

Arizona Department of Transportation

ARIZONA HIGHWAY USER REVENUE FUND

Forecasting Process & Results

FY 2010-2019



Financial Management Services

September 2009

**ARIZONA HIGHWAY USER REVENUE FUND
OFFICIAL FORECAST UPDATE
RISK ANALYSIS OF EXPECTED VALUES**

Introduction

This document presents the forecast of expected values for the Arizona Highway User Revenue Fund for the period FY 2010-2019, as prepared by the Arizona Department of Transportation.

Background

The State of Arizona taxes motor fuels and collects a variety of fees relating to the registration and operation of motor vehicles in the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license taxes, motor vehicle registration fees, and other miscellaneous fees. These revenues are deposited in the Arizona Highway User Revenue Fund (HURF) and are then distributed to the cities, towns and counties of the State and to the State Highway Fund, which is administered by the Department. These taxes and fees represent the primary source of revenues available to the state for highway construction, improvements and other related expenses.

Since 1986, the Department has estimated Highway Revenues for the State using a comprehensive regression-based econometric model. In 1989, the model was updated by Dr. Alberta Charney of the University of Arizona. The model relied on the estimates of certain “independent variables” to predict future tax revenues. Any variability between estimated and actual values could lead to variances in the tax forecast. In order to deal with this variability, the Department introduced the Risk Analysis Process (RAP) in 1992. The RAP relies upon probability analysis and the independent evaluation of the model’s variables by an expert panel of economists. This results in a series of forecasts with specified probabilities of occurrence, rather than a single or “best guess” estimate.

In 1997, Hickling Lewis Brod Inc. (HLB), working in conjunction with Dr. Dennis Hoffman of Arizona State University, developed a new forecasting model to incorporate certain economic data generated over the past ten years and evaluate the inclusion of independent variables absent from the 1989 model, to enhance the model’s forecasting accuracy. The new model also took into consideration 1997 legislation which eliminated the weight distance tax on motor carriers, increased weight and use fees for use class vehicles, and changed the point of taxation on fuel.

In September 2000 and 2003, HLB reviewed the model and updated the equations. The independent variables contained in the model in 2003 included Arizona Real Income Growth Per Capita, Population Growth, Wage & Salary Employment Growth and Fleet Fuel Efficiency.

In 2005, HDR\HLB developed a new forecasting model to incorporate additional economic data that would enhance the model’s forecasting accuracy. The Arizona Real Gross Domestic Product Growth independent variable was added to the model to incorporate the impact of the Arizona economy on the commercial registration activities.

In September 2008, HDR\HLB reviewed the forecasting model and added the Arizona Real Gas Price Growth independent variable to improve the model's forecasting accuracy for changes in Arizona gasoline consumption. The updated model now includes:

- Arizona real income growth per capita
- Arizona population
- Arizona wage & salary employment
- Arizona real gross domestic product
- Arizona fleet fuel efficiency (Not part of RAP Process)
- Arizona real fuel price growth

Risk Analysis Panel

The Risk Analysis Process relies heavily on the judgments of an expert panel of economic and financial participants to provide information critical to the forecasting process. In August 2009, a panel of fifteen economic and finance experts representing public, private, and academic sectors submitted their individual estimates of the model's independent variables and comments on the future economic outlook. The information gathered from the panelists was input into the model to produce a series of forecasts with associated probabilities of occurrence. The panelists' inputs are reflected in the attached tables at the back of this report.

Model Results

This year's panel inputs produced a mean forecast of \$14,989.8 million for the period FY 2010-2019 with a compound growth rate of 4.0 percent.

The Department's Official Forecast for FY 2010-2019 totals \$14,458.8 million with a compound growth rate of 3.6 percent. The Official Forecast incorporates the 50 percent confidence interval for FY 2011-2019. The FY 2010 forecast of \$1,247.8 million was developed in July 2009 by ADOT staff using time-series techniques, historical and projected growth rates from the model, and recent legislative changes.

FY 2010 Official Forecast (Dollars in Millions)			
Fiscal Year	Mean Forