

Population Projection Issues

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August 27, 2008



ARIZONA

State financial plans in limbo as population projections fall

THE ASSOCIATED PRESS

PHOENIX — The three-year housing boom in Arizona that ended in 2006 skewed the state's population figures, leading to projections that planners, economists and government officials agree are inflated.

Accurately tracking and projecting population numbers is crucial to financial development plans across Arizona.

Taxes, freeways, commercial and residential projects all are based on how many people are expected to move here.

"Population growth is the beginning of the food chain of Arizona's economy," said Joanna Morfessis, founding chief executive of the Greater Phoenix Economic Council. "But if the numbers are wrong, and I think the state's population numbers are inflated, it's going to be a house of cards for the economy."

State and census estimates showed a record 196,000 people moved to the Phoenix area during the height of the housing boom. The startling figure led to projections for the metro area's population to more than double to 12 million as soon as 2030.

Those figures were based largely on housing permits and occupancy numbers.

But the number of building

permits exceeded the number of houses actually sold. For example, a record 62,000 new houses went up in metro Phoenix during 2005 but only about 40,000 of those were bought by people who moved into them.

The housing market began to slow in mid-2006, and by early 2007, the economy had begun to contract. Municipalities began cutting services, schools started closing, home builders walked away from subdivisions, retailers closed stores, businesses laid off workers, and foreclosures started to soar.

That's when it became clear that Arizona would not grow at the expected pace, and attention turned to adjusting population projections.

Six months ago, projection estimates showed 105,000 people moving to metro Phoenix in 2008. That figure recently was adjusted to 85,000 — 19 percent lower.

The drop translates to about \$24 million less in tax revenue for the state. Each Arizona resident contributes \$1,200 in state income tax and net sales-tax revenue, according to an estimate from Marshall Vest, a University of Arizona economist.

Problems from inaccurate population projections also rip-

ple through Arizona's towns and cities, which receive their share of state taxes and other funds based on their populations.

"Arizona is very dependent on its population numbers because we have a revenue-sharing system," said Kent Ennis, deputy director of the Arizona Department of Commerce.

"A municipality's growth determines how much they get of sales and income taxes and highway funds. Billions of dollars are riding on how much an area grows and how good population estimates are for that area."

Now, some of the area's top economists and the Arizona Department of Commerce are working on a better way to calculate projections without relying so much on housing.

Gov. Janet Napolitano in 2006 called for a state task force to investigate Arizona's population numbers.

The Arizona Data Estimates and Projection Task Force includes various state agencies, municipalities and economists. Last fall, the group came back with its recommendations to create a new model for population forecasts.

The model called for moving

the state's population and job data collection and forecasting from the Department of Economic Security to the Commerce Department.

The department is now working to get data on driver's licenses, school enrollments, hospital stays, more detailed job records and tax-return data.

The department also is working with local governments to track how many homes were actually built out of all the housing permits issued.

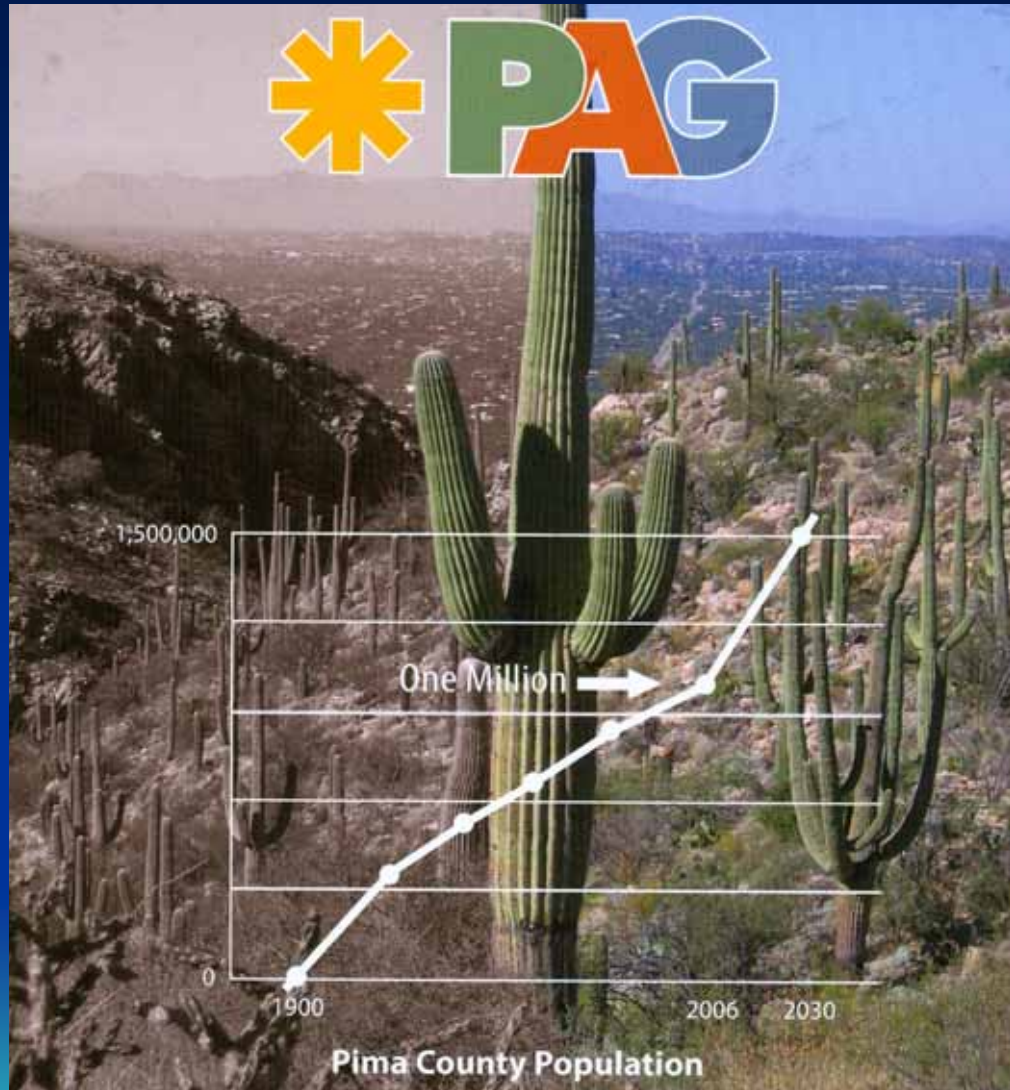
And to figure out many houses and apartments are vacant, it's working with utilities to gather information on new hookups and power usage.

The state will need a demographer to launch the new projection model. But because of Arizona's more than \$1 billion budget shortfall, the Commerce Department can't yet hire one.

Central Arizona Governments, which plans for Pinal County, can't wait. It has already hired economists to create the recommended new model. New population forecasts for Maricopa, Pinal and Pima counties are due out this fall.

"Everyone wants a population number they can count on, even if it's not the number we want to hear," Morfessis said.

Population Projections on Steroids?



2007 PAG Annual Report

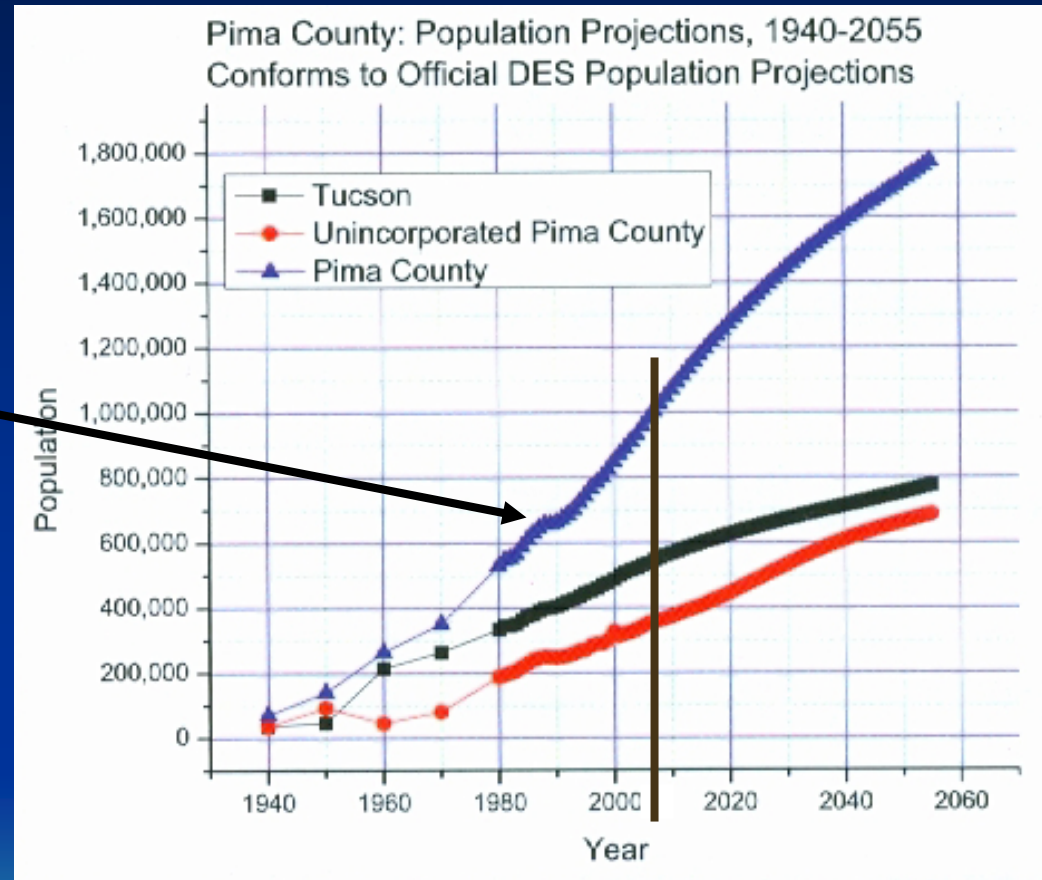
"Population growth is the beginning of the food chain of Arizona's economy,"

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Ioanna Morfessis, founding chief executive of the Greater Phoenix Economic Council and economic development consultant



Pima County Population Projections



Zero population growth in 1990

**Good plans are based on
defensible assumptions
and projections**



**Is the future going to be an
extrapolation of the past?**

or

**Do we face unprecedented
challenges and uncertainties?**

**How will we address these
uncertainties?**



What factors will effect population change?


Supply

- Water Quality and Costs
- Energy Costs
- Construction Costs
- Climate Change Mitigation

