

Arizona Department of Transportation

**MARICOPA COUNTY TRANSPORTATION EXCISE TAX
Forecasting Process & Results
FY 2005-2026**



Financial Management Services

November 2004

**MARICOPA COUNTY TRANSPORTATION EXCISE TAX
OFFICIAL FORECAST UPDATE
RISK ANALYSIS OF EXPECTED VALUES
as of November 2004**

Introduction

In 1985, the voters of Maricopa County approved Proposition 300 to establish a one-half cent transportation excise (sales) tax for construction of a regional freeway system within the county. The half cent sales tax was approved for a period of 20 years and ends on December 31, 2005.

On November 2, 2004, Maricopa County's voters approved Proposition 400 which extends the one-half cent sales tax for another 20 years through December 31, 2025. The sales tax extension will be used for construction of new freeways, widening of existing freeways and highways, improvements to the arterial street system, regional bus service and other special transportation services, and high capacity transit services such as light rail, bus rapid transit and express buses.

This document contains the official forecast of expected values for the Maricopa County Transportation Excise Tax for the period FY 2005-2026 developed by the Arizona Department of Transportation in cooperation with the Maricopa Association of Governments, Valley Metro and Valley Metro Rail.

Background

Since 1986, the Arizona Department of Transportation (the Department) has used a comprehensive regression-based econometric model to estimate Transportation Excise Tax revenues for Maricopa County. These revenues, which flow into the Regional Area Road Fund (RARF), are the major funding source for the Maricopa County Freeway Program.

The revenue forecast is highly dependent on estimates of independent variables. In order to deal with variability between estimated and actual values, the Department introduced the Risk Analysis Process (RAP) in 1992. The RAP relies on probability analysis and the independent evaluation of the model's variables by an expert panel of economists. The process results in a series of forecasts, with specified probabilities of occurrence, rather than a single or "best guess" estimate.

Enhanced forecasting accuracy was achieved in July 1996, when Hickling Lewis Brod Inc. (HLB) working in conjunction with Dr. Dennis Hoffman of Arizona State University, incorporated economic data and independent variables which were not included in the 1986 model.

In September 2000 and 2003, HLB reviewed the model and updated the equations. The independent variables contained in the updated model include:

- Maricopa County real income growth per capita
- Maricopa County population growth
- Maricopa County construction employment growth
- Phoenix Consumer Price Index (CPI)
- Prime interest rate.

Risk Analysis Panel

The Risk Analysis Process (RAP) relies heavily on the judgments of an expert panel of economists to provide information critical to the forecasting process. In September 2004, an expert panel of eleven economists representing public, private, and academic sectors provided their individual estimates of the model's independent variables and comments on the future economic outlook.

Model Results

The model results from the panel inputs produced a mean forecast of \$14,869.3 million for the period FY 2005-2026 with an average compound growth rate (CGR) of 7.2 percent.

The Official Forecast totals \$14,813.2 million for the period FY 2005-2026 and has an average compound growth rate of 7.2 percent. The FY 2005 forecast of \$306.9 million was developed independently of the econometric model using time series techniques and historic and projected growth rates from the model. The FY 2005 forecast is 6.3 percent above the FY 2004 collections.

The FY 2005-2026 forecast utilizes the 50% confidence interval growth rate to account for less uncertainty in the future. The Mean Forecast and the Official Forecast are shown on the next page.

Official Forecast Results

(Dollars in Millions)

Fiscal Year	Mean Forecast	Official Forecast	Confidence Level
2005	\$309.5	\$306.9	N/A
2006	331.4	329.0	50%
2007	355.1	352.4	50%
2008	380.6	377.3	50%
2009	407.5	404.6	50%
2010	436.4	433.3	50%
2011	467.3	465.0	50%
2012	499.7	497.7	50%
2013	535.4	532.8	50%
2014	573.5	570.7	50%
2015	614.0	612.3	50%
2016	657.6	655.6	50%
2017	704.8	702.8	50%
2018	755.9	752.6	50%
2019	809.6	807.9	50%
2020	868.3	865.2	50%
2021	931.8	929.8	50%
2022	1,000.5	998.4	50%
2023	1,072.3	1,070.1	50%
2024	1,150.5	1,145.8	50%
2025	1,234.6	1,232.5	50%
2026	<u>773.0</u>	<u>770.5</u>	50%
Total	\$14,869.3	\$14,813.2	
Ave. CGR	7.2%	7.2%	

Note: Current inflated dollars

For comparison purposes, the November 2003 and 2004 Official Forecasts are shown below:

Fiscal Year	Official Forecast November 2003		Official Forecast November 2004				
	Current \$ (Inflated)	2002 \$ @ 3%/1	Current \$ (Inflated)	FCST Diff	2002 \$ @ 3.0%/1	2002 \$ @ 2.65%/1	2002 \$ @ 2.85%/1
2005	\$305.0	\$279.1	\$306.9	\$1.9	\$280.9	\$283.7	\$282.1
2006	327.4	290.9	329.0	1.6	292.3	296.3	294.0
2007	351.2	302.9	352.4	1.2	303.9	309.2	306.2
2008	377.8	316.4	377.3	(0.5)	316.0	322.5	318.8
2009	406.6	330.6	404.6	(2.0)	329.0	336.9	332.4
2010	437.6	345.4	433.3	(4.3)	342.0	351.5	346.1
2011	471.1	361.1	465.0	(6.1)	356.4	367.4	361.1
2012	505.2	375.9	497.7	(7.5)	370.3	383.1	375.7
2013	542.4	391.8	532.8	(9.6)	384.9	399.6	391.1
2014	583.1	409.0	570.7	(12.4)	400.3	417.0	407.4
2015	626.8	426.8	612.3	(14.5)	416.9	435.8	424.9
2016	671.1	443.7	655.6	(15.5)	433.4	454.6	442.4
2017	719.6	461.9	702.8	(16.8)	451.1	474.8	461.1
2018	773.1	481.7	752.6	(20.5)	469.0	495.3	480.1
2019	830.3	502.3	807.9	(22.4)	488.8	517.9	501.0
2020	890.7	523.2	865.2	(25.5)	508.2	540.3	521.7
2021	955.9	545.1	929.8	(26.1)	530.3	565.7	545.1
2022	1,022.3	566.0	998.4	(23.9)	552.8	591.7	569.1
2023	1,095.6	588.9	1,070.1	(25.5)	575.2	617.8	593.1
2024	1,173.6	612.5	1,145.8	(27.8)	598.0	644.5	617.5
2025	1,260.2	638.5	1,232.5	(27.7)	624.5	675.3	645.8
2026	789.3	388.3	770.5	(18.8)	379.0	411.3	392.5
TOTALS							
FY 05-26	\$15,115.9	\$9,582.0	\$14,813.2	(\$302.7)	\$9,403.2	\$9,892.2	\$9,609.2
FY 06-25	\$14,021.4	\$8,914.7	\$13,735.7	(\$285.7)	\$8,743.4	\$9,197.3	\$8,934.5

Note: 1/ Discounted at constant 2002 dollars at the respective discount rate.
Totals may not add due to individual rounding.

The November 2004 Official Forecast for FY 2005-2026 in current dollars (inflated) totaled \$14,813.2 million compared to the November 2003 Official Forecast of \$15,115.9 million, a decrease of \$302.7 million. The decrease in the November 2004 Official Forecast was due to the RAP panel being somewhat less optimistic with future Maricopa County real per capita income growth.

However, the RAP panel also forecast a lower Phoenix CPI during the forecast period. The September 2002 RAP panel estimated the Phoenix CPI would average 3 percent over the FY 2006-2025 forecast period. This Phoenix CPI figure was then used by the Maricopa Association of Governments to deflate into 2002 constant dollars the revenue

forecast used in Proposition 400. In addition, the Department used the 3 percent Phoenix CPI figure to deflate the November 2003 Official Forecast into 2002 constant dollars, which resulted in revenue forecast similar to the forecast used in Proposition 400. By applying the same 3 percent Phoenix CPI with the November 2004 Official Forecast, the total 2002 constant dollar revenues would amount to \$8,743.4 million, a decrease of \$171.3 million from the November 2003 Official Forecast of \$8,914.7 in 2002 constant dollars.

As noted above, the September 2004 RAP panel estimated a lower Phoenix CPI for the forecast period. By incorporating the forecast period midpoint Phoenix CPI of 2.65 percent, the November 2004 Official Forecast in 2002 constant dollars would be \$9,197.3 million, an increase of \$282.6 million over the November 2003 Official Forecast for the FY 2006-2025 time period. For comparison purposes, a 2.85 percent Phoenix CPI figure used to deflate the November 2004 Official Forecast would provide similar revenue results when compared to the November 2003 Official Forecast using a 3 percent deflator.

Summary

The Official Forecast for FY 2005-2026 totals \$14,813.2 million, which reflects the extension of the Maricopa County Transportation Excise Tax. The November 2004 Official Forecast was decreased by \$302.7 million from the November 2003 Official Forecast. Compared to last year, the Risk Analysis Process panel forecasted lower growth in Maricopa County income, construction employment, prime rate and Phoenix CPI but a higher population growth for FY 2005–2026 period. In FY 2005, the Department expects improvement in Maricopa County’s economy with modest job and population growth along with strength in tourism.

Supplementary Information

The remainder of this report presents supplementary information on the RAP’s model, the values of the independent variables forecast by the expert panel, and detailed results of the Risk Analysis Process.

RARF Official Revenue Forecast
With Category Detail by Fiscal Year
(Current Dollars in Millions)

Fiscal Year	Retail	Contracting	Utilities	Restaurant/ Bar	Rental Real Property	Rental Personal Property	Other	Total
2005	\$155.4	\$46.6	\$20.9	\$26.7	\$28.9	\$12.6	\$15.8	\$306.9
2006	170.0	48.4	22.2	28.5	29.7	12.7	17.5	329.0
2007	186.4	49.2	23.0	30.6	30.5	13.1	19.6	352.4
2008	199.3	53.6	23.8	32.8	33.4	14.1	20.3	377.3
2009	213.8	58.0	24.8	35.2	36.5	15.3	21.0	404.6
2010	228.7	63.0	25.8	37.6	39.9	16.6	21.7	433.3
2011	245.2	68.5	26.9	40.6	43.4	18.0	22.4	465.0
2012	262.7	73.9	28.0	43.4	47.3	19.2	23.2	497.7
2013	281.3	79.9	29.0	46.5	51.3	20.9	23.9	532.8
2014	301.1	85.8	30.2	49.6	56.6	22.7	24.7	570.7
2015	323.3	92.7	31.5	53.0	61.6	24.7	25.5	612.3
2016	346.5	100.1	32.7	56.6	66.8	26.6	26.3	655.6
2017	371.4	107.6	34.0	60.7	73.1	28.7	27.3	702.8
2018	397.9	114.3	35.5	65.0	80.4	31.2	28.3	752.6
2019	427.7	123.2	37.0	69.9	87.2	33.6	29.3	807.9
2020	458.0	131.4	38.5	74.5	95.4	37.0	30.4	865.2
2021	491.6	142.2	40.2	80.2	104.1	40.1	31.4	929.8
2022	527.8	152.4	41.9	85.9	114.2	43.6	32.6	998.4
2023	564.8	163.5	43.8	92.4	124.4	47.3	33.9	1,070.1
2024	606.5	173.9	45.6	98.7	135.0	51.0	35.1	1,145.8
2025	652.6	186.4	47.8	106.3	146.8	56.1	36.5	1,232.5
2026	407.1	115.7	29.1	66.4	94.2	35.8	22.1	770.5
Total: 05-26	\$7,819.1	\$2,230.3	\$712.2	\$1,281.1	\$1,580.7	\$620.9	\$568.8	\$14,813.2

Note: Totals may not add due to individual rounding.

RARF TOTAL TAX REVENUE RISK ANALYSIS RESULTS
(Current Dollars in Millions)

Fiscal Year	Mean	10%	20%	30%	40%	50%	60%	70%	80%	90%
2005	\$309.5	\$319.1	\$316.0	\$314.0	\$311.5	\$309.5	\$307.8	\$306.4	\$303.9	\$300.5
2006	331.4	343.2	339.5	336.2	333.9	331.8	329.3	326.7	324.4	319.1
2007	355.1	371.0	365.3	361.9	358.4	355.3	352.4	349.1	344.9	338.4
2008	380.6	400.5	393.2	388.8	384.3	380.5	376.7	373.5	368.3	361.3
2009	407.5	429.6	422.8	417.2	412.1	408.0	403.2	398.5	393.2	384.8
2010	436.4	463.4	453.2	447.9	442.5	436.9	430.5	424.7	418.7	410.9
2011	467.3	498.1	487.6	481.5	475.9	468.8	460.9	454.5	446.2	435.4
2012	499.7	534.6	523.0	513.7	507.9	501.8	491.7	483.7	474.7	464.9
2013	535.4	574.7	562.0	551.6	543.6	537.3	526.6	518.2	508.4	495.1
2014	573.5	619.0	603.2	590.0	582.2	575.5	564.2	556.0	543.6	524.0
2015	614.0	665.7	647.1	633.8	622.8	617.4	605.1	593.8	580.7	560.9
2016	657.4	718.6	695.5	678.9	666.7	661.1	646.7	633.5	618.9	598.1
2017	704.8	769.7	747.8	729.9	716.7	708.7	690.9	676.6	659.9	638.0
2018	755.9	829.1	807.8	786.9	768.0	758.9	741.2	723.5	706.5	680.8
2019	809.6	894.7	862.7	843.2	825.0	814.6	791.3	774.5	755.1	724.1
2020	868.3	959.0	926.5	905.2	887.7	872.4	852.4	827.5	810.0	772.1
2021	931.8	1,032.7	998.7	975.7	951.4	937.6	910.3	890.1	866.6	826.3
2022	1,000.5	1,110.9	1,072.4	1,045.1	1,019.4	1,006.7	979.0	955.9	924.7	887.0
2023	1,072.3	1,198.6	1,153.9	1,119.2	1,095.2	1,079.0	1,049.0	1,022.6	990.7	949.4
2024	1,150.5	1,286.9	1,237.6	1,204.9	1,173.3	1,155.3	1,128.3	1,096.2	1,058.2	1,015.2
2025	1,234.6	1,389.5	1,323.1	1,289.4	1,258.2	1,242.7	1,208.5	1,174.8	1,135.6	1,093.7
2026	773.0	869.5	830.1	806.0	789.5	776.9	754.1	736.6	711.2	680.8

RARF Official Revenue Forecast
Revenue Distribution
(Current Dollars in Millions)

Fiscal Year	Regional Area Road Fund (RARF) /1		Public Transportation Fund (33.3%)	Total
	Freeways (56.2%)	Arterial Streets (10.5 %)		
2005	\$306.9			\$306.9
2006 /2	268.9	\$14.4	\$45.7	329.0
2007	198.1	37.0	117.3	352.4
2008	212.1	39.6	125.6	377.3
2009	227.4	42.5	134.7	404.6
2010	243.5	45.5	144.3	433.3
2011	261.3	48.8	154.9	465.0
2012	279.7	52.3	165.7	497.7
2013	299.4	56.0	177.4	532.8
2014	320.7	59.9	190.1	570.7
2015	344.1	64.3	203.9	612.3
2016	368.5	68.8	218.3	655.6
2017	395.0	73.8	234.0	702.8
2018	423.0	79.0	250.6	752.6
2019	454.1	84.8	269.0	807.9
2020	486.2	90.9	288.1	865.2
2021	522.6	97.6	309.6	929.8
2022	561.1	104.8	332.5	998.4
2023	601.4	112.4	356.3	1,070.1
2024	643.9	120.3	381.6	1,145.8
2025	692.7	129.4	410.4	1,232.5
2026 /3	433.0	80.9	256.6	770.5
TOTALS	\$8,543.6	\$1,503.1	\$4,766.5	\$14,813.2

Note: 1/ In FY 2005, \$7.7 million was transferred from RARF to the RPTA for transit costs. This transfer amount is adjusted annually by the GDP price deflator. Beginning July 1, 2005, this transfer from RARF will be divided equally between MAG and the Public Transportation Fund for planning and administrating the regional transportation plan.

2/ Reflects the current one-half cent transportation excise tax and the extension which begins on January 1, 2006.

3/ Reflects the end of the one-half cent transportation excise tax extension on December 31, 2025.

Total may not add due to rounding.

Distribution

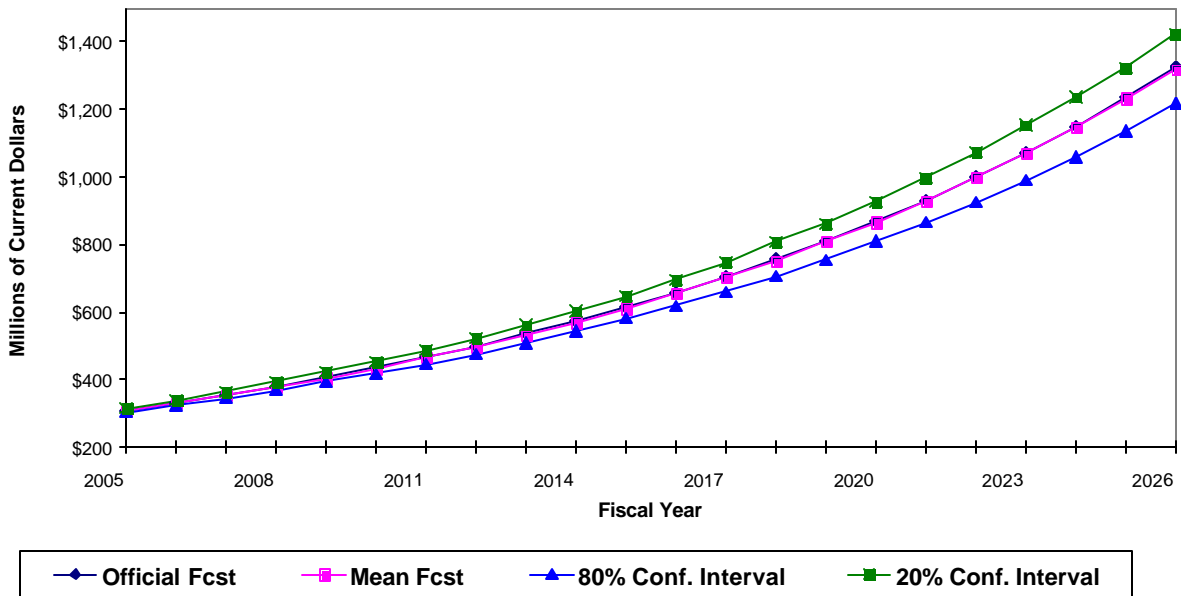
Per Laws 2004, Chapter 2 (HB 2456), the sales tax extension will be distributed as follows:

1. 56.2 percent to the Regional Area Road (RARF) fund for freeways and other routes in the state highway systems, including capital expense and maintenance.
2. 10.5 percent to the RARF fund for major arterial streets and intersection improvements, including capital expense and implementation studies.
3. 33.3 percent to the public transportation fund for:
 - (a). Capital costs, maintenance and operation of public transportation classifications.
 - (b). Capital costs and utility relocation costs associated with a light rail public transit system.

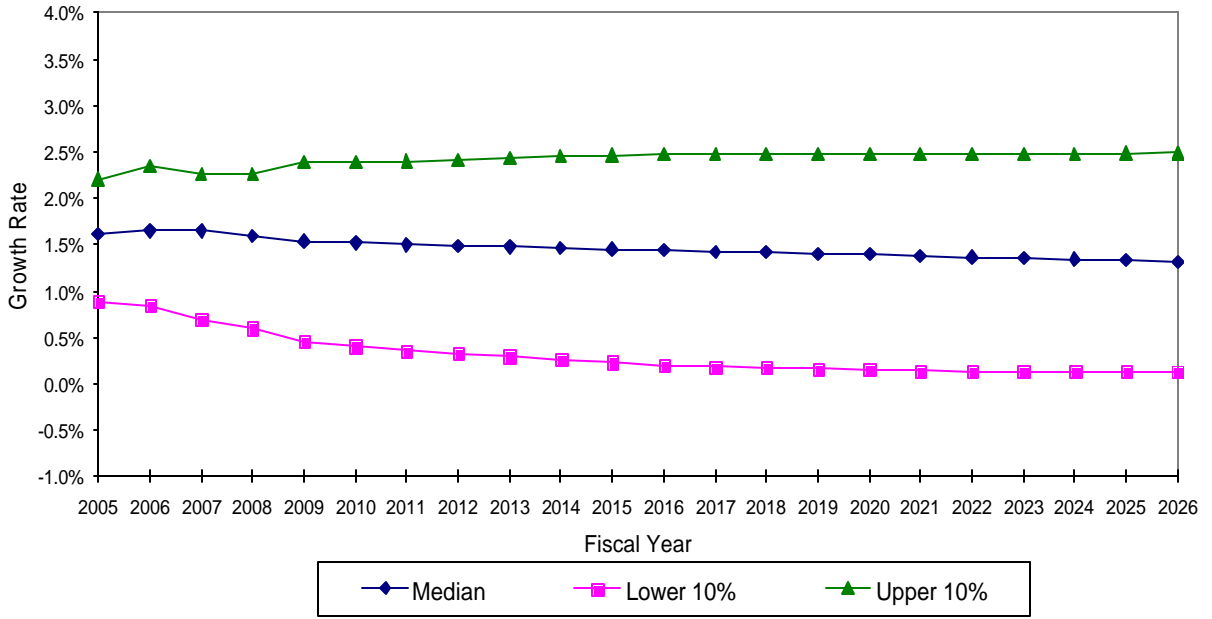
Official Forecast Results (Current Dollars in Millions)

Fiscal Year	Mean Forecast	Official Forecast	80% Conf. Interval	20% Conf. Interval
2005	\$309.5	\$306.9	\$303.9	\$316.0
2006	331.4	329.0	324.4	339.5
2007	355.1	352.4	344.9	365.3
2008	380.6	377.3	368.3	393.2
2009	407.5	404.6	393.2	422.8
2010	436.4	433.3	418.7	453.2
2011	467.3	465.0	446.2	487.6
2012	499.7	497.7	474.7	523.0
2013	535.4	532.8	508.4	562.0
2014	573.5	570.7	543.6	603.2
2015	614.0	612.3	580.7	647.1
2016	657.6	655.6	618.9	695.5
2017	704.8	702.8	659.9	747.8
2018	755.9	752.6	706.5	807.8
2019	809.6	807.9	755.1	862.7
2020	868.3	865.2	810.0	926.5
2021	931.8	929.8	866.6	998.7
2022	1,000.5	998.4	924.7	1,072.4
2023	1,072.3	1,070.1	990.7	1,153.9
2024	1,150.5	1,145.8	1,058.2	1,237.6
2025	1,234.6	1,232.5	1,135.6	1,323.1
2026 /1	773.0	770.5	711.2	830.1
Total	\$14,869.3	\$14,813.2	\$13,944.8	\$15,769.1

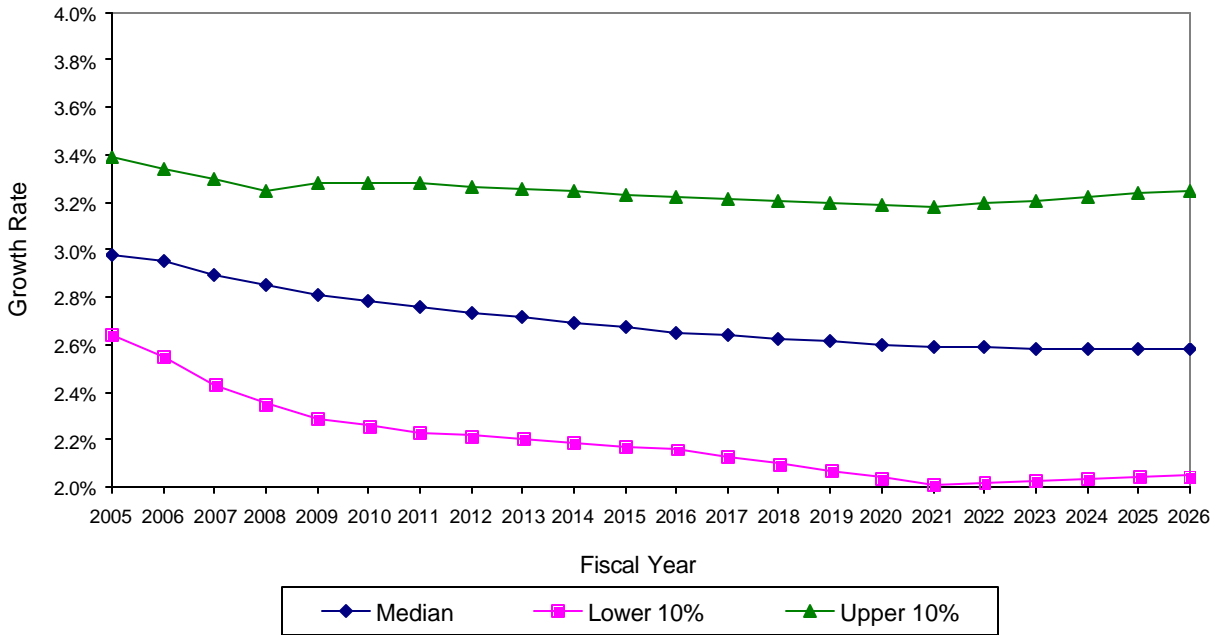
Note: 1/ FY 2026 totals are adjusted to reflect the transportation excise tax ends on December 31, 2025. Totals may not add due to individual rounding.



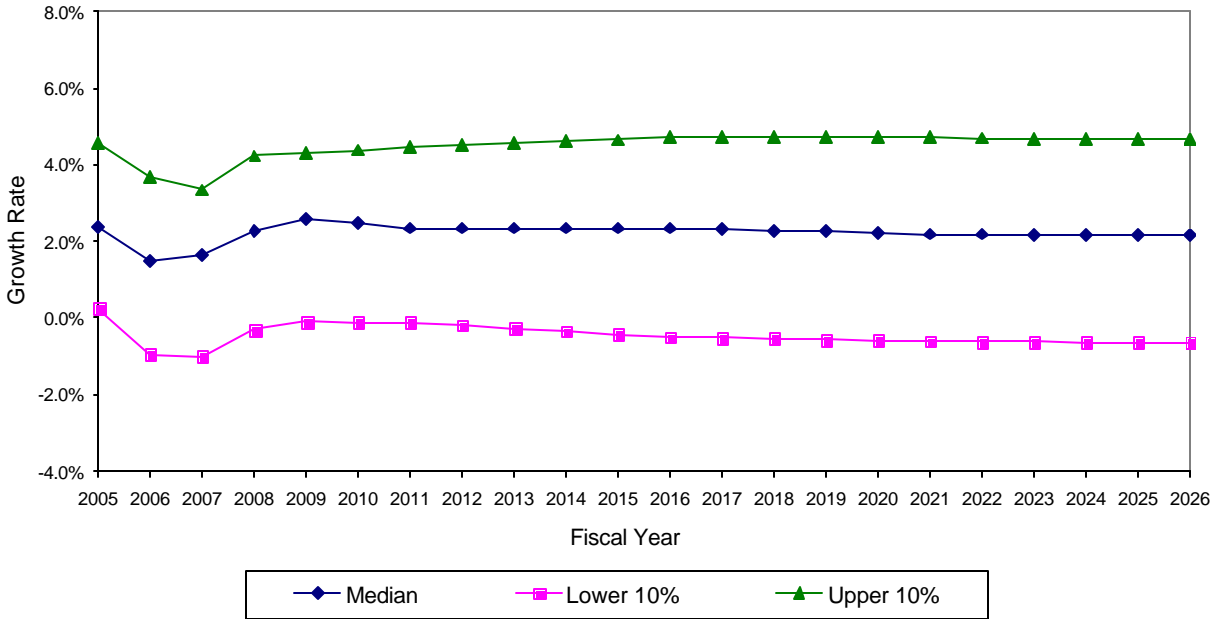
Maricopa County Real Income Per Capita



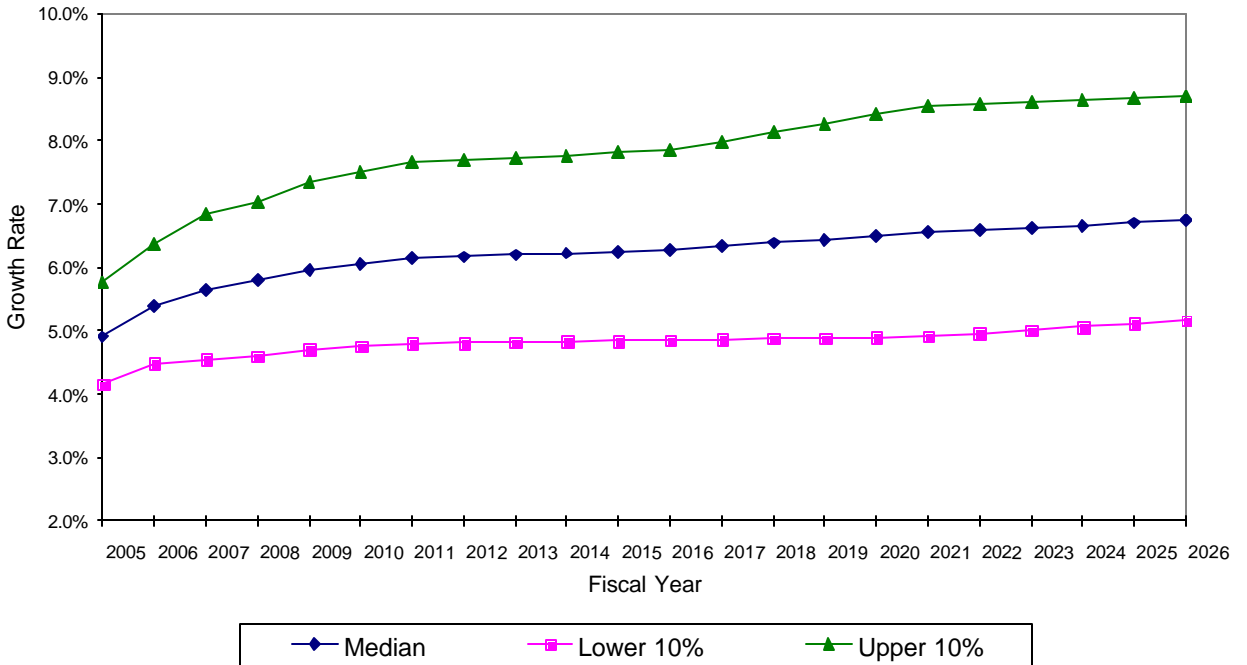
Maricopa County Population



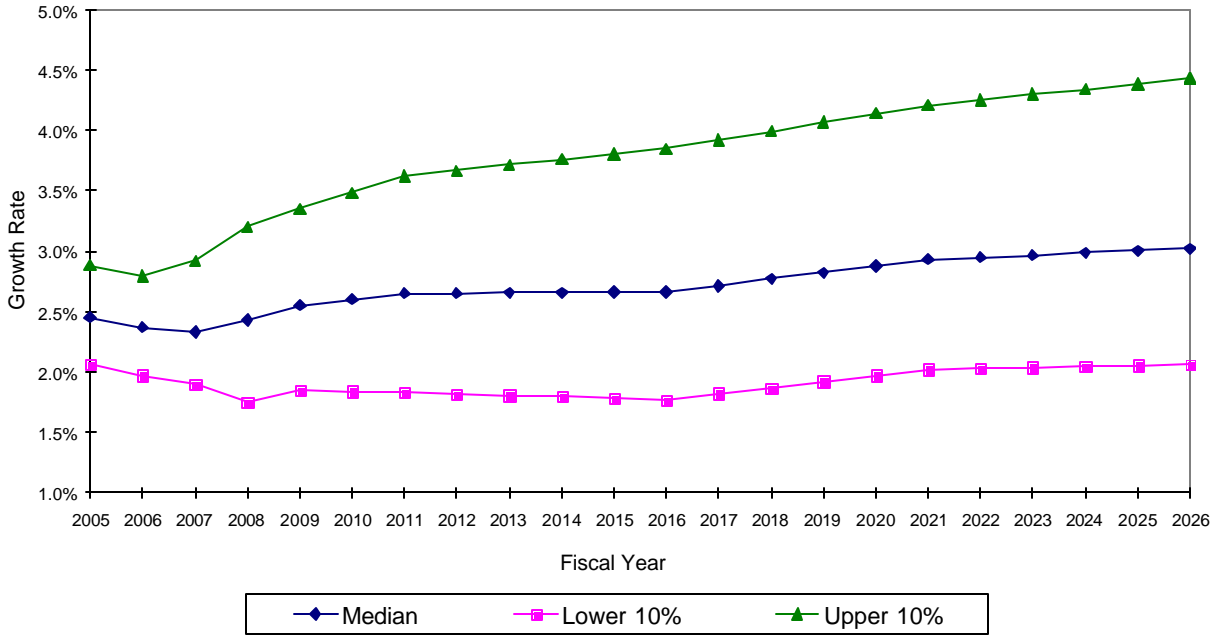
Maricopa County Construction Employment Growth Rate



Prime Interest Rate



Phoenix CPI



Mean Panelist Data Values

	Income Growth	Population Growth	Construction Employment	Prime Rate	Phoenix CPI Growth
FY 2005					
Upper 10%	2.21	3.39	4.57	5.77	2.88
Lower 10%	0.89	2.64	0.25	4.16	2.06
Median	1.61	2.98	2.36	4.90	2.45
FY 2006					
Upper 10%	2.35	3.34	3.69	6.36	2.79
Lower 10%	0.85	2.55	-0.94	4.48	1.97
Median	1.65	2.95	1.49	5.38	2.37
FY 2007					
Upper 10%	2.26	3.30	3.35	6.83	2.92
Lower 10%	0.70	2.43	-1.01	4.55	1.89
Median	1.65	2.89	1.63	5.65	2.33
FY 2008					
Upper 10%	2.27	3.25	4.23	7.04	3.20
Lower 10%	0.60	2.35	-0.31	4.60	1.75
Median	1.59	2.85	2.28	5.80	2.43
FY 2009					
Upper 10%	2.39	3.28	4.32	7.35	3.35
Lower 10%	0.45	2.29	0.10	4.70	1.85
Median	1.54	2.81	2.60	5.95	2.55
FY 2011					
Upper 10%	2.40	3.28	4.45	7.65	3.62
Lower 10%	0.36	2.23	-0.12	4.80	1.83
Median	1.50	2.76	2.35	6.14	2.65
FY 2016					
Upper 10%	2.48	3.22	4.71	7.85	3.85
Lower 10%	0.20	2.16	-0.50	4.85	1.77
Median	1.44	2.65	2.35	6.28	2.66
FY 2021					
Upper 10%	2.47	3.18	4.71	8.55	4.21
Lower 10%	0.14	2.01	-0.61	4.91	2.02
Median	1.38	2.59	2.19	6.55	2.93
FY 2026					
Upper 10%	2.49	3.25	4.66	8.70	4.43
Lower 10%	0.13	2.05	-0.64	5.16	2.06
Median	1.32	2.58	2.17	6.74	3.02

All data in the above table are percentage growth rates with the exception of the prime rates which are in nominal rates.

Per Capita Income Growth Rate									
	2005	2006	2007	2008	2009	2011	2016	2021	2026
Panelist 1									
Upper 10%	1.50	2.00	2.60	2.10	1.40	1.20	1.10	1.50	1.50
Lower 10%	0.40	0.50	0.60	0.30	-1.40	-1.80	-1.00	0.20	0.20
Median	1.00	1.20	1.80	1.10	0.20	-0.40	0.00	0.80	0.80
Panelist 2									
Upper 10%	2.2	2.20	2.20	2.00	1.90	1.90	1.50	1.50	1.25
Lower 10%	1.25	1.00	0.75	0.75	0.75	0.50	0.20	0.00	0.00
Median	2.00	1.80	1.70	1.60	1.50	1.50	1.00	0.80	0.75
Panelist 3									
Upper 10%	2.40	2.50	2.50	2.60	2.70	2.80	2.90	2.80	2.80
Lower 10%	1.00	0.80	0.60	0.40	0.00	-0.20	-1.00	-1.20	-1.50
Median	1.70	1.70	1.70	1.60	1.60	1.50	1.40	1.30	1.10
Panelist 4									
Upper 10%	3.30	3.30	3.30	3.20	3.20	3.10	3.00	3.00	3.00
Lower 10%	1.10	1.10	1.10	1.00	1.00	1.00	1.00	1.00	0.90
Median	2.20	2.20	2.10	2.00	2.00	2.00	2.00	2.00	2.00
Panelist 5									
Upper 10%	2.80	3.80	3.00	2.50	2.60	2.90	2.80	2.90	3.00
Lower 10%	0.00	0.00	-0.50	-0.50	-0.40	-0.40	-0.40	-0.40	-0.40
Median	1.30	2.00	2.00	1.80	1.50	1.40	1.30	1.40	1.00
Panelist 6									
Upper 10%	2.50	2.50	2.30	2.10	2.10	1.90	1.80	1.90	1.70
Lower 10%	1.00	1.00	1.00	0.00	0.00	-0.50	-1.00	-1.50	-1.70
Median	1.90	1.90	1.80	1.50	1.50	1.30	0.90	0.50	0.00
Panelist 7									
Upper 10%	2.30	2.00	1.90	1.90	1.90	1.70	1.30	1.20	1.10
Lower 10%	1.40	1.10	1.10	1.00	0.90	0.80	0.30	0.10	0.00
Median	2.10	1.70	1.70	1.60	1.70	1.40	1.00	0.90	0.80
Panelist 8									
Upper 10%	1.60	1.40	1.10	0.70	0.90	1.20	1.30	1.40	1.50
Lower 10%	0.80	0.60	0.30	-0.10	0.10	0.40	0.50	0.60	0.70
Median	1.20	1.00	0.70	0.30	0.50	0.80	0.90	1.00	1.10
Panelist 9									
Upper 10%	1.50	1.50	1.00	1.00	1.50	1.50	2.00	2.00	2.00
Lower 10%	0.50	0.50	-0.50	-0.50	-1.00	-1.50	-2.00	-2.00	-2.00
Median	1.00	1.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00
Panelist 10									
Upper 10%	2.20	2.30	2.40	2.20	2.30	1.80	0.50	0.50	0.50
Lower 10%	1.00	1.10	1.20	0.70	0.30	-0.20	-1.50	-1.50	-1.50
Median	1.60	1.70	1.80	1.50	1.30	0.80	-0.50	-0.50	-0.50
Panelist 11									
Upper 10%	2.00	2.30	2.60	2.50	2.50	2.60	3.00	3.50	3.50
Lower 10%	1.30	1.70	2.00	1.40	1.40	2.00	1.00	1.25	1.25
Median	1.70	2.00	2.30	1.80	1.80	2.30	1.80	2.00	2.00

All data in the above table are in percentage growth rates.

Maricopa County Population Growth Rate									
	2005	2006	2007	2008	2009	2011	2016	2021	2026
Panelist 1									
Upper 10%	3.30	3.20	3.10	3.00	3.00	3.00	2.90	2.90	2.90
Lower 10%	2.50	2.40	2.30	2.00	1.80	1.50	1.50	1.50	1.50
Median	2.90	2.80	2.80	2.70	2.70	2.50	2.20	2.10	2.10
Panelist 2									
Upper 10%	3.50	3.30	3.10	3.10	3.00	2.90	2.70	2.50	2.20
Lower 10%	2.90	2.70	2.70	2.70	2.50	2.40	2.20	2.00	1.80
Median	3.10	3.00	2.90	2.90	2.80	2.70	2.50	2.30	2.00
Panelist 3									
Upper 10%	3.30	3.30	3.40	3.40	3.50	3.50	3.50	3.50	3.50
Lower 10%	2.30	2.10	1.90	1.90	1.80	1.80	1.70	1.60	1.50
Median	2.70	2.60							2.60
Panelist 4									
Upper 10%	4.00	4.00	3.80	3.80	3.80	3.50	3.30	3.10	3.00
Lower 10%	2.70	2.60	2.50	2.50	2.50	2.30	2.30	2.00	2.00
Median	2.90	2.90	2.90	2.90	2.90	2.70	2.50	2.30	2.10
Panelist 5									
Upper 10%	3.00	2.90	3.20	3.10	3.00	2.90	2.90	2.90	2.90
Lower 10%	3.30	2.90	2.20	2.10	2.00	1.70	1.70	1.70	1.70
Median	3.50	3.50	3.50	3.30	3.00	2.70	2.70	2.70	2.70
Panelist 6									
Upper 10%	3.40	3.20	3.20	3.00	3.00	3.00	2.90	2.60	2.50
Lower 10%	2.80	2.60	2.60	2.40	2.40	2.20	2.00	1.80	1.60
Median	3.10	2.90	2.90	2.80	2.80	2.70	2.40	2.20	2.00
Panelist 7									
Upper 10%	3.80	3.80	3.60	3.40	3.40	3.40	3.00	2.90	2.70
Lower 10%	2.70	2.70	2.60	2.60	2.40	2.40	2.30	2.20	1.90
Median	3.00	3.00	2.90	2.90	2.80	2.80	2.60	2.50	2.30
Panelist 8									
Upper 10%	3.50	3.60	3.50	3.40	3.40	3.10	2.90	2.50	2.50
Lower 10%	2.50	2.60	2.50	2.40	2.40	2.10	1.90	1.50	1.50
Median	3.00	3.20	3.00	2.90	2.90	2.60	2.40	2.00	2.00
Panelist 9									
Upper 10%	3.20	3.10	3.00	2.90	2.90	2.80	2.70	2.70	2.90
Lower 10%	2.50	2.70	2.60	2.50	2.30	2.00	1.70	1.20	1.00
Median	3.00	2.90	2.80	2.70	2.50	2.30	2.00	2.00	2.00
Panelist 10									
Upper 10%	3.10	3.10	3.10	3.20	3.10	3.00	3.00	2.60	2.60
Lower 10%	2.90	2.90	2.90	2.80	2.60	2.30	2.00	1.40	1.20
Median	3.00	3.00	3.00	3.00	3.00	2.80	2.50	2.00	2.00
Panelist 11									
Upper 10%	3.20	3.20	3.30	3.50	3.50	3.90	3.40	3.50	3.70
Lower 10%	1.90	1.90	1.90	2.00	2.00	2.70	2.30	1.90	2.40
Median	2.60	2.60	2.60	2.70	2.70	3.10	2.90	3.00	2.70

All data in the above table are in percentage growth rates.

Maricopa Construction Employment Growth Rate									
	2005	2006	2007	2008	2009	2011	2016	2021	2026
Panelist 1									
Upper 10%	5.50	3.00	1.00	5.00	6.00	7.00	6.50	6.50	6.50
Lower 10%	1.00	-5.50	-10.00	-5.00	0.00	1.00	1.00	1.00	1.00
Median	3.50	-2.50	-4.00	2.00	4.00	4.40	3.00	3.00	3.00
Panelist 2									
Upper 10%	6.50	5.00	5.00	4.50	4.00	4.00	3.50	3.00	3.00
Lower 10%	4.00	2.50	2.00	2.00	1.75	1.50	1.00	0.75	0.50
Median	5.00	3.50	3.50	3.00	3.00	2.50	2.50	2.25	2.00
Panelist 3									
Upper 10%	6.00	5.50	5.30	5.50	6.50	7.50	8.50	9.00	10.00
Lower 10%	1.00	0.00	-1.00	-1.90	-2.50	-3.00	-4.00	-5.00	-6.00
Median	4.00	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Panelist 4									
Upper 10%	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Lower 10%	-2.00	-2.00	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50
Median	2.00	2.20	2.20	2.00	2.00	1.90	1.80	1.80	1.80
Panelist 5									
Upper 10%	4.00	0.00	1.00	5.00	4.00	4.00	4.00	4.00	4.00
Lower 10%	-2.00	-4.00	-3.00	0.00	1.00	1.00	1.00	1.00	1.00
Median	0.00	-2.00	-1.00	2.00	2.80	2.70	3.00	3.00	3.00
Panelist 6									
Upper 10%	6.30	4.60	3.50	4.00	4.50	4.00	3.80	3.80	3.80
Lower 10%	3.70	1.00	0.90	0.90	0.90	0.70	0.00	0.00	0.00
Median	5.00	2.80	2.50	2.50	2.50	2.50	2.30	2.30	2.30
Panelist 7									
Upper 10%	6.00	5.00	4.00	4.00	3.50	4.00	4.50	5.00	5.00
Lower 10%	-1.00	-0.90	-0.50	-0.50	-0.50	-1.00	-1.00	-2.00	-2.00
Median	2.50	2.40	2.40	2.60	2.50	2.50	2.40	2.40	2.00
Panelist 8									
Upper 10%	3.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Lower 10%	2.00	0.50	-1.00	0.50	0.00	0.00	0.00	0.00	0.00
Median	2.50	1.00	0.00	1.00	0.50	0.50	0.50	0.50	0.50
Panelist 9									
Upper 10%	0.00	2.00	4.00	4.00	5.00	5.00	6.00	6.00	6.00
Lower 10%	-7.00	-5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	-5.00	0.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00
Panelist 10									
Upper 10%	5.00	4.00	3.00	3.00	4.00	4.00	5.00	5.00	5.00
Lower 10%	3.00	2.00	1.00	1.00	0.00	0.00	-1.00	-1.00	-1.00
Median	4.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Panelist 11									
Upper 10%	5.50	7.00	6.00	7.00	6.00	5.50	6.00	5.50	4.00
Lower 10%	0.00	1.10	2.00	1.10	2.00	0.00	-1.00	0.00	1.00
Median	2.50	3.70	5.00	3.70	5.00	2.50	4.00	2.50	3.02

All data in the above table are in percentage growth rates.

Prime Interest Rate									
	2005	2006	2007	2008	2009	2011	2016	2021	2026
Panelist 1									
Upper 10%	6.00	6.50	7.00	7.50	7.80	7.70	7.70	8.00	8.00
Lower 10%	4.00	4.30	4.30	4.20	4.00	3.60	3.40	3.20	3.00
Median	4.50	4.70	6.00	6.40	6.20	6.00	5.90	5.90	5.90
Panelist 2									
Upper 10%	5.00	5.25	5.50	6.00	6.00	6.50	6.50	7.00	7.00
Lower 10%	4.00	4.00	4.00	4.00	4.00	4.25	4.25	4.50	4.50
Median	4.25	4.50	4.50	4.75	5.00	5.50	6.00	6.00	6.00
Panelist 3									
Upper 10%	7.50	8.50	9.00	9.00	9.00	9.00	9.50	11.00	12.00
Lower 10%	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Median	5.50	6.00	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Panelist 4									
Upper 10%	5.00	5.20	5.60	5.80	5.80	6.00	6.00	8.00	8.00
Lower 10%	4.00	4.00	4.20	4.40	4.50	4.50	4.50	4.50	4.50
Median	4.50	4.60	4.80	5.00	5.00	5.00	5.00	6.00	6.00
Panelist 5									
Upper 10%	7.40	7.10	7.40	6.80	6.50	6.60	6.80	7.00	7.00
Lower 10%	4.00	4.10	4.40	3.40	3.60	3.70	3.90	4.50	4.50
Median	6.40	6.10	5.40	4.40	4.10	4.20	4.40	5.00	5.00
Panelist 6									
Upper 10%	5.50	7.50	8.50	8.50	8.50	9.50	9.50	10.00	10.00
Lower 10%	4.50	5.50	5.50	6.00	6.00	7.00	7.00	7.00	7.50
Median	5.00	6.50	7.00	7.00	7.00	8.00	8.00	8.00	8.50
Panelist 7									
Upper 10%	5.40	6.40	6.80	7.80	8.90	10.00	10.40	10.50	10.50
Lower 10%	4.10	5.00	5.40	5.50	6.60	7.00	6.80	6.60	6.60
Median	4.80	5.70	6.10	6.70	7.70	8.50	8.60	8.60	8.60
Panelist 8									
Upper 10%	5.00	5.20	5.40	5.40	5.90	6.20	6.50	6.90	6.70
Lower 10%	4.00	4.20	4.60	4.60	5.10	5.40	5.50	5.50	5.30
Median	4.50	4.70	5.00	5.00	5.50	5.80	6.00	6.20	6.00
Panelist 9									
Upper 10%	5.00	5.70	6.30	6.90	7.50	8.10	8.40	9.10	9.50
Lower 10%	4.50	5.00	5.50	5.80	6.00	6.30	6.50	6.70	6.90
Median	4.80	5.50	6.00	6.50	7.00	7.50	7.70	7.90	8.10
Panelist 10									
Upper 10%	6.20	6.20	7.20	7.20	8.50	8.50	9.00	10.00	10.00
Lower 10%	4.20	4.20	3.20	3.20	2.50	2.50	3.00	2.00	4.00
Median	5.20	5.20	5.20	5.50	5.50	5.50	6.00	6.00	7.00
Panelist 11									
Upper 10%	5.50	6.40	6.40	6.50	6.50	6.00	6.00	6.50	7.00
Lower 10%	4.00	5.00	5.00	5.50	5.50	4.50	4.50	5.50	6.00
Median	4.50	5.70	5.70	6.00	6.00	5.00	5.00	6.00	6.50

All data in the above table are nominal interest rates.

Phoenix CPI Growth Rate										
	2005	2006	2007	2008	2009	2011	2016	2021	2026	
Panelist 1										
Upper 10%	3.00	3.50	4.00	4.50	4.80	4.70	4.70	4.80	4.80	
Lower 10%	2.30	2.30	2.30	2.20	2.00	1.80	1.80	1.80	1.80	
Median	2.50	2.70	3.00	3.40	3.20	3.00	2.80	2.80	2.80	
Panelist 2										
Upper 10%	3.00	3.00	3.50	3.50	3.50	4.00	4.00	4.50	4.50	
Lower 10%	2.00	2.00	2.10	2.20	2.30	2.50	2.50	2.50	2.50	
Median	2.40	2.50	2.60	2.70	2.80	3.00	3.20	3.50	3.80	
Panelist 3										
Upper 10%	2.90	3.50	4.00	4.30	4.50	5.50	6.50	7.50	8.50	
Lower 10%	1.70	1.50	1.50	1.50	1.40	1.30	1.10	1.00	1.00	
Median	2.30	2.20	2.10	2.10	2.00	2.50	2.50	2.50	2.50	
Panelist 4										
Upper 10%	2.50	2.60	2.60	2.70	2.80	3.00	3.00	3.00	3.00	
Lower 10%	2.00	2.10	2.10	2.10	2.10	2.00	2.00	2.00	2.00	
Median	2.20	2.30	2.30	2.40	2.50	2.50	2.50	2.50	2.50	
Panelist 5										
Upper 10%	3.70	2.80	2.40	2.50	2.50	2.50	2.90	4.40	4.70	
Lower 10%	2.50	1.80	1.40	1.50	1.50	1.50	1.90	2.40	2.70	
Median	3.20	2.80	2.00	2.00	2.00	2.00	2.40	3.40	3.70	
Panelist 6										
Upper 10%	2.80	3.00	3.00	3.20	3.60	3.60	3.80	4.00	4.00	
Lower 10%	2.00	2.00	1.80	1.50	2.00	2.00	2.00	2.50	2.50	
Median	2.40	2.50	2.50	2.80	2.80	2.80	2.80	3.00	3.00	
Panelist 7										
Upper 10%	2.70	2.30	2.20	2.80	3.00	3.70	4.30	4.50	5.00	
Lower 10%	2.30	1.90	1.80	1.40	1.60	1.90	2.10	2.00	2.00	
Median	2.50	2.10	2.00	2.10	2.30	2.80	3.20	3.50	3.50	
Panelist 8										
Upper 10%	3.00	2.30	2.50	3.00	3.50	3.90	3.90	3.90	3.90	
Lower 10%	2.00	1.70	1.90	2.00	2.50	2.10	2.10	2.10	2.10	
Median	2.50	2.00	2.20	2.50	3.00	3.00	3.00	3.00	3.00	
Panelist 9										
Upper 10%	2.70	3.00	3.20	3.20	3.20	3.20	3.00	3.00	3.00	
Lower 10%	2.20	2.50	2.70	2.50	2.40	2.20	2.00	2.00	2.00	
Median	2.50	2.70	3.00	3.00	3.00	3.00	2.70	2.70	2.70	
Panelist 10										
Upper 10%	2.60	2.40	2.20	2.60	2.90	3.00	3.00	3.00	3.00	
Lower 10%	2.20	2.00	1.80	1.80	2.10	2.00	2.00	2.00	2.00	
Median	2.40	2.20	2.00	2.20	2.50	2.50	2.50	2.50	2.50	
Panelist 11										
Upper 10%	2.75	2.30	2.50	2.90	2.60	2.70	3.20	3.70	4.30	
Lower 10%	1.50	1.90	1.40	0.50	0.50	0.80	0.00	1.90	2.10	
Median	2.00	2.10	1.90	1.50	1.90	2.00	1.7	2.80	3.20	

All data in the above table are in percentage growth rates.

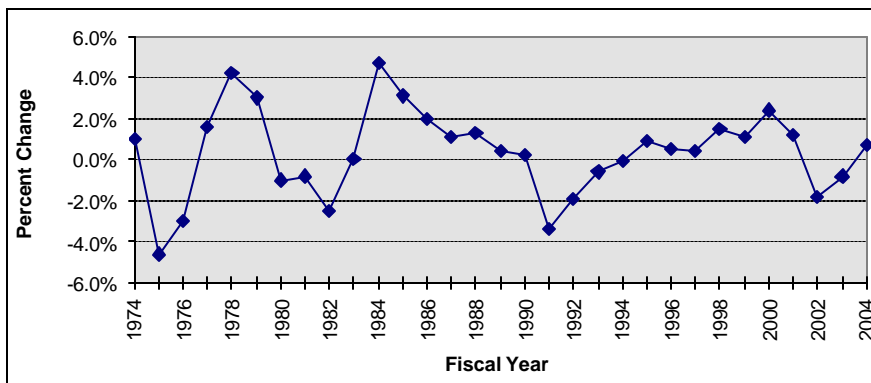
**HISTORICAL DATA
GROWTH IN REAL INCOME PER CAPITA
Using Phoenix CPI to Measure Inflation
(Annual Percent Change)**

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960	1970	1980	-1.0%	1990	0.2%	2000	2.4%	
1961	1971	1981	-0.8%	1991	-3.4%	2001	1.2%	
1962	1972	1982	-2.5%	1992	-1.9%	2002	-1.8%	
1963	1973	1983	0.0%	1993	-0.6%	2003	-0.8%	
1964	1974	1.0%	1984	4.7%	1994	-0.1%	2004*	0.7%
1965	1975	-4.6%	1985	3.1%	1995	0.9%	2005	
1966	1976	-3.0%	1986	2.0%	1996	0.5%	2006	
1967	1977	1.6%	1987	1.1%	1997	0.4%	2007	
1968	1978	4.2%	1988	1.3%	1998	1.5%	2008	
1969	1979	3.0%	1989	0.4%	1999	1.1%	2009	

*Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-1.8%	2.4%	0.3%	1.7%	-1.4%	1.9%
10 Years	-1.8%	2.4%	0.6%	1.2%	-0.9%	1.6%
Full Period	-4.6%	4.7%	0.3%	2.1%	-2.5%	3.0%

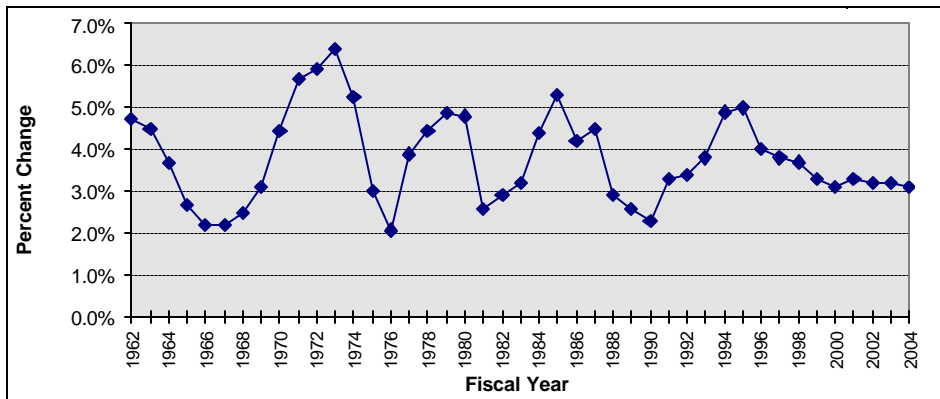
**HISTORICAL DATA
MARICOPA COUNTY POPULATION GROWTH
(Annual Percent Change)**

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960		1970 4.4%	1980 4.8%	1990 2.3%	2000 3.1%
1961		1971 5.7%	1981 2.6%	1991 3.3%	2001 3.3%
1962 4.7%		1972 5.9%	1982 2.9%	1992 3.4%	2002 3.2%
1963 4.5%		1973 6.4%	1983 3.2%	1993 3.8%	2003 3.2%
1964 3.7%		1974 5.2%	1984 4.4%	1994 4.9%	2004* 3.1%
1965 2.7%		1975 3.0%	1985 5.3%	1995 5.0%	2005
1966 2.2%		1976 2.1%	1986 4.2%	1996 4.0%	2006
1967 2.2%		1977 3.9%	1987 4.5%	1997 3.8%	2007
1968 2.5%		1978 4.4%	1988 2.9%	1998 3.7%	2008
1969 3.1%		1979 4.9%	1989 2.6%	1999 3.3%	2009

DES smoothed out the 191 to 2003. FY 2004-2020 based on annual growth rates in ASU Population Estimates and Projections report dated December 2001. FY 2021-2026 based on trend average.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	3.1%	3.3%	3.2%	0.1%	3.1%	3.3%
10 Years	3.1%	5.0%	3.6%	0.6%	3.1%	4.1%
Full Period	2.1%	6.4%	3.8%	1.1%	2.5%	5.2%

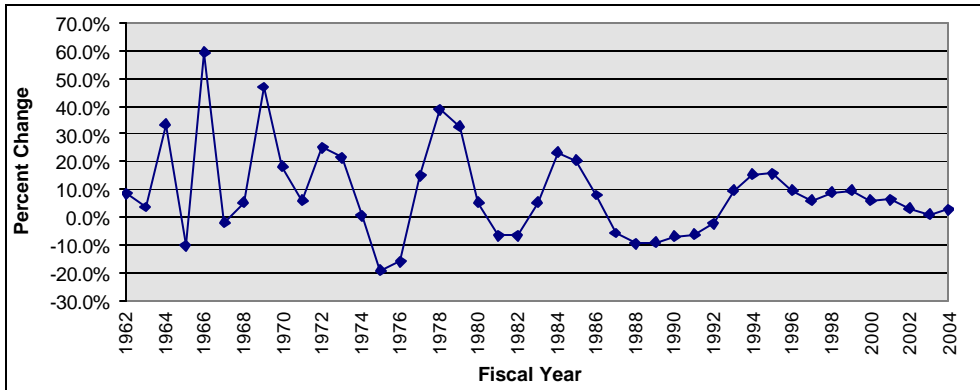
**HISTORICAL DATA
MARICOPA COUNTY GROWTH IN CONSTRUCTION EMPLOYMENT
(Annual Percent Change)**

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960		1970	18.2%	1980	5.2%	1990	-7.2%	2000	5.8%
1961		1971	5.9%	1981	-6.7%	1991	-6.5%	2001	6.2%
1962	8.3%	1972	24.9%	1982	-6.5%	1992	-2.4%	2002	3.1%
1963	3.6%	1973	21.3%	1983	5.4%	1993	9.5%	2003	0.8%
1964	33.3%	1974	0.4%	1984	23.4%	1994	15.4%	2004*	2.5%
1965	-10.5%	1975	-19.3%	1985	20.3%	1995	15.8%	2005	
1966	59.2%	1976	-16.3%	1986	7.9%	1996	9.7%	2006	
1967	-1.9%	1977	14.7%	1987	-5.8%	1997	5.8%	2007	
1968	5.2%	1978	38.7%	1988	-9.8%	1998	8.7%	2008	
1969	46.9%	1979	32.7%	1989	-9.1%	1999	9.7%	2009	

*Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

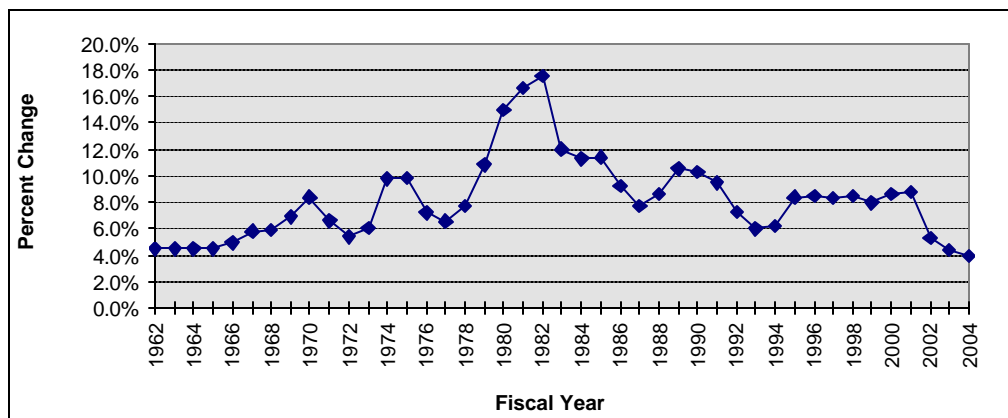
Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	0.8%	6.2%	3.7%	2.3%	1.5%	6.0%
10 Years	0.8%	15.8%	6.8%	4.4%	2.3%	10.3%
Full Period	-19.3%	59.2%	8.5%	16.3%	-8.7%	31.2%

HISTORICAL DATA PRIME INTEREST RATE

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960		1970	8.4%	1980	15.0%	1990	10.3%	2000	8.6%
1961	4.6%	1971	6.6%	1981	16.6%	1991	9.5%	2001	8.7%
1962	4.5%	1972	5.4%	1982	17.5%	1992	7.2%	2002	5.3%
1963	4.5%	1973	6.1%	1983	12.0%	1993	6.0%	2003	4.4%
1964	4.5%	1974	9.8%	1984	11.3%	1994	6.2%	2004	4.0%
1965	4.5%	1975	9.8%	1985	11.4%	1995	8.4%	2005	
1966	4.9%	1976	7.2%	1986	9.2%	1996	8.5%	2006	
1967	5.8%	1977	6.6%	1987	7.7%	1997	8.3%	2007	
1968	6.0%	1978	7.7%	1988	8.7%	1998	8.5%	2008	
1969	6.9%	1979	10.9%	1989	10.6%	1999	8.0%	2009	

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	4.0%	8.7%	6.2%	2.3%	4.2%	8.7%
10 Years	4.0%	8.7%	7.3%	1.9%	4.4%	8.6%
Full Period	4.0%	17.5%	8.1%	3.1%	4.5%	11.4%

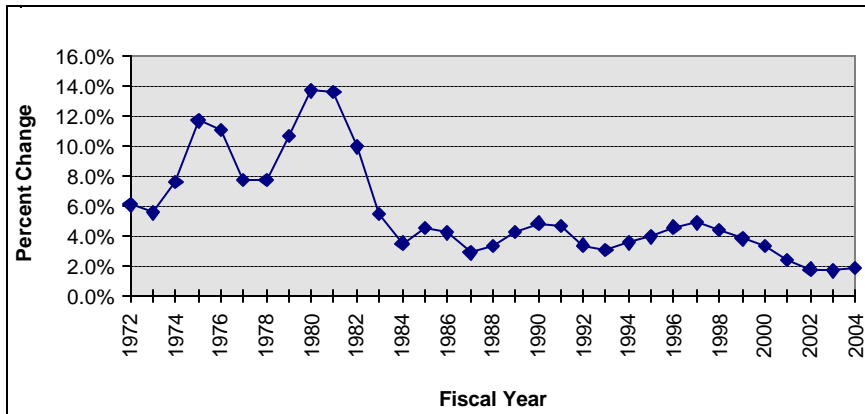
**HISTORICAL DATA
PHOENIX CPI GROWTH RATE
(Annual Percent Change)**

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960	1970	1980	13.7%	1990	4.9%	2000	3.4%
1961	1971	1981	13.6%	1991	4.7%	2001	2.4%
1962	1972	1982	10.0%	1992	3.4%	2002	1.8%
1963	1973	1983	5.5%	1993	3.1%	2003	1.7%
1964	1974	1984	3.5%	1994	3.6%	2004*	2.1%
1965	1975	1985	4.6%	1995	4.0%	2005	
1966	1976	1986	4.2%	1996	4.6%	2006	
1967	1977	1987	2.9%	1997	4.9%	2007	
1968	1978	1988	3.4%	1998	4.4%	2008	
1969	1979	1989	4.3%	1999	3.9%	2009	

* Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	1.7%	3.4%	2.3%	0.7%	1.7%	3.0%
10 Years	1.7%	4.9%	3.3%	1.2%	1.8%	4.6%
Full Period	1.7%	13.7%	5.6%	3.4%	2.5%	11.0%