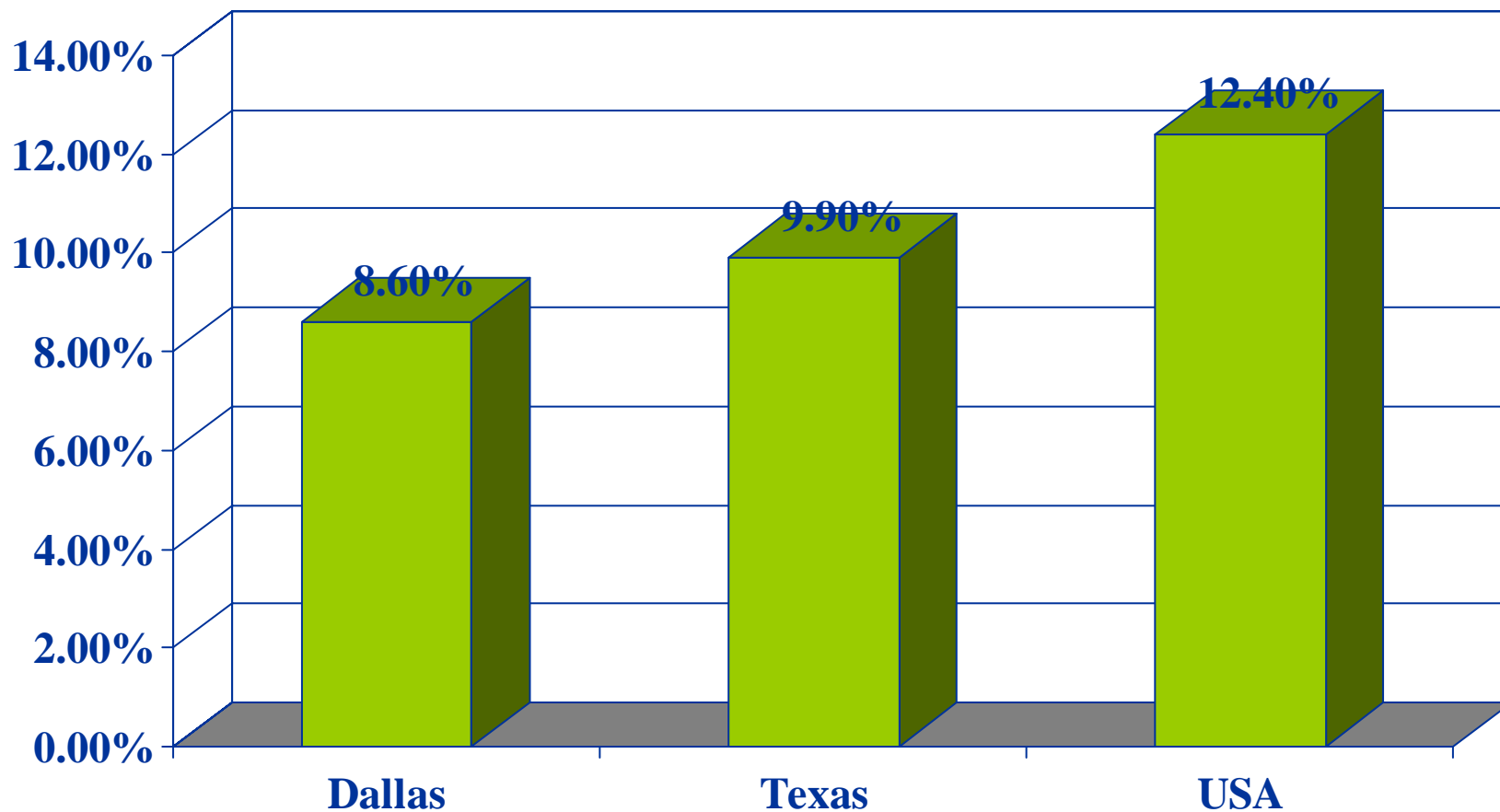
Census Trends





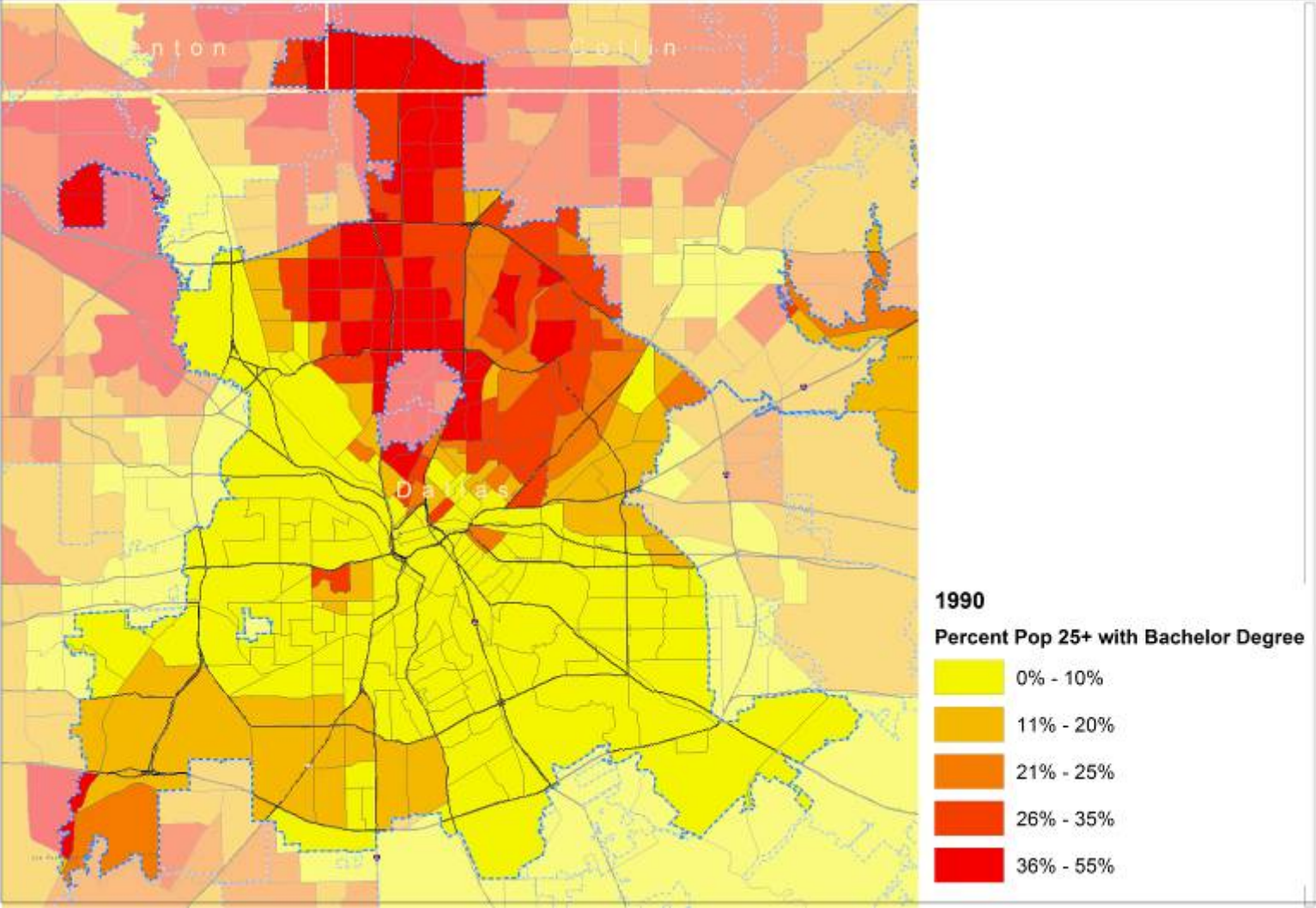
2000 Census Trends

Age 65 +



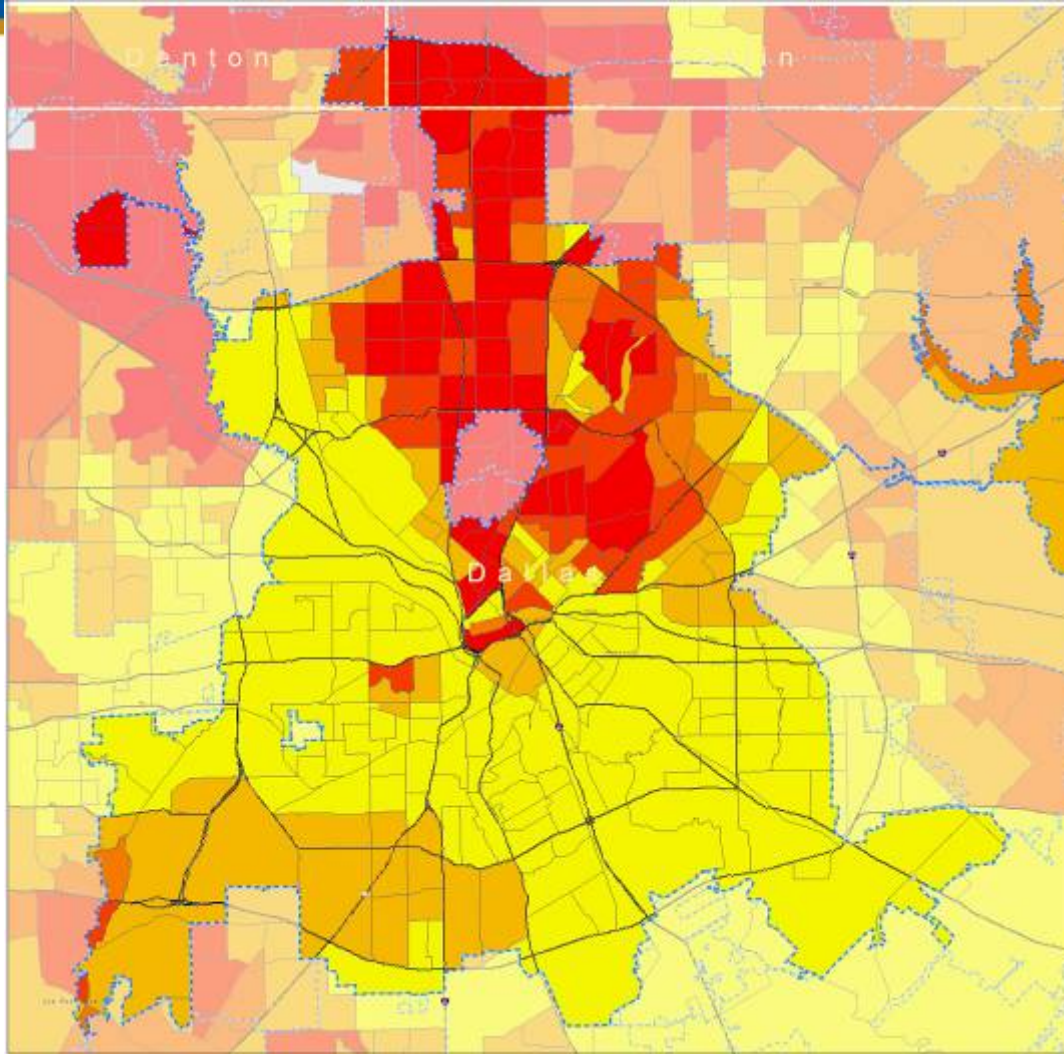


Census Trends





Census Trends



2000

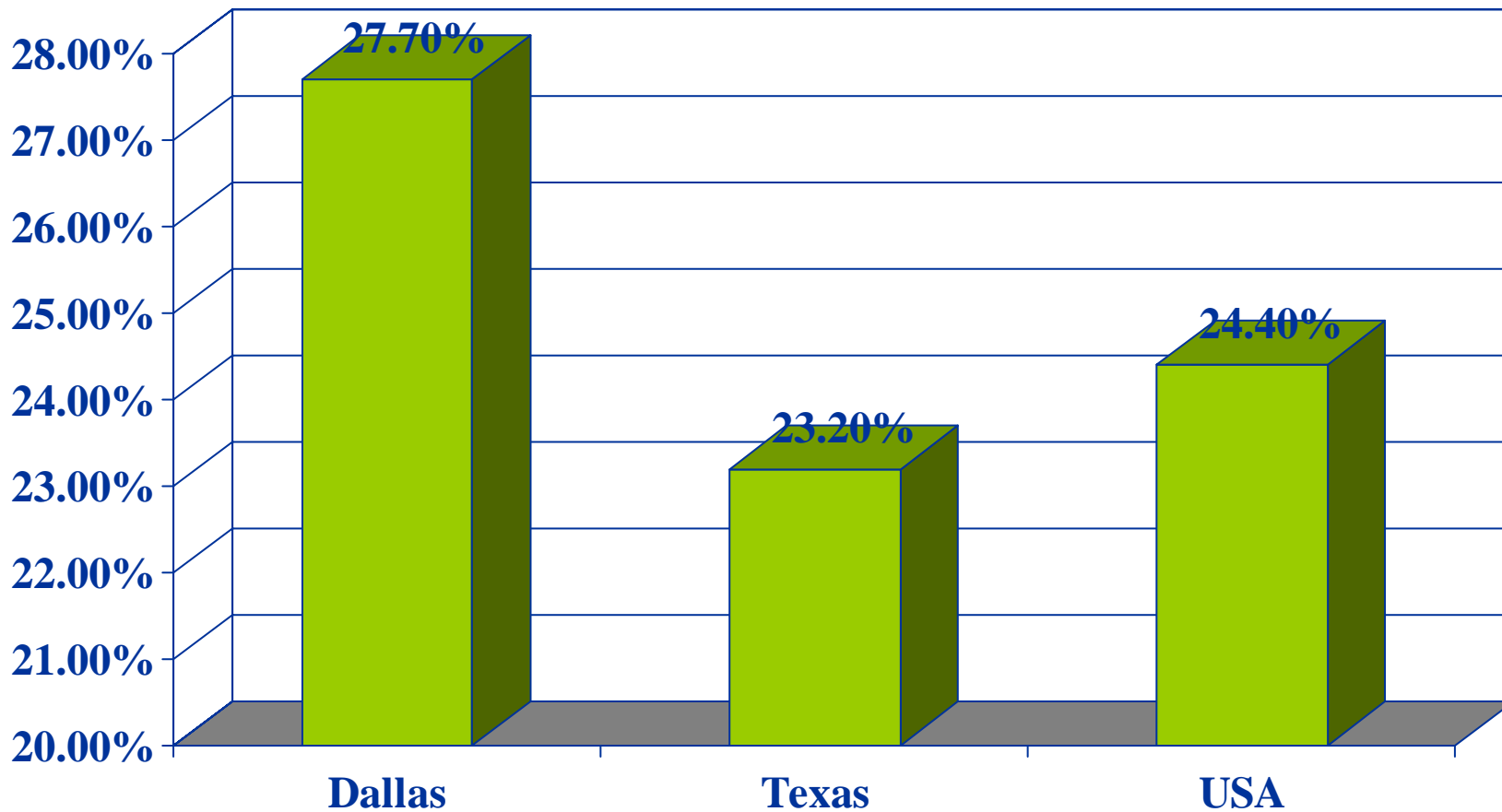
Percent Pop 25+ with Bachelor Degree





2000 Census Trends

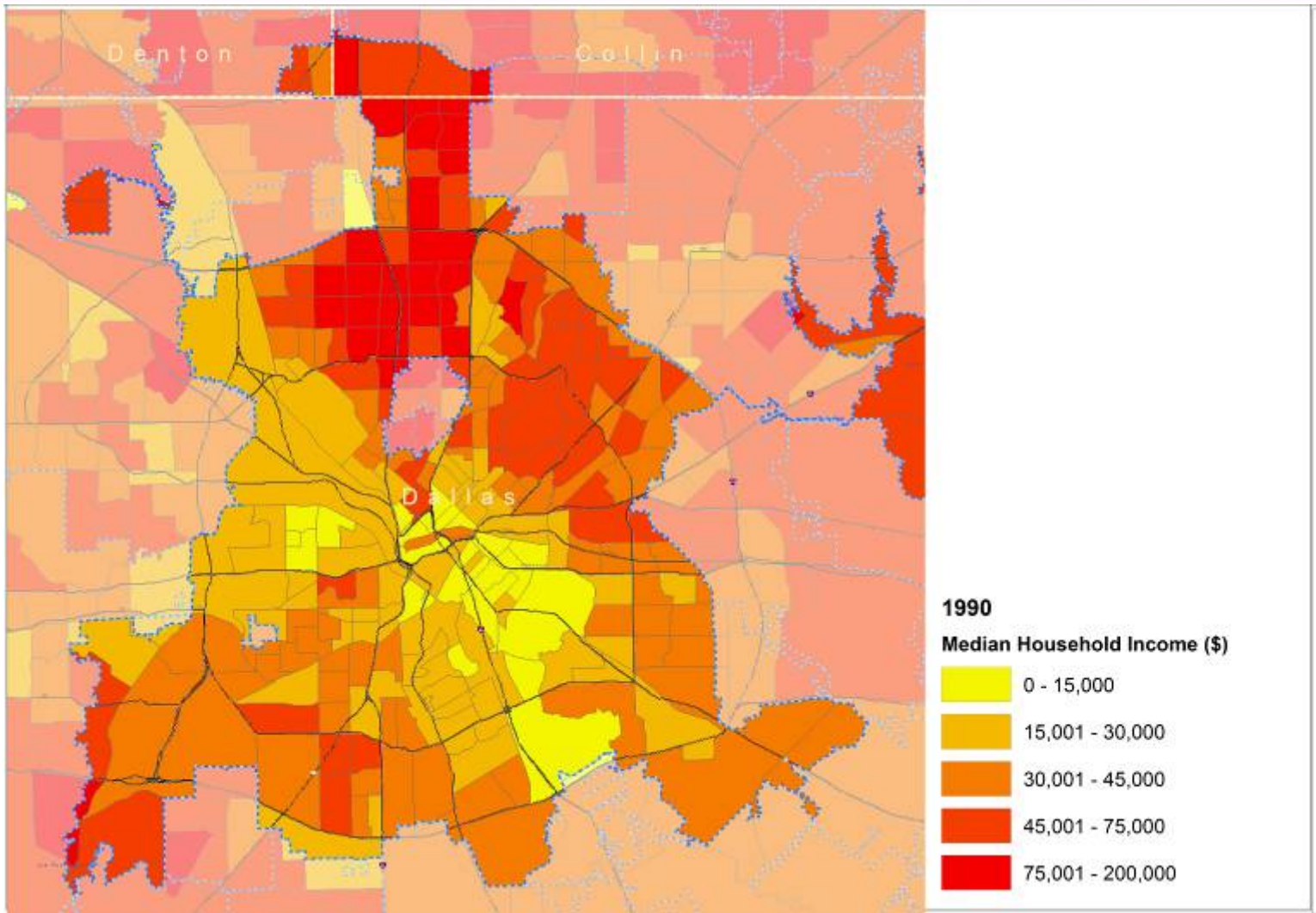
% Bachelor Degree





Median Household Income (\$)

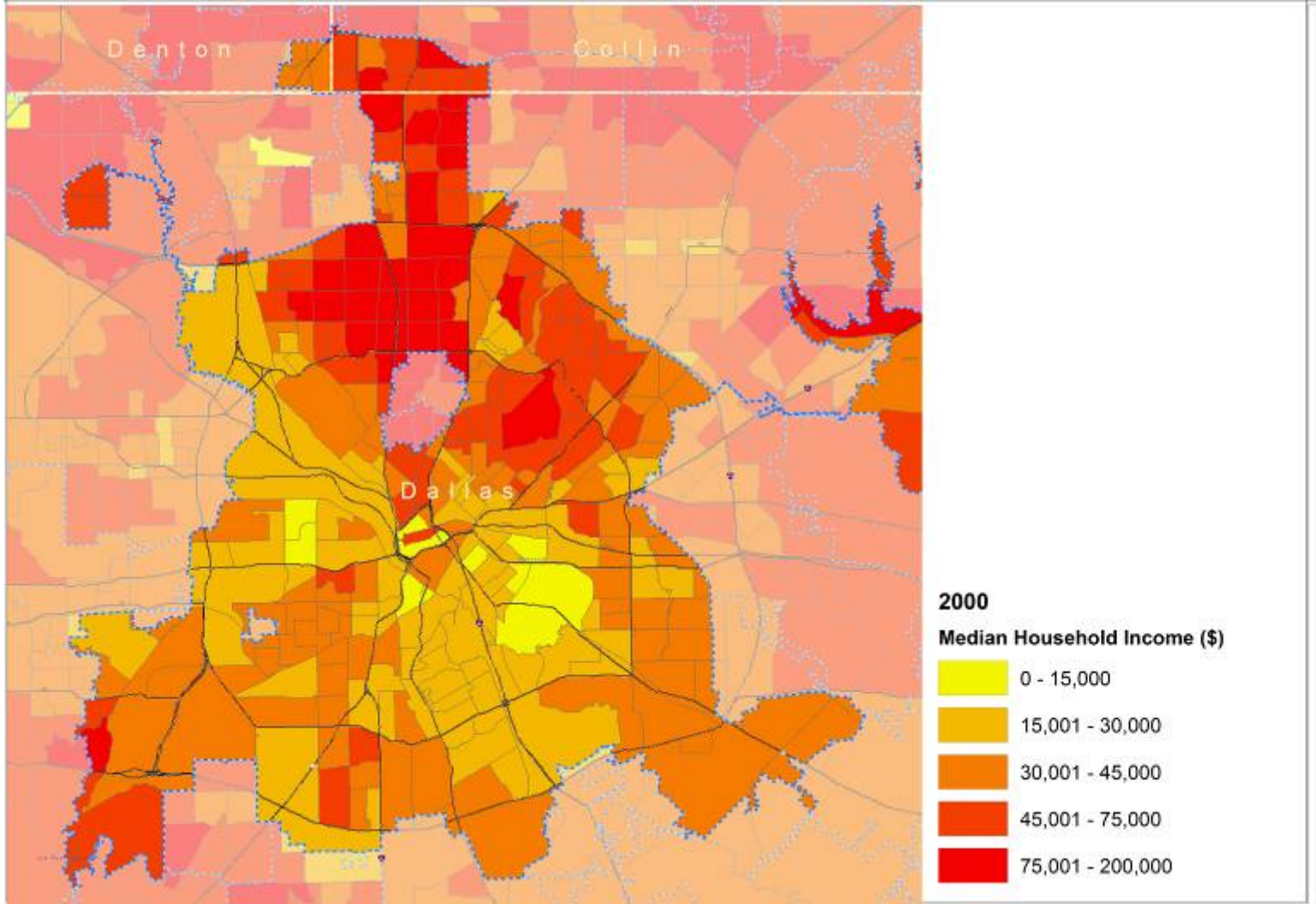
1990



Source: Census Bureau, 1999 \$



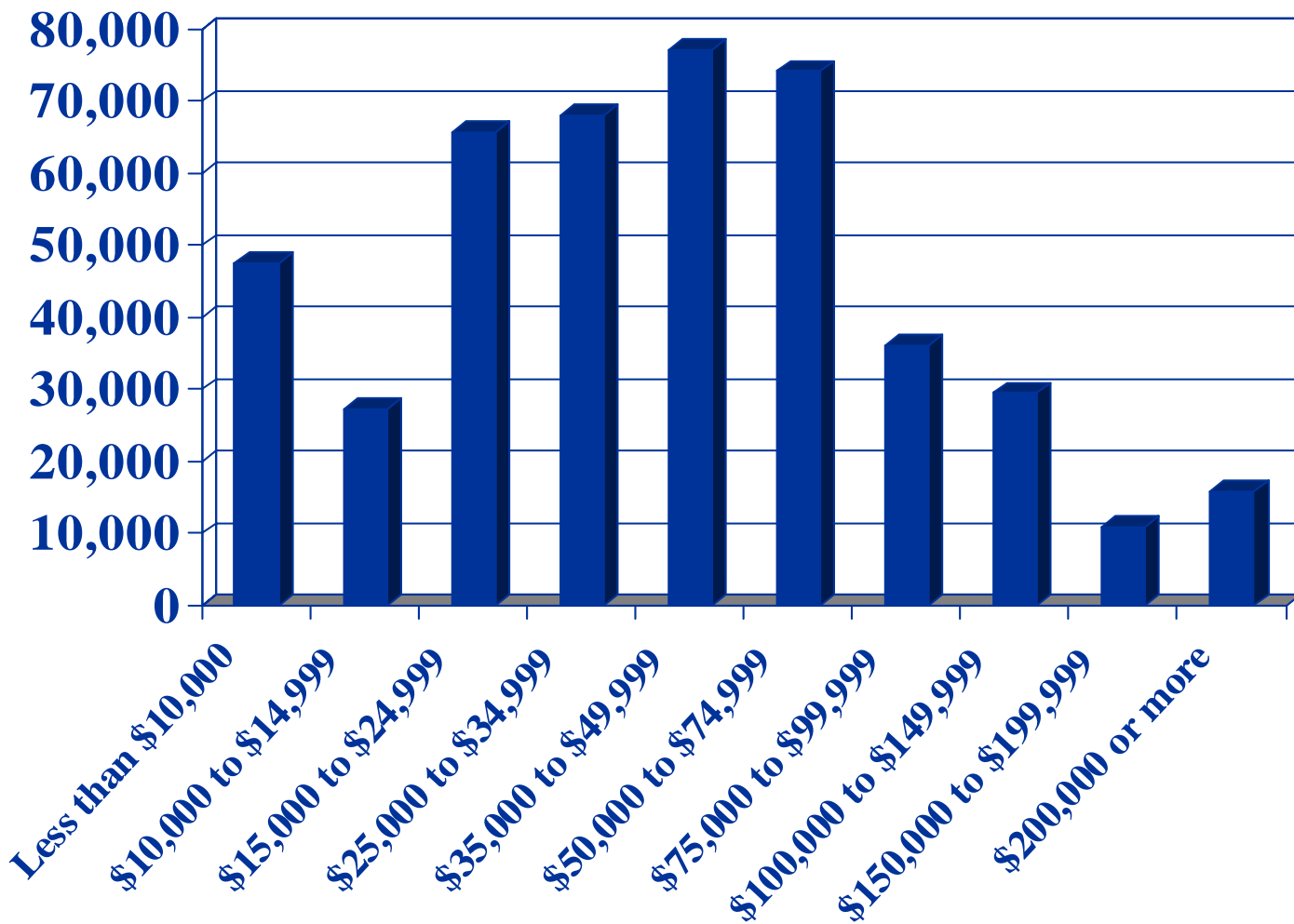
Median Household Income (\$) 2000



Source: Census Bureau, 1999 \$



Income Distribution 2000

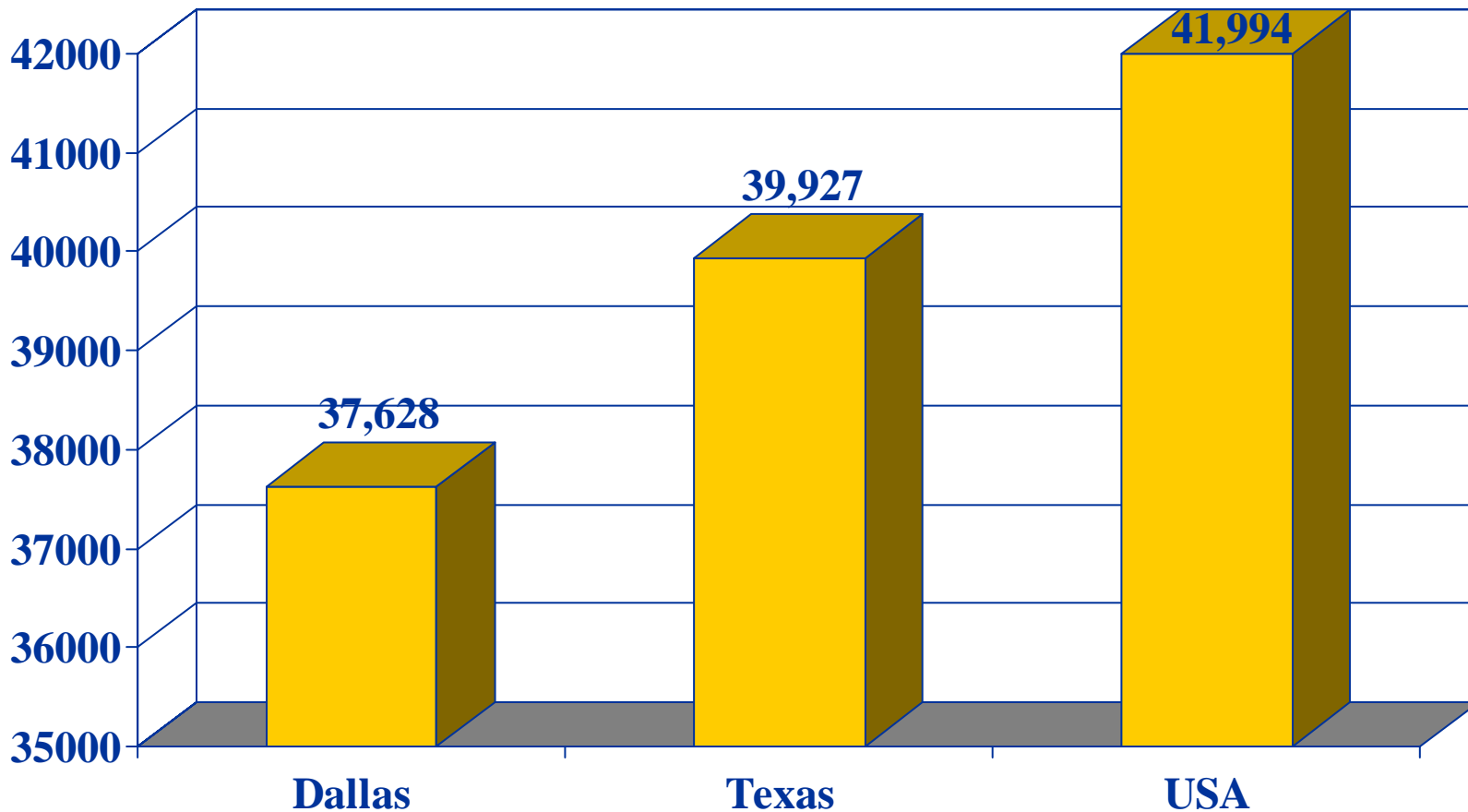


Source: Census Bureau



2000 Census Trends

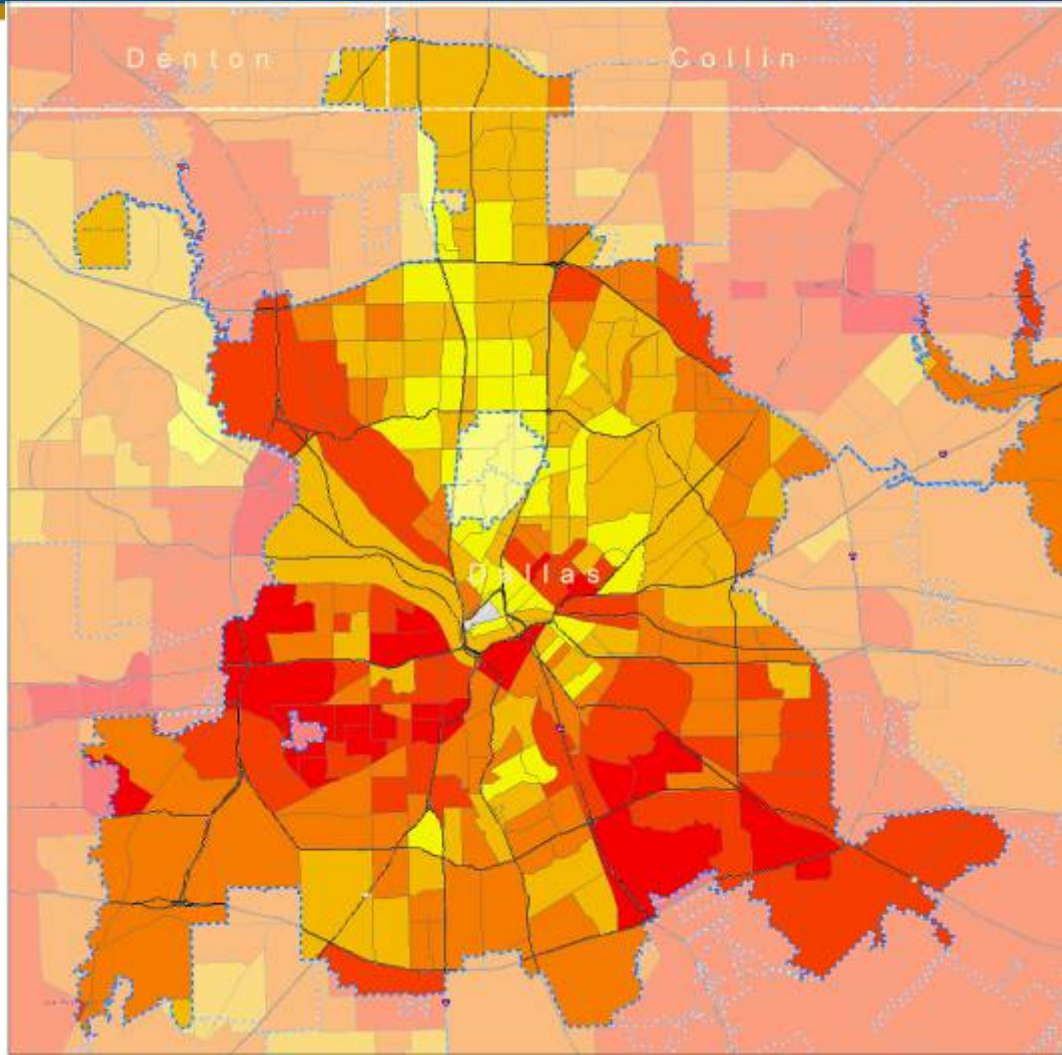
Median Household Income (\$)



Source: Census Bureau, 1999 \$

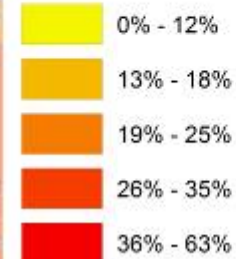


Census Trends



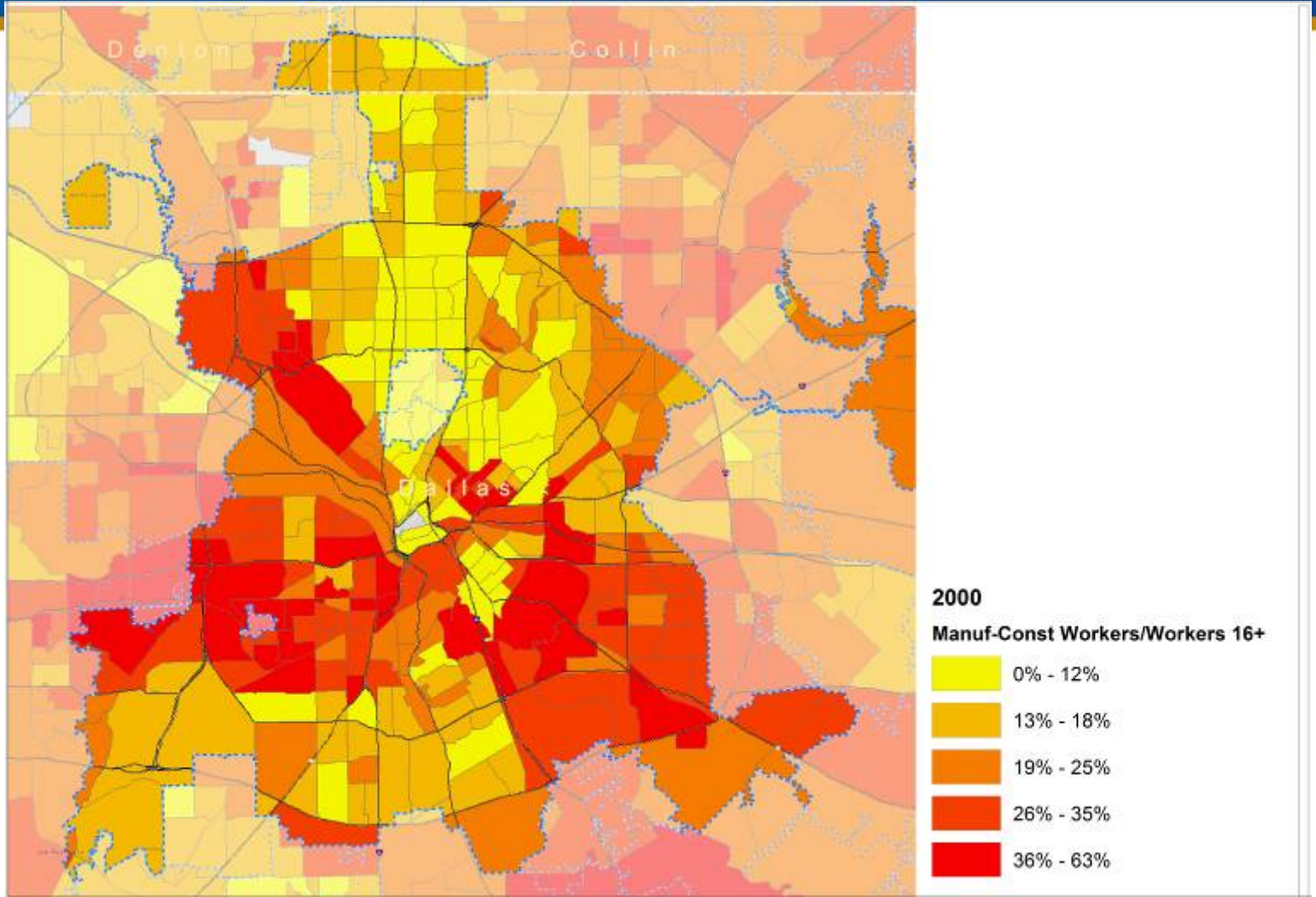
1990

Manuf-Const Workers/Workers 16+



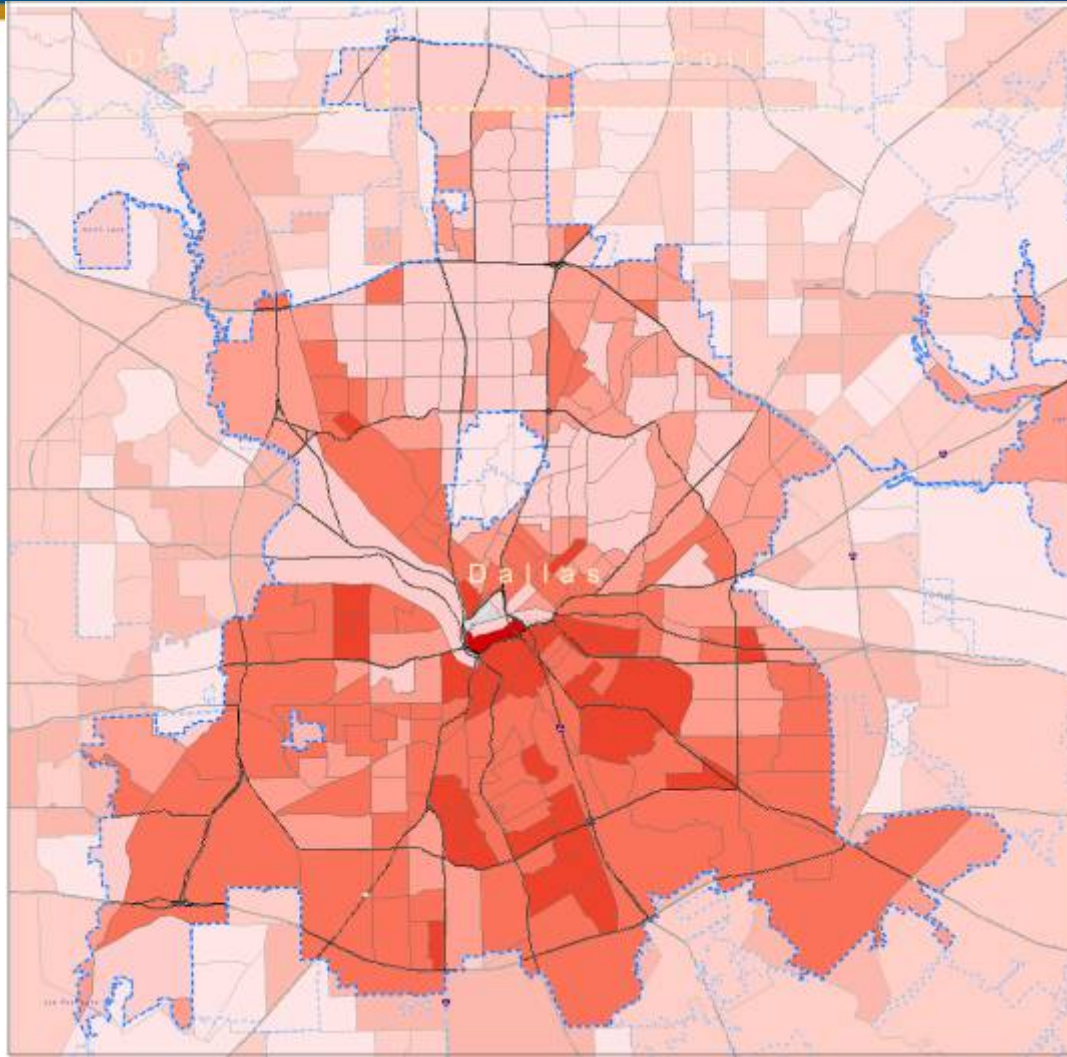


Census Trends





Census Trends



1990

Unemployed/Pop 16+

0% - 3%

4% - 5%

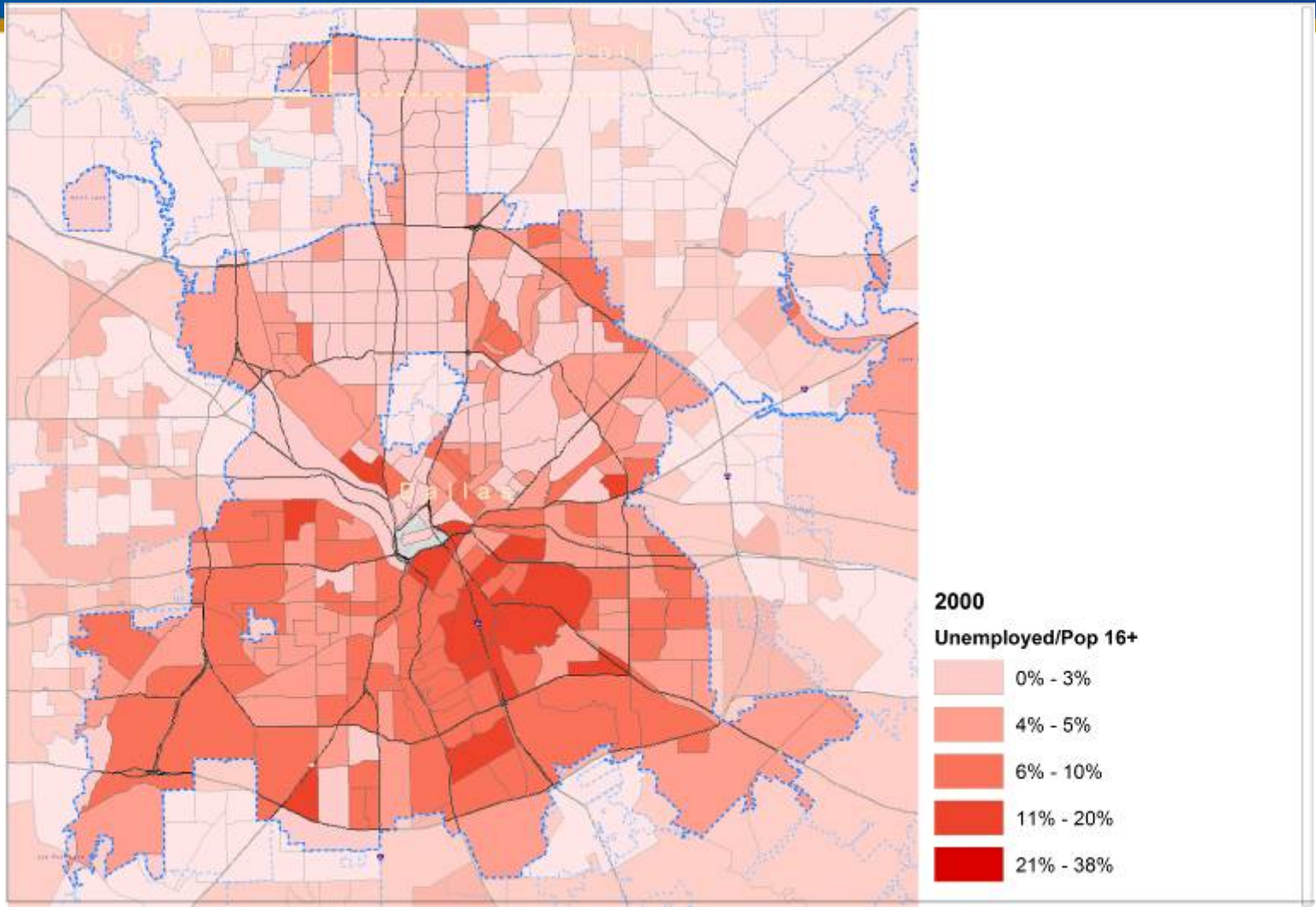
6% - 10%

11% - 20%

21% - 38%

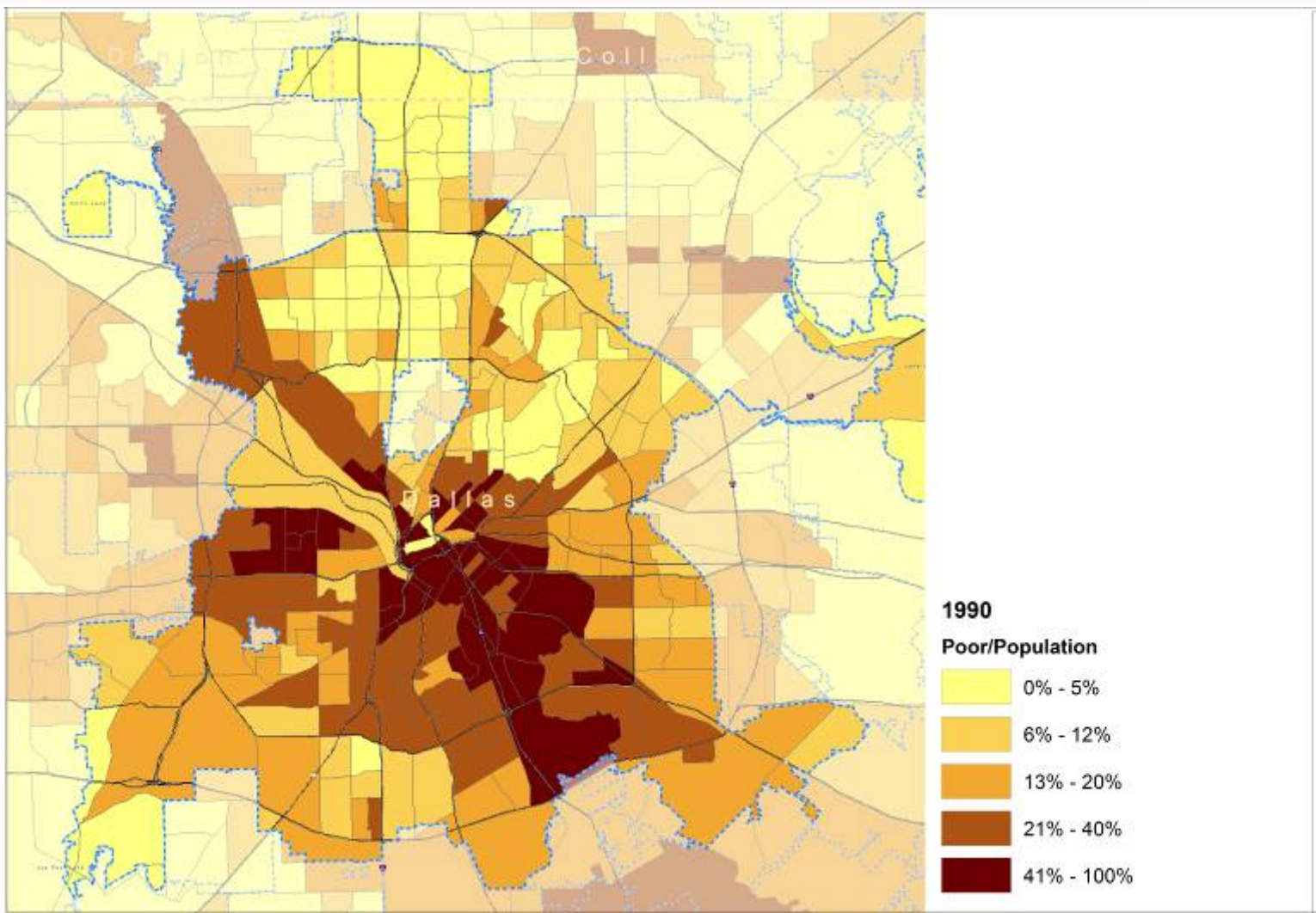


Census Trends





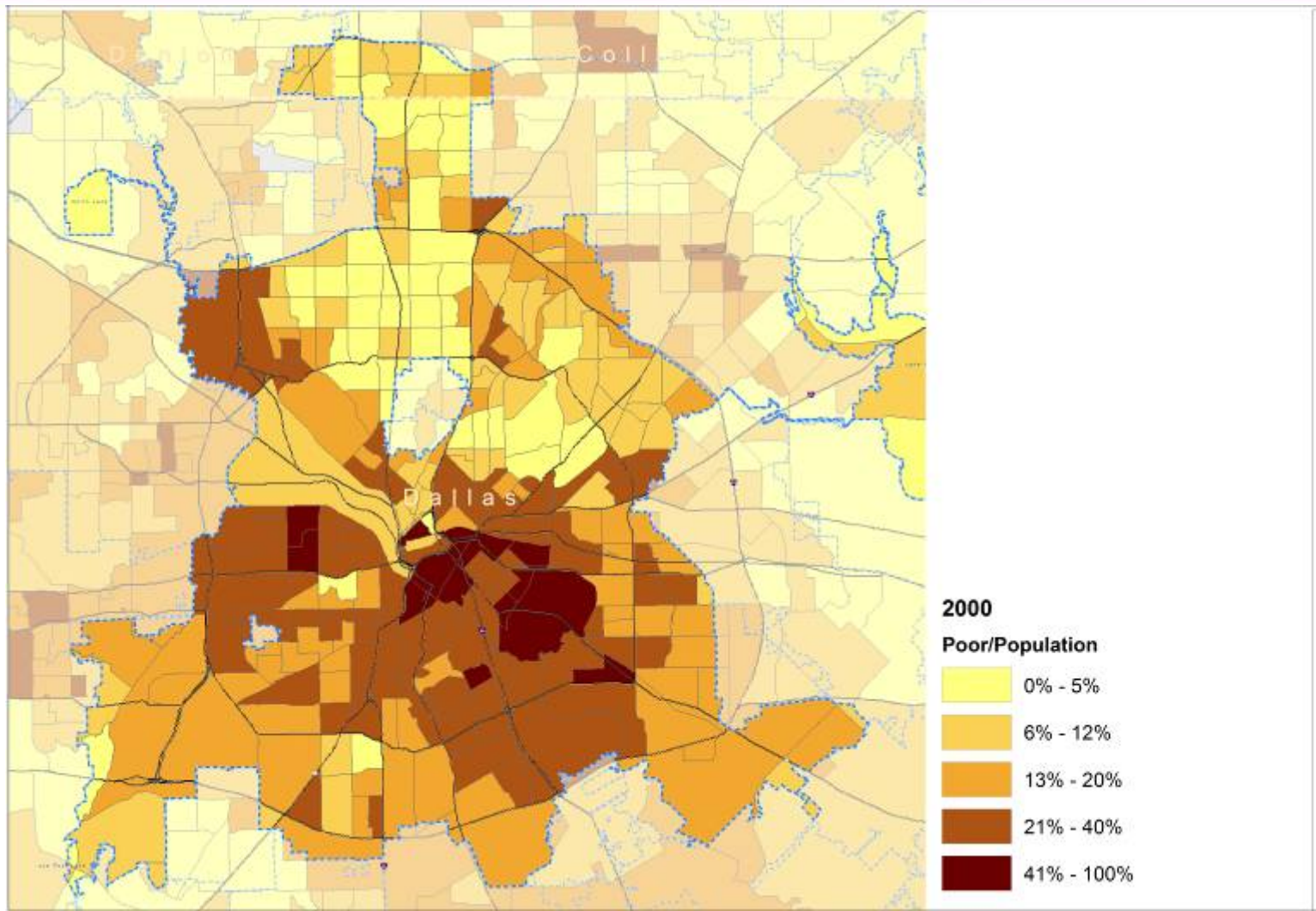
Poverty Rate 1990



Source: Census Bureau



Poverty Rate 2000

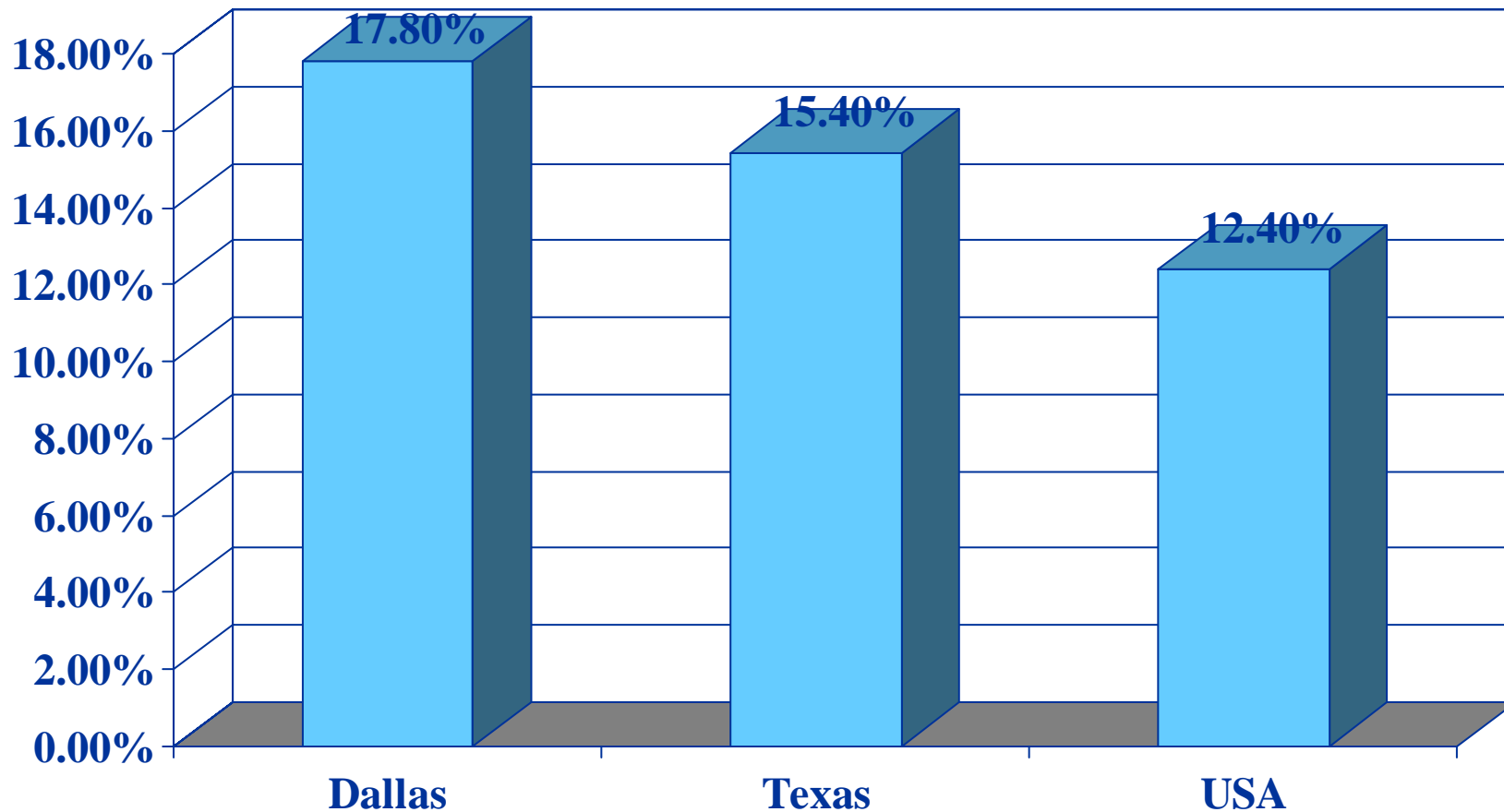


Source: Census Bureau



2000 Census Trends

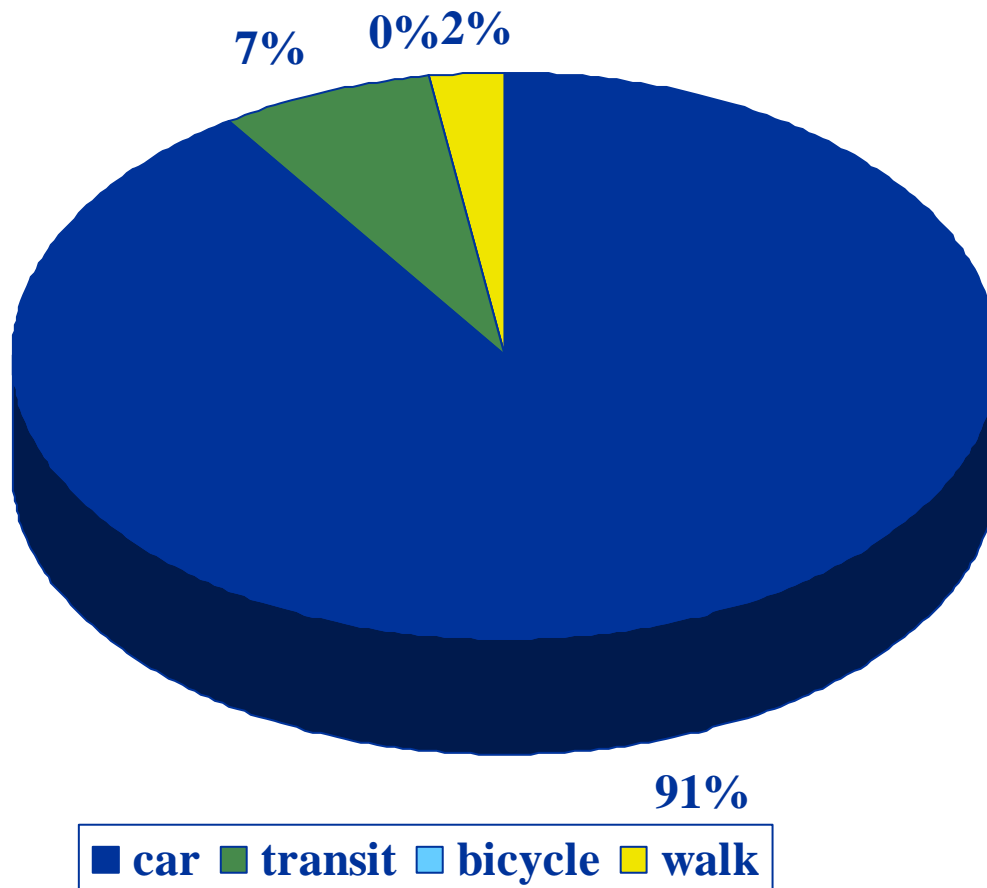
Poverty Rate



Source: Census Bureau

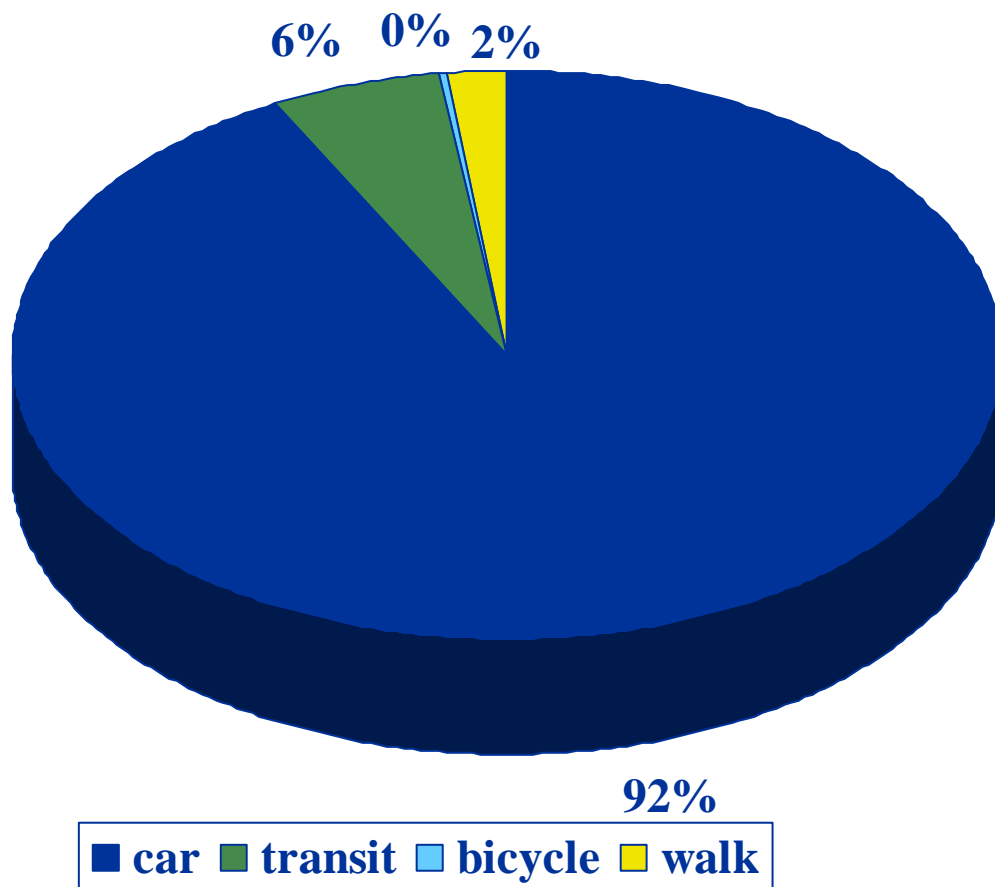


Census Trends Commute 1990



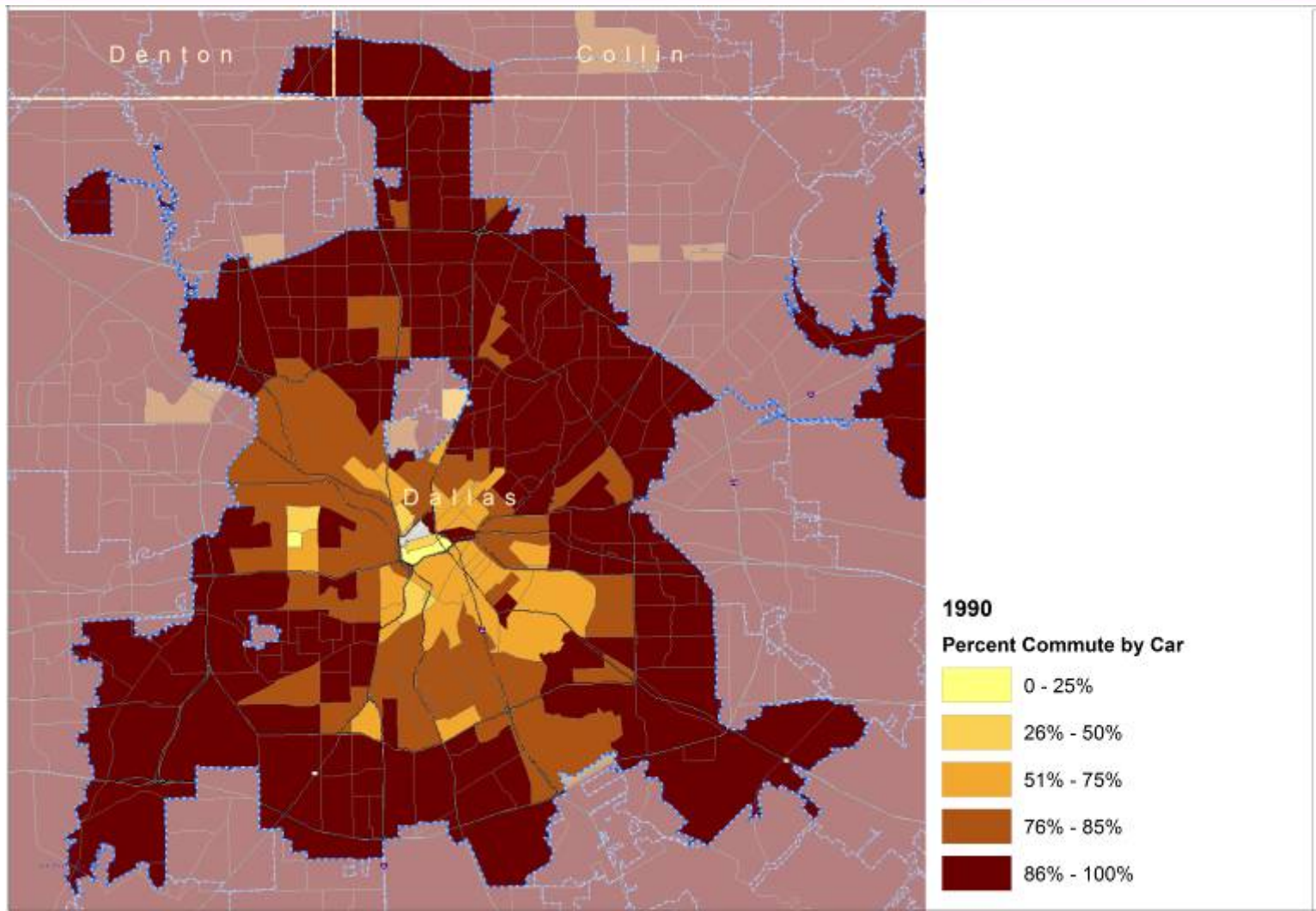


Census Trends Commute 2000





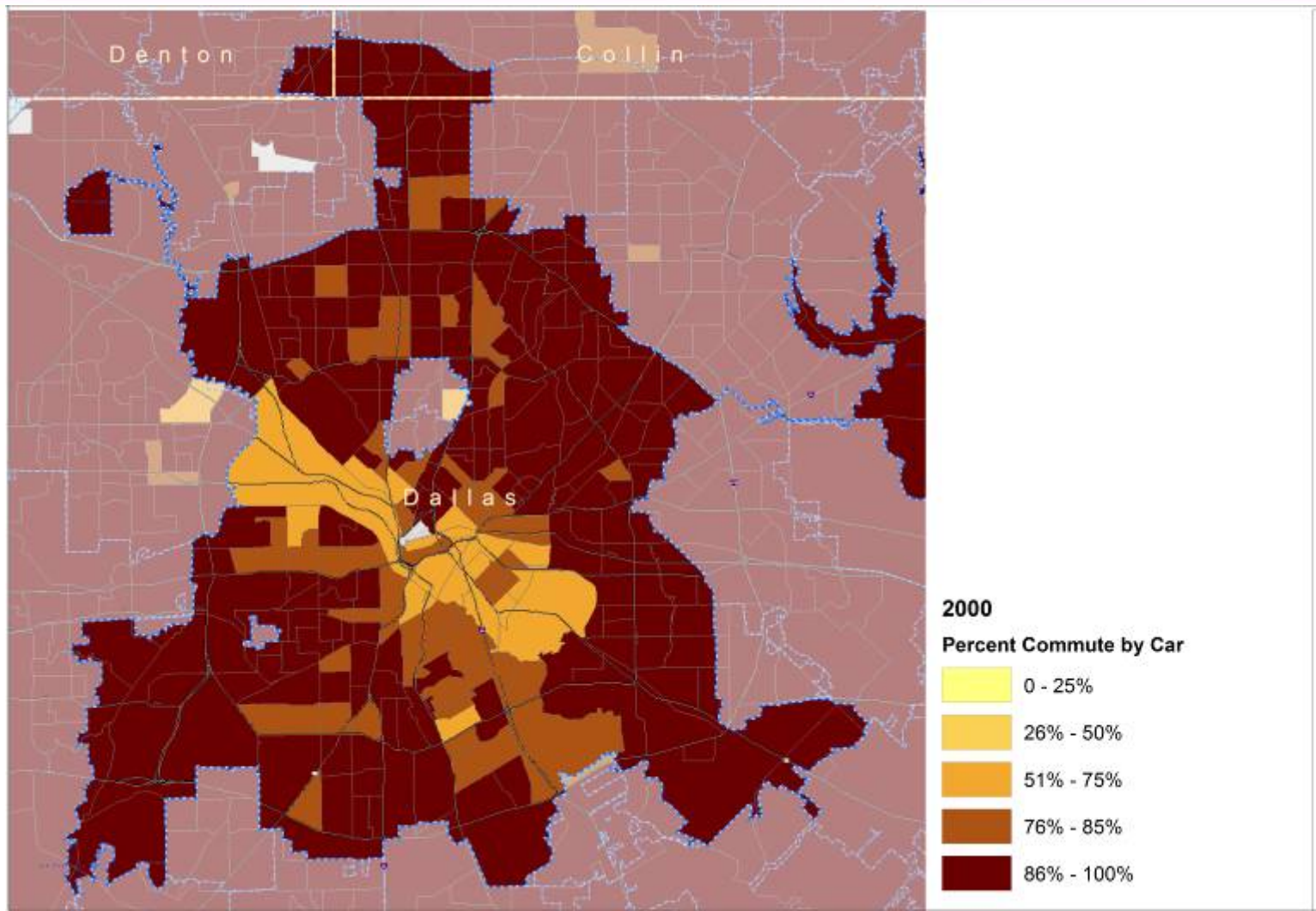
Percent Commute by Car 1990



Source: Census Bureau



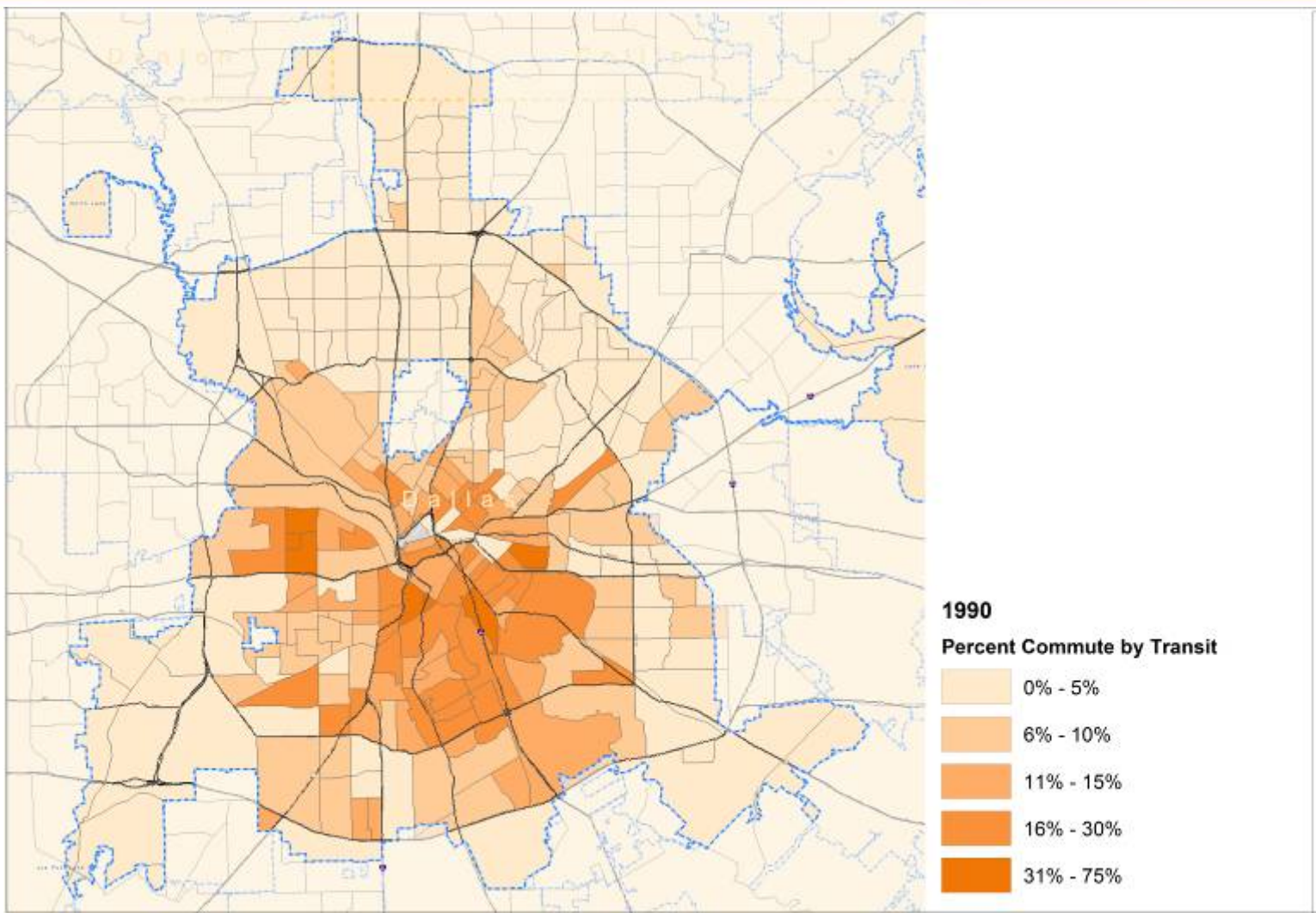
Percent Commute by Car 2000



Source: Census Bureau



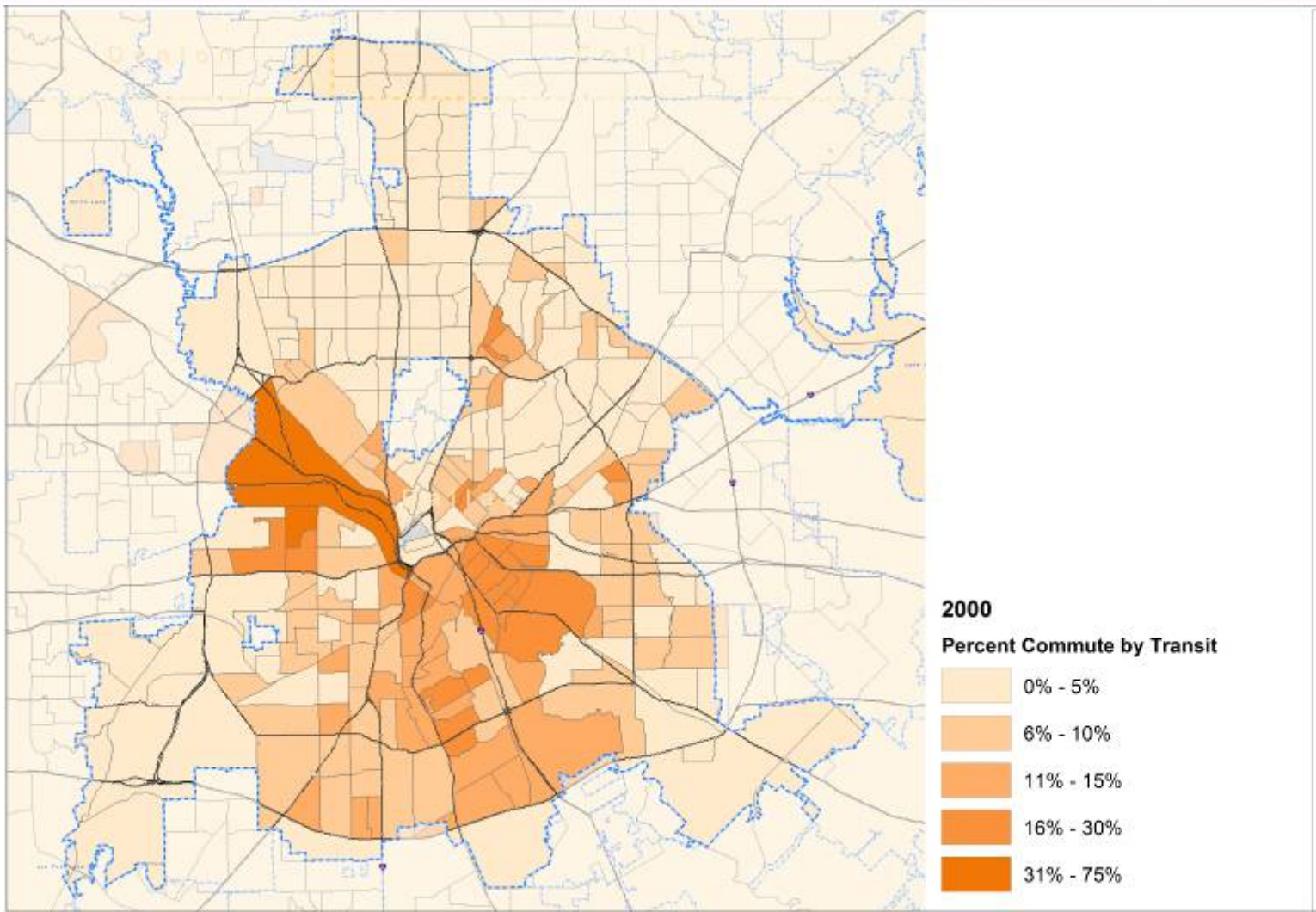
Percent Commute by Transit 1990



Source: Census Bureau



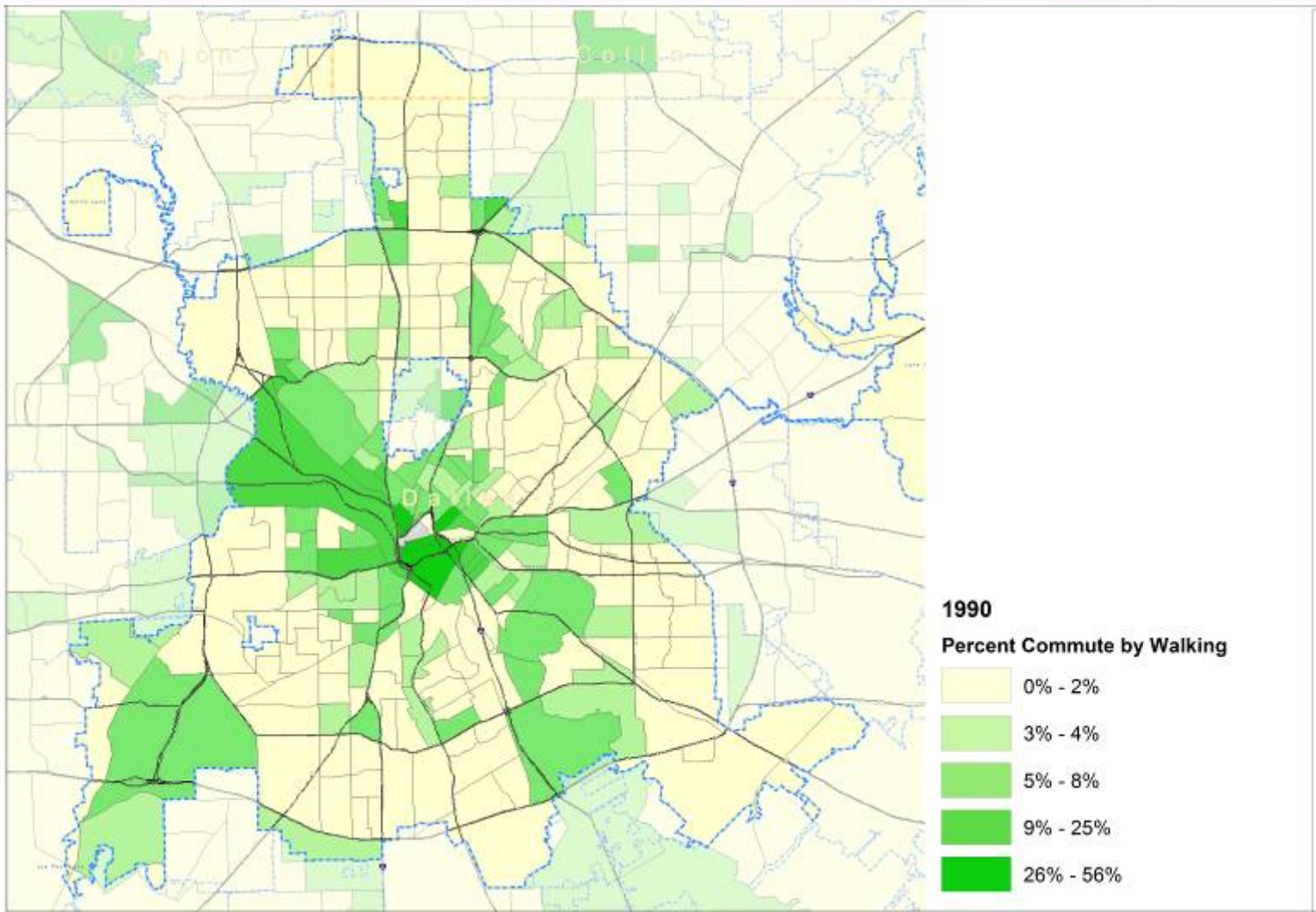
Percent Commute by Transit 2000



Source: Census Bureau



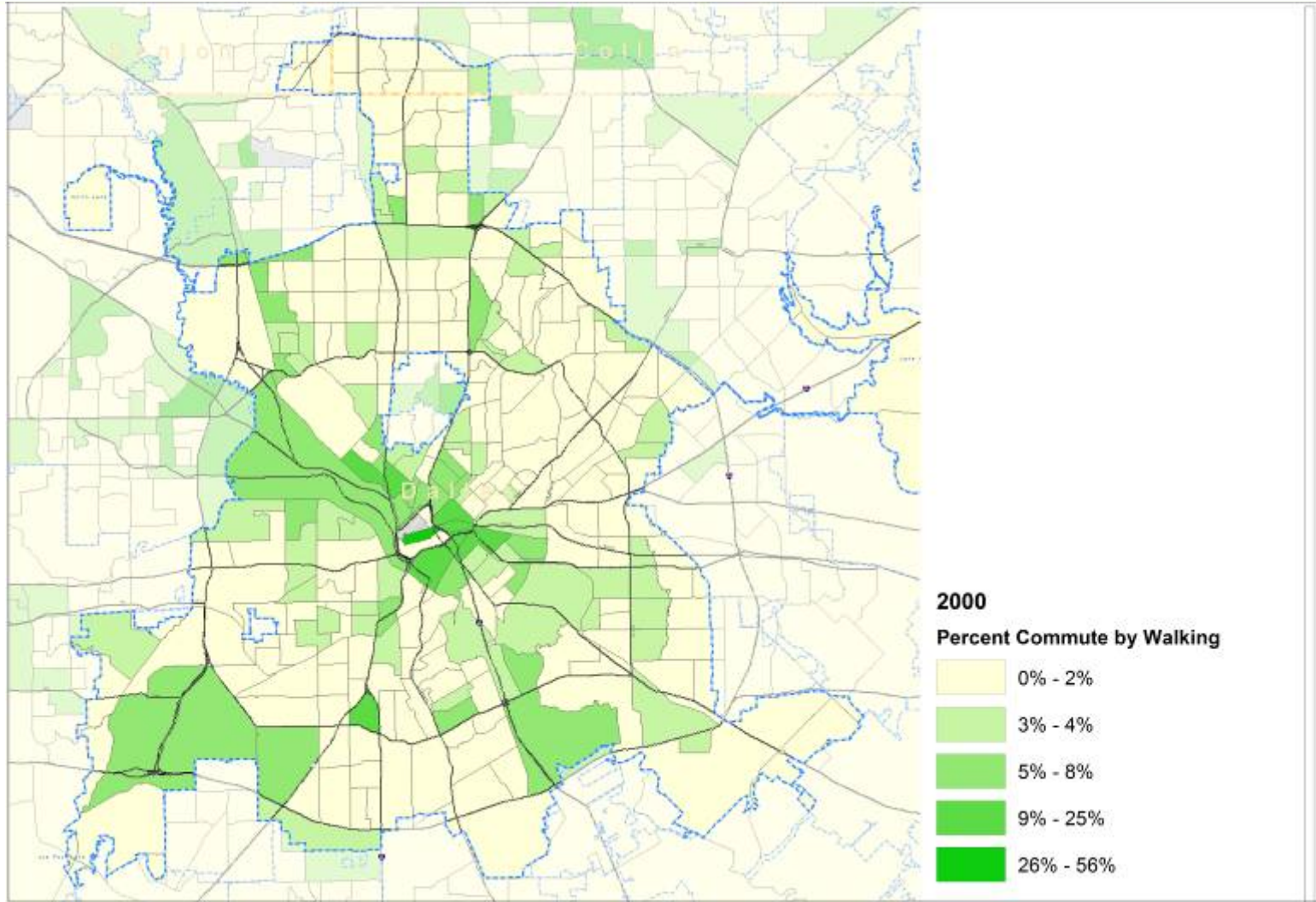
Percent Commute by Walking 1990



Source: Census Bureau



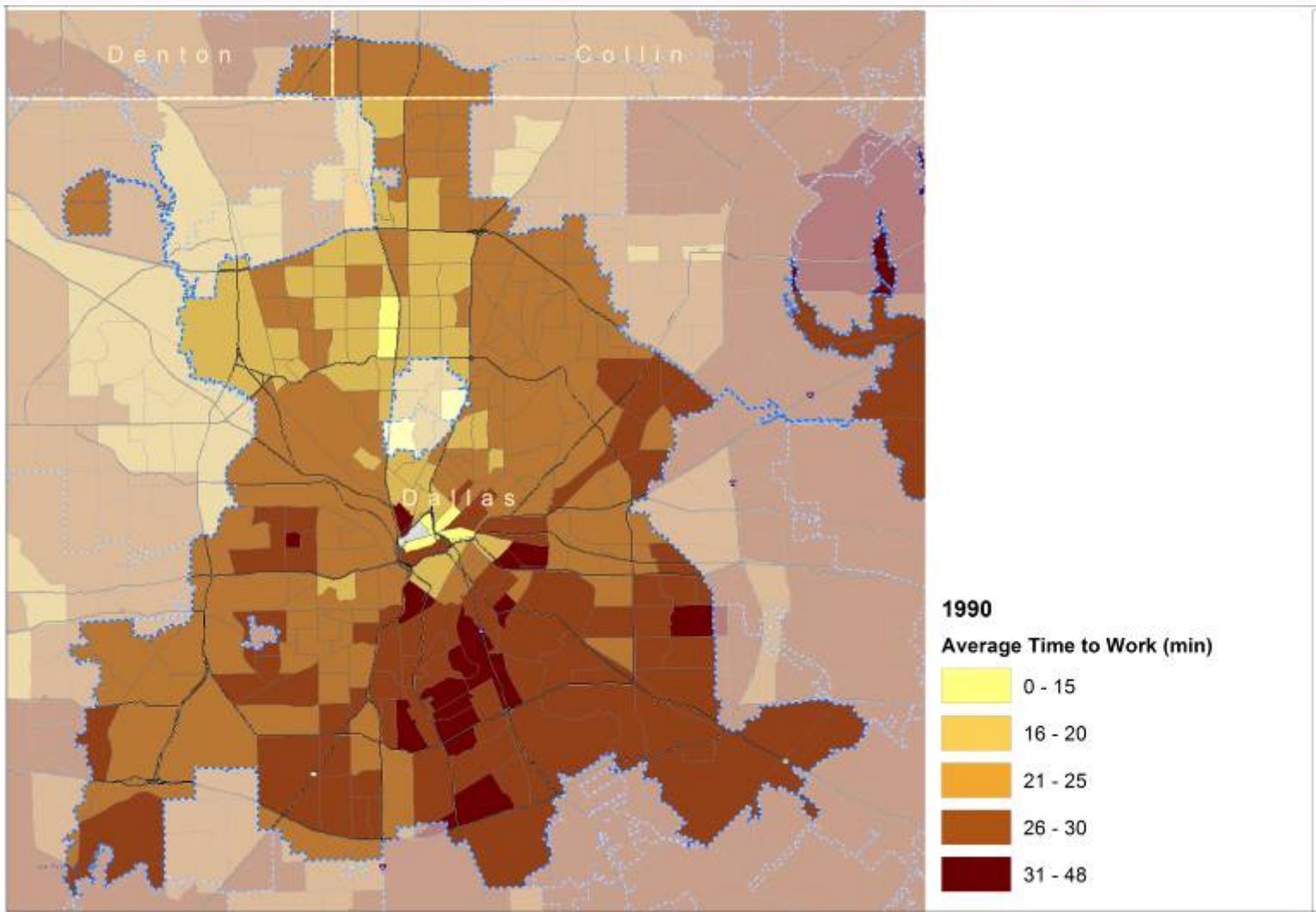
Percent Commute by Walking 2000



Source: Census Bureau



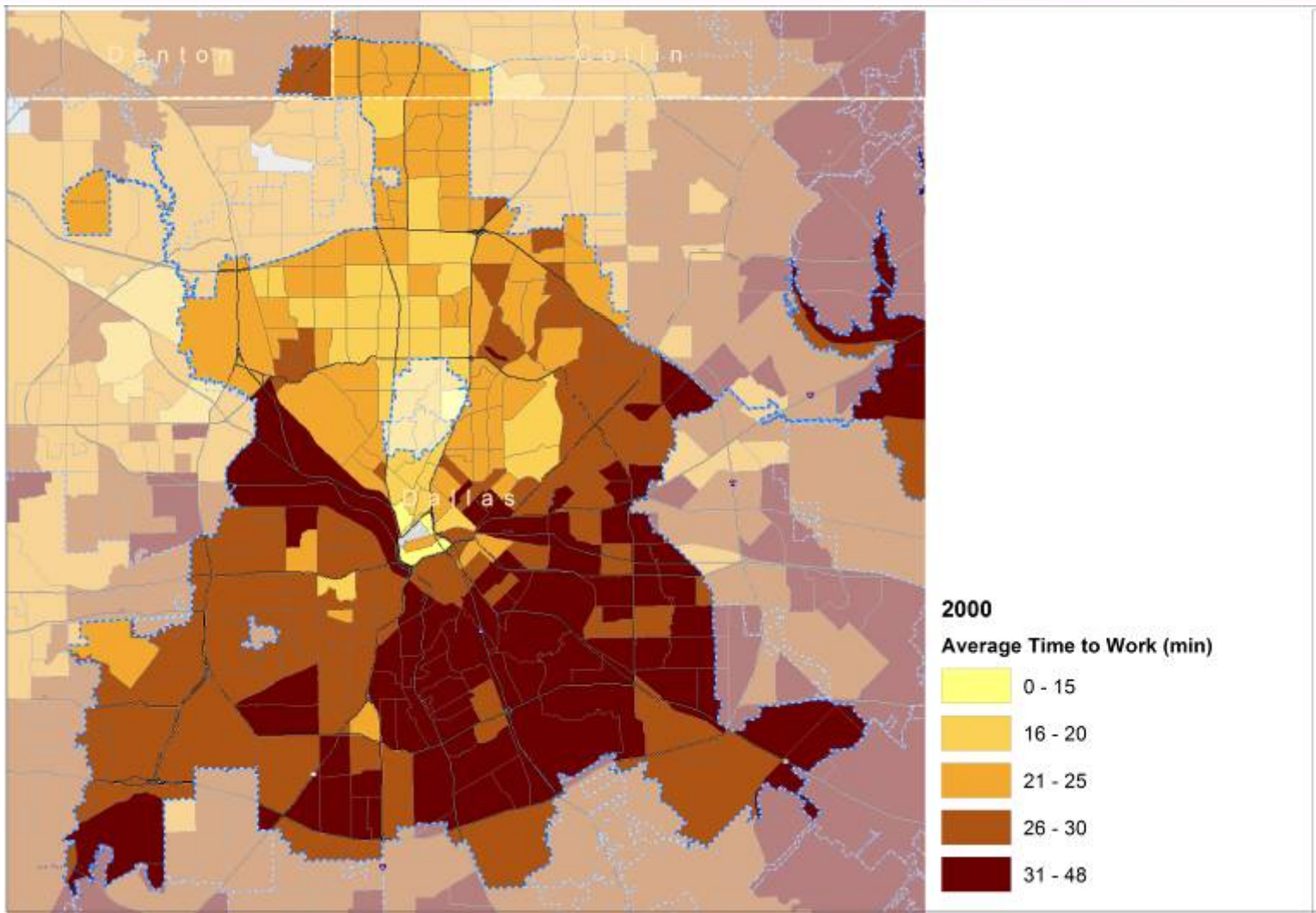
Average Time to Work (min.) 1990



Source: Census Bureau



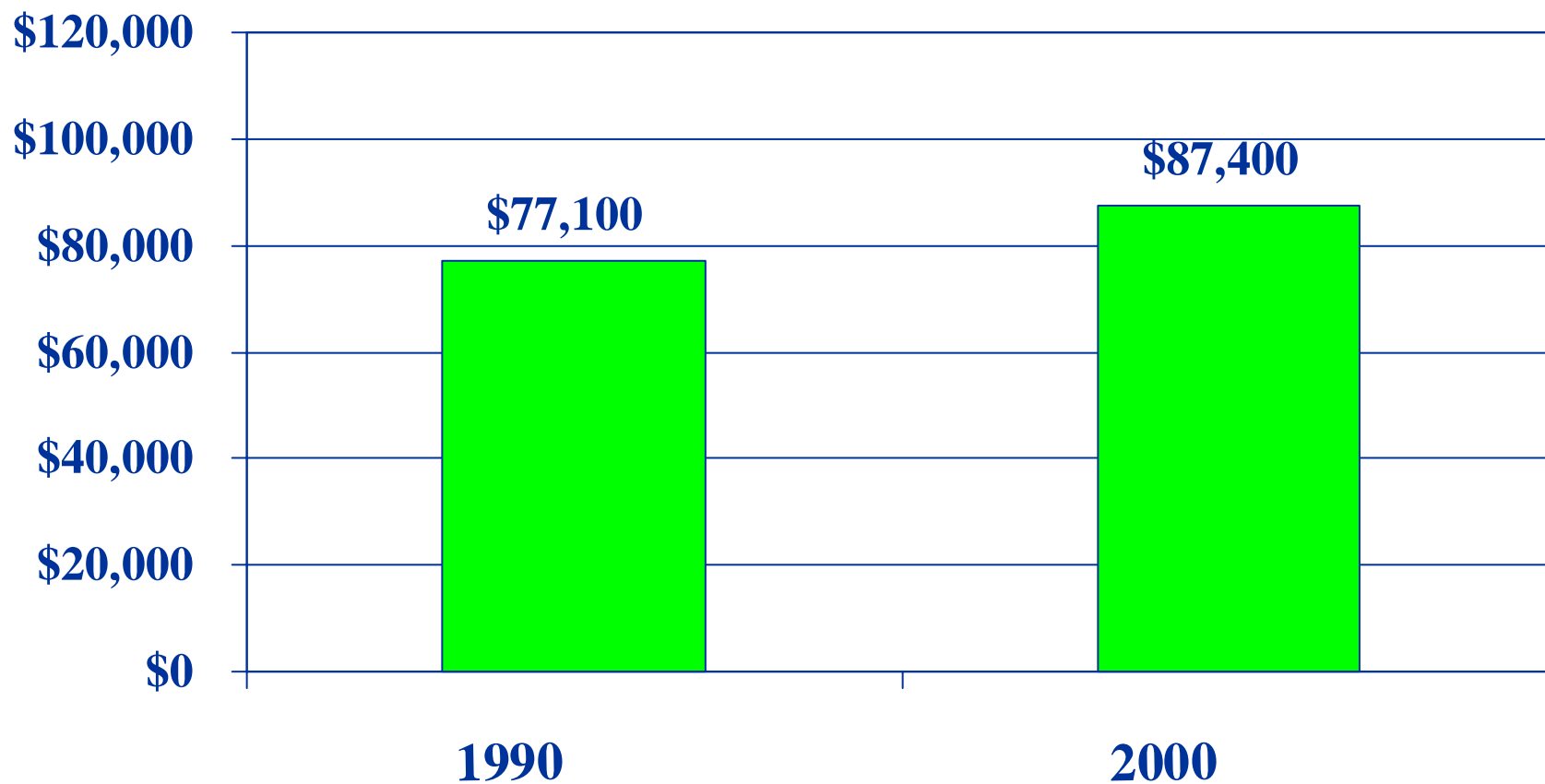
Average Time to Work (min.) 2000



Source: Census Bureau

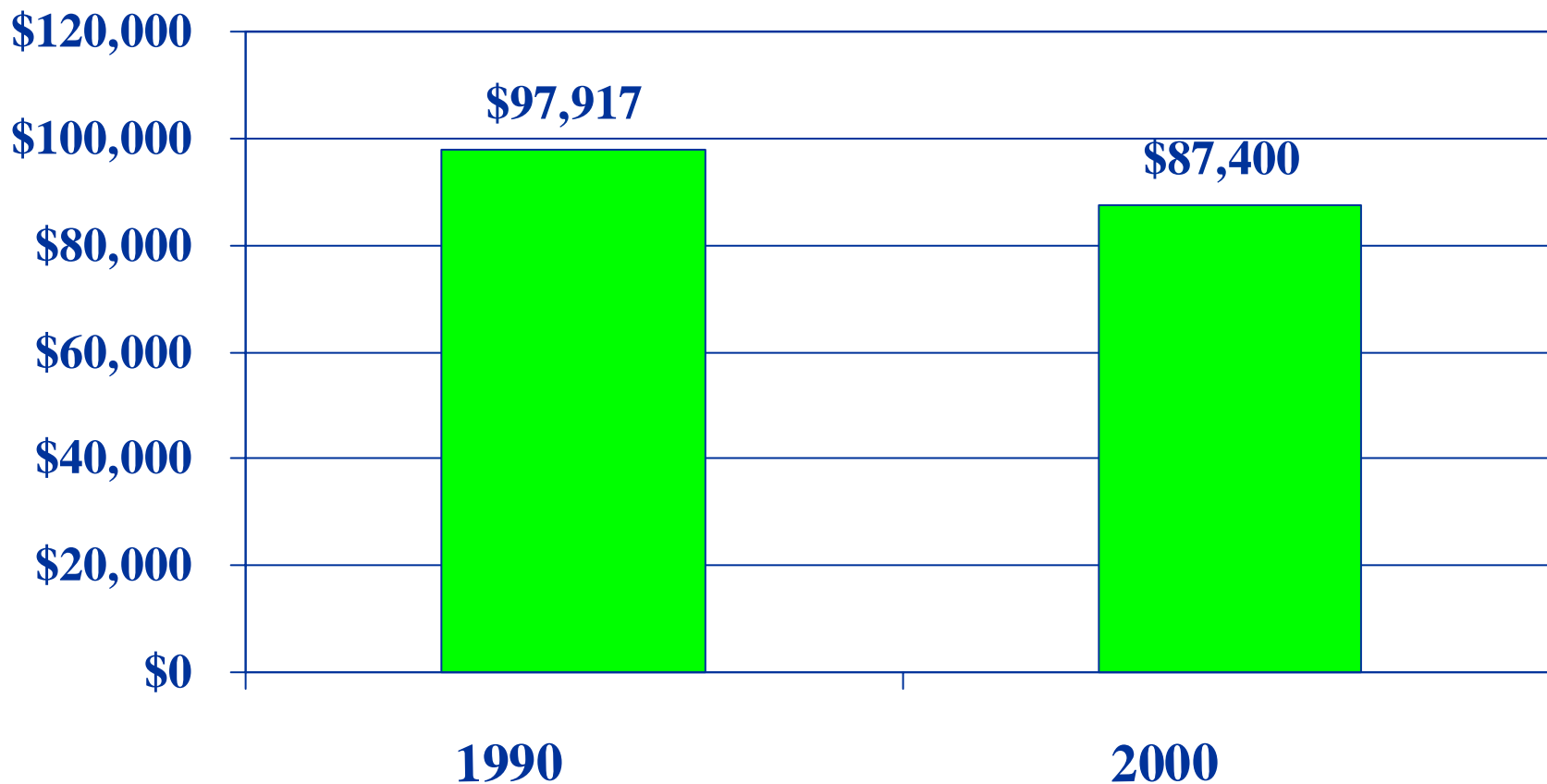


Median Home Value





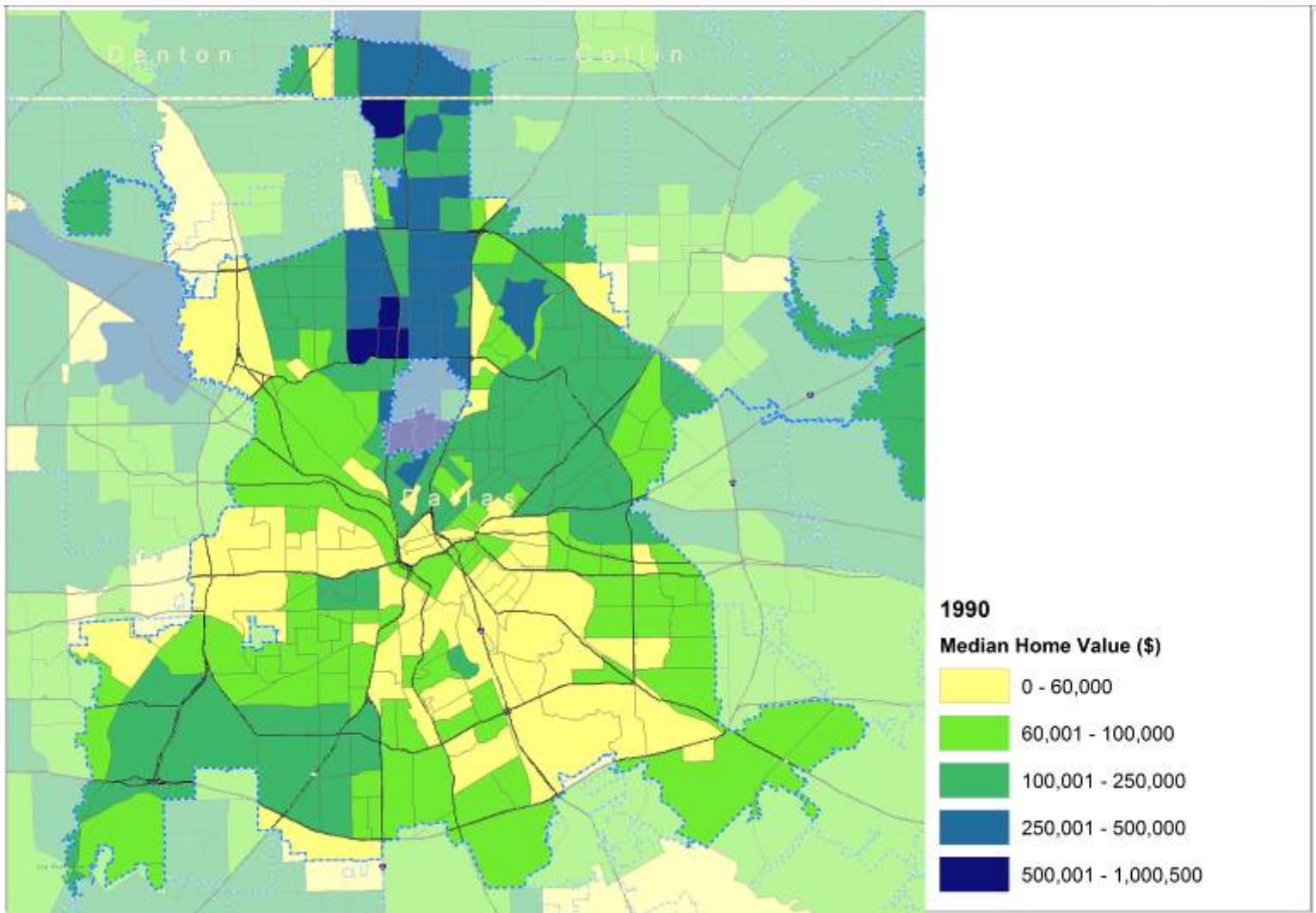
Median Home Value 1999 \$



Source: Census Bureau, 1999 \$



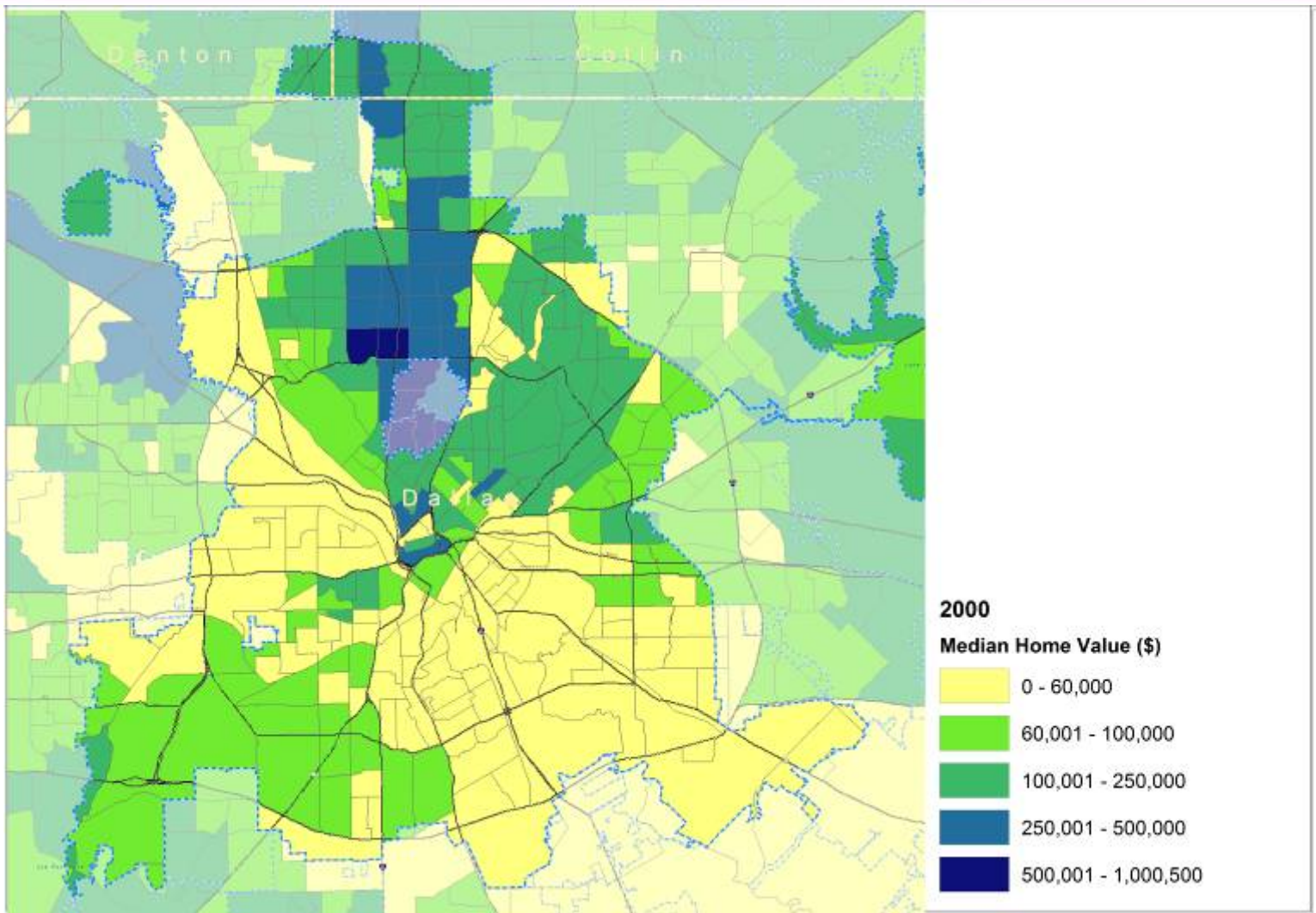
Median Home Value 1990



Source: Census Bureau, 1999 \$



Median Home Value 2000

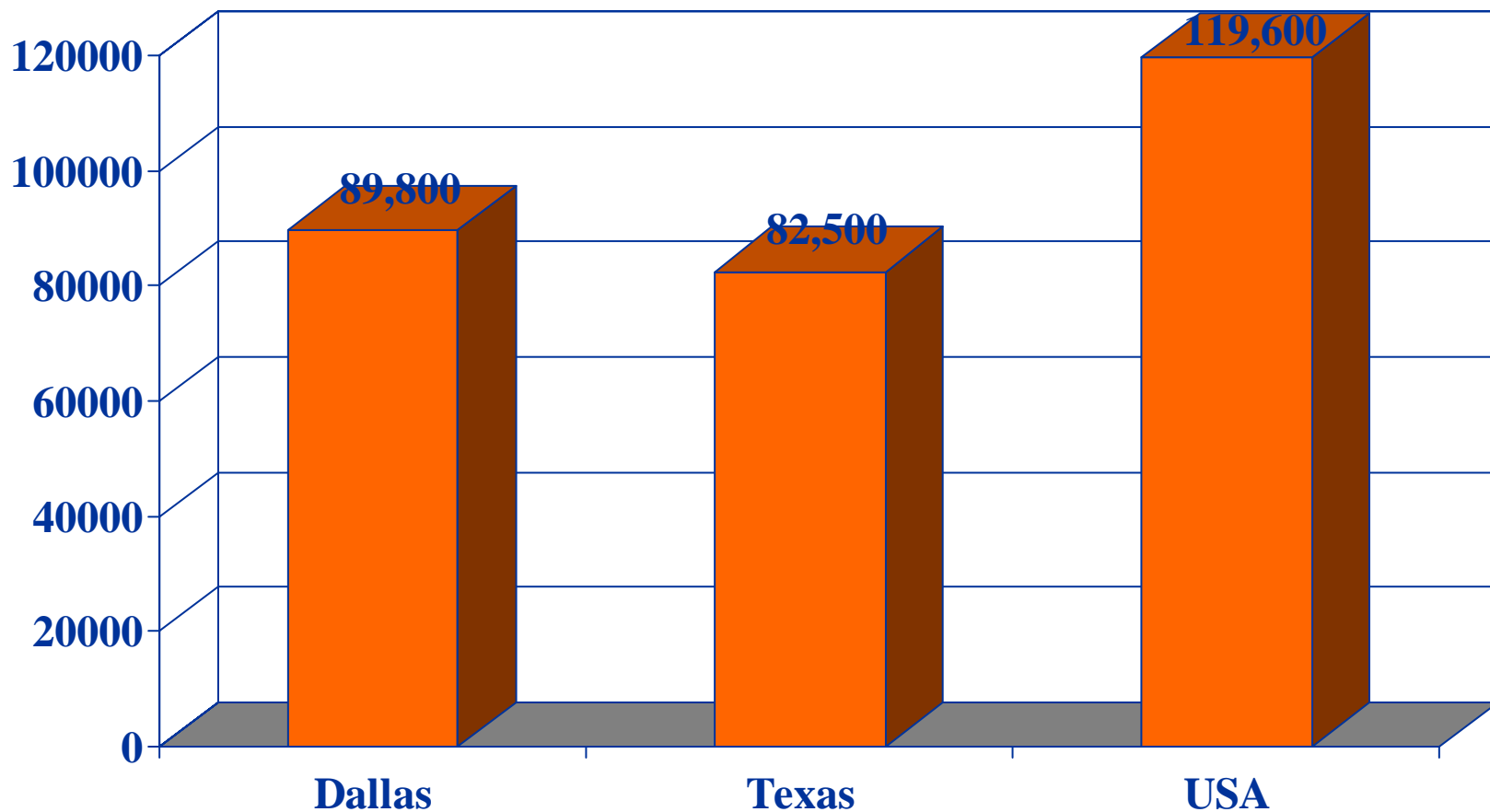


Source: Census Bureau, 1999 \$



2000 Census Trends

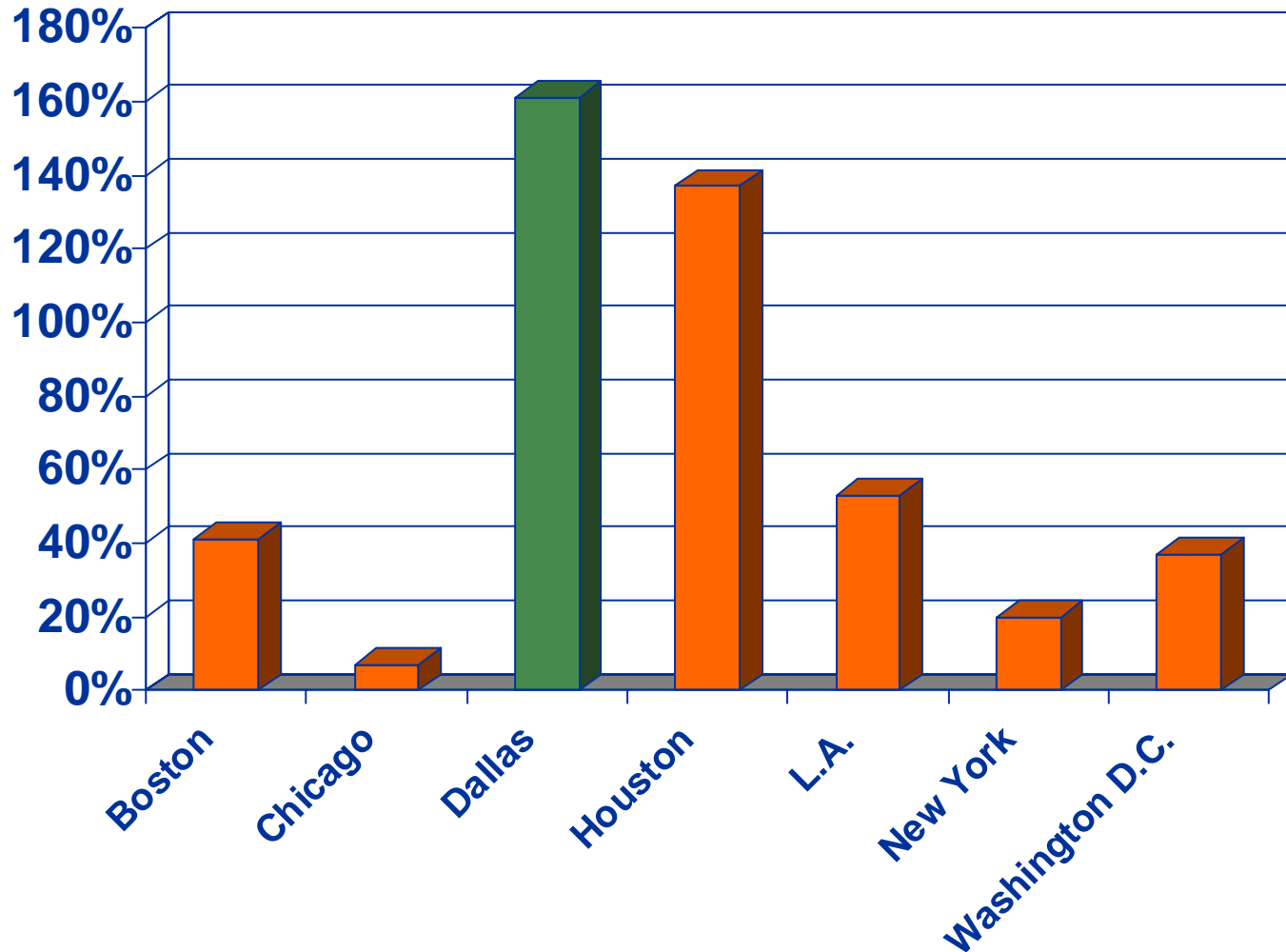
Median Home Value (\$)



Source: Census Bureau, 1999 \$



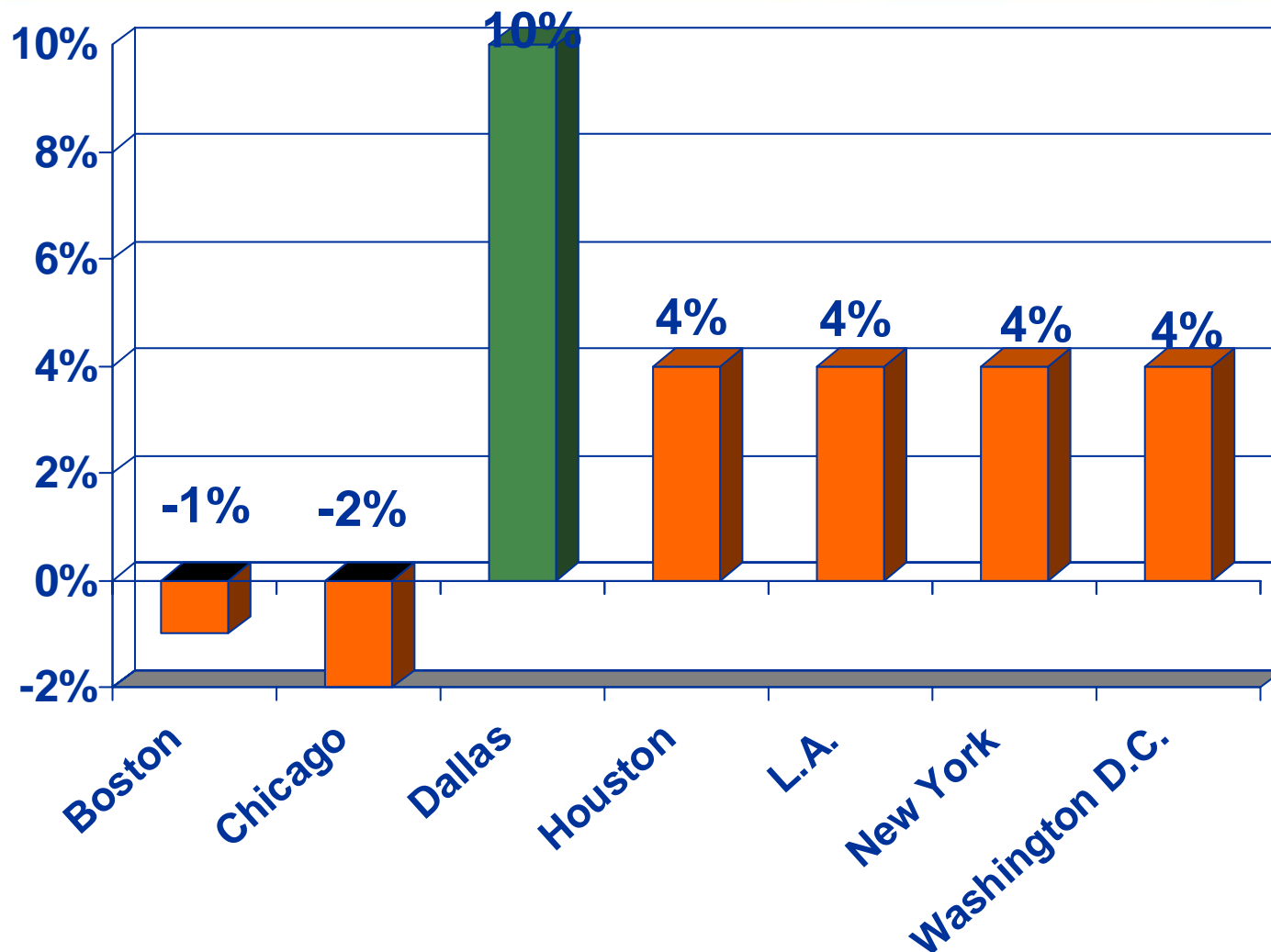
Change in Total Rental Units in Selected Metropolitan areas 1970-2000



Source: Census Bureau



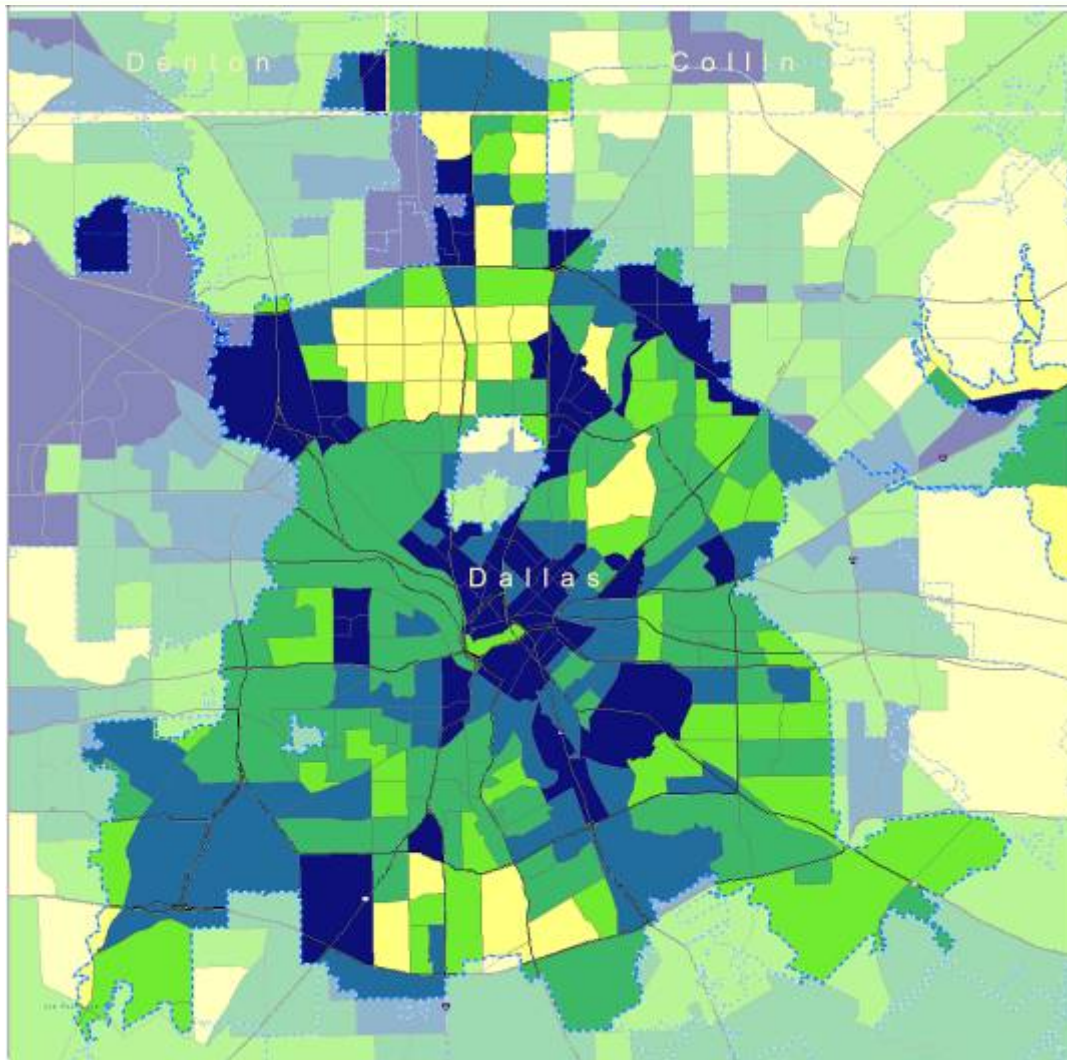
Change in Total Rental Units in Selected Metropolitan Areas, 1990 - 2000



Source: Census Bureau

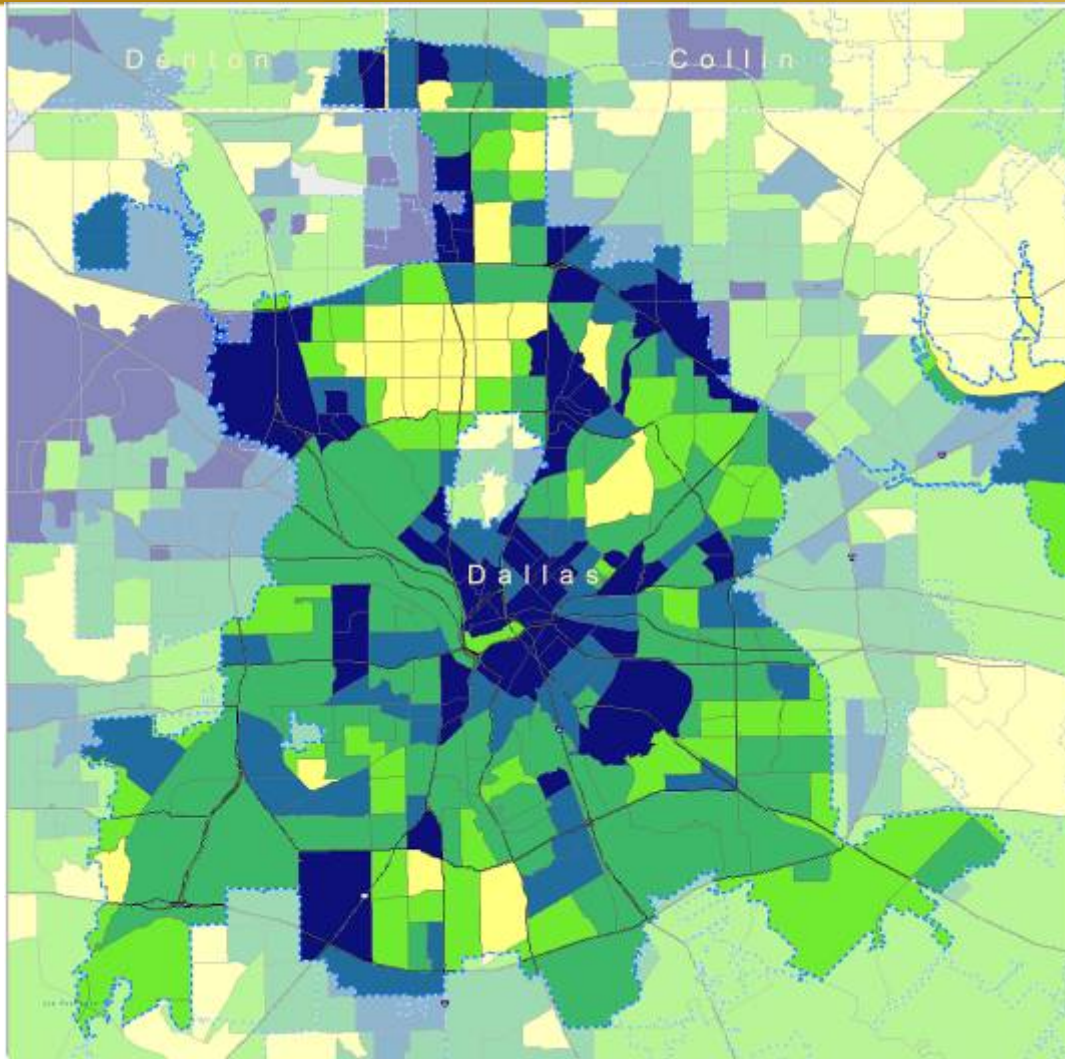


Census Trends





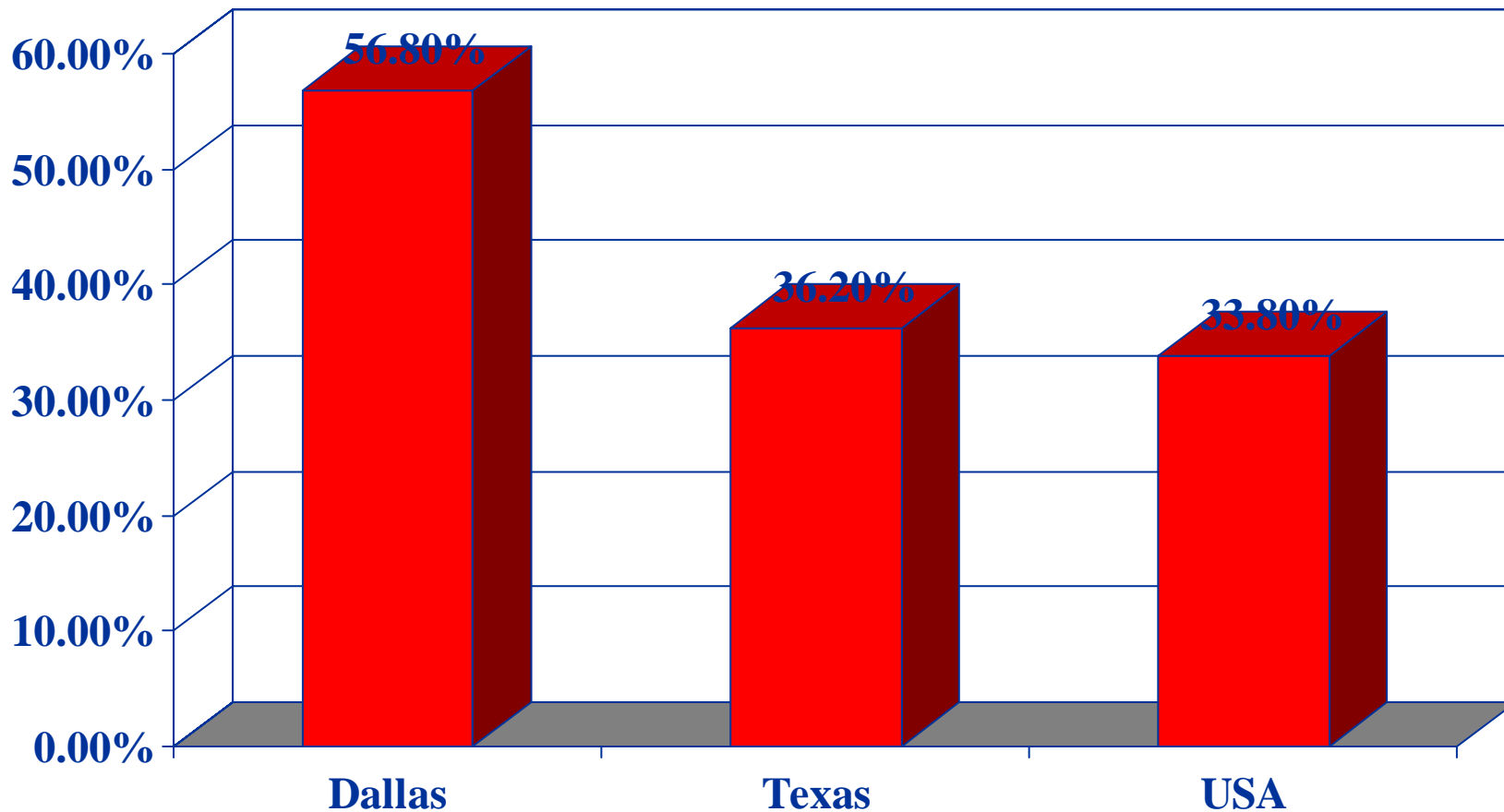
Census Trends





2000 Census Trends

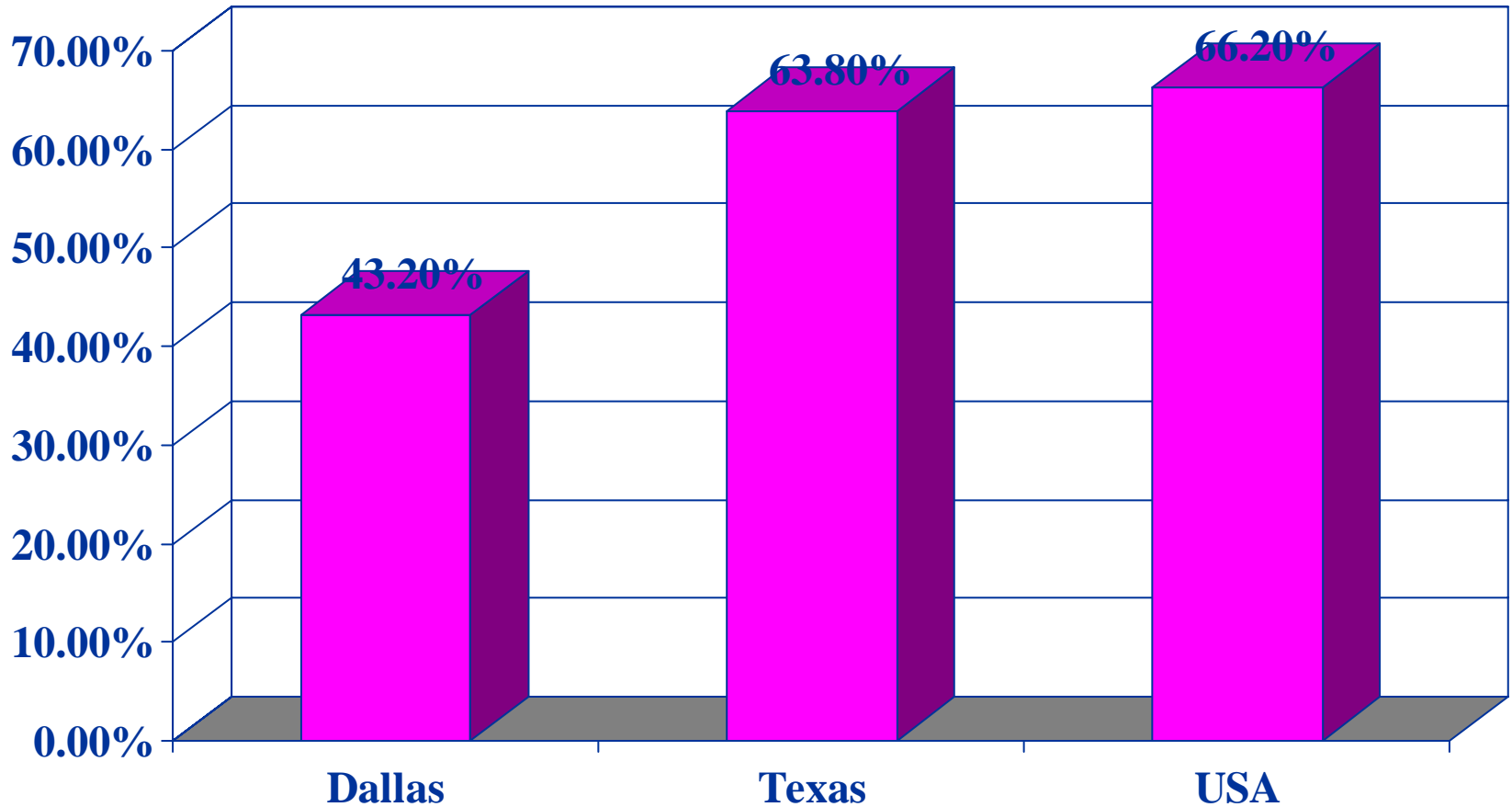
% Renter Households



Source: Census Bureau

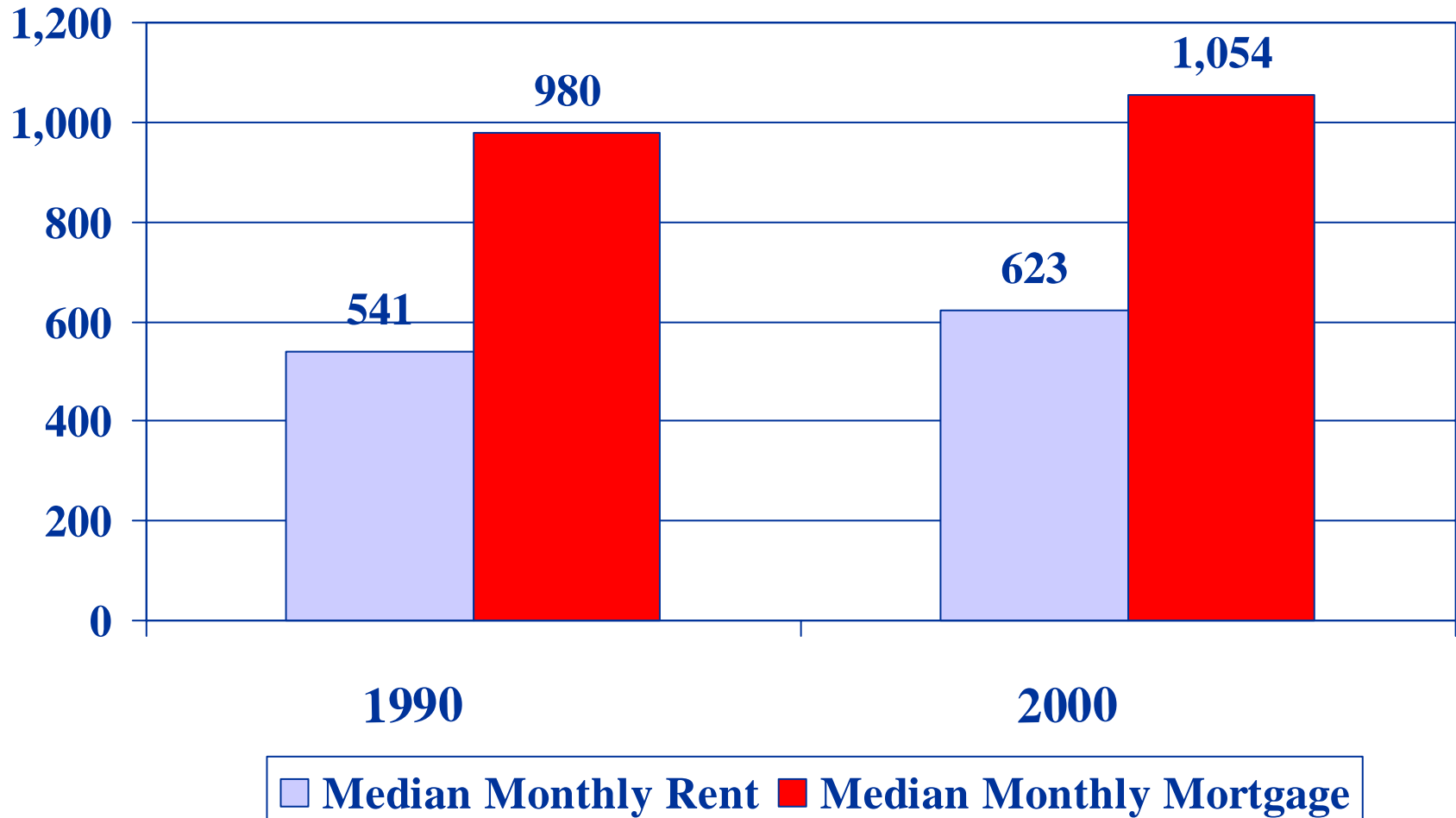
2000 Census Trends

% Owner-occupied Households





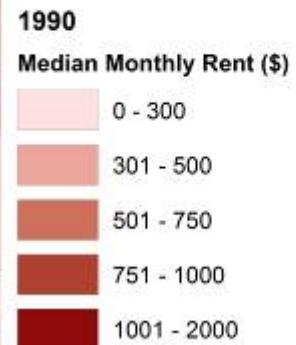
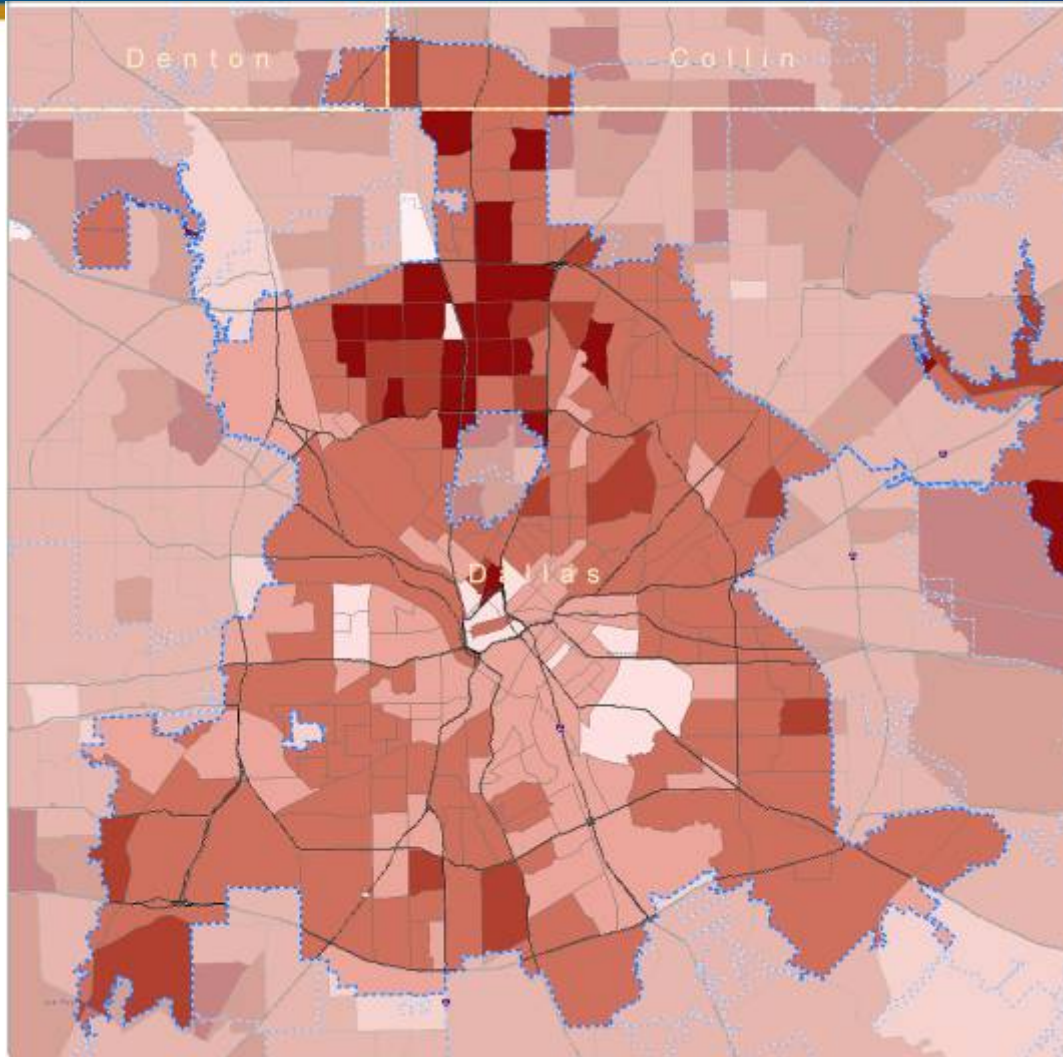
Median Monthly Housing Payment



Source: Census Bureau, 1999 \$

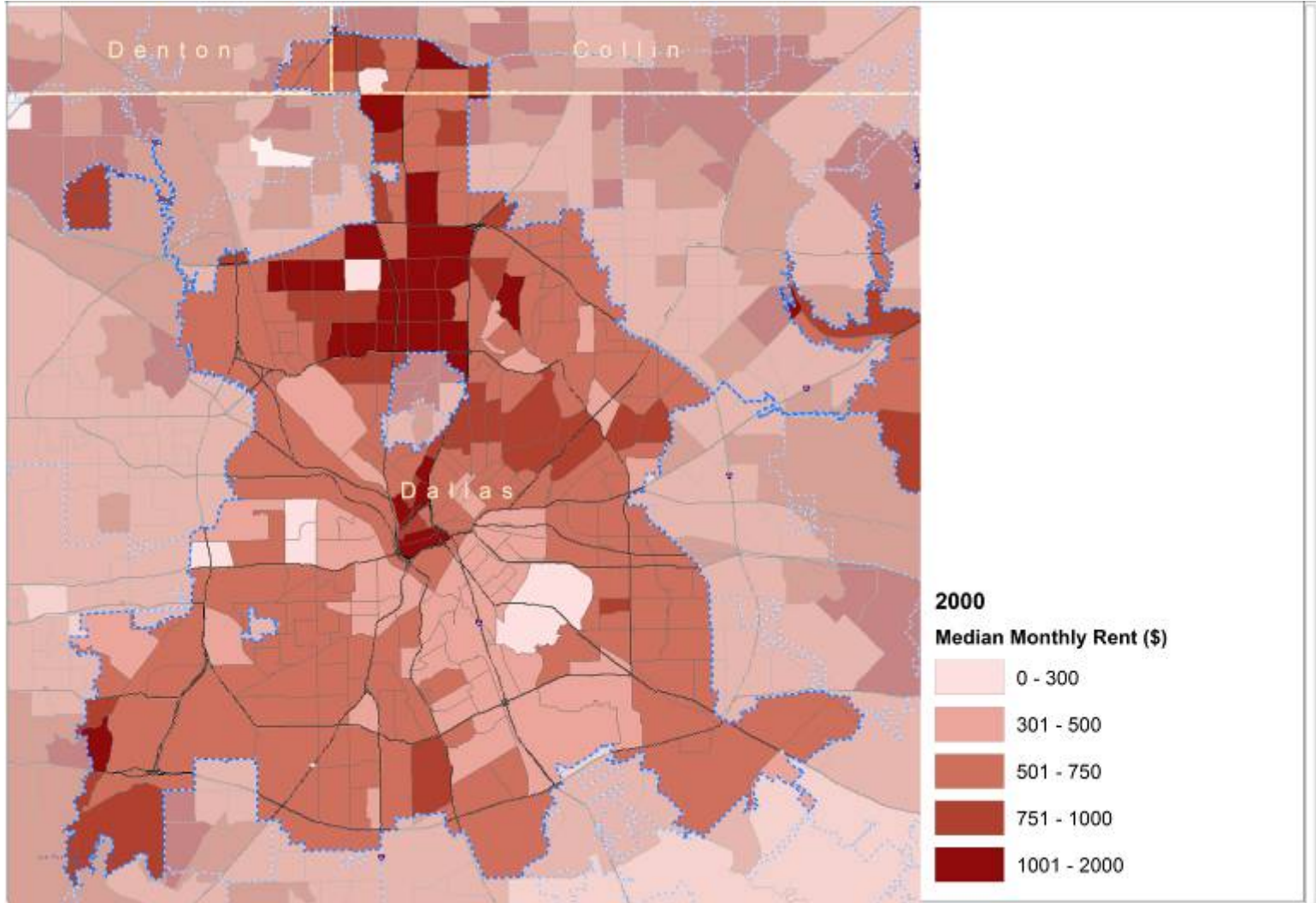


Census Trends



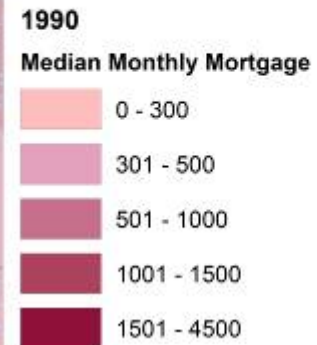
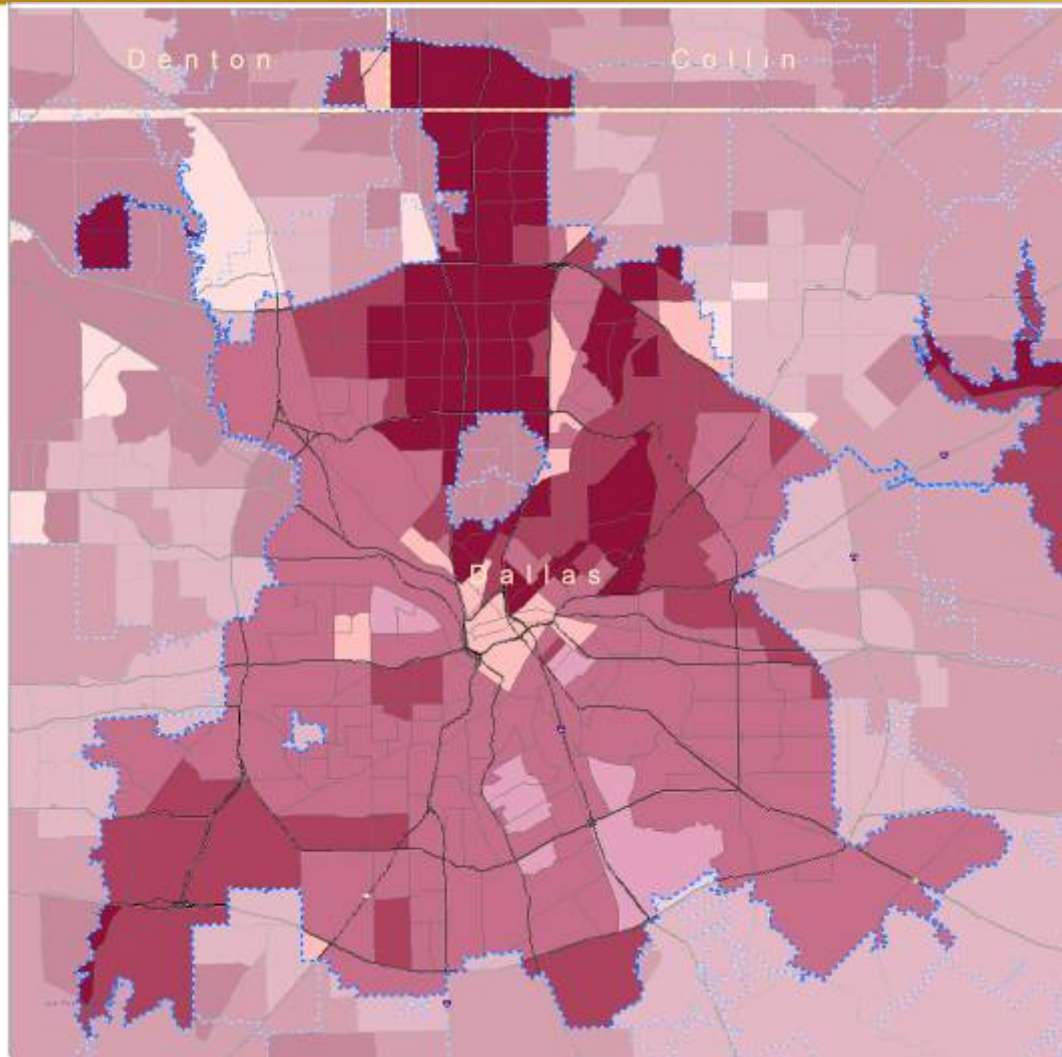


Census Trends



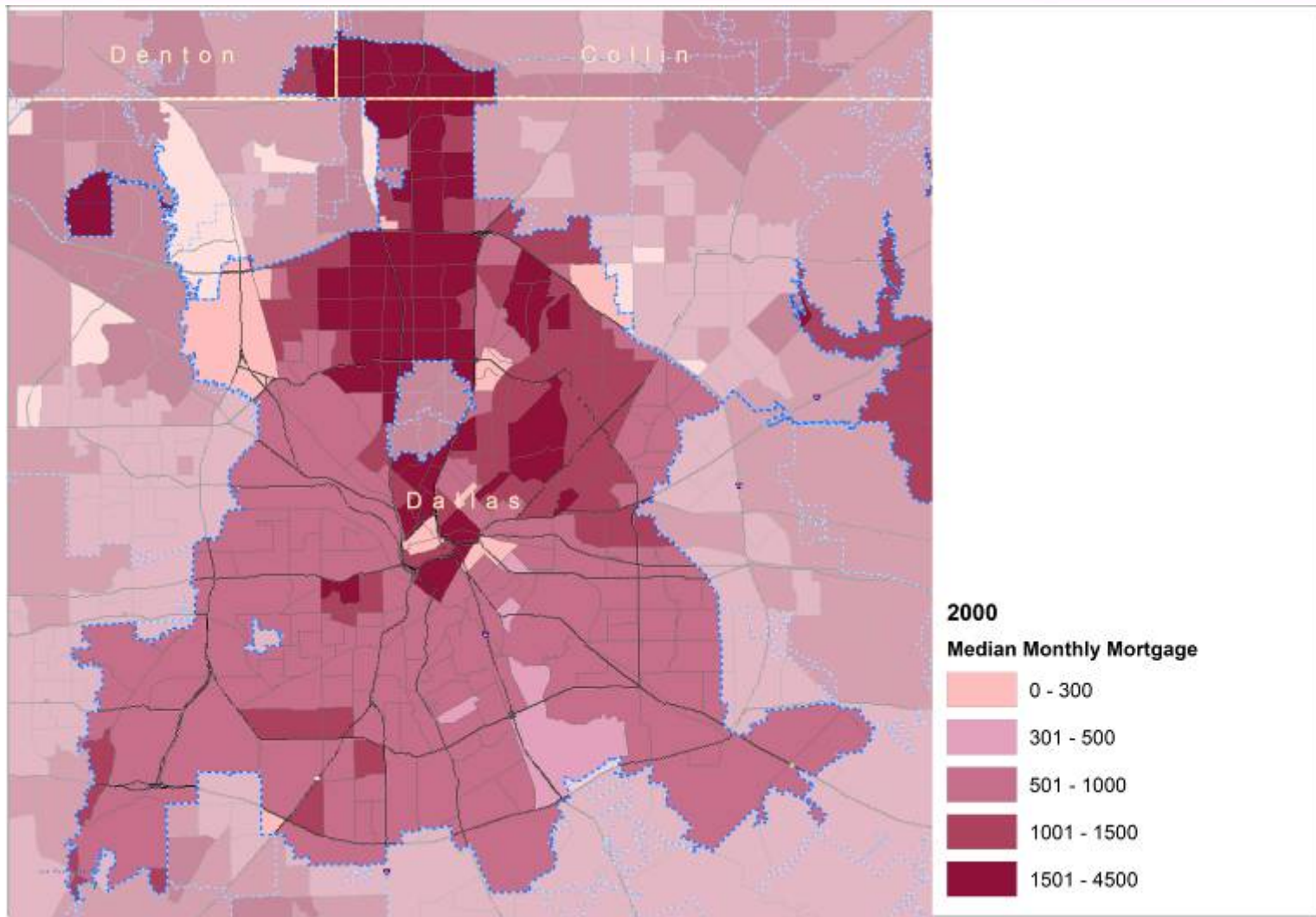


Census Trends



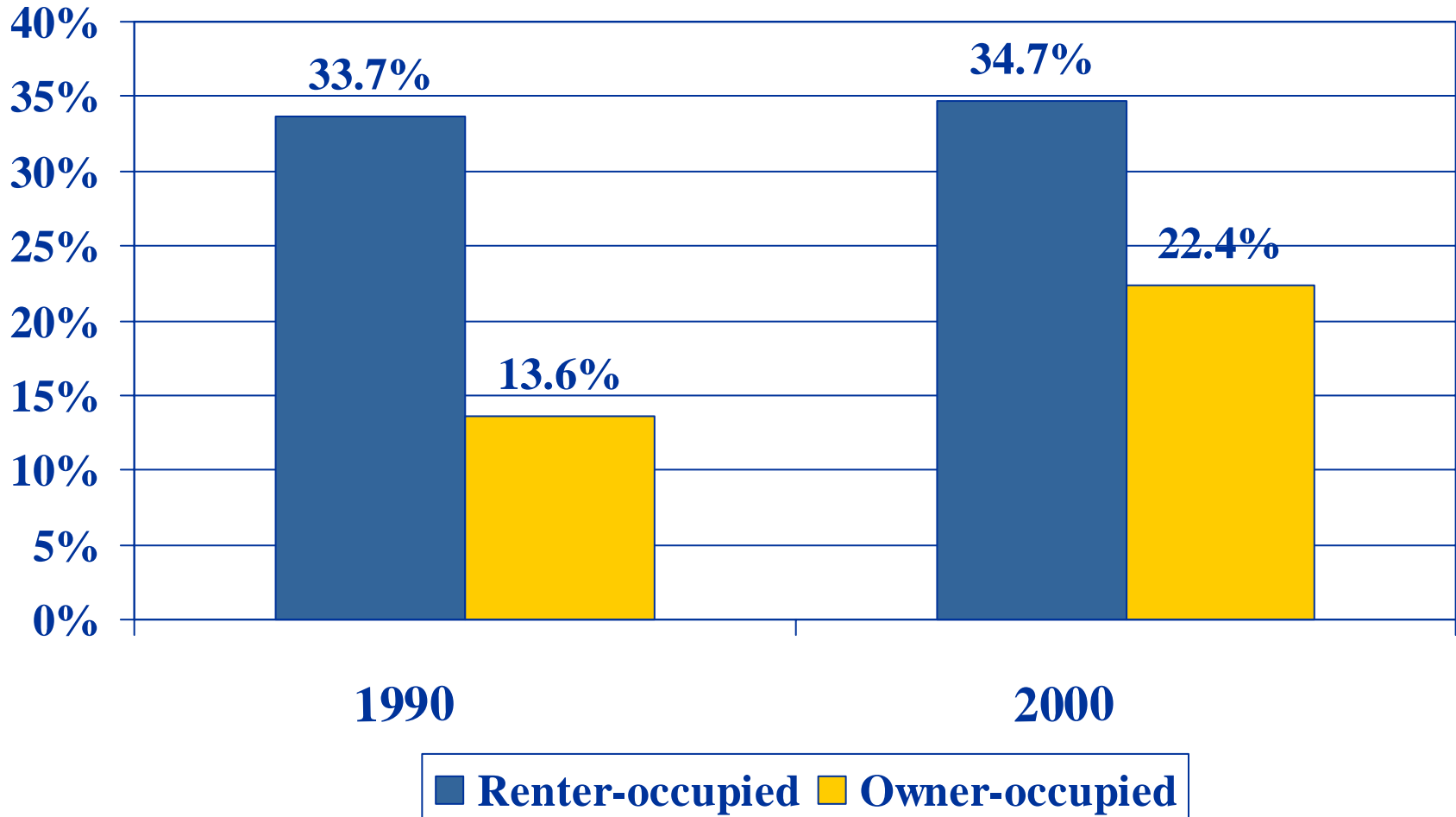


Census Trends





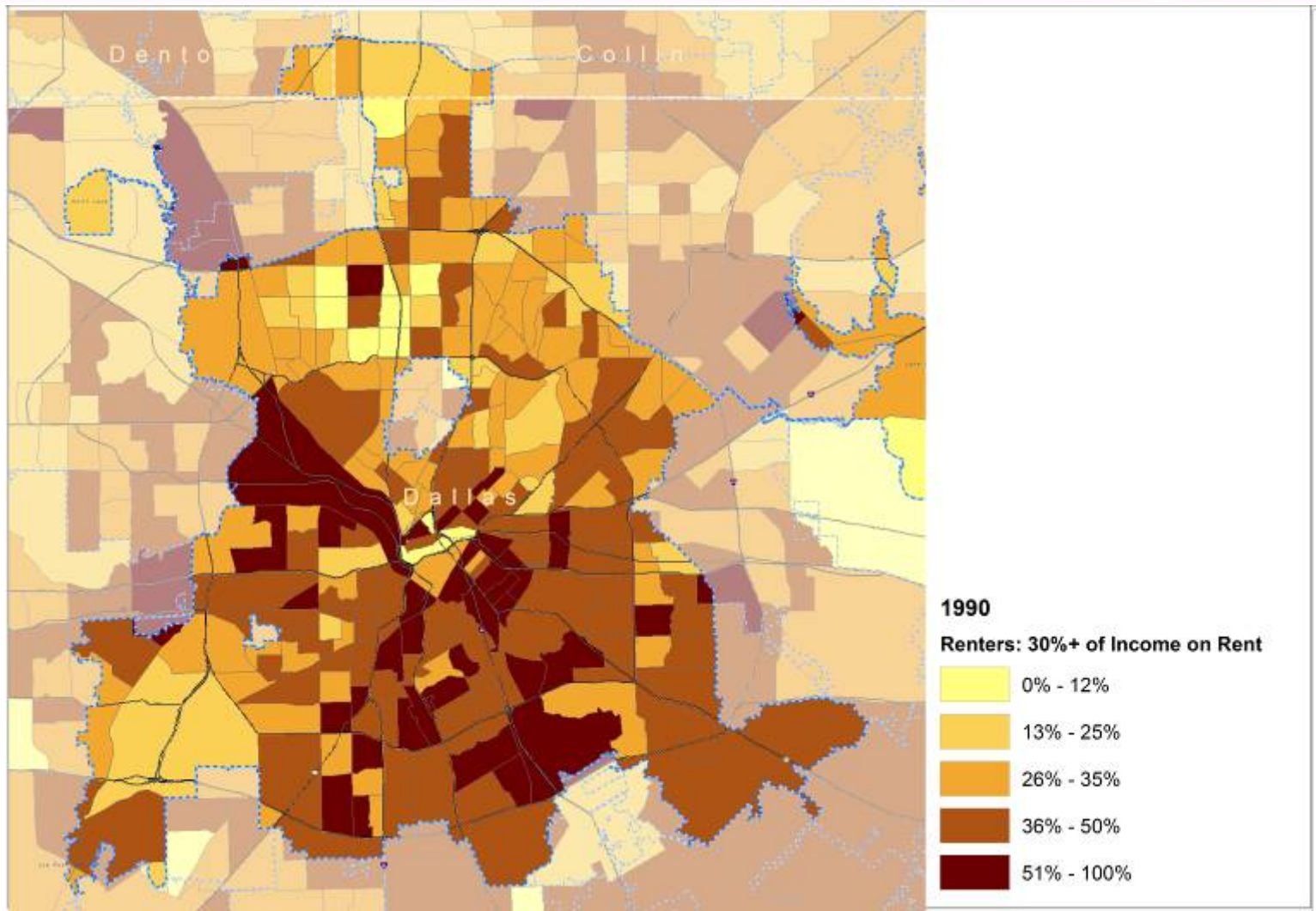
Households paying over 30% of Income on Housing



