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Population counts were far off mark

Estimates based on new homes hurt cities, schools

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Accurately tracking and projecting Arizona's growing population are crucial to financial and development plans across the state.

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

For decades, everyone assumed Arizona's population-projection figures were reliable. Turns out they are not.

Metropolitan Phoenix's housing boom of 2003-06 skewed the state's population numbers, leading to projections that planners, economists and government officials agree are inflated. As a result, cities and towns across Arizona, particularly in the Valley where most of the state's residents live, are struggling to figure out what's the real population base and how it might grow in the future.

Nobody can say how off the mark the state's population projections are. But some of the area's top economists and the Arizona Department of Commerce are now working on a better way to calculate projections without relying so much on housing.

"Population growth is the beginning of the food chain of Arizona's economy," said Ioanna Morfessis, founding chief executive of the Greater Phoenix Economic Council and economic development consultant for some of the Valley's new communities, including Maricopa. "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."

During the height of the boom in 2005, state and census estimates showed a record 196,000 people moved to the Phoenix area. That startling figure led to projections for the Valley's population to more than double to 12 million as soon as 2030.

But those projections, based largely on housing permits and occupancy numbers, didn't accurately reflect how many people were moving to the Valley.

The large number of investor-owned properties inflated figures. And the number of building permits exceeded the number of houses actually sold. For example, a record 62,000 new homes went up in metro Phoenix during 2005 but only about 40,000 of those were bought by people who moved into them.

Then in mid-2006 the housing market started to slow. 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. It became clear that Arizona would not grow at the expected pace. Attention turned to adjusting the state's 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.

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.

Until accurate projections are compiled, all types of financial and development plans across Arizona are in limbo.

Formula inflates total

For nearly 40 years, the Arizona Department of Economic Security has calculated the state's population projections.

State economists started with employment and Social Security data. They factored in new jobs and salaries to predict which industries were growing and how that would affect population growth. They tried to track undocumented workers and seasonal residents, including farm and construction workers and retirees. And they used housing data such as building permits, home prices and household size.

They paired all of that with census data, which included births, deaths, housing occupancies and permits and national migration patterns. They then arrived at a range for population projections.

"Up until a four or five years ago, the numbers were almost always right in range," said Vest, who has been counting the state's population since the 1970s and is working on the state's new model. "What happened in the housing market a few years ago inflated the population statistics. We are trying to figure out by how much, but it will probably take a decennial census count to do that."

Jay Butler, director of realty studies at Arizona State University Polytechnic, says part of the current formula for projecting Arizona's population assumes 1 to 2 percent of the state's homes are vacant.

"Now we know at least 10 percent of the new homes built during the boom were vacant, and foreclosures are leaving more homes empty," Butler said. "We have tried to go door to door in the past to track vacant homes, but now with the Valley's size, it's a daunting task. No one really knows how many homes are empty."

As part of the new method to project the state's population, accurate occupancy data will be sought from local governments and utilities such as Arizona Public Service.

Depending on population

Problems from inaccurate population projections ripple through Arizona's economy and communities.

State government receives federal funding based on the number of new residents. Local taxes can be

raised or lowered depending on how many people will be paying them. Municipalities 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."

The town of Buckeye on the far west side of metro Phoenix is one of many municipalities that bet on population forecasts.

When home builders and developers started buying land in the town in 2000, city leaders realized significant growth was headed their way. Based on forecasts, Buckeye had the potential to balloon from 30,000 residents to 2 million by 2030. The town sped up the annexation of tens of thousands of acres, beefed up its planning staff, formed its first economic-development group and looked forward to a bigger share of tax and other state government money to prepare for its population boon.

But growth slowed so much in Buckeye that some home builders who bought parcels in new developments have lost those holdings to foreclosure, shutdown or filed for bankruptcy. Investors who bought homes during the boom believed they could quickly flip them for a profit because so many people were going to move to the town. A growing number of those homes are now in foreclosure.

In the past few years, Buckeye's planning staff has been downsized. Though the city gets more state funds for the additional land it annexed, Buckeye has to pay to maintain its vast borders where fewer than expected taxpayers now live.

"DES has a history of underprojecting populations for fast-growing Arizona towns," said Elliott Pollack, a long-time Arizona economist and real-estate investor. "If you were Buckeye and saw the big forecasts for growth, you would see you had the most vacant land and could easily assume a large part of that growth would come your way."

Unless the projections are wrong and not as many people show up.

Concern over numbers

Concern over some of Arizona's population numbers began just as the housing boom did.

Maricopa Association of Governments, the regional planning group for metro Phoenix, began analyzing population numbers for a big transportation initiative. One of the things it found was that the population was growing faster than expected, which is another flaw in the projections. DES had projected in 1997 that Pinal County was expected to grow to 300,000 by 2030. But in 2002, Pinal County already had that many residents.

"We knew something was wrong with the numbers and encouraged the state to look at them," said Eric Anderson, transportation director with MAG. "In states like Michigan and Ohio, where growth is much slower, population projections aren't as important. But here, they are crucial to preparing the necessary infrastructure new residents need."

He said anyone dealing with the bumper-to-bumper traffic on Hunt Highway in Pinal County will see

firsthand what happens when governments can't accurately plan for growth.

In 2006, based on MAG's findings and looming budget shortfalls, Gov. Janet Napolitano called for a state task force to investigate Arizona's population numbers. Inflated population counts and projections are most likely to blame for part of Arizona's budget shortfall. But so far there's no data to quantify how much that has impacted state revenue, officials say.

The task force included DES, the Arizona Commerce Department, MAG, municipalities and economists, and delved into the state's data just as the housing boom started to slow.

Called the Arizona Data Estimates and Projection Task Force, the group first looked to other states for better models to project population. But since few states besides Nevada have experienced the same rampant growth, there were none to copy.

Last fall, the group came back with its recommendations to create a new model for population forecasts. The model should:

- Move the state's population and job data collection and forecasting from DES to the Commerce Department.
- Collect much more data from state agencies, the federal government, state Indian communities, local governments and utilities.
- Gather better housing data.
- Hire the first state demographer.

"We can't emphasize enough how important good population projections are, which is why the state made it a priority to develop a new method for tracking them," said Shannon Scutari, the governor's policy adviser for growth and infrastructure. "If the population numbers aren't accurate, crucial growth decisions are made on faulty data."

The job to project the state's population was handed over to the Commerce Department at the end of last year. It is now working with the Department of Motor Vehicles to get data on driver's licenses; the Department of Education for school enrollments; the health department for statistics on hospital stays, illnesses and patient records; the U.S. Labor Department for more detailed job records and the Internal Revenue Service for tax-return data.

As for better housing data, the state agency 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 homes and apartments are vacant, it's working with utilities such as Arizona Public Service 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.

"Until we track population with this new model, population growth is just a wild guess," Pollack said.

Central Arizona Governments, which plans for Pinal County, can't wait. It has already hired Vest and other economists from UA and ASU 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," said Morfessis of the Greater Phoenix Economic Council.