

BUILDING MORE SUSTAINABLE & JUST CITIES: ECONOMIC & POLICY THOUGHTS



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with references to sustainable homes,
neighborhoods, & metropolitan areas –
& strategies that make sense at each level

Cullum Clark

National Association of Realtors
Presentation
Austin, September 2023



OUTLINE

- ❑ George W. Bush Institute-SMU Economic Growth Initiative
- ❑ Sustainability & opportunity: Some facts
- ❑ Economics & strategies:
 - ❑ Homes
 - ❑ Neighborhoods
 - ❑ Metro areas
- ❑ Action



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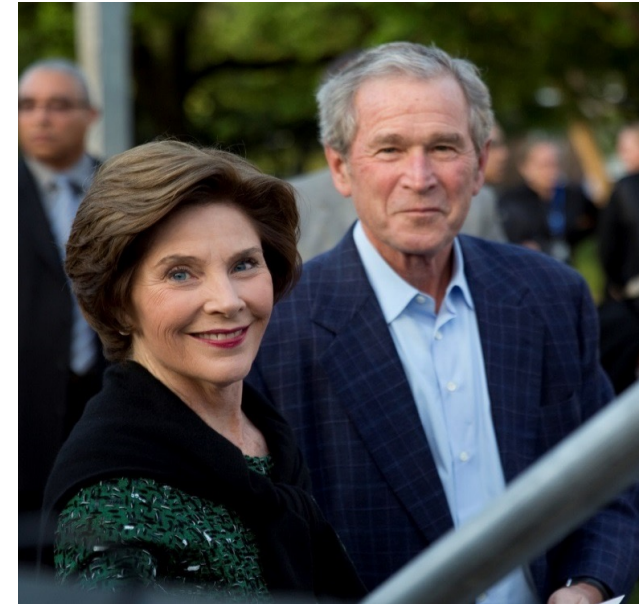


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WHAT DRIVES US

We celebrate the goodness of our Nation and pursue with optimism the timeless values of:

- Freedom
- Opportunity
- Accountability
- Compassion



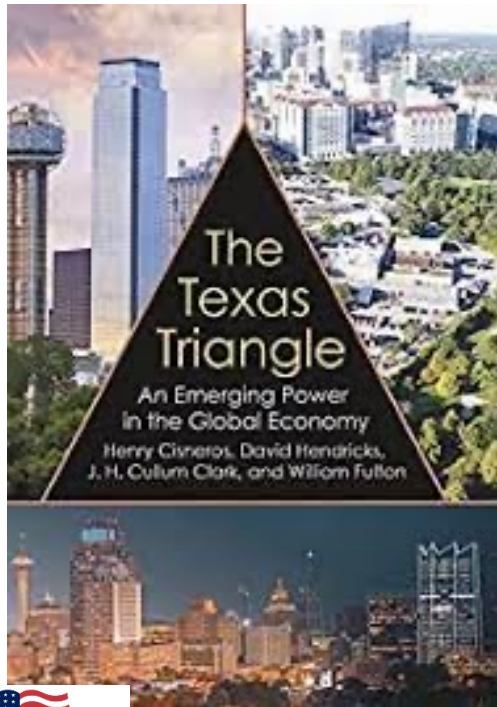
“We believe in open societies ordered by moral conviction. We believe in private markets humanized by compassionate government. We believe in economies that reward effort, communities that protect the weak, and the duty of nations to respect the dignity and the rights of all.”

- President George W. Bush
November 13, 2003



BLUEPRINT FOR OPPORTUNITY

Challenge: How to create inclusively prosperous, opportunity-rich cities in 21st century America?



“Big D Is a Big Deal
Dallas–Fort Worth is becoming
the de facto capital of
America’s Heartland.”
City Journal



The Dallas Morning News

**The secret sauce of North
Texas suburban growth**

Bush Institute published work:

- “Cities and opportunity in 21st century America”
- “The new geography of opportunity”
- “The innovation impact of U.S. universities”
- “Eds and meds: Anchor institutions in the economic development of Dallas & other cities”
- “Immigrants & opportunity in America’s cities”
- “How to make urban growth more inclusive: The Dallas experience”

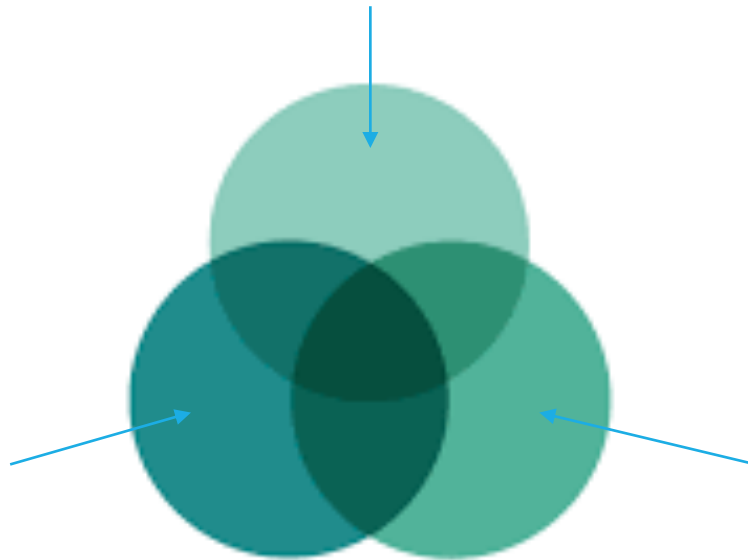


SUSTAINABLE & JUST CITIES

Ecological Sustainability

Opportunity for all

Justice & Fairness

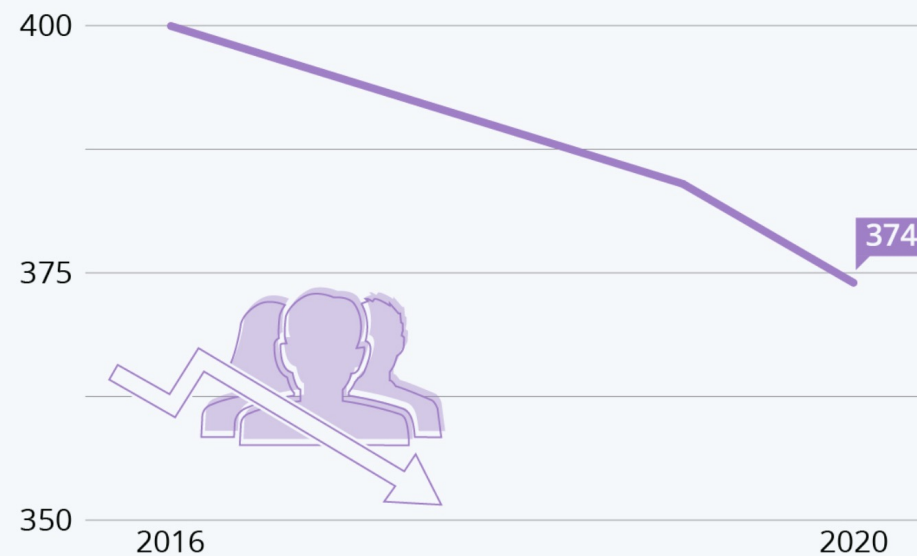


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FACTS: DEMOGRAPHICS

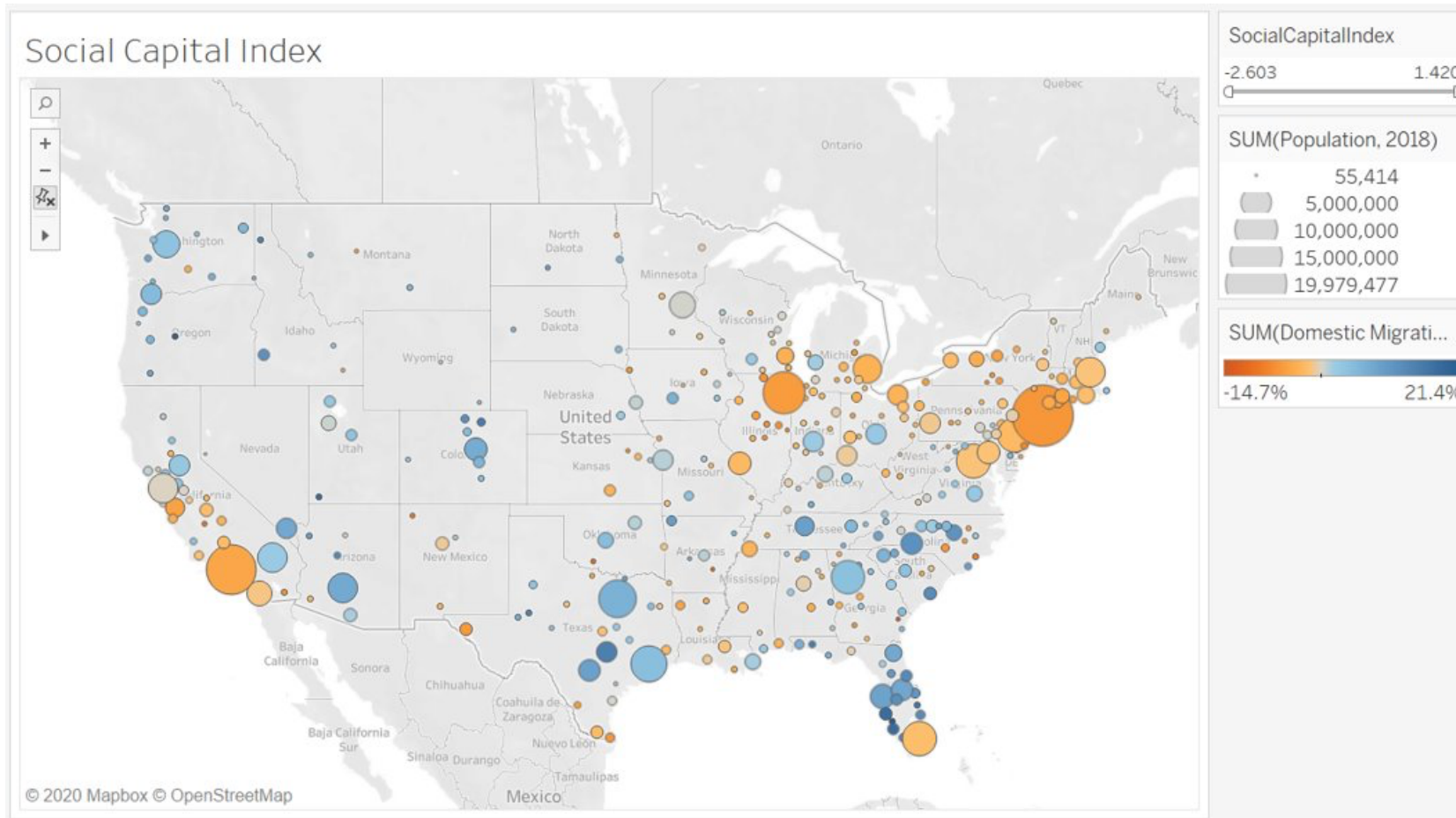
U.S. Population Projections Fall

Projected size of the U.S. population in 2046 from each projection year (in millions)



Sources: Congressional Budget Office, Wall Street Journal

FACTS: DOMESTIC MIGRATION



FACTS: ENERGY

Total U.S. electricity use:

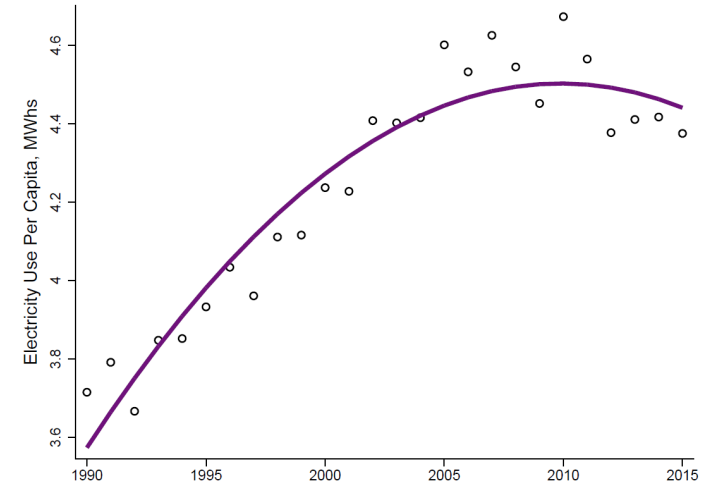
- Flat since 2005 peak
- Reflects significant unsung technology improvements

Household use:

- 20% of total use
- About flat since 2005
- BUT still 3x France/Japan, 4x Germany/Spain

Renewables:

- 2000: 7% of power, of which < 1% from wind/solar
- 2023: 20% of power, of which, ~ 8% from wind/solar



FACTS: WATER

Total U.S. water use:

- Down 20% since 1980 peak
- Also reflects significant technology improvements

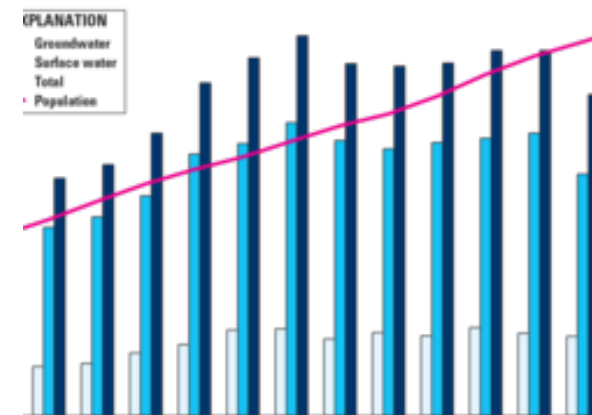
Household use:

- Down 30% since 1980 peak
- Several cities show: 15%+ conservation possible
- BUT still 2x France/Japan, 3x Germany/Spain

BUT:

- Residential use: 2-3% of total use
- Dominant use: AGRICULTURE
- Supply will decline in some regions

Changes in population and freshwater withdrawals by source, 1950-2010



FACTS: DENSITY

Figure 6.2: The decline in average tract density in 20 U.S. cities, 1910-2000

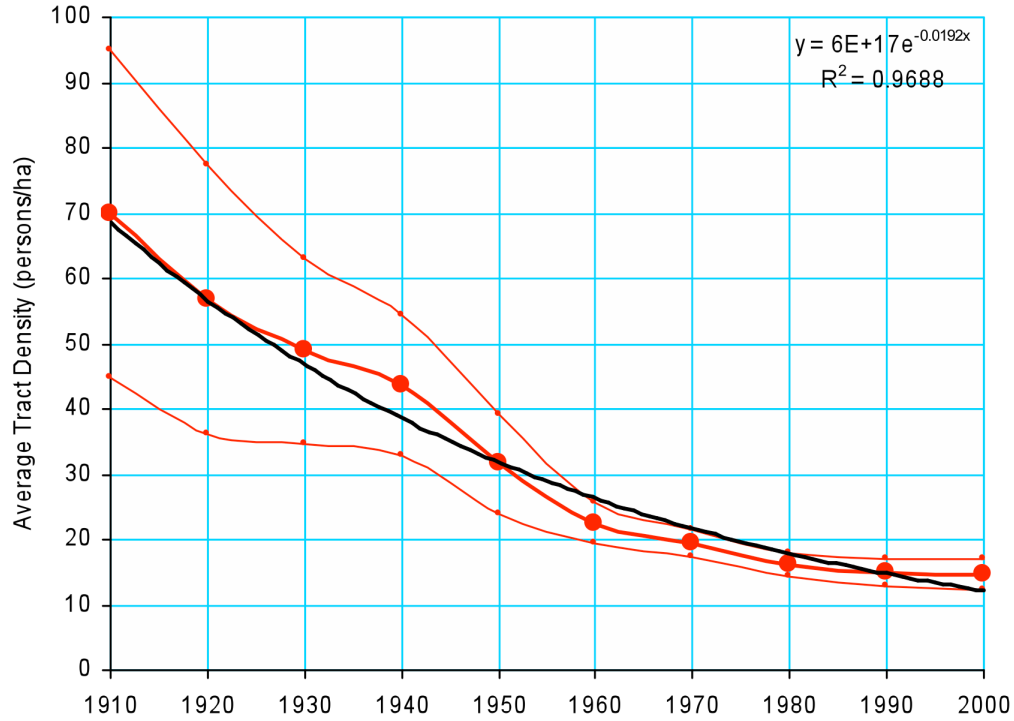
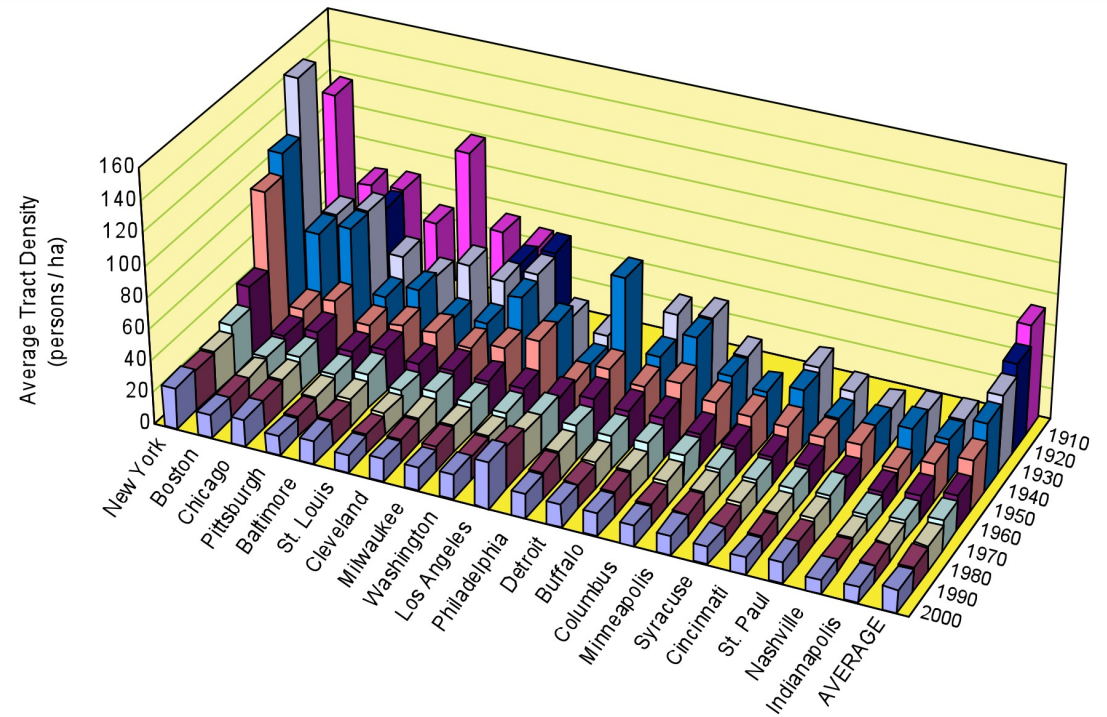
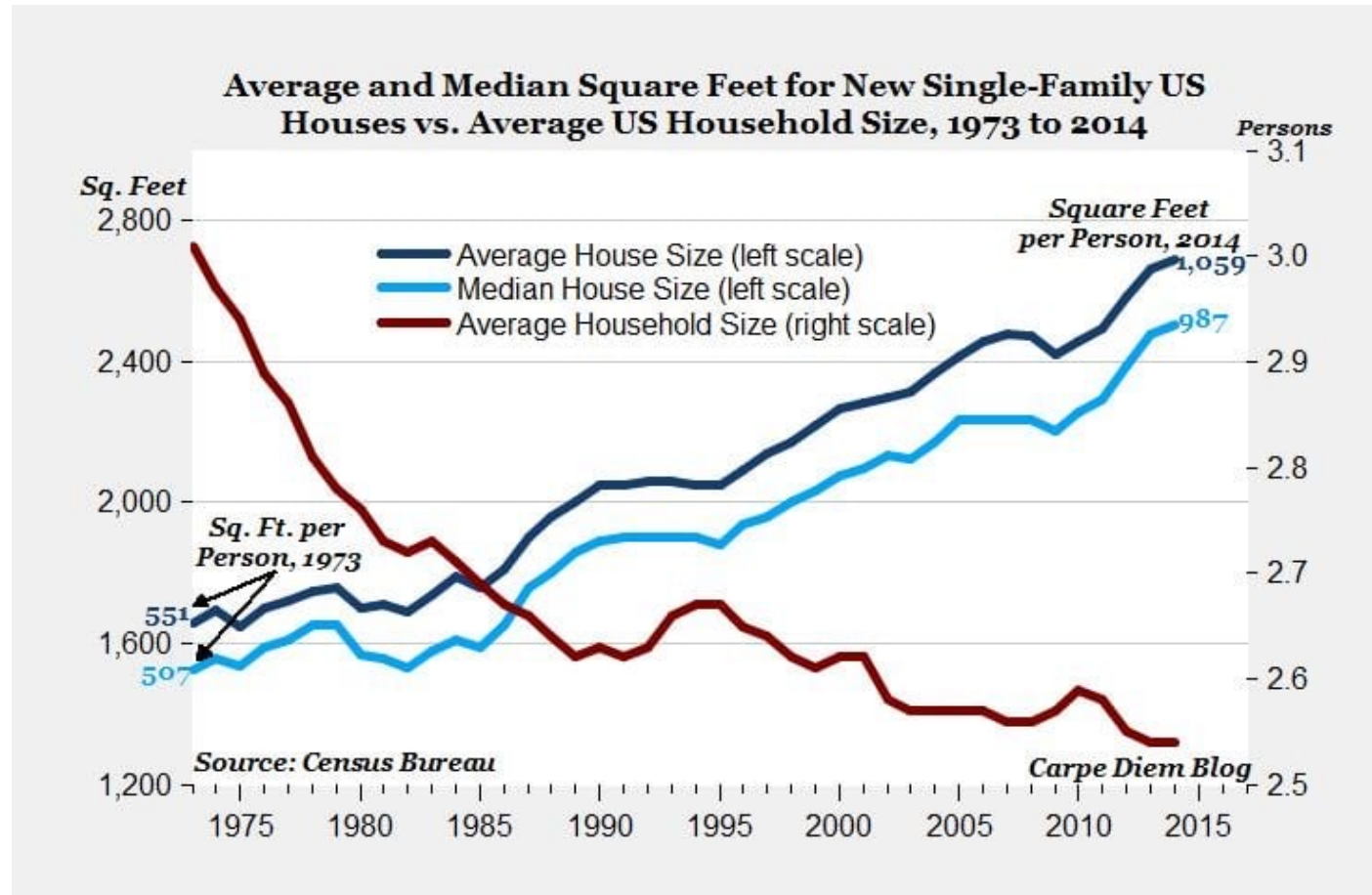


Figure 6.1: Average tract densities in 20 U.S. cities, 1910-2000



FACTS: AVERAGE HOUSE SIZE



FACTS: OUTWARD EXPANSION

Texas Counties, 2010-2021				
Metro Areas	Core Counties	Pop Growth	Suburban Counties	Pop Growth
Austin	Travis County	33.2%	Hays County	74.4%
			Williamson County	64.2%
Dallas-Fort Worth	Dallas County	11.4%	Collin County	50.2%
	Tarrant County	22.0%	Denton County	49.9%
Houston	Harris County	19.7%	Fort Bend County	58.4%
			Montgomery County	51.7%
			Galveston County	24.0%

FACTS: SUBURBAN SUSTAINABILITY

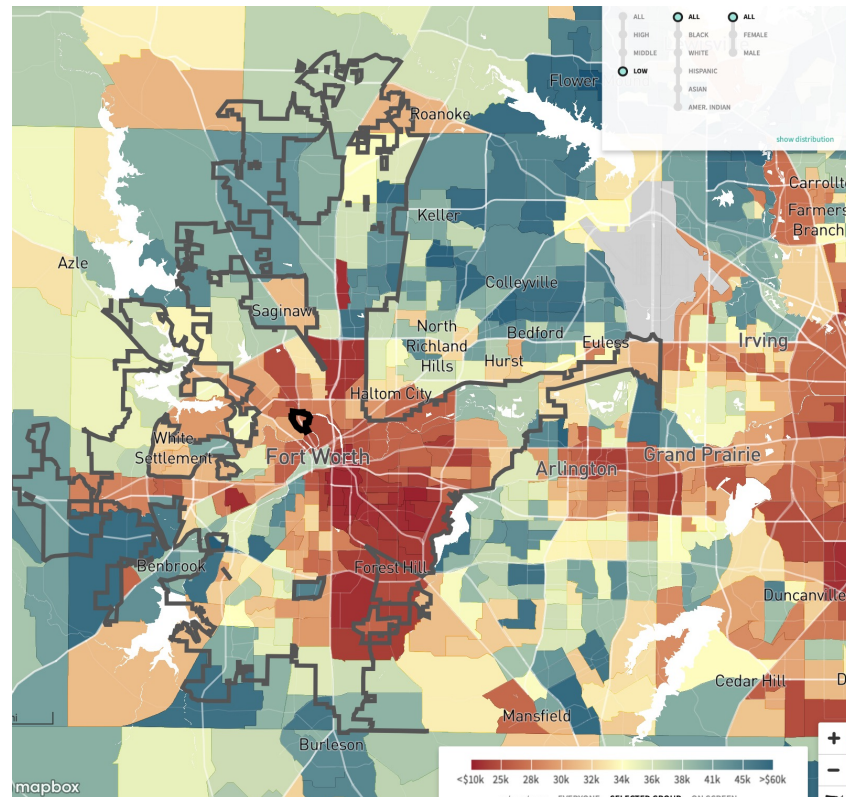
Why suburban growth will be ecologically sustainable:

- Outward growth will slow
- Commuting distances will decline:
Suburban jobs growing faster than resident populations
- Hybrid work means less commuting
- Electric vehicles
- AND: less concrete, more tree canopy

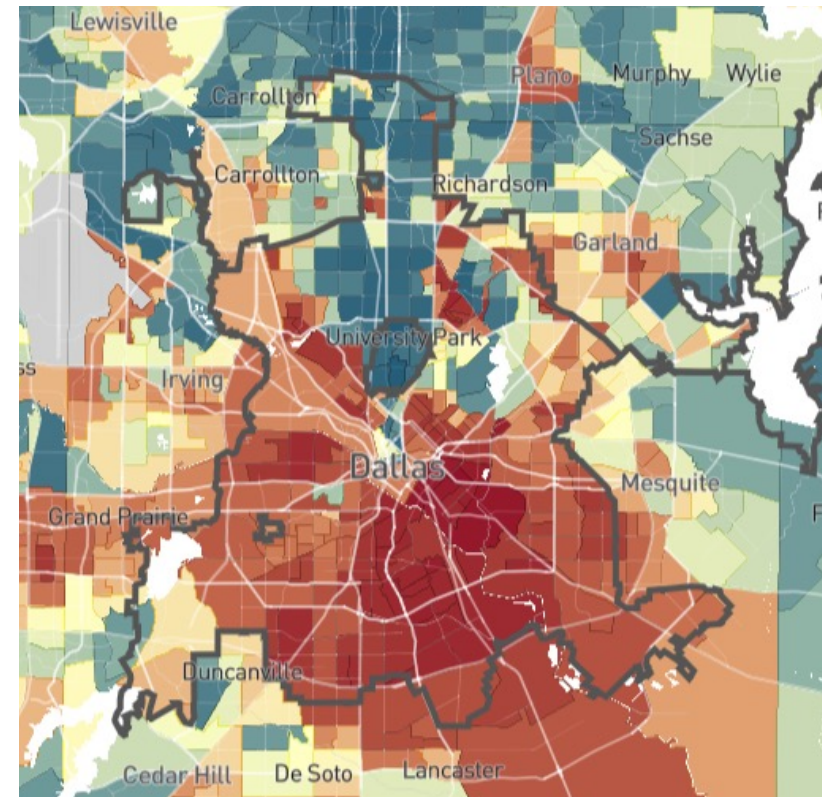


FACTS: DISPARATE OPPORTUNITY

Fort Worth

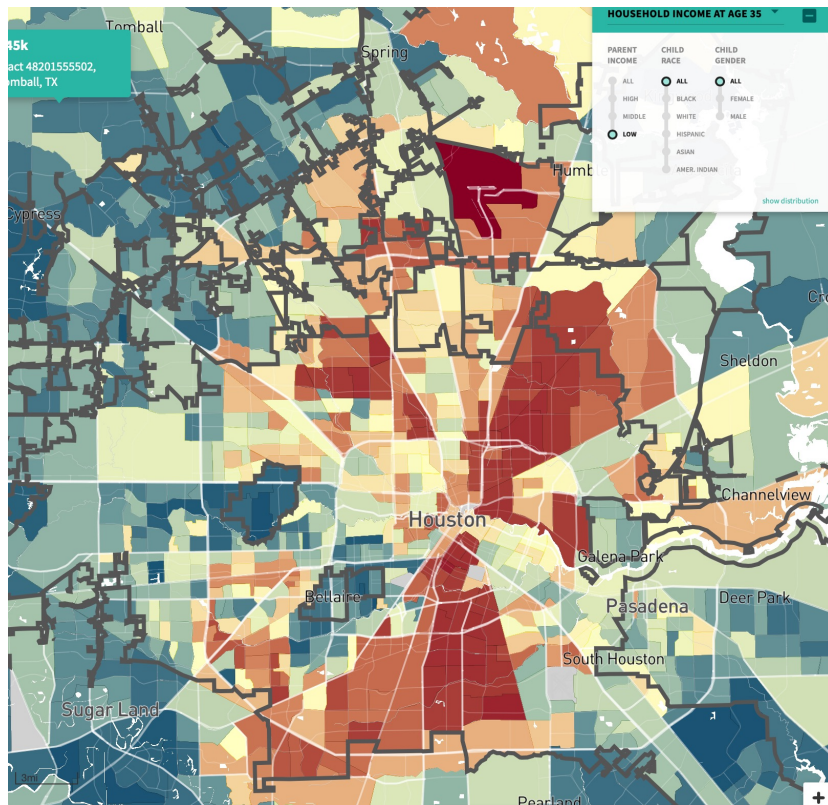


Dallas

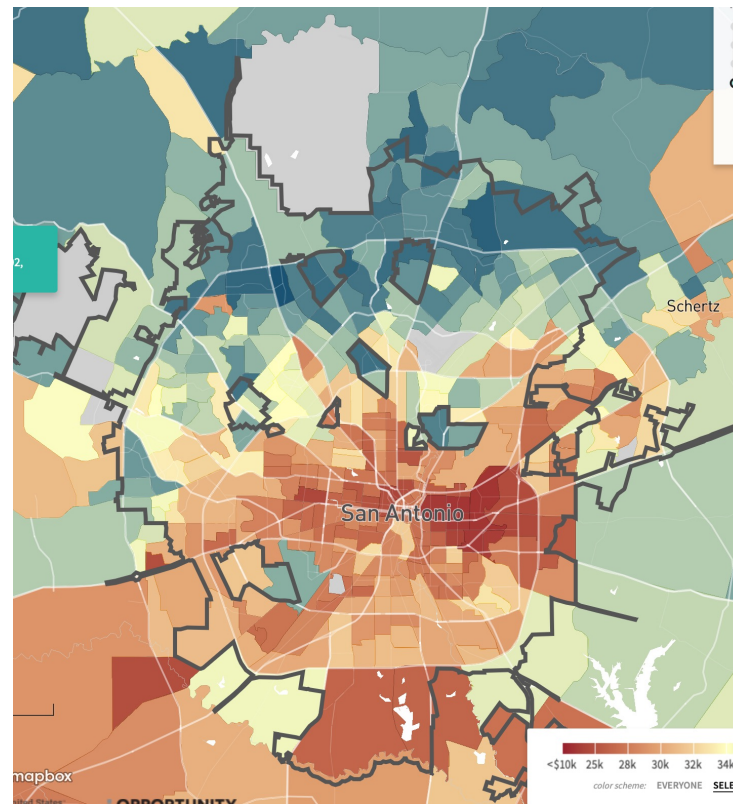


FACTS: DISPARATE OPPORTUNITY

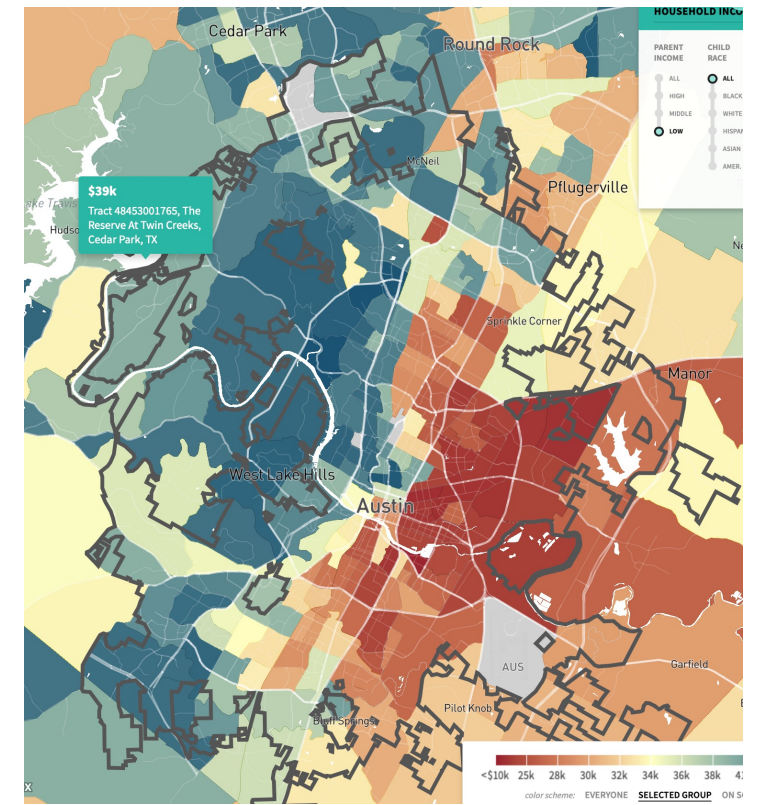
Houston



San Antonio



Austin



STRATEGIES FOR SUSTAINABLE CITIES: HOMES

Technologies:

- Energy-efficient appliances & lighting
- Reverse-cycle HVAC
- Solar panels
- Low-flow tapware
- Greywater recycling
- Rainwater capture



CHALLENGING ECONOMICS

Poor return on investment:

- Incremental cost of full eco features:
 - New build: \$30k-\$100k on average house
 - Retrofit: \$50k - \$120k
- Electricity & water bill savings:
\$500 - \$1,500 / yr
- Tragedy of the commons:
 - Not in anyone's private interest to make this investment

Policy challenge:

- Subsidy required: \$20k - \$50k for new build
- Subsidy for sustainable new development:
 - New units at 1% of U.S. pop / yr: \$24-60 bn / yr
 - Note: HUD budget: \$50 bn / yr
- Mandating eco features:
 - Drives up housing costs & drives people away