Source: Census Bureau



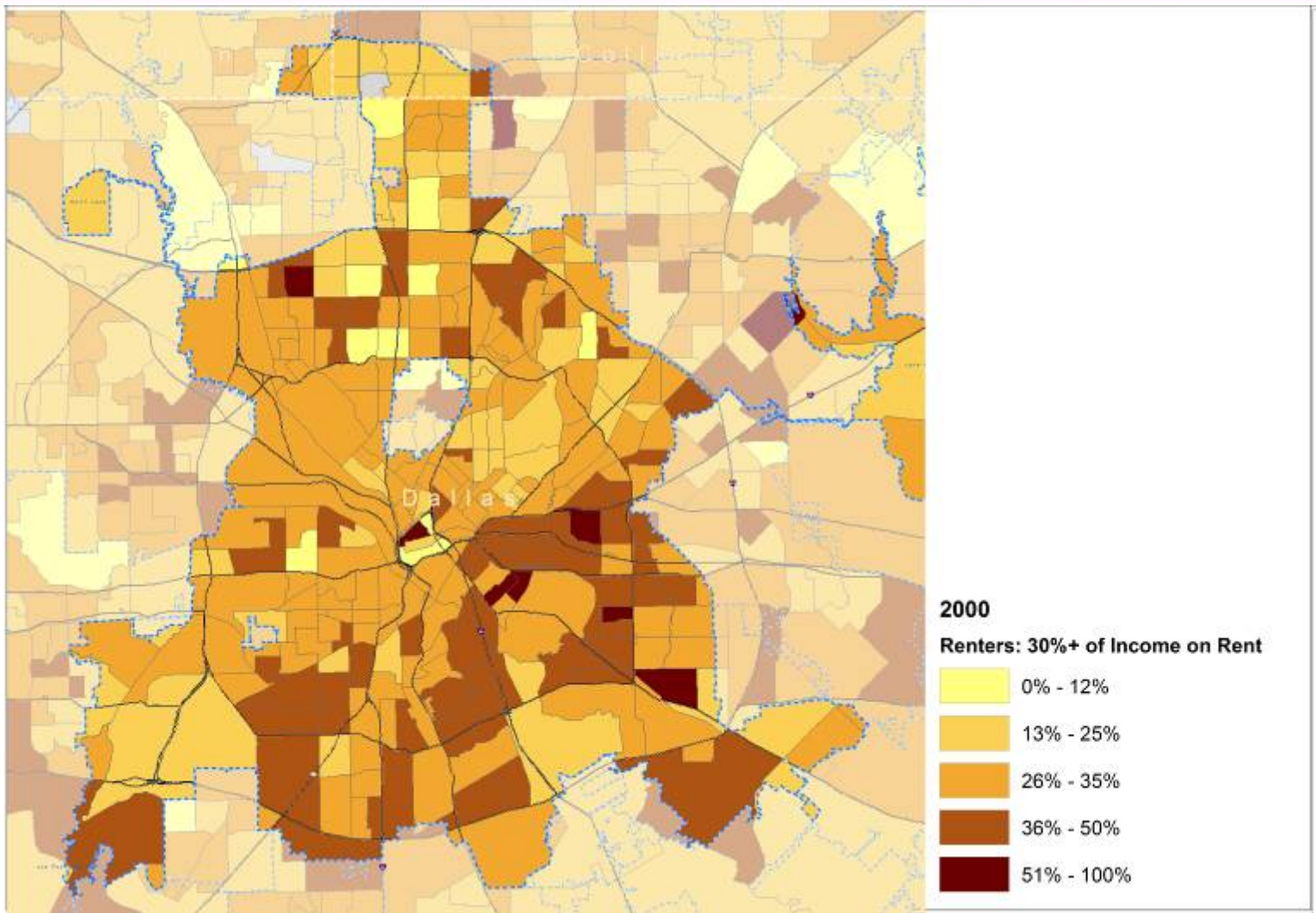
Renters Overpaying 1990



Source: Census Bureau



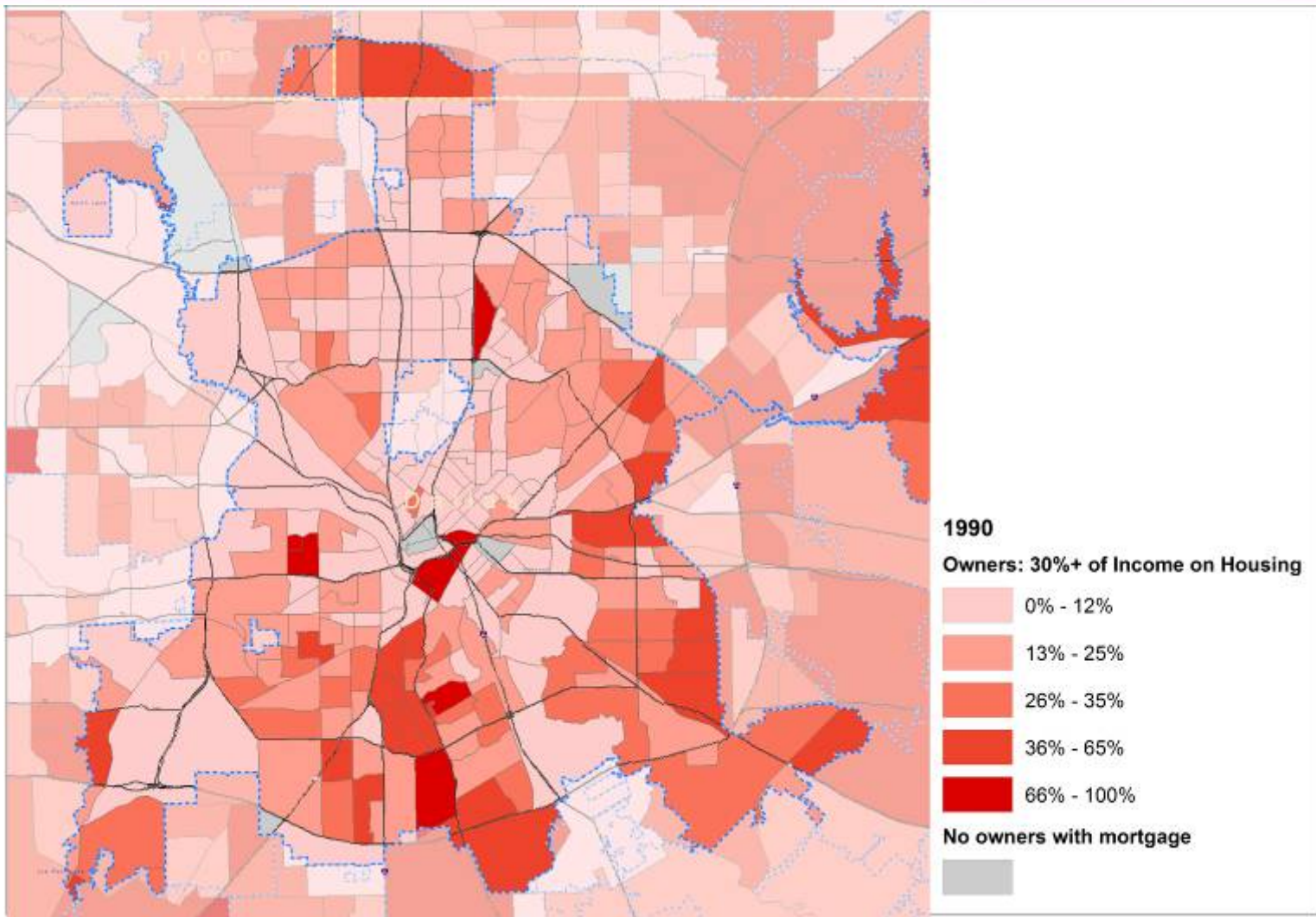
Renters Overpaying 2000



Source: Census Bureau



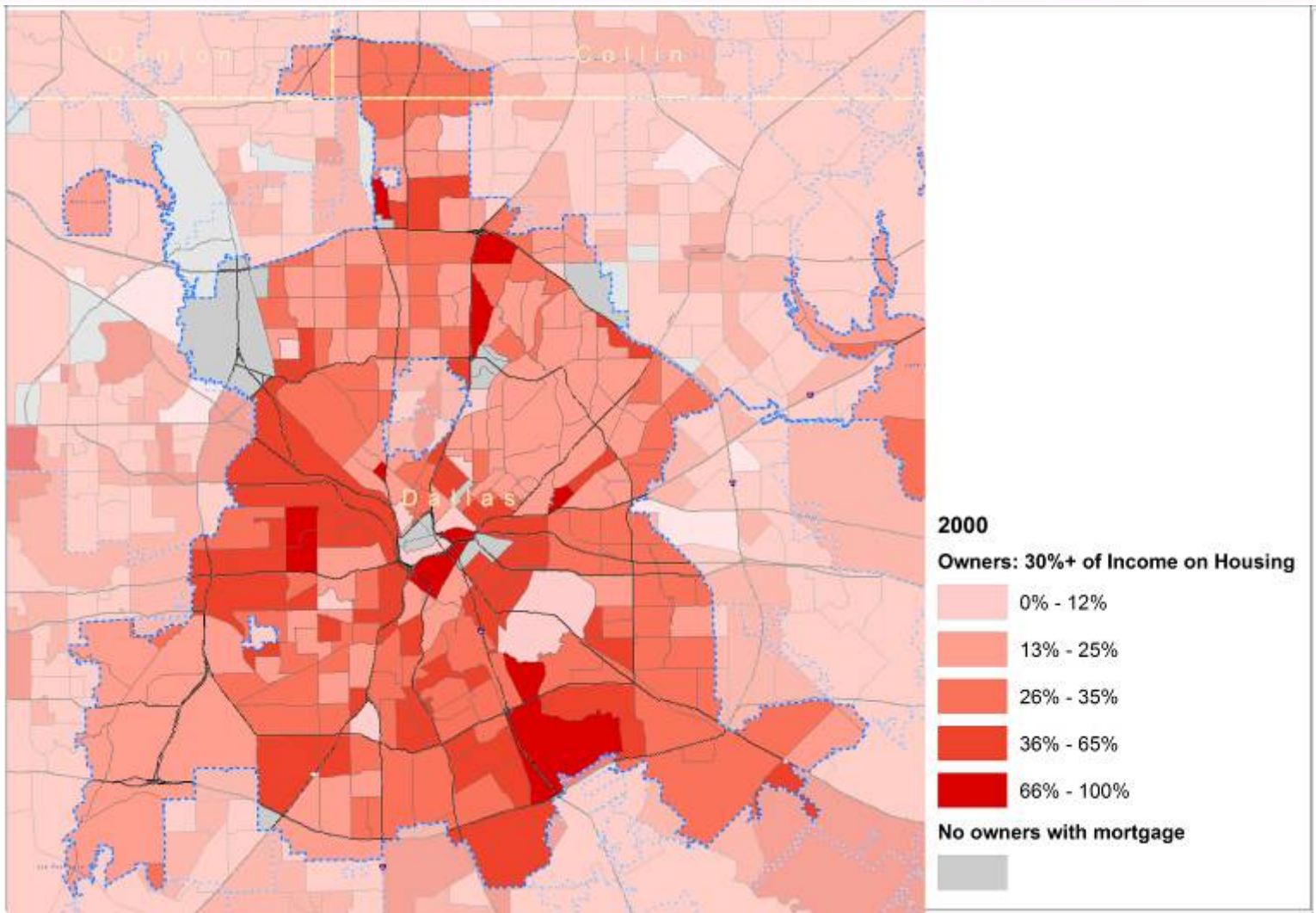
Owners Overpaying 1990



Source: Census Bureau



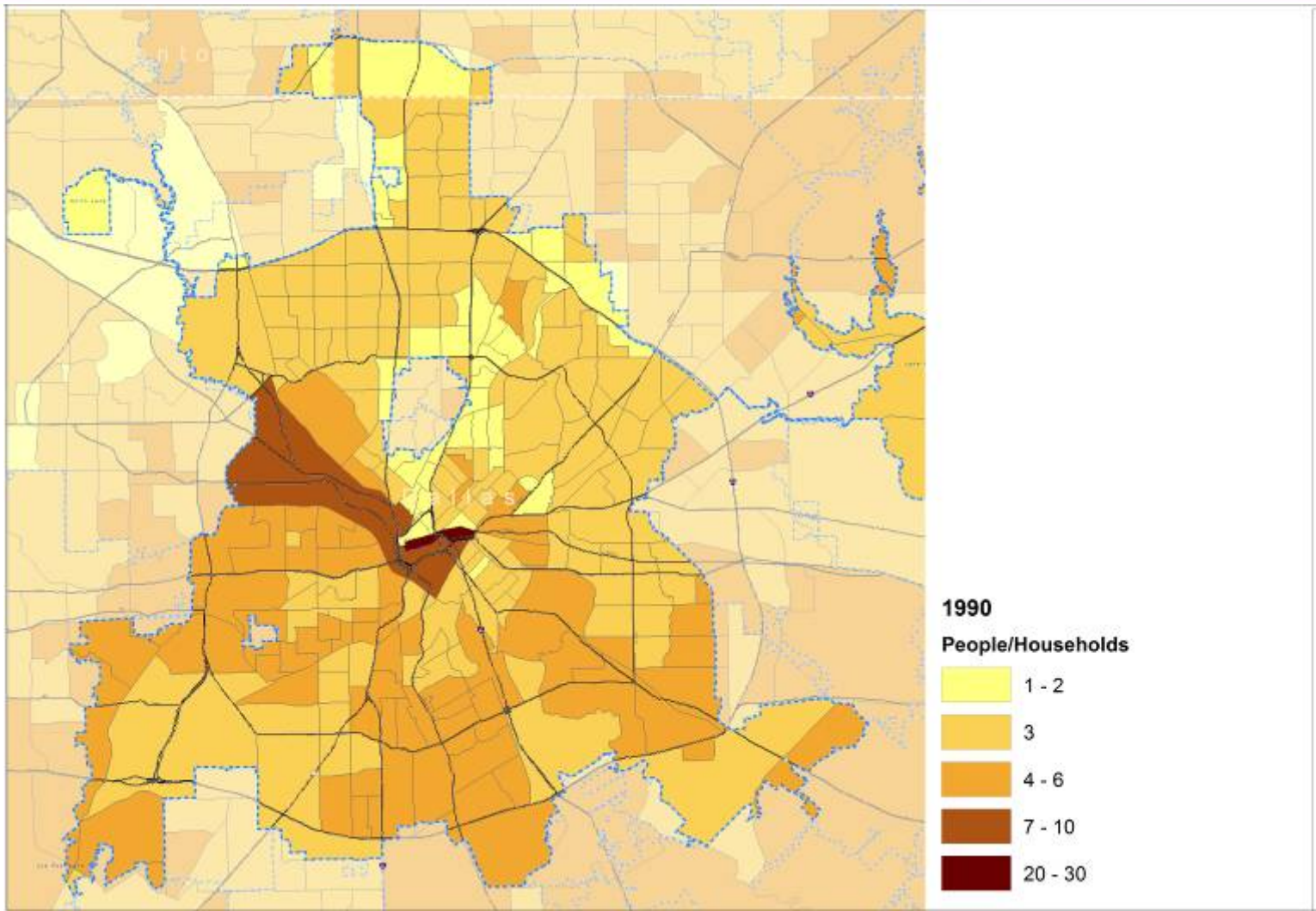
Owners Overpaying 2000



Source: Census Bureau



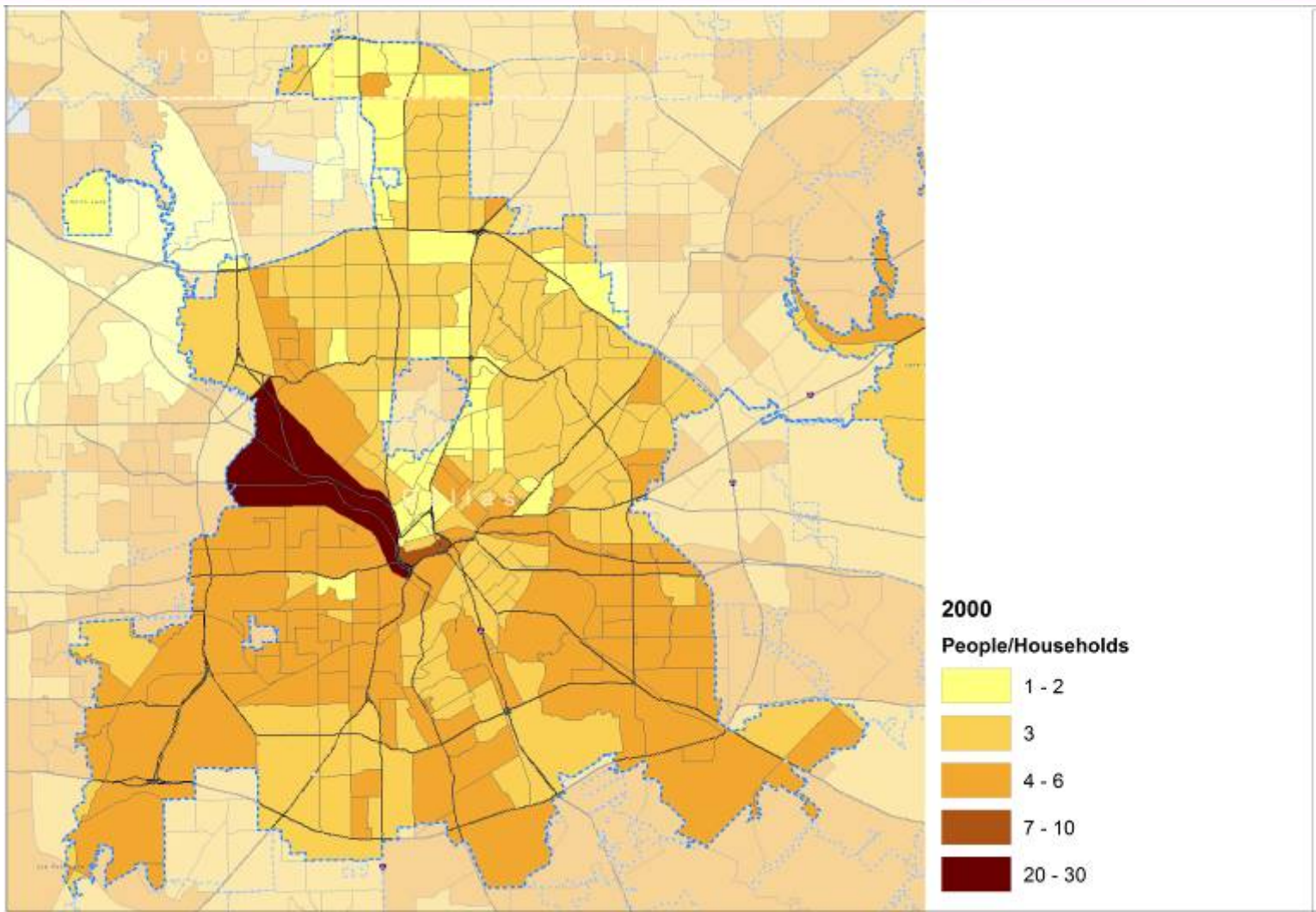
People per Household 1990



Source: Census Bureau



People per Household 2000

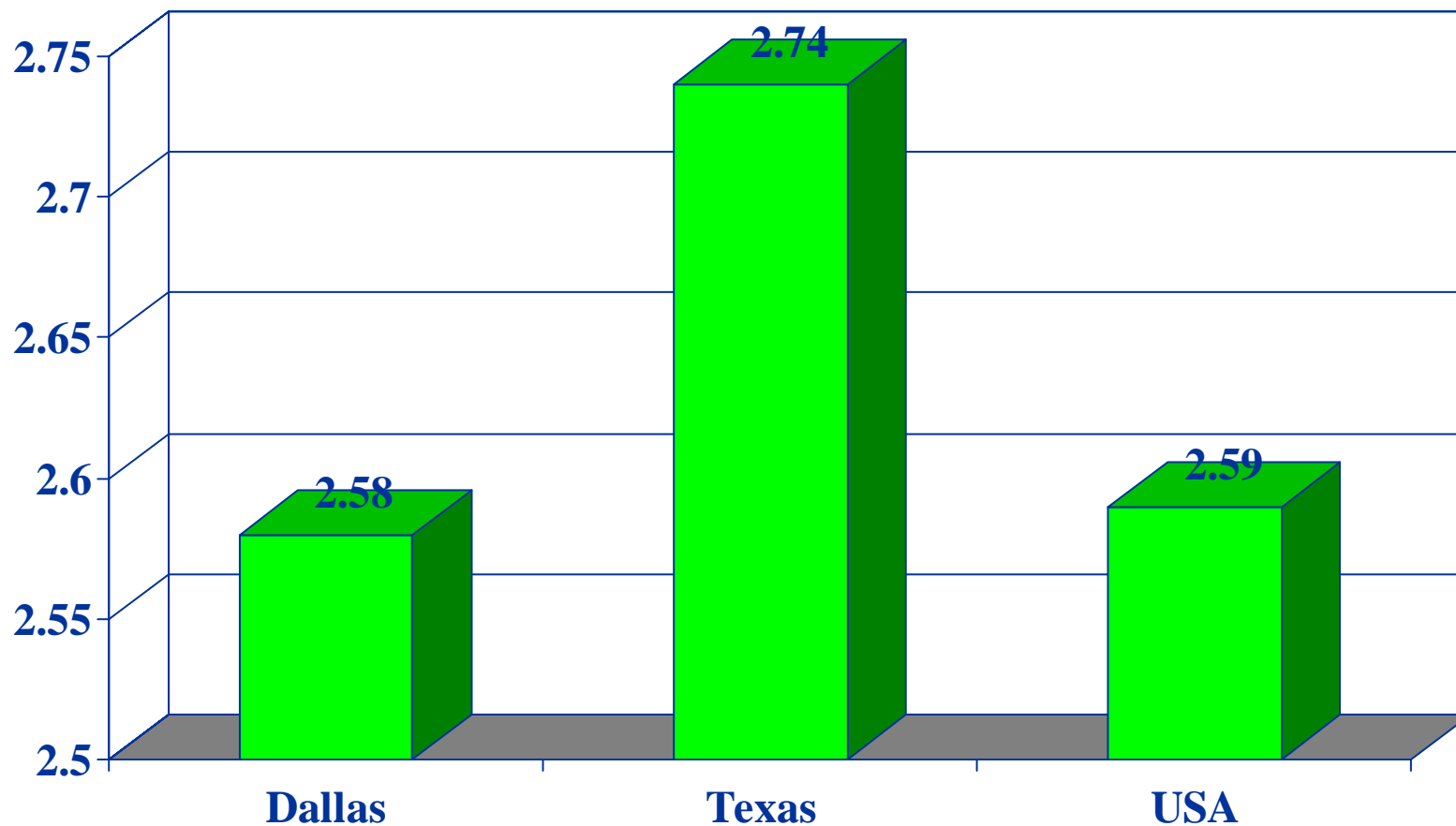


Source: Census Bureau



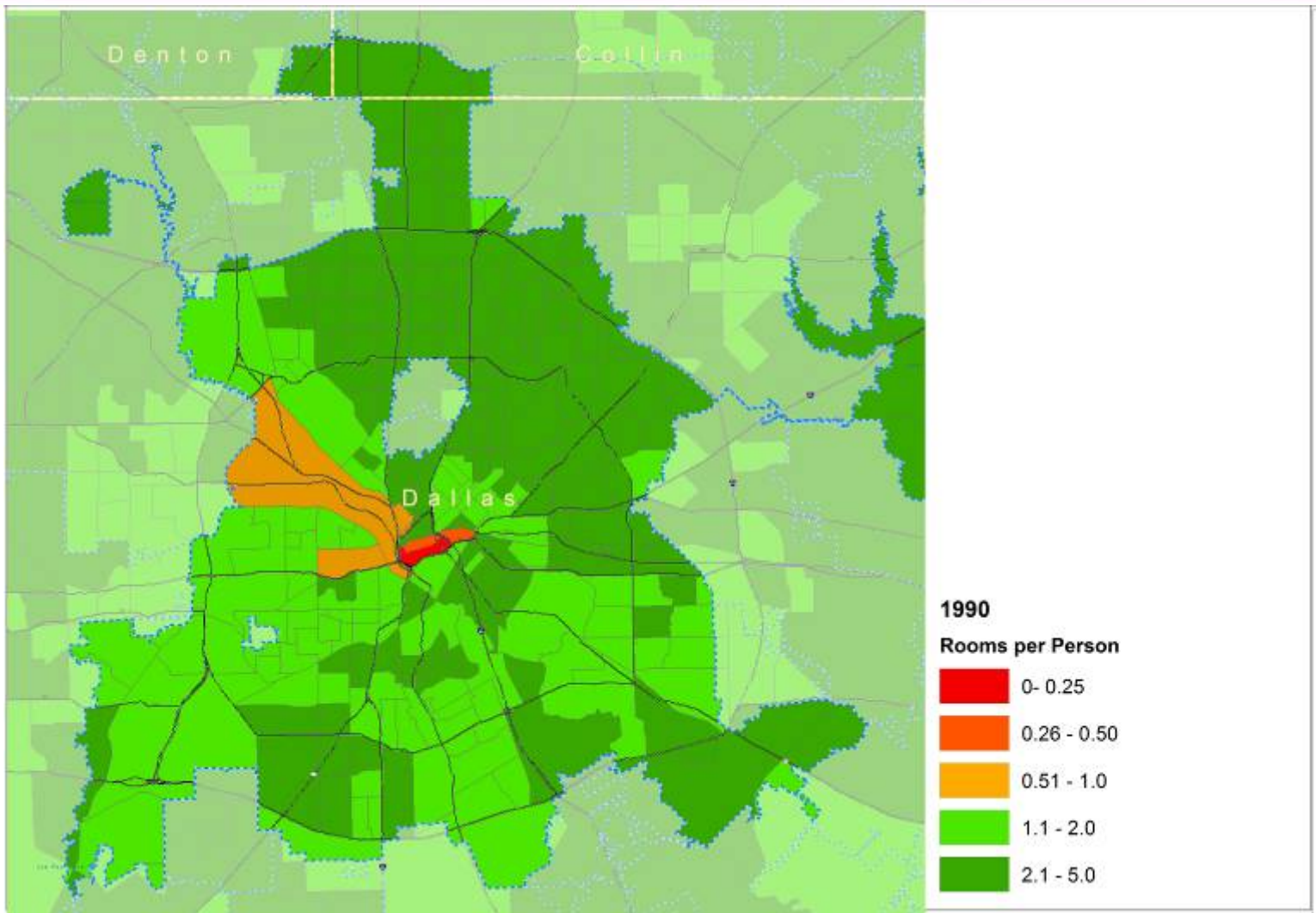
2000 Census Trends

Average Household Size





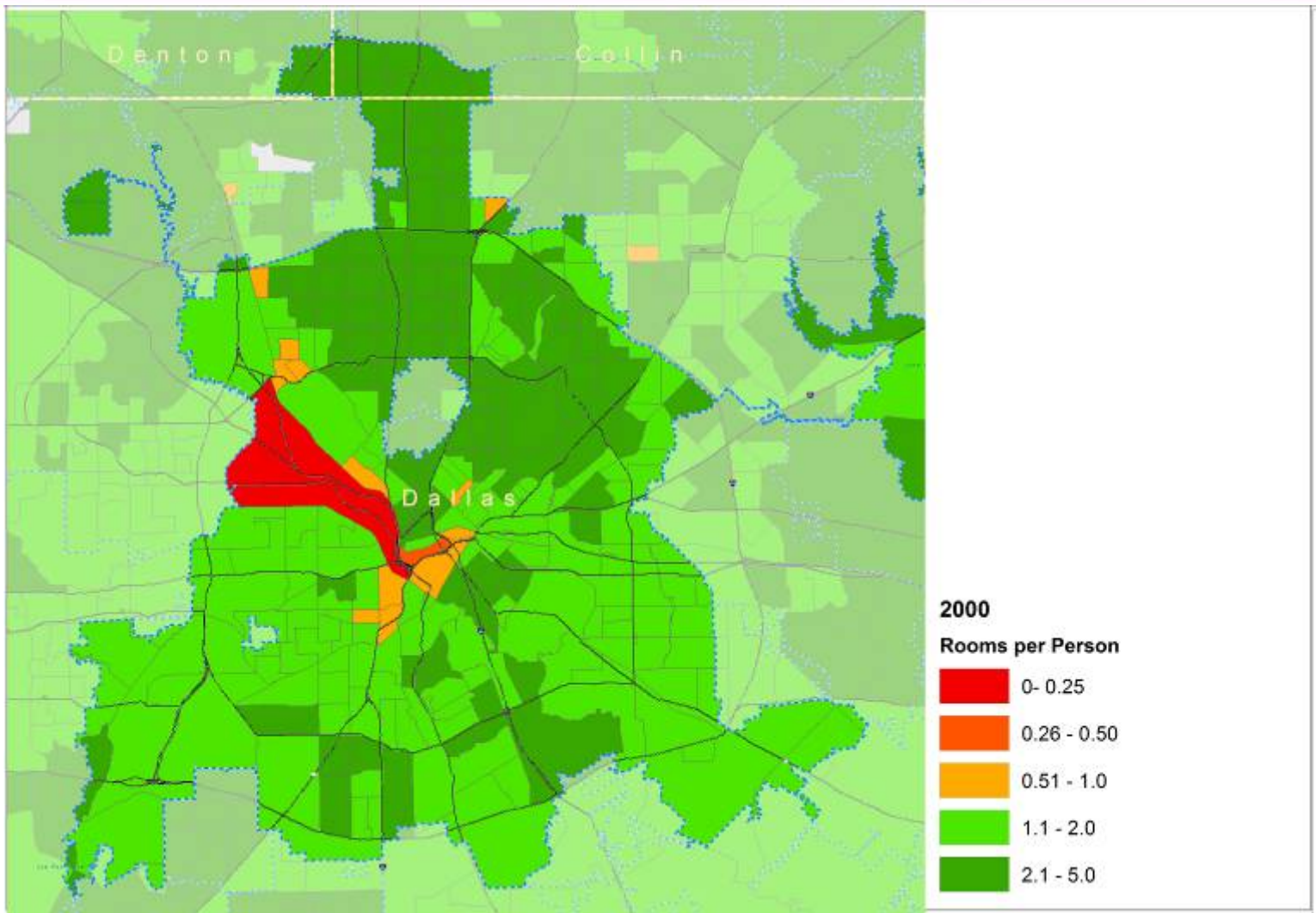
Rooms per Person 1990



Source: Census Bureau



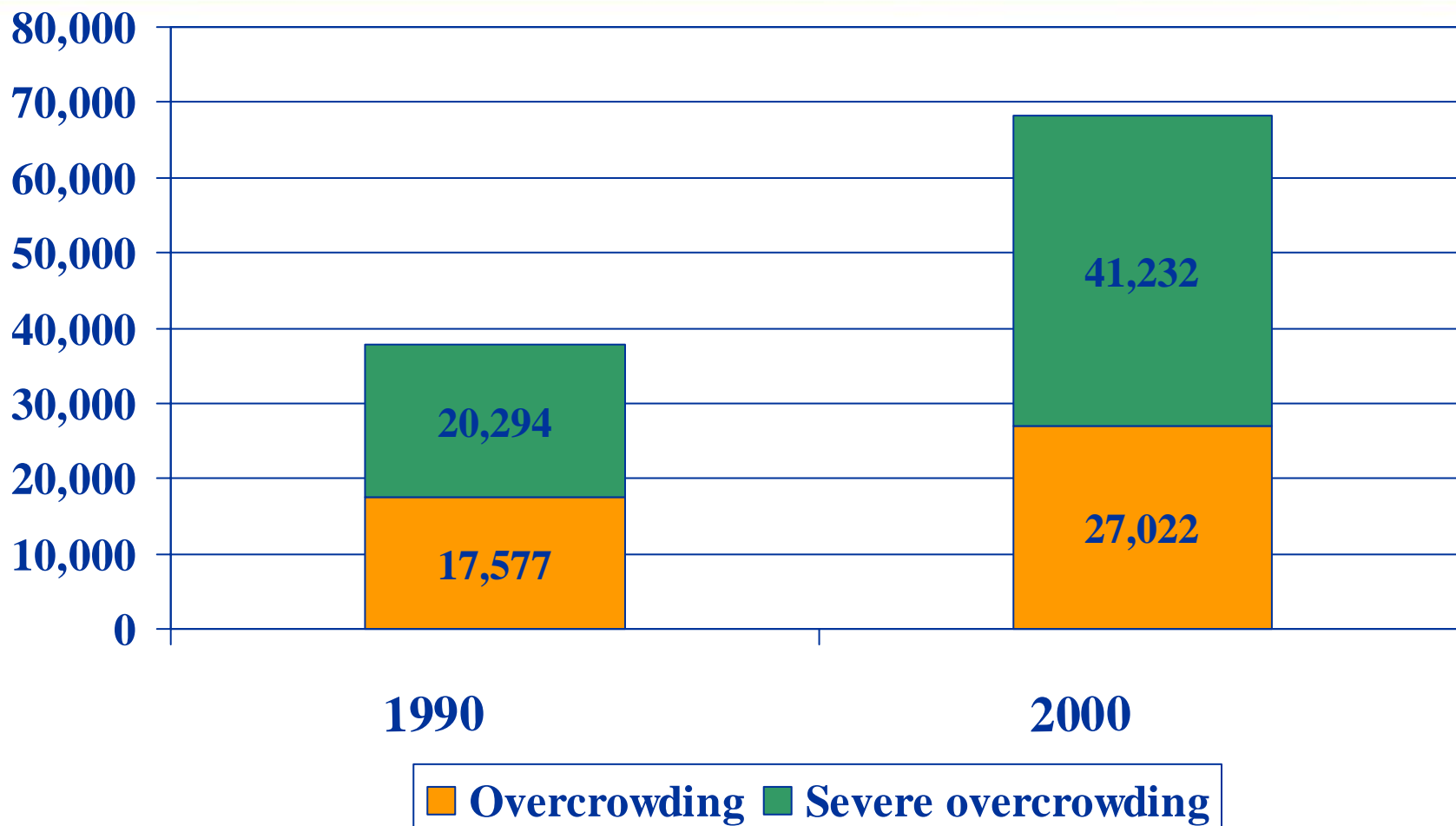
Rooms per Person 2000



Source: Census Bureau



Overcrowding

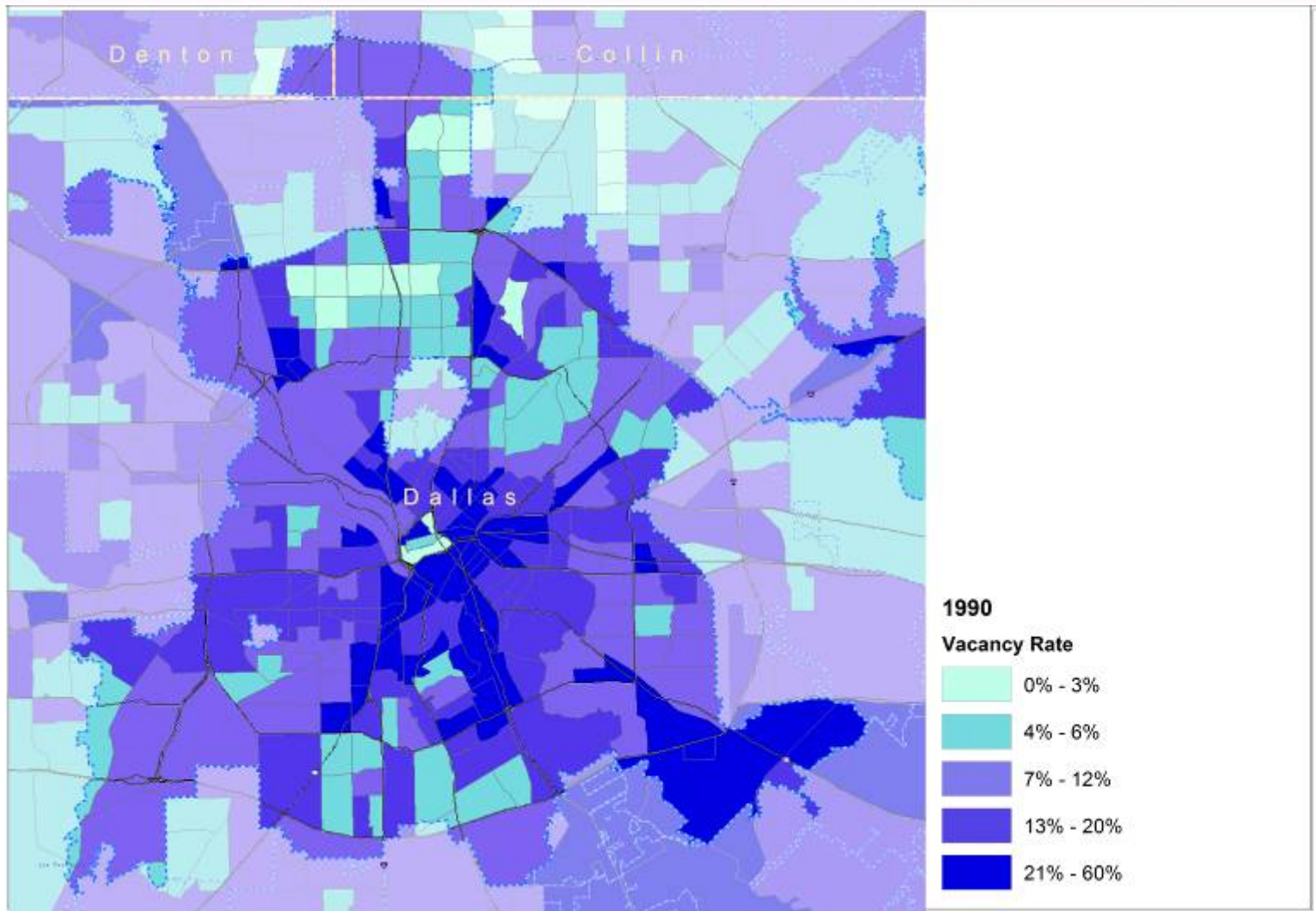


The US Census defines overcrowding as more than one person per room per unit and severe overcrowding as more than 1.5 persons per room per unit

Source: Census Bureau



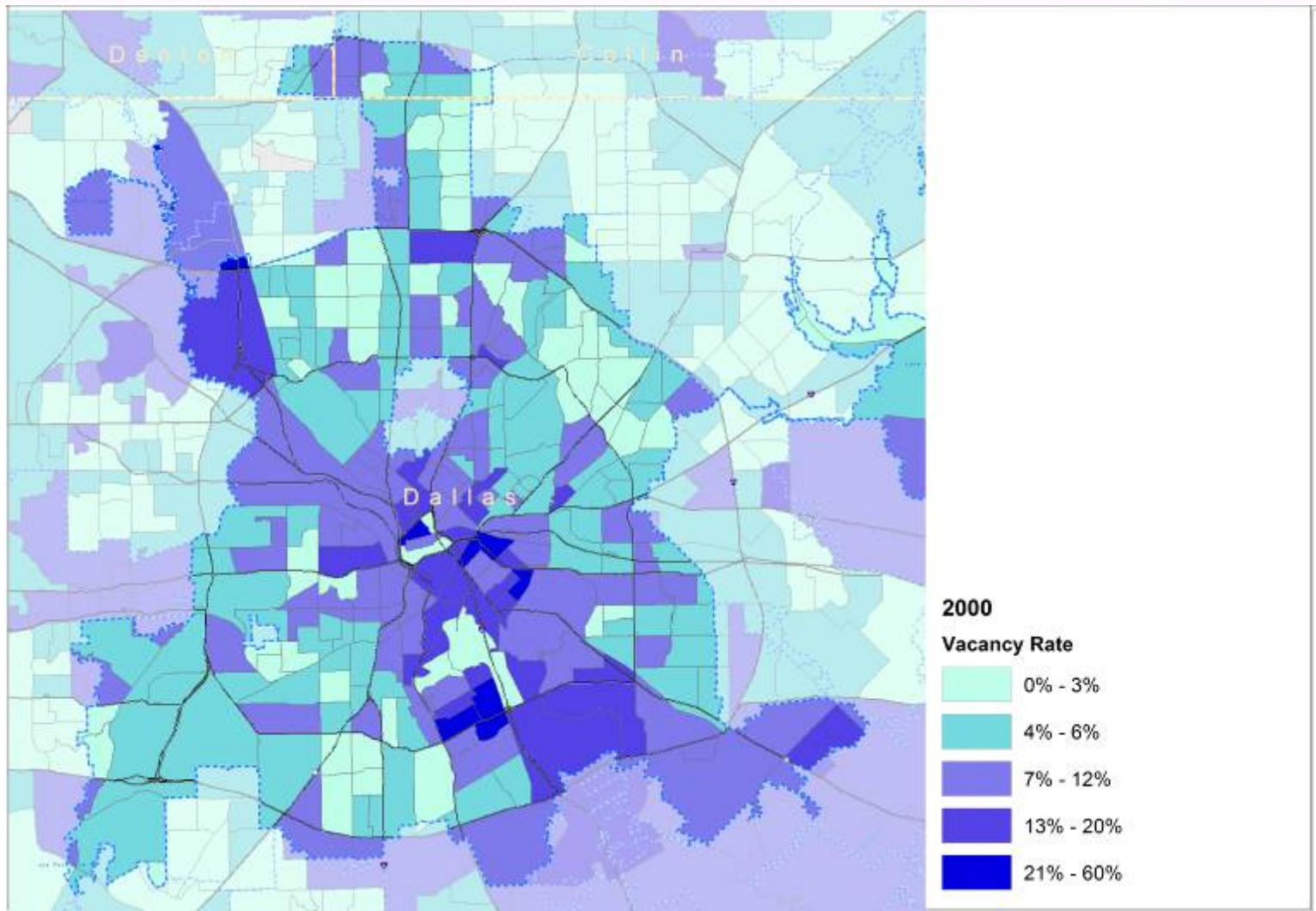
Vacancy Rate 1990



Source: Census Bureau



Vacancy Rate 2000

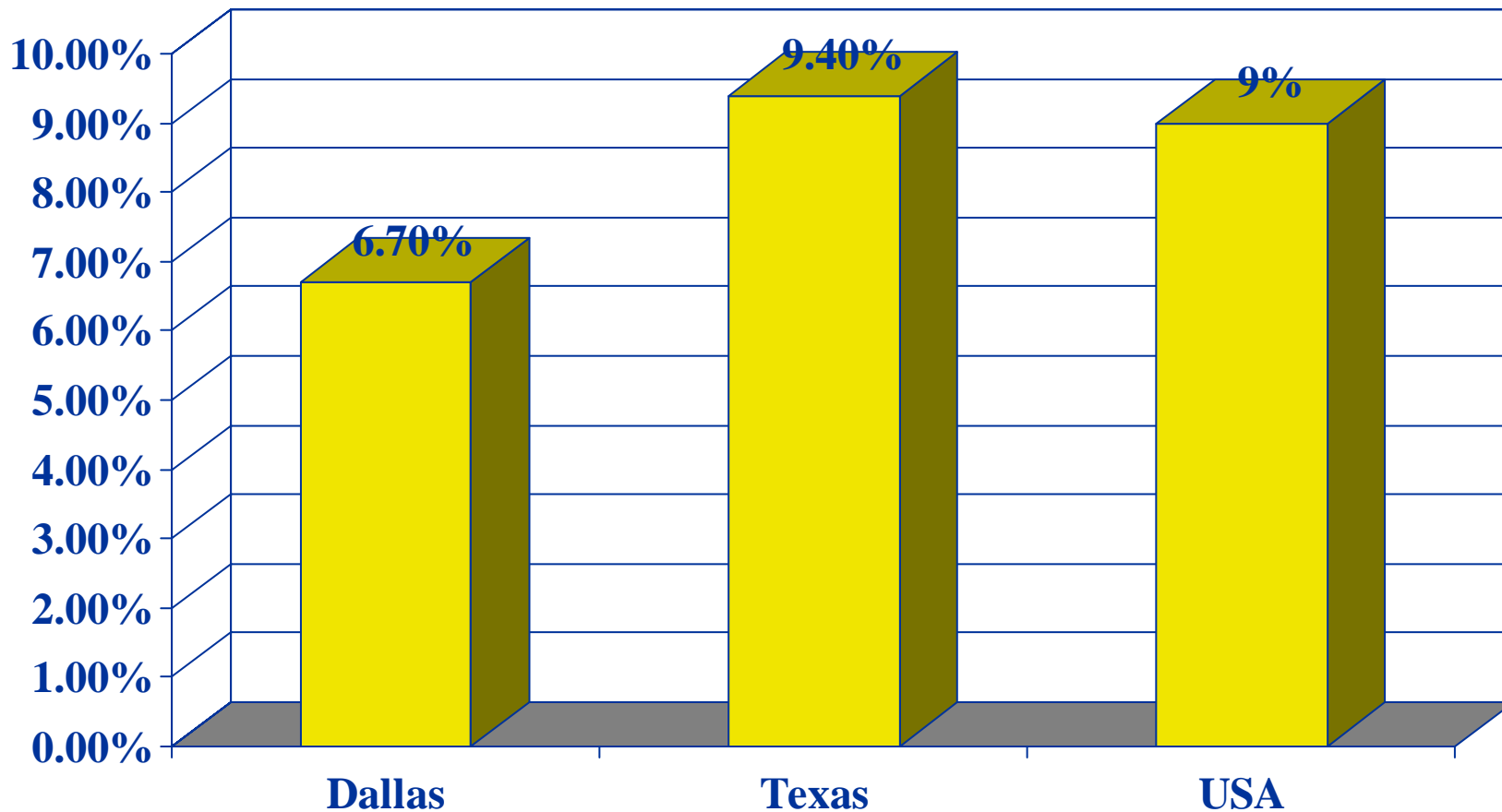


Source: Census Bureau



2000 Census Trends

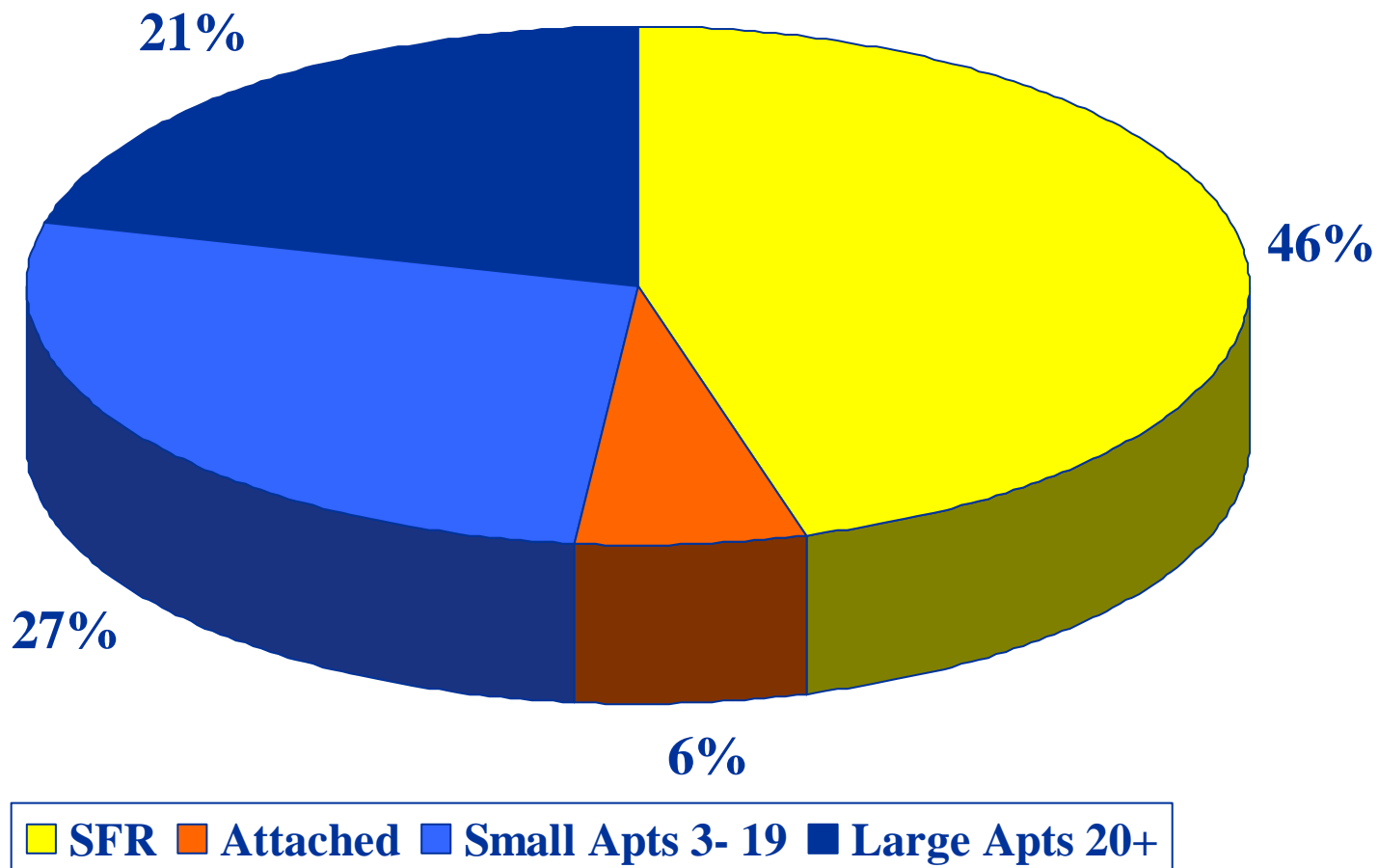
Vacancy Rate



Source: Census Bureau

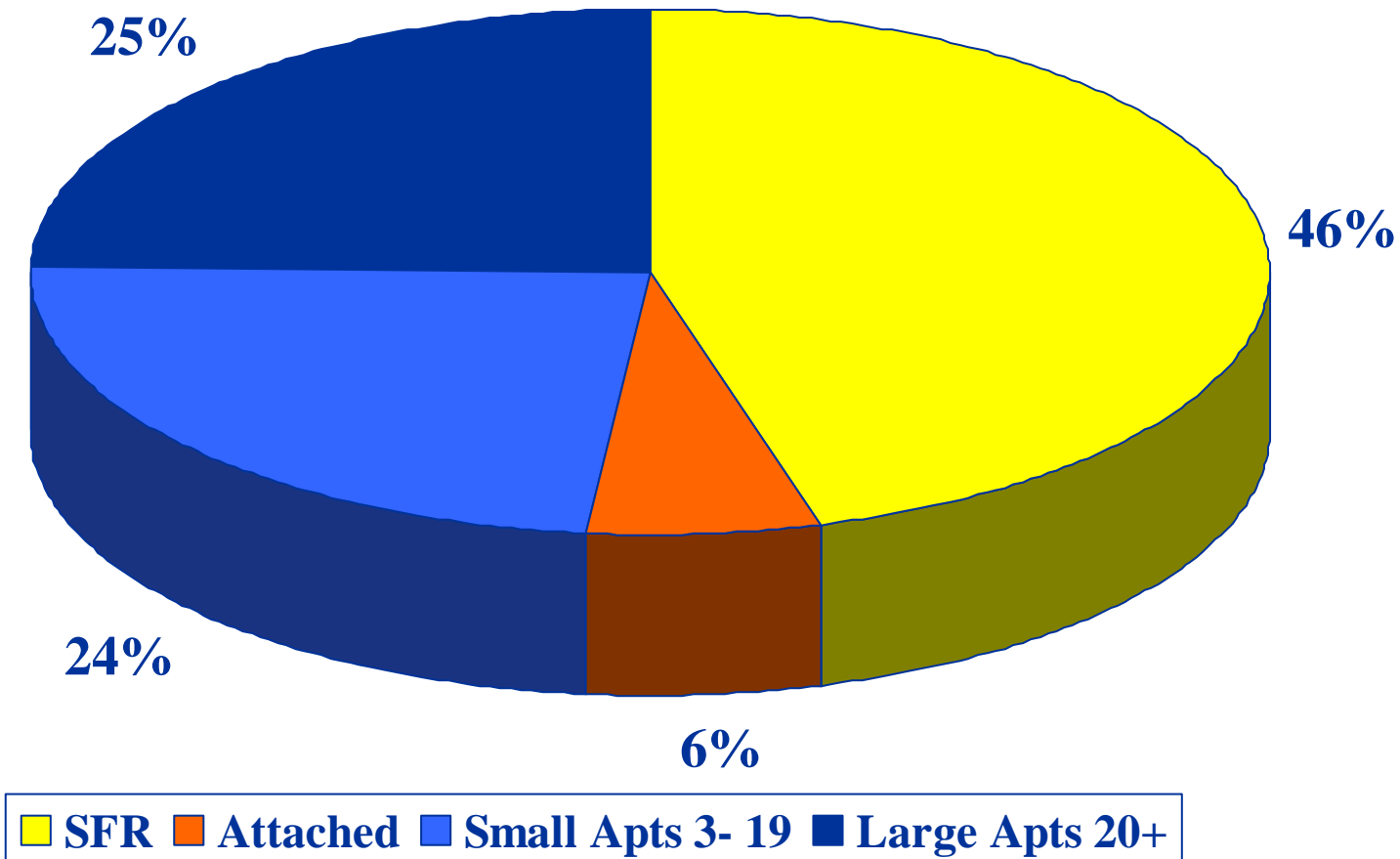


Housing by Type 1990



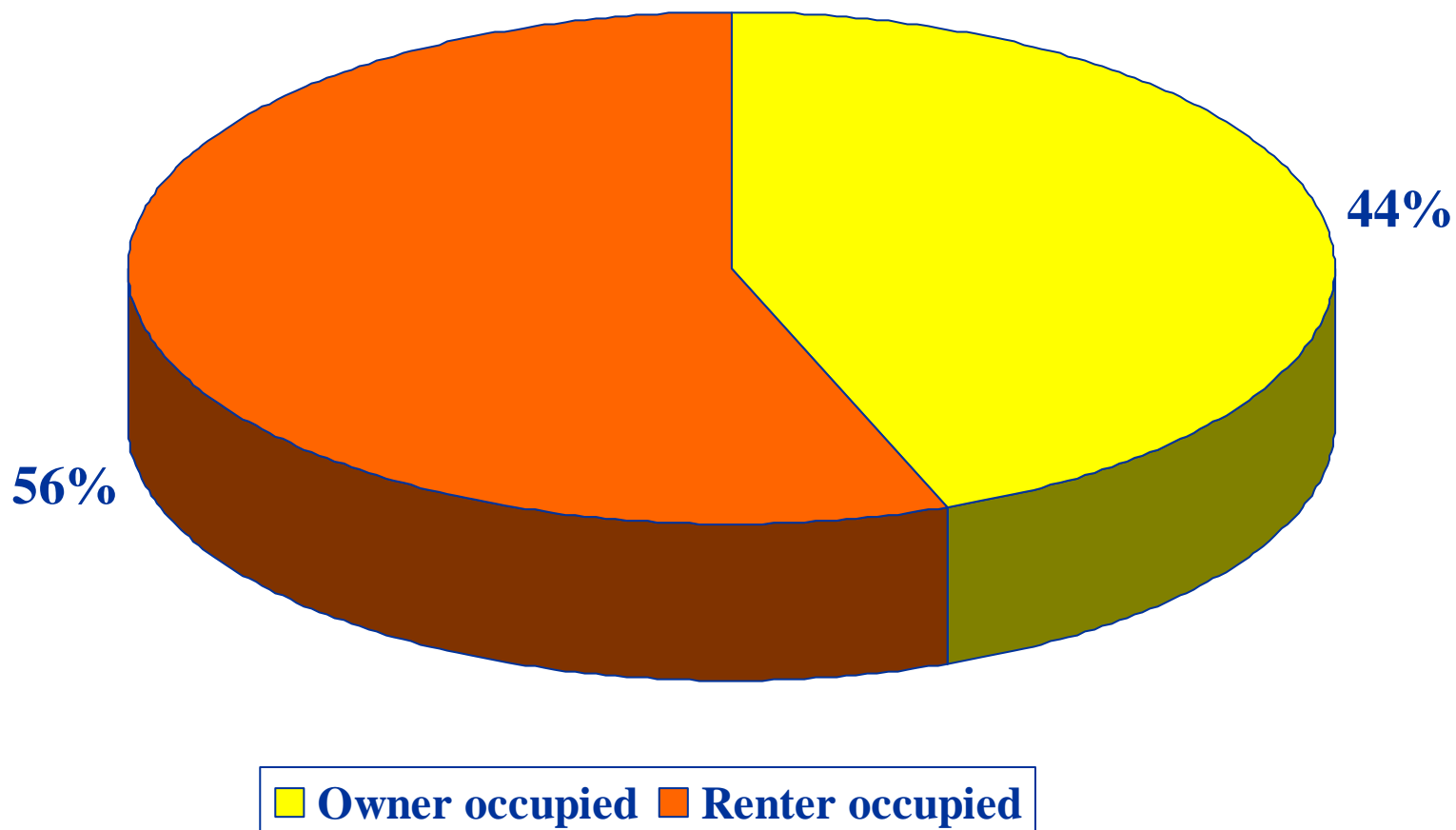


Housing by Type 2000



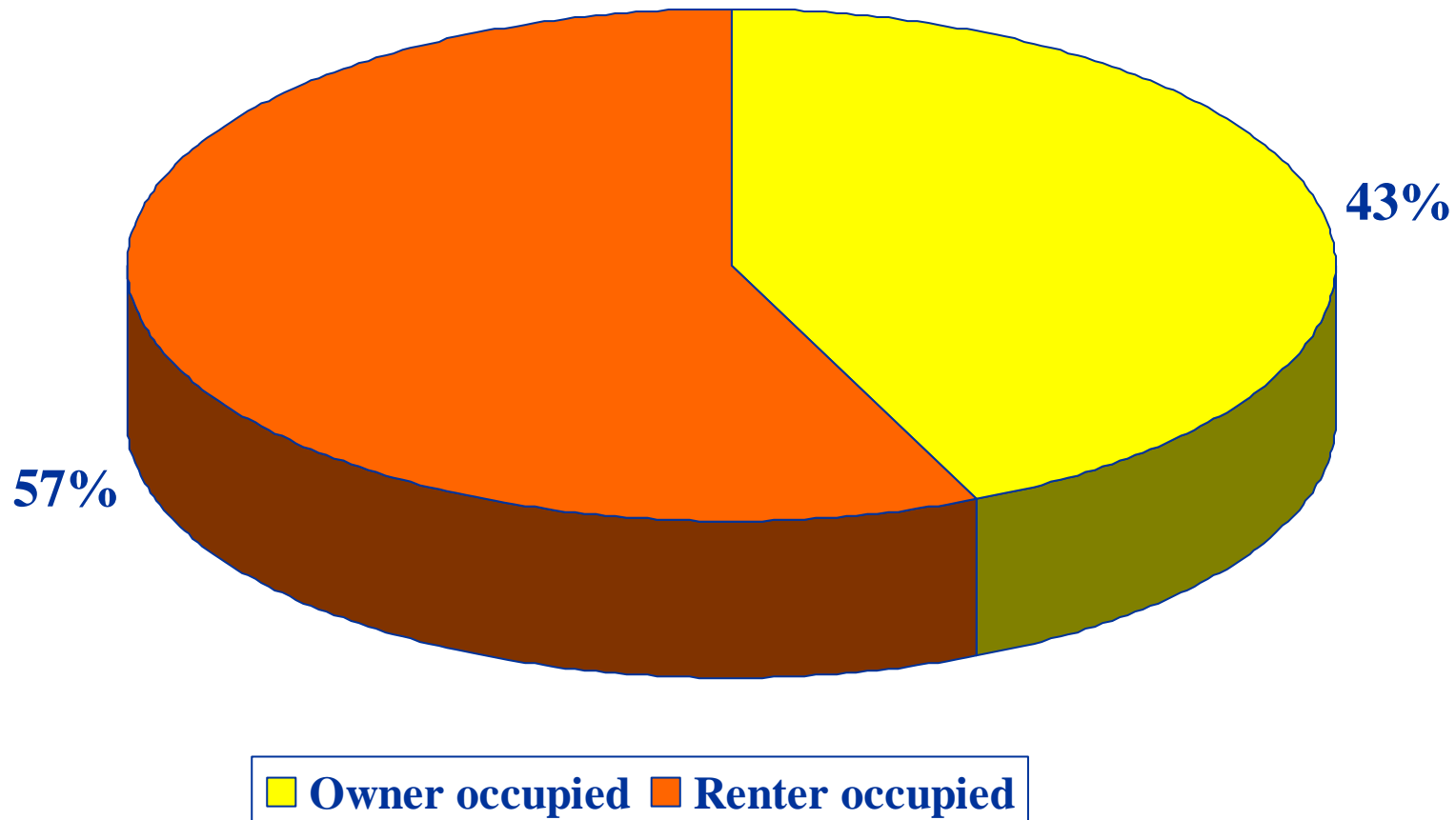


Housing Tenure 1990



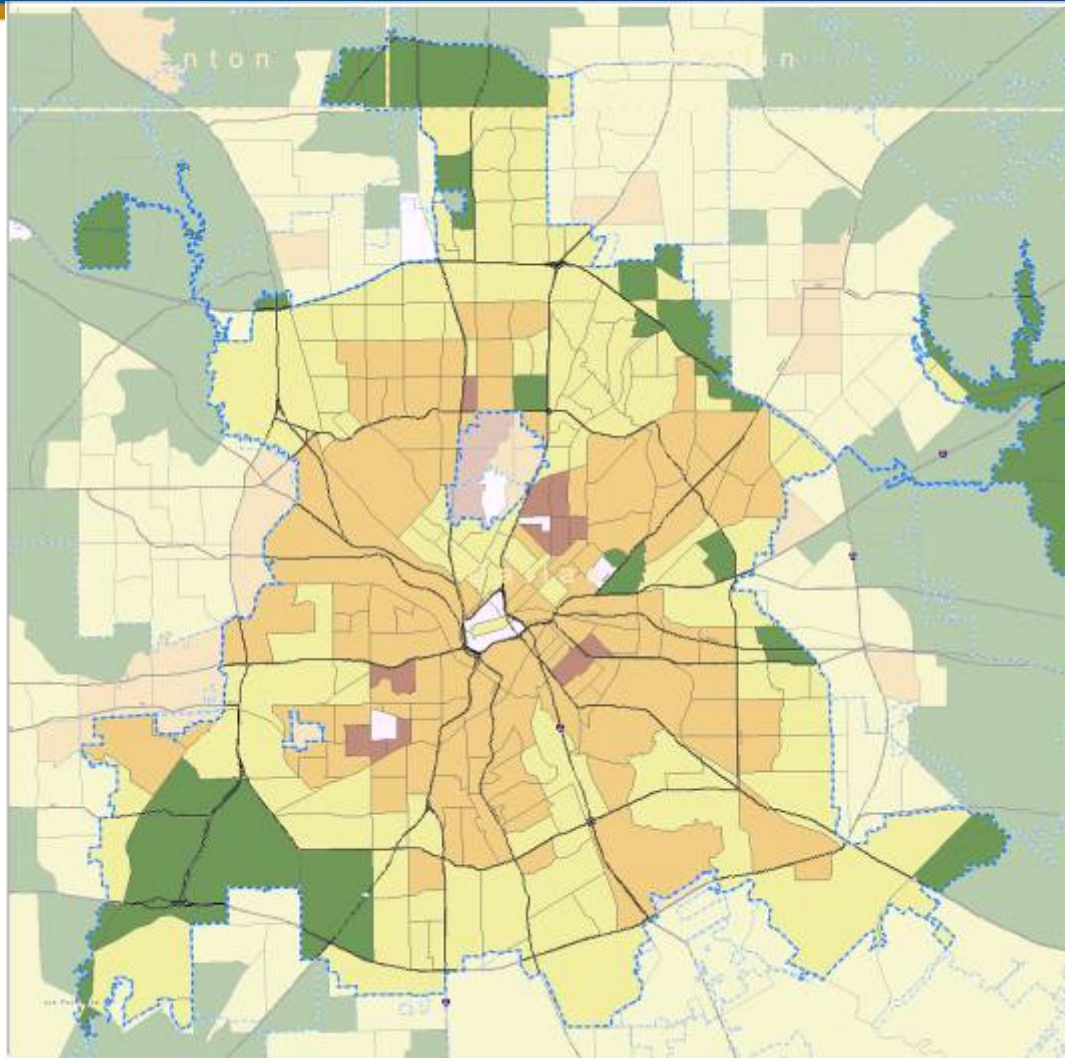


Housing Tenure 2000






Census Trends



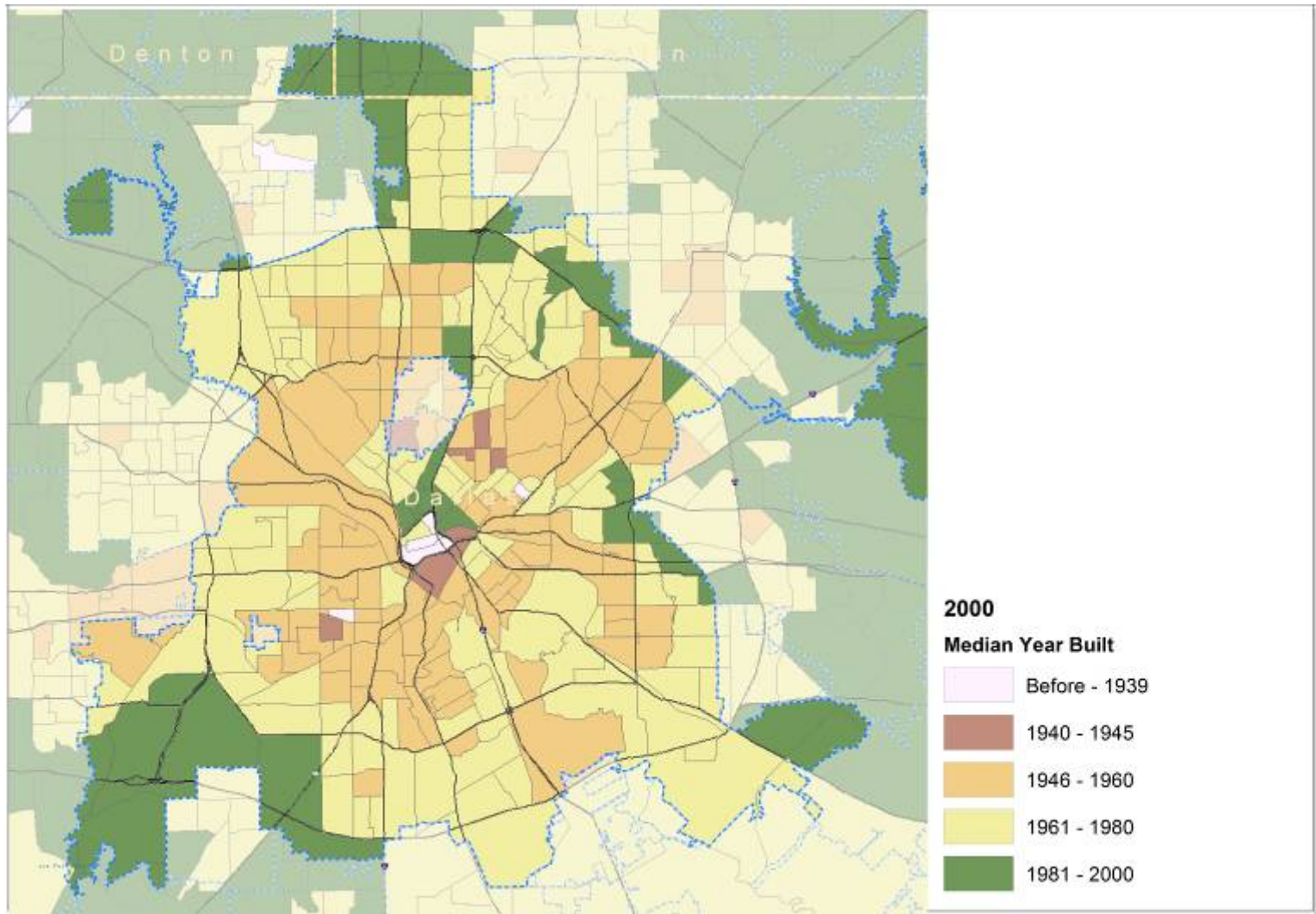
1990

Median Year Built

-  Before - 1939
-  1940 - 1945
-  1946 - 1960
-  1961 - 1980
-  1981 - 2000



Census Trends





Census Trends

- More ethnically diverse
- High percentage of foreign born
- Younger population
- High percentage of people with bachelor degrees
- Low average household size
- Low vacancy housing rates in 2000
- Geographic isolation among ethnic groups



...Census Trends

- Higher poverty rates than state
- Lower incomes than state or country
- More dependency on car for commutes
- Longer commutes
- Lower homeownership rates than state
- Overcrowding in central city area



Housing Trends

- Overcrowding increased in the 1990s
- A majority of households are renters
- Type of housing remained unchanged in 1990s
- 46 percent of households live in single detached family housing
- Homeownership rate increased somewhat in the 1990s, from 56 to 57 percent
- More rental units were built in the 1990s than owner-occupied units

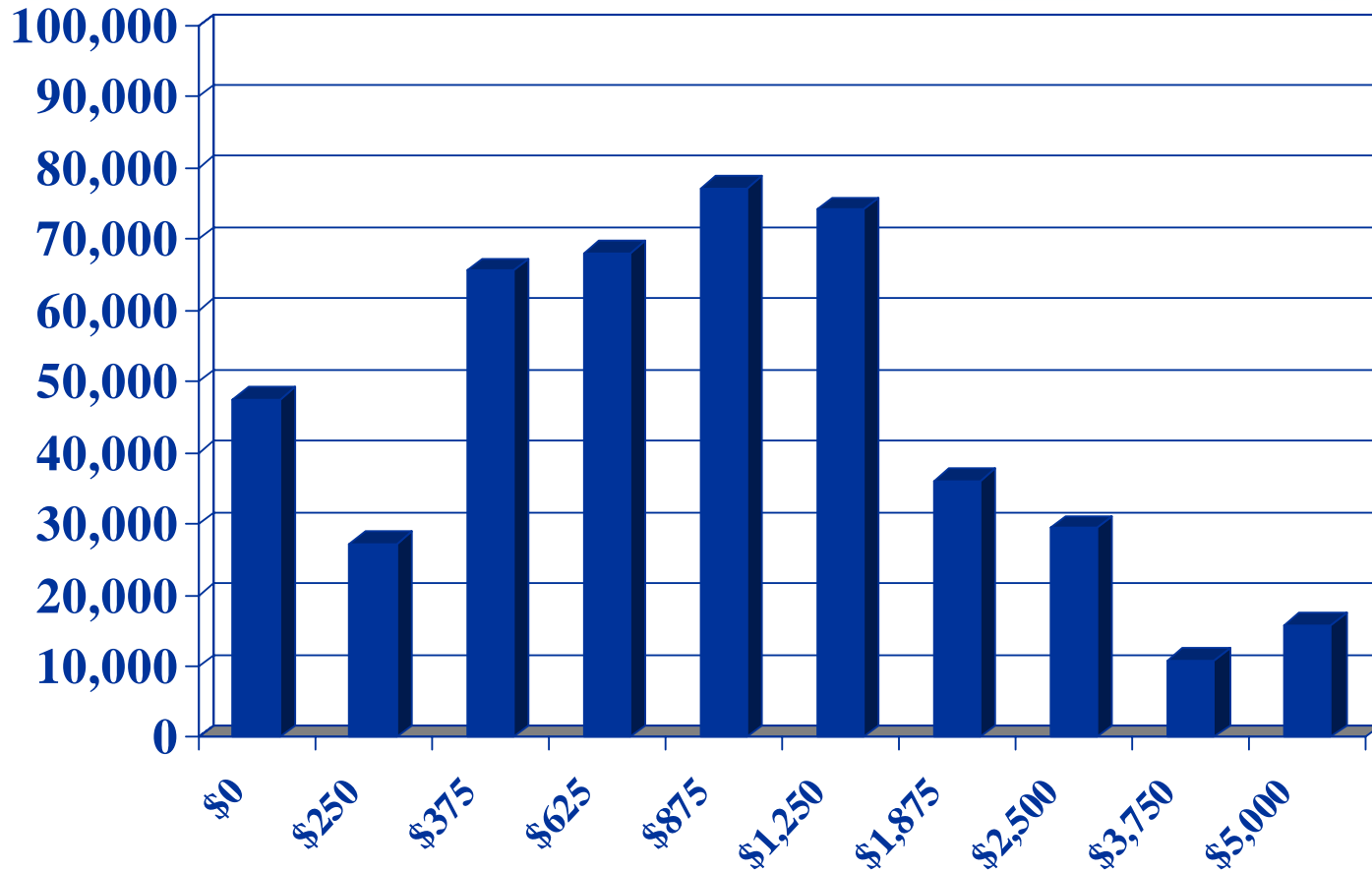


Housing Model

- Distribute increment households proportionally to 2000 income distribution
- Estimate monthly rent based on income
 - Housing payments of no more than 30% of income (HUD threshold)
- Adjust for present overcrowding and to obtain “optimal” vacancy rates
 - 2 percent for owner-occupied units
 - 6 percent for renter-occupied units



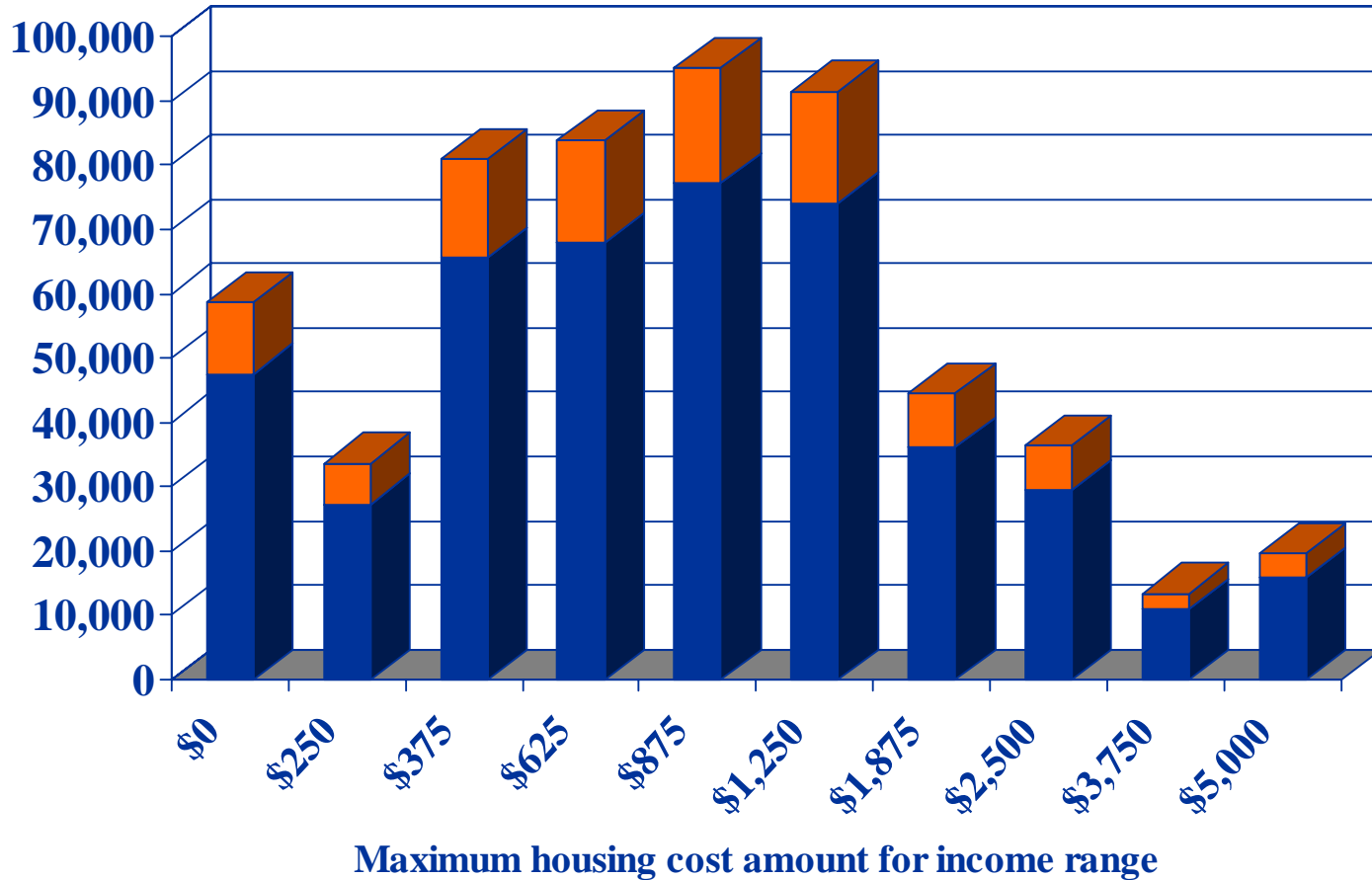
Housing Cost Distribution 2000



Maximum housing cost amount for income range



Housing Cost Distribution 2030

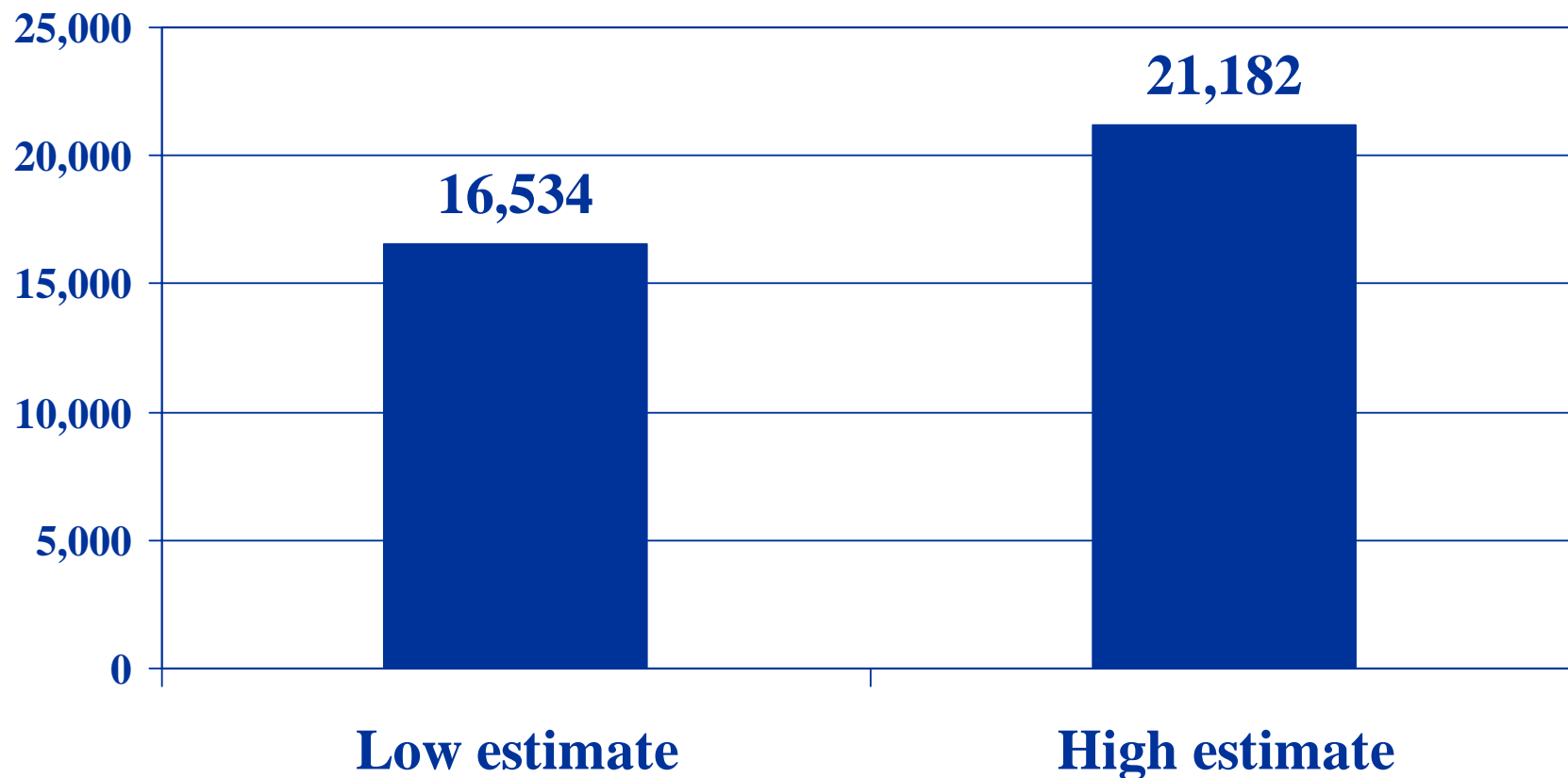


■ 2000 ■ 2030 Increment



Estimated Adjustments 2000:

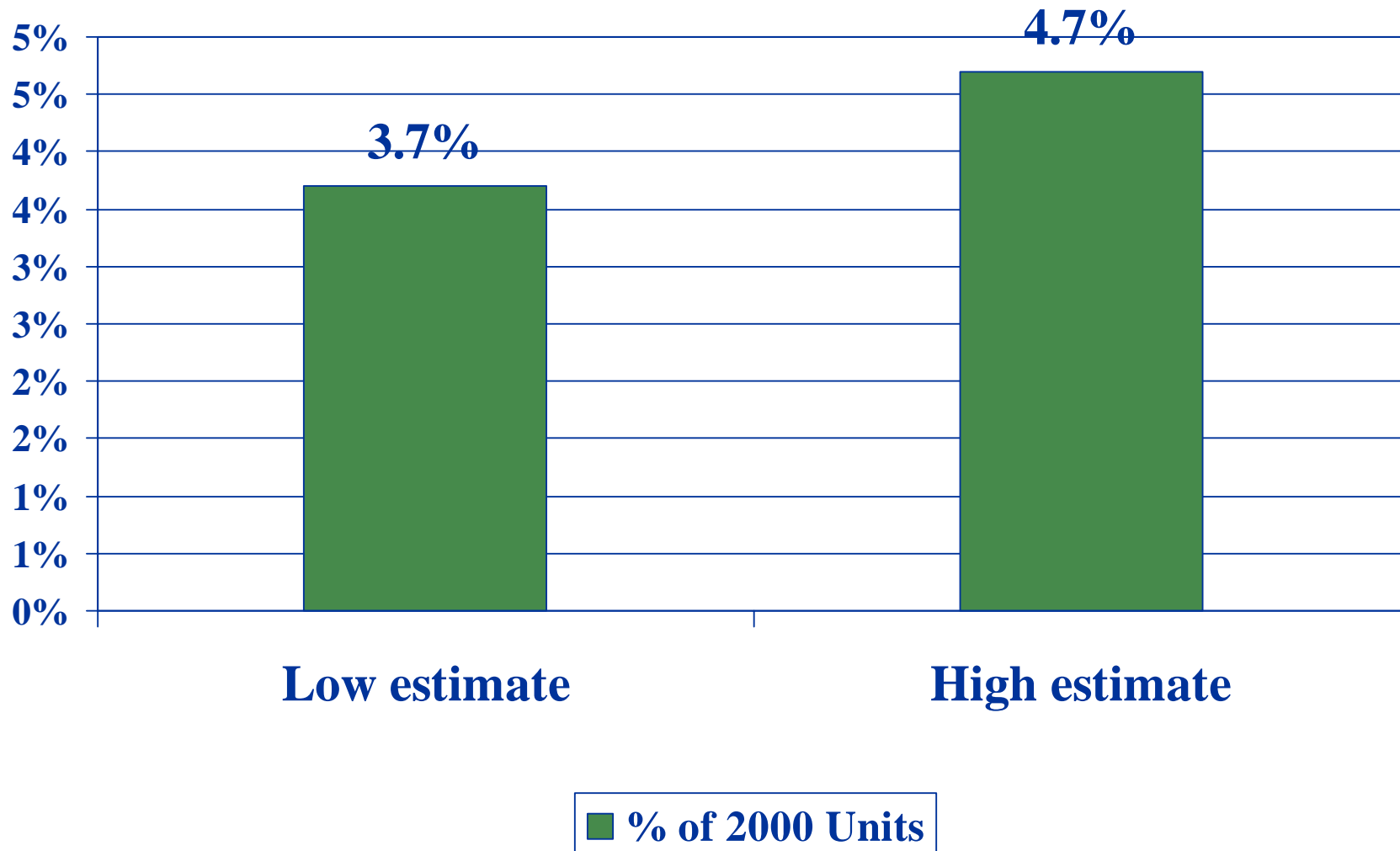
Extra needed units to fix overcrowding and ensure optimal vacancy rates





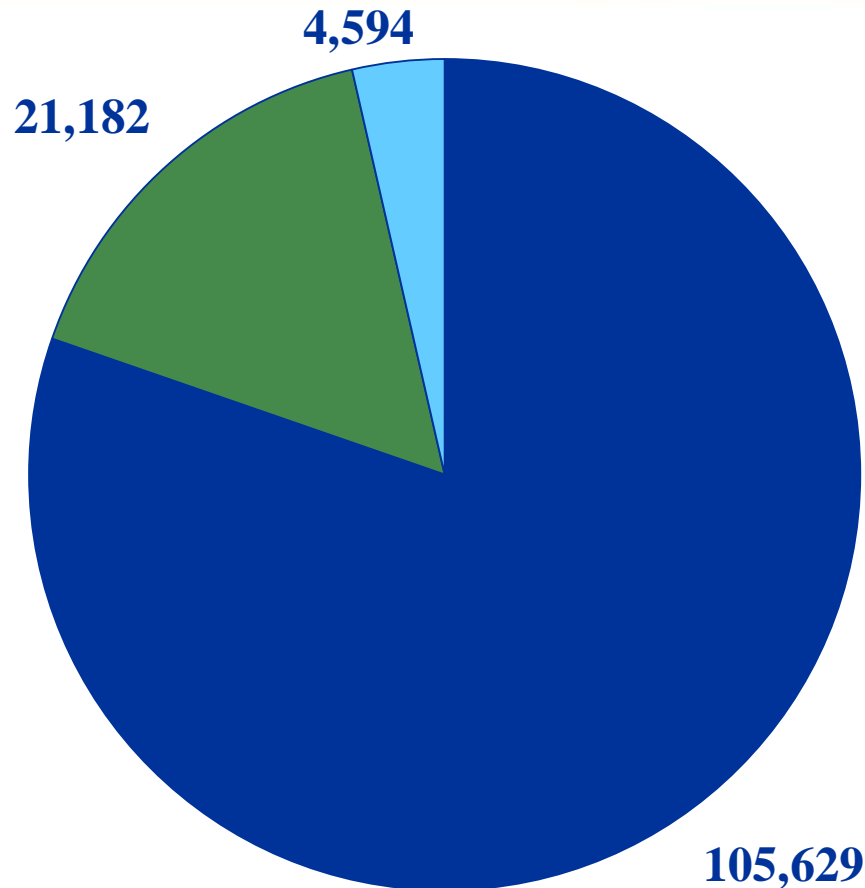
Estimated Adjustments 2000:

Extra needed units to fix overcrowding and ensure optimal vacancy rates





Estimated Units 2030: 131,000 units



■ 2030 Household Increment

■ 2000 Overcrowding & Vacancy

■ 2030 Vacancy



Housing Model

- Demand: Estimate type of housing that can be afforded by income groups using a price range for each type
- Supply: Determine trend of housing and likely future development
- Compare affordability of future housing with incomes
- Determine gaps between housing costs and incomes



Housing Model

- Incorporate effect of more diverse population, aging population on housing patterns
- Estimate present and future housing demand and supply based on:
 - Housing cost levels
 - Housing types
 - Possibly tenure?



Housing Model

- Estimate future housing supply by
 - Studying building permit trends
 - Housing inventory
 - Land use trends
- Add to total supply the units needed to adjust for present overcrowding and vacancy
- Estimate the *type* of housing needed to close the gap and provide housing that matches people's incomes
- Adjust land use scenarios to reflect balanced housing