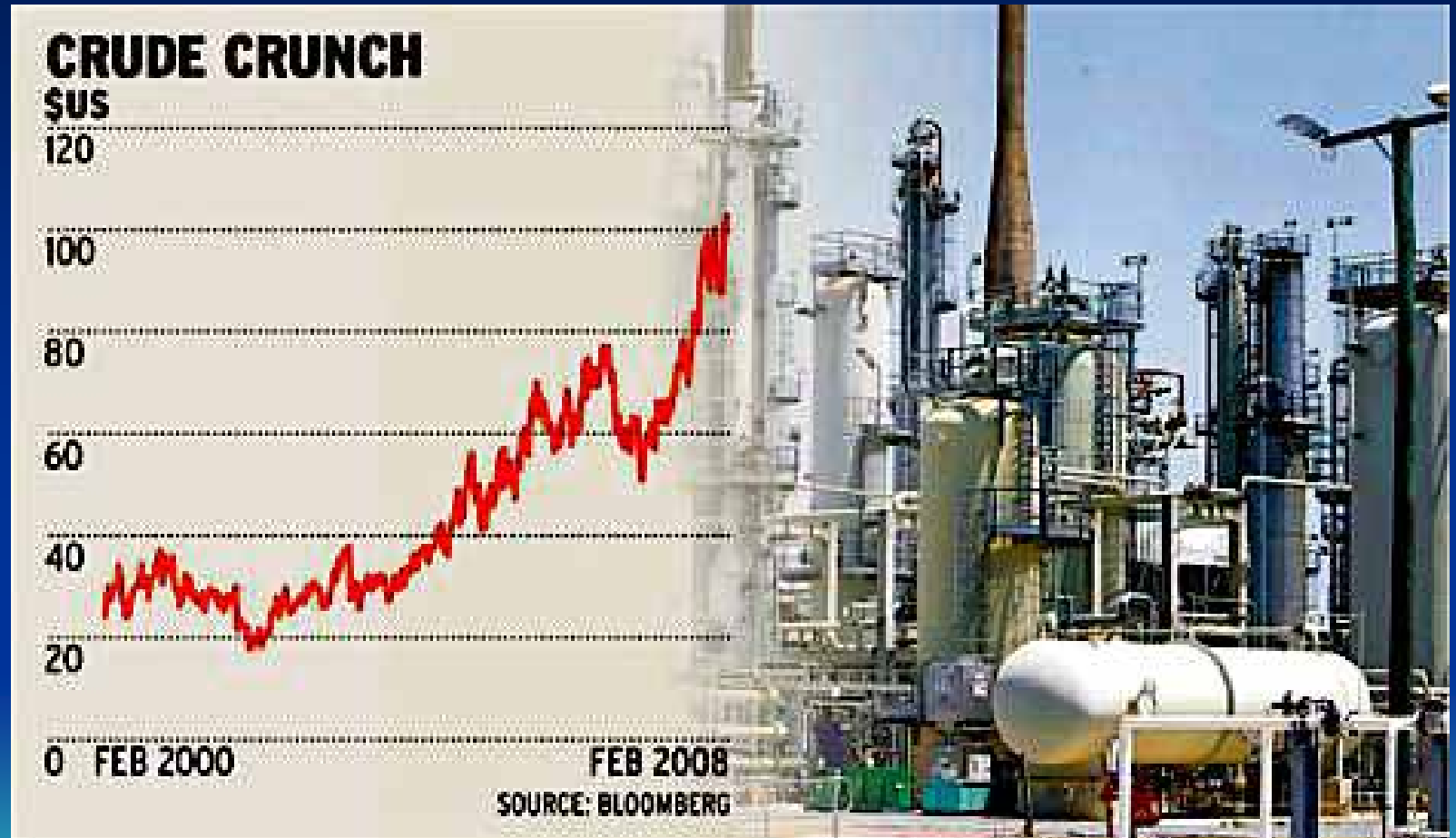


What factors will effect population change?

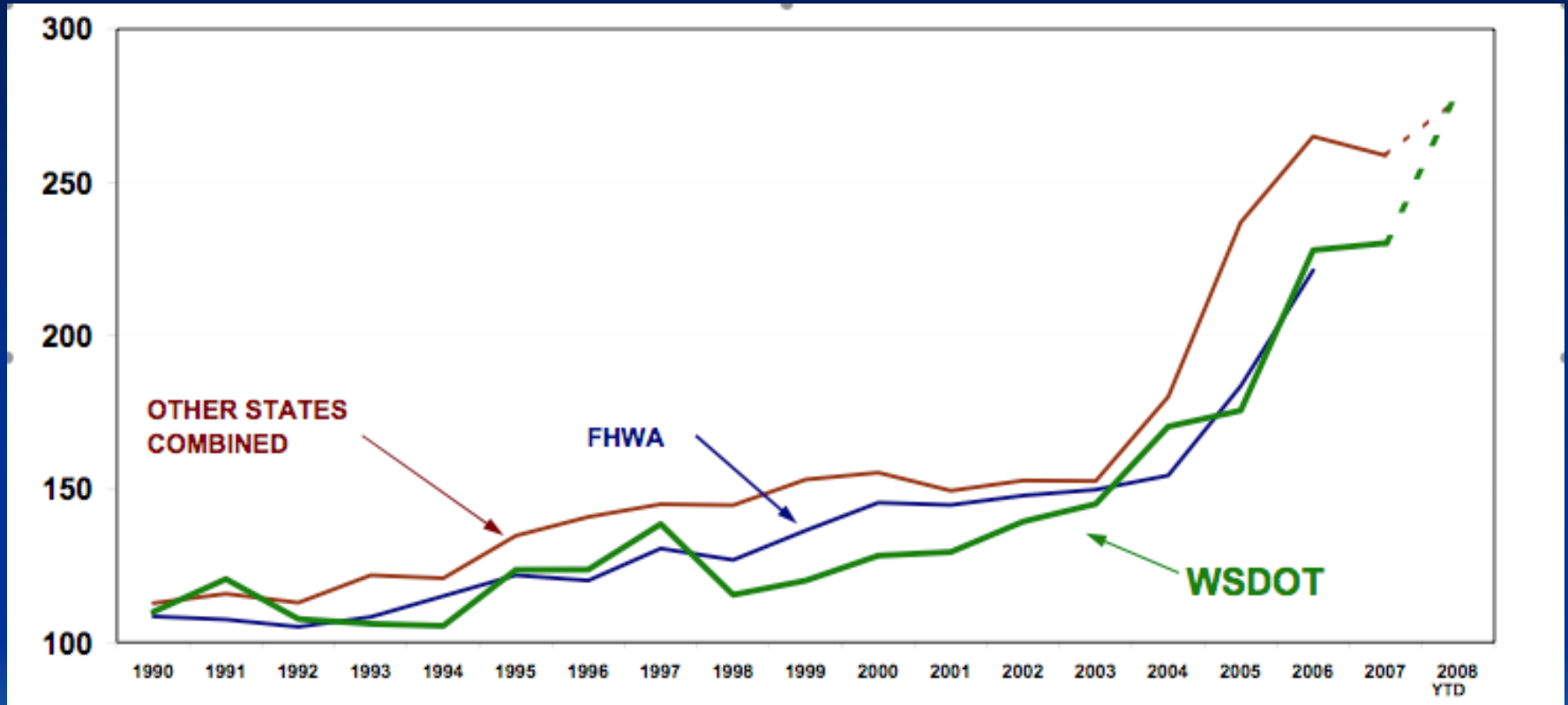
Demand

- Job creation / destruction
 - Per capita income / consumption
 - Vehicle Miles Traveled (VMT)
 - Climate
 - Burden of Growth Costs
 - Cost of Living
 - Quality of Life
- 

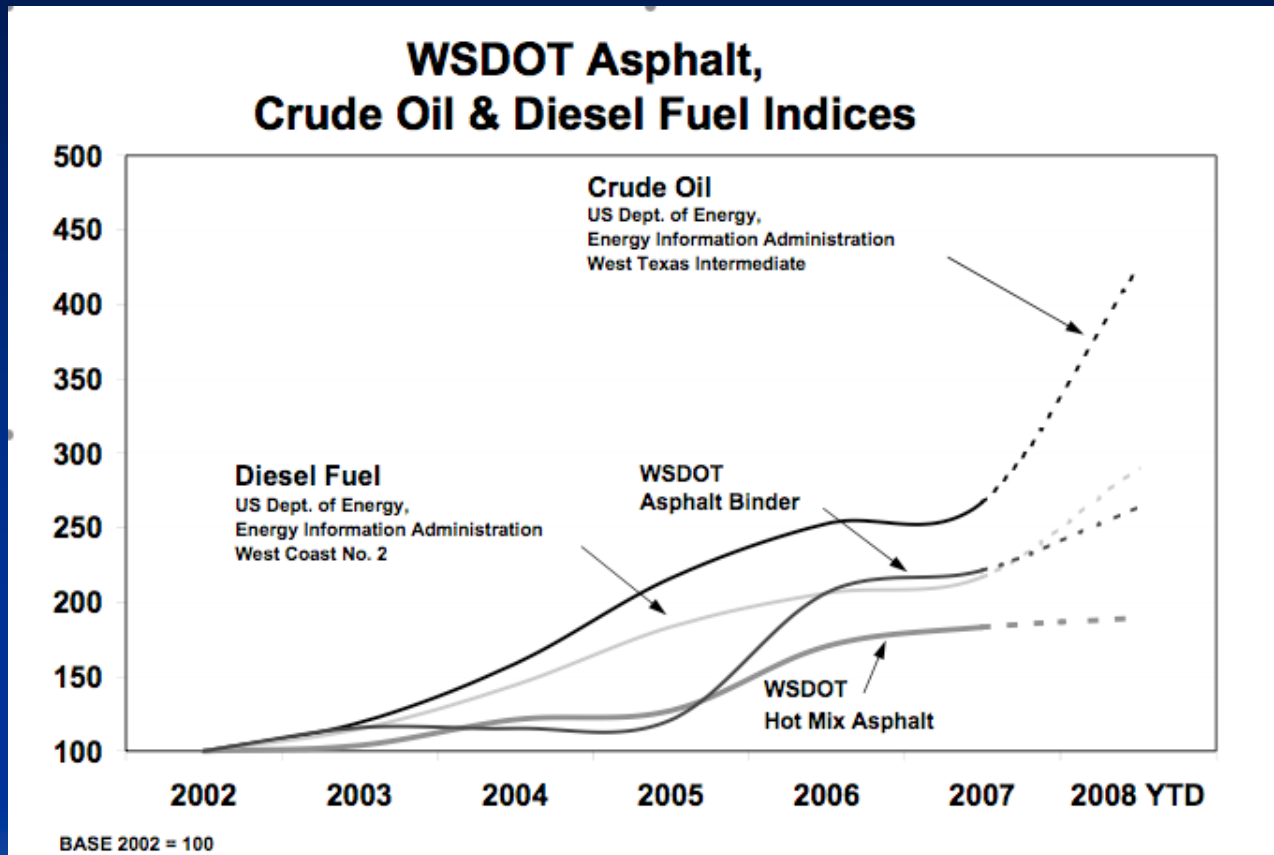
Future Costs of Fossil Fuels?



Road Construction Cost Indices 1990 - 2008



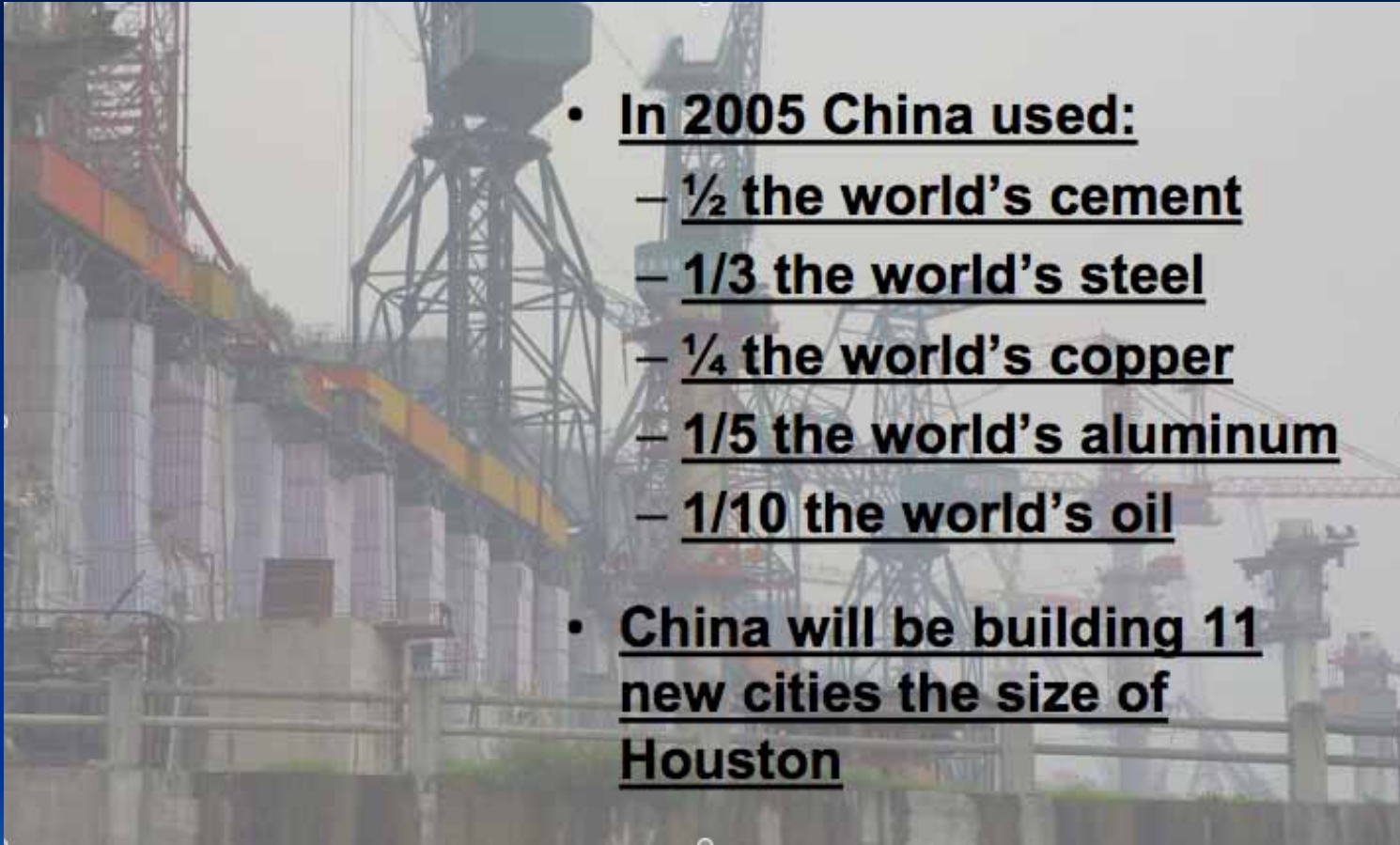
Petroleum-based road costs



12-month road construction cost trends in 2006

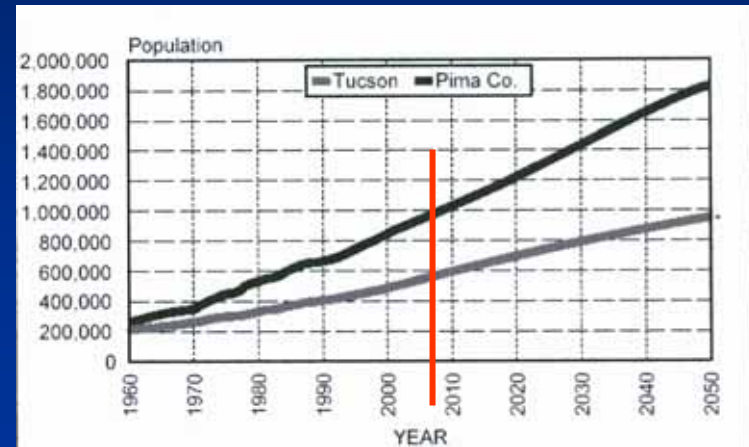
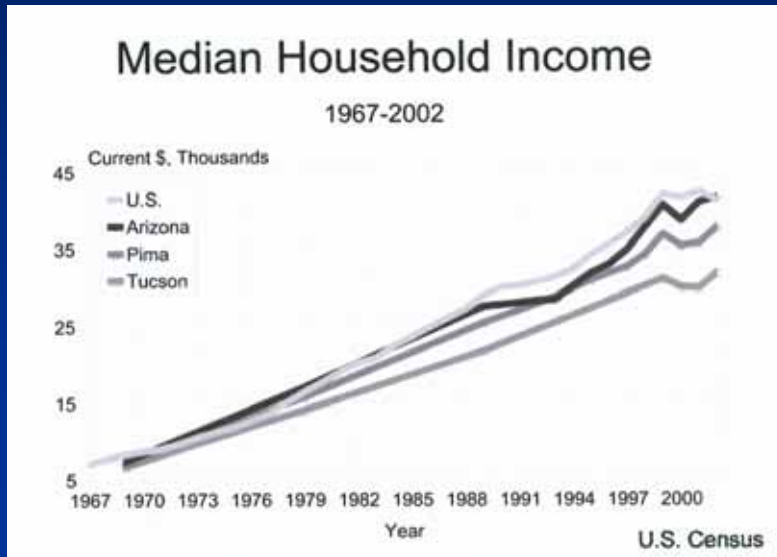
Structural Steel up 14%
Copper Prices up 81%
Asphalt up 71%
Diesel Fuel up 33%
Ready Mix Concrete up 14%
Plastics up 19%

China Impact

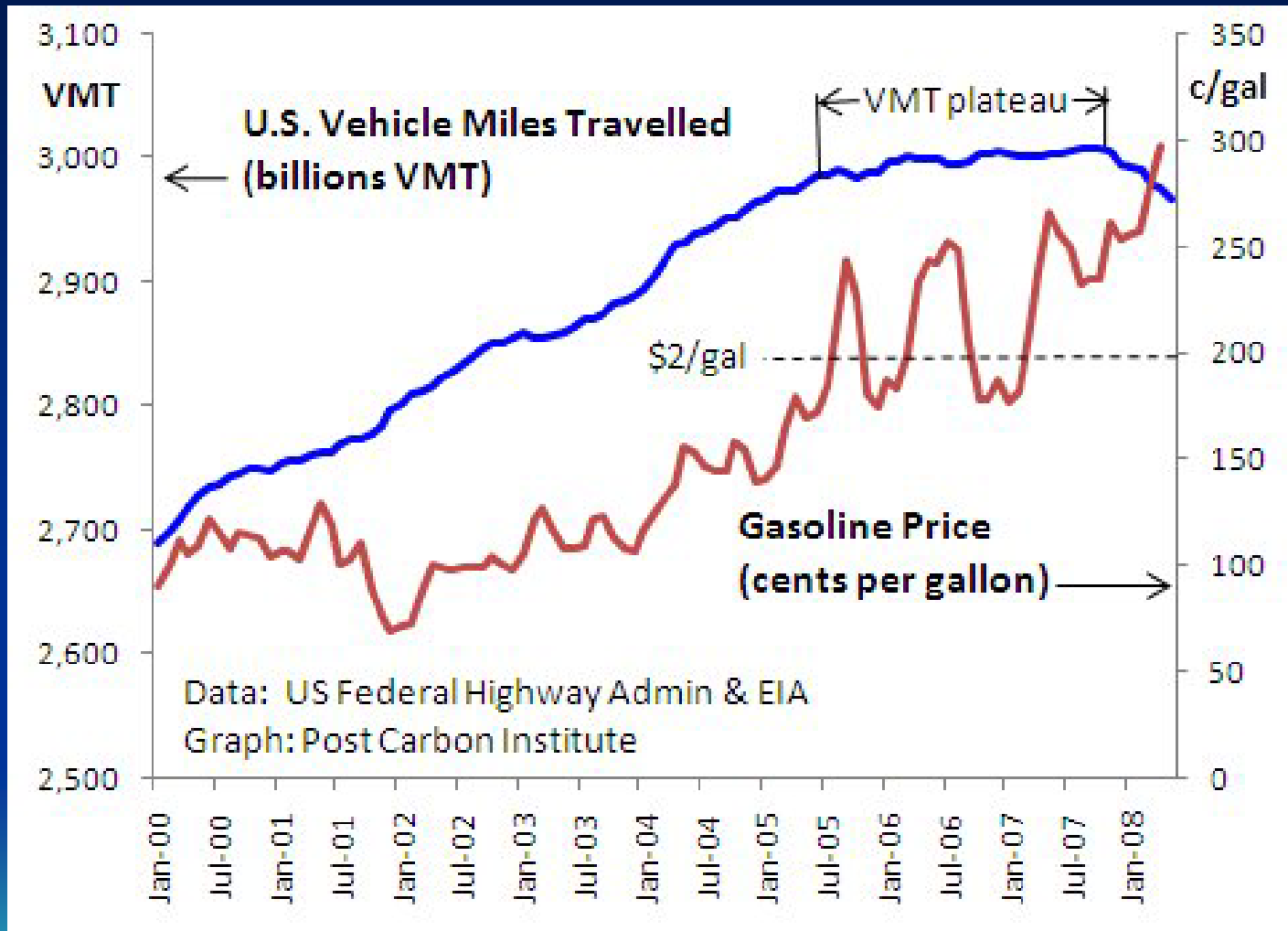


- In 2005 China used:
 - 1/2 the world's cement
 - 1/3 the world's steel
 - 1/4 the world's copper
 - 1/5 the world's aluminum
 - 1/10 the world's oil
- China will be building 11 new cities the size of Houston

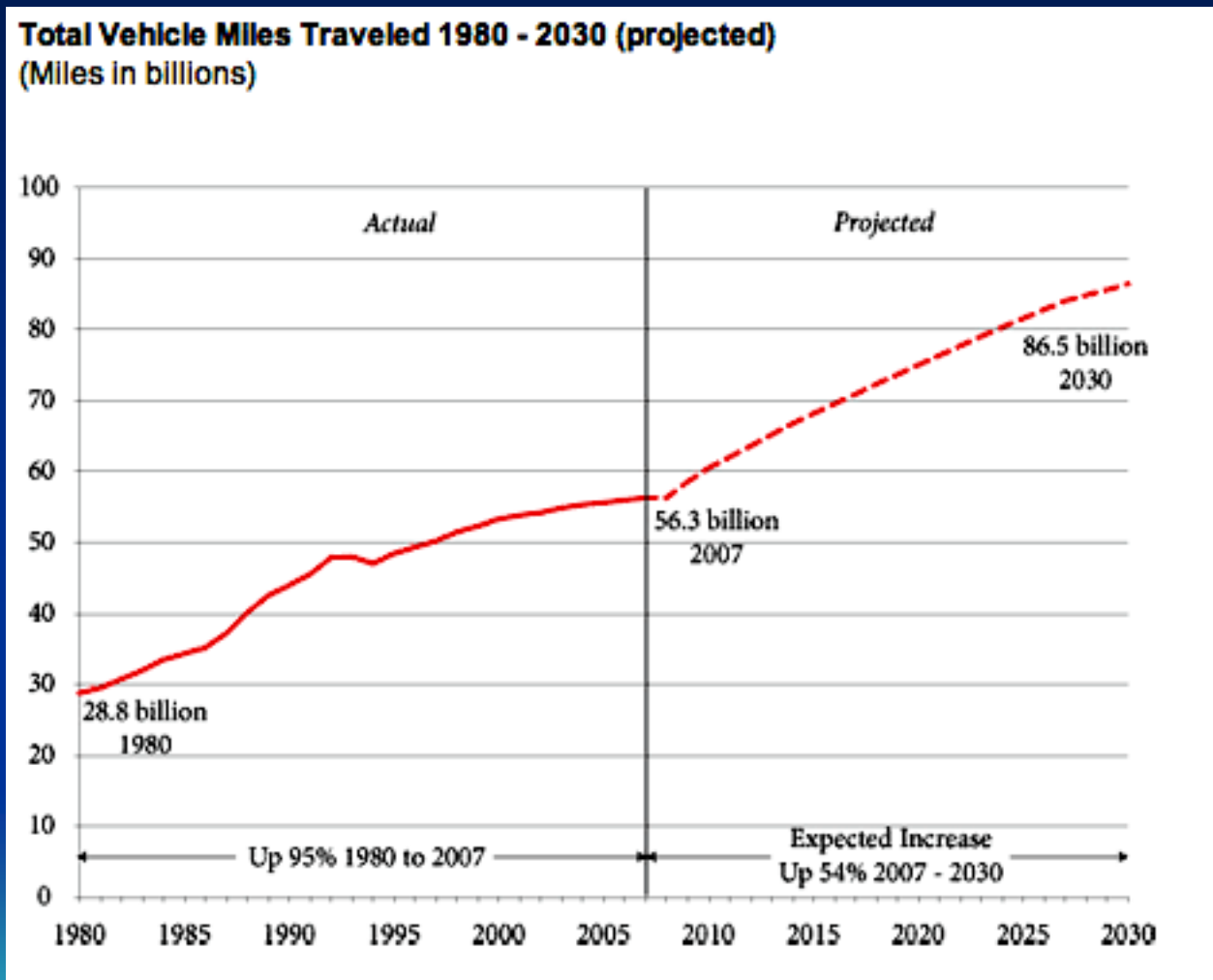
Differences in income and population growth