*Only feasible through long-term
technological progress*

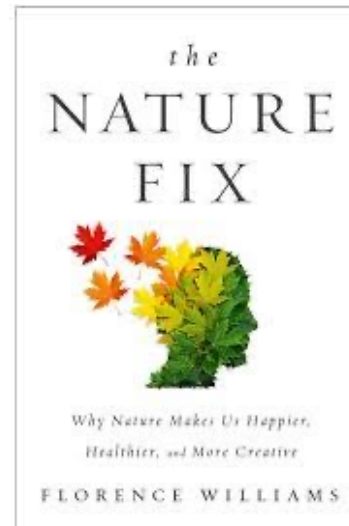
STRATEGIES FOR SUSTAINABLE CITIES: NEIGHBORHOODS

Improvements:

- Trees
- Community parks
- Trails

Benefits:

- Health
- Safety
- Quality of life
- Home values: 5-10%



BETTER ECONOMICS

Trees:

- Individual home: \$2k-\$20k for 5-10 trees → Adds \$20k+ to avg value
- Dallas example: \$5-11m/yr for 30 years → Adds canopy over 10% of city

Community parks:

- 20-acre park: \$40-\$90m investment over 30 years → Adds \$60-\$150m of value to area w/in ½-mi. radius if average homes (~ ¼ from new development)
- Costs \$1.3-\$3m/yr over 30 years but adds \$1.3-\$3.1m in tax revenues
- If low-income neighborhood: Requires \$20-\$50m subsidy

Trails:

- 5 miles: \$30-\$60m over 30 years → Adds \$180-\$360m of value in avg area, or \$60m-\$120m in low-income area – easily pays for itself



Tree Equity Scores (American Forests)		
Wealth		
Rainfall:	High	Low
High	Atlanta (93)	Winston-Salem (92)
	New York (89)	Greenville (81)
	Washington (88)	Miami (69)
Low	Austin (91)	Phoenix (82)
	Los Angeles (77)	San Antonio (77)
	San Jose (77)	Amarillo (70)

SOME PERSPECTIVE

Texas cities today:

- Top 5 cities spend \$50-\$100 per resident on parks
 - Compares to \$200+ for Minneapolis, Seattle; and \$100-\$150 for Denver, Phoenix
- Trust for Public Land ParkScore: Austin: 41st of 100 largest cities; Dallas: 43rd; San Antonio: 57th; Houston: 71st; Fort Worth: 88th
- % of pop. w/in 10 min. walk of park: Dallas, Austin in 70s; Houston, Fort Worth in 60s

A modest proposal:

- Spend \$30 per resident more over next 30 years
- Add 10% to tree cover
- Raise pop. share near a park or trail to 85-90%
- Improve quality of life & raise property values in 15-20% of city



COUNTERING DISPLACEMENT

Recognize that all neighborhoods evolve over time:

- Appropriate goal: Slow pace to reduce disruption in people's lives

Anti-displacement strategies:

- Subsidize naturally occurring affordable housing
- Temporary tax freezes in rapidly appreciating areas
- Promote homeownership among disadvantaged populations



STRATEGIES FOR SUSTAINABLE CITIES: METRO AREAS

Migration since 2010:

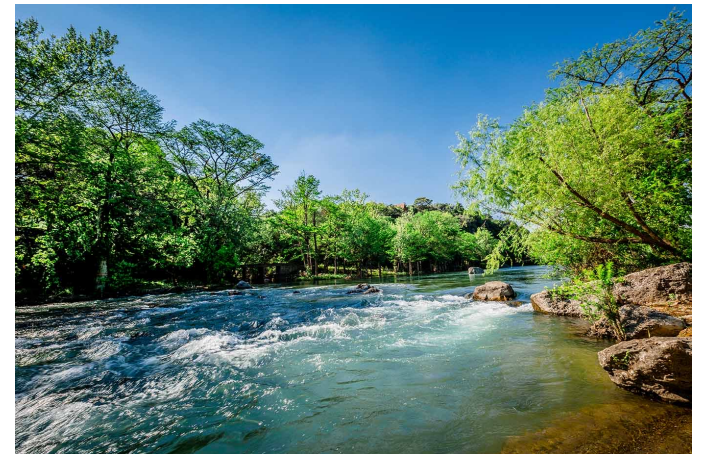
- 8m people have moved into 20 largest metro-area destinations since 2010 – all but 2 in hotter-than-average metros
- Large majority moving to fast-growing suburban cities

Will extreme heat make Sun Belt metros unsustainable?

- Test case: Phoenix area

Will water shortages make southwestern cities unsustainable?

- Texas: Manageable
- Colorado R. Compact states: Depends on agriculture



STRATEGIES FOR SUSTAINABLE CITIES: ACTION

What's needed:

- **More market forces in agriculture & water rights**
- **More housing supply in thriving, low to medium-density areas**
- **More action to preserve naturally occurring affordable housing**
- **More long-range planning to build trees, parks, & trails into development plans**
- **More proximity between job centers & residential developments**
- **More walkable mixed-use development: Many alternative downtowns**
- **Climate policy: *More adaptation AND mitigation***
- **Public-private-nonprofit partnerships to advance all these aims**

MORE SUSTAINABLE & JUST CITIES: WITHIN REACH



And that's where you come in.

THANK YOU!