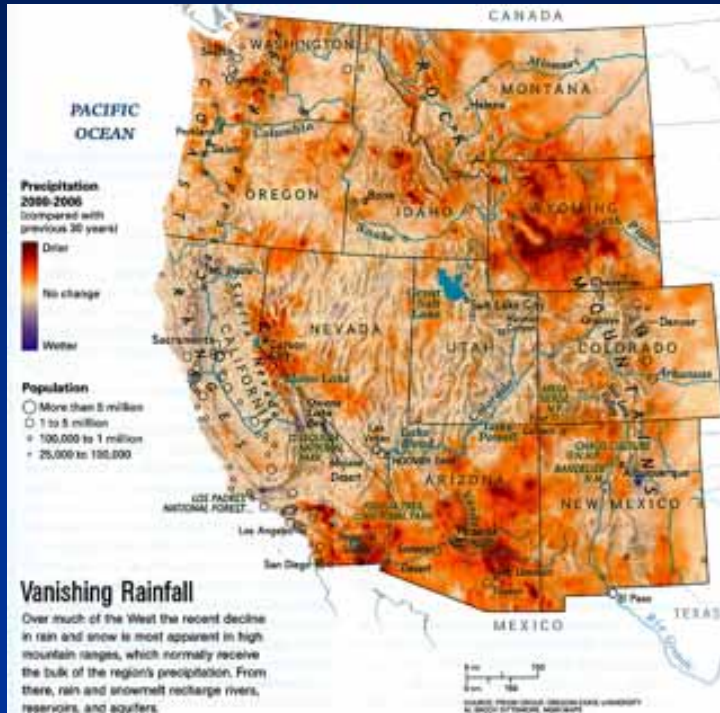
A New Trend for VMT ?



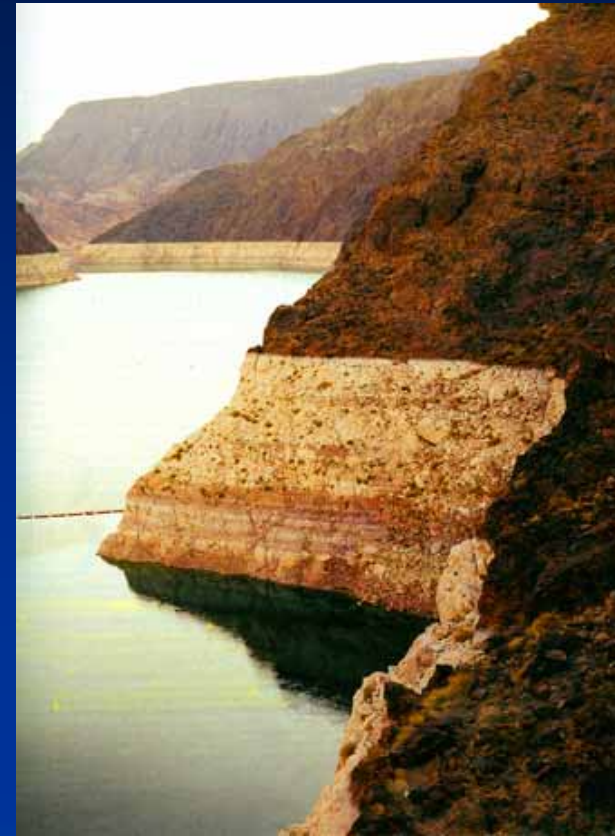
Washington state VMT projections -- Based on What?



Drought and Climate Change

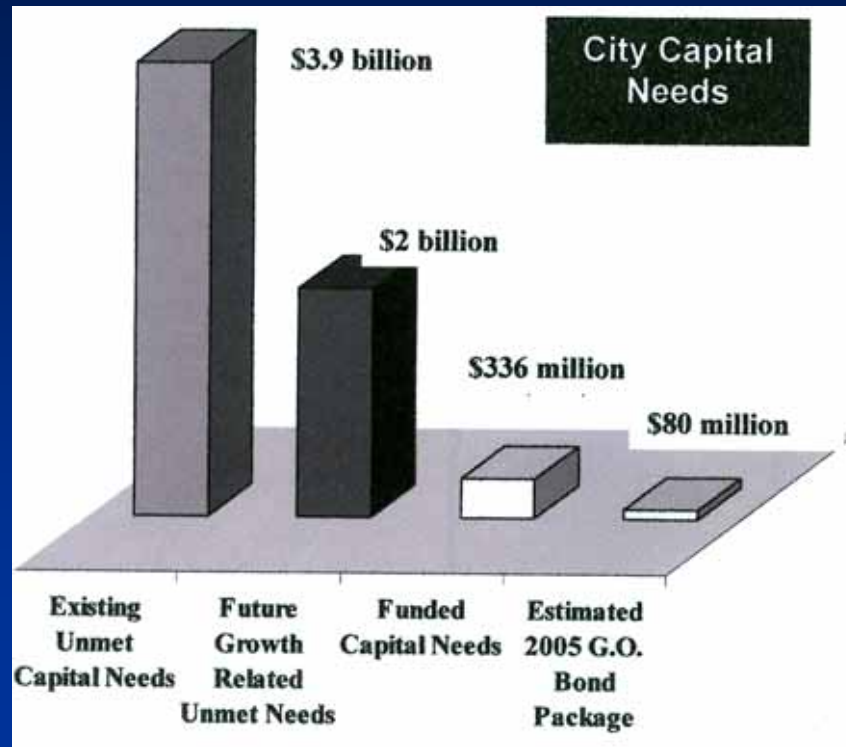


Vanishing rainfall



Lake Mead half empty

Has growth really paid for itself?



A backlog of infrastructure deficiencies competing for limited capital.

GENERAL PLAN IMPLEMENTATION COMPONENT

“Implementation is perhaps the most important step in the planning process. Plan implementation allows the policies to take effect, builds trust with the citizenry who participated in the planning process, and provides the opportunity to evaluate the outcome of the policies. It is the purpose of the Implementation Component to ensure that key policy initiatives within the *General Plan* are implemented. The Implementation Component sets a time frame for: (1) developing a Cost of Development Element implementation time frame.....”

City of Tucson General Plan



III. CITY of TUCSON GENERAL PLAN IMPLEMENTATION COMPONENT

- **Cost of Development Element Implementation Time Frame**
 - a. “Submit a time frame for implementation of the policies set forth in the Cost of Development Element (Element 12). The **implementation should include completion of a study**, using an accepted methodology, **to determine the total cost of growth and development** in prioritized areas of the city. As a part of the study, **develop a Cost of Growth Model that tracks actual costs over time.**”

b. Within six months of completion of 1.a, above, the Mayor and Council will hold a public hearing on a program designed to recover the "fair share" of the costs of new public services and facilities required to serve new development. The program will contain details regarding the application of fair share cost recovery in an equitable manner, in designated areas of the city. Within six months of the public hearing, an "Adequate Public Facilities Ordinance," or a similar tool, which integrates the information derived from the Cost of Growth Model into the Community Facilities Management Strategy (CFMS), shall be brought to the Mayor and Council for consideration. The CFMS will be used as the long-term framework for development of the Annual and Five-Year Capital Improvements Programs and for assessing and committing public funds to rehabilitation, redevelopment, or development programs or projects. The Mayor and Council can program those expenditures through the Action Plan Area designation process and the City's Capital Improvements Program.



Population Component

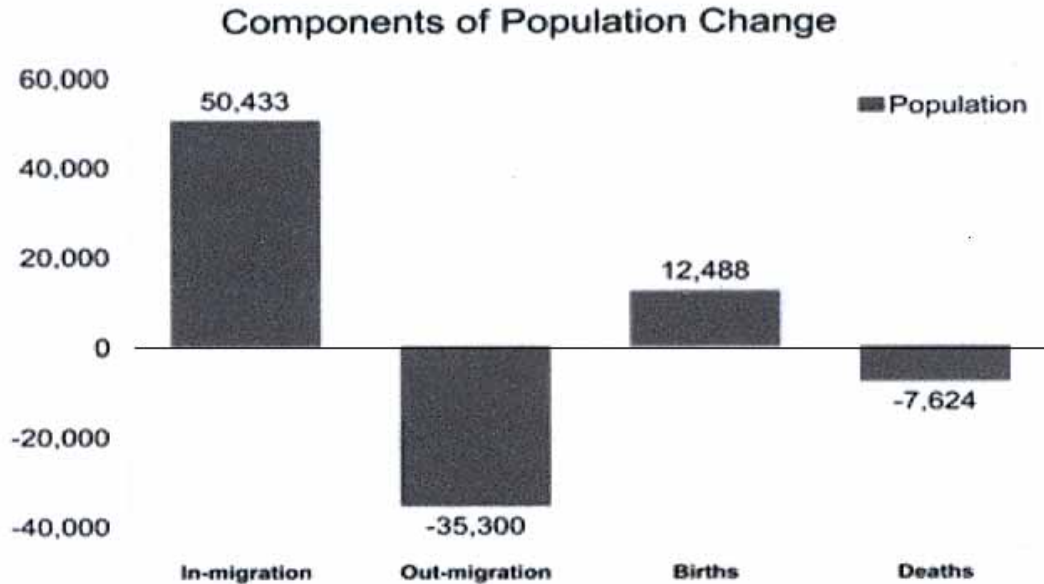
“The City's basic responsibility is to protect the safety and welfare of its citizens. The City would provide the infrastructure and services required to adequately serve the people. The likely demands required by future growth would be obtained cooperatively through regional processes to estimate and project population. These demand levels would be used by City staff in planning efforts.”

City of Tucson General Plan



Population Churn: Quality Growth ?

Pima County – Change from 2001 to 2002



U.S. Census American Community Survey & Arizona Department of Health Statistics

Inflated projections to sell a tax election ?

Congestion tomorrow

- In the next twenty years our population will increase by **54%**,
- **67%** increase in elderly/disabled transportation needs, and
- **96%** increase in vehicle miles traveled; these factors will result in:



A 550%
increase in
severe travel
congestion



We need a Water / Wastewater / Effluent Plan that:

- Addresses all major Uncertainties.
- Is Adaptive to emerging reality.
- Is Flexible to the appropriate scale of need.
- Prioritizes the needs of current residents over future residents.
- Allocates the infrastructure costs of new growth to new populations.
- Is Responsive to all members of our community.
- Considers a Sustainable balance of all infrastructure needs.



Thank you

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Sustainable Tucson

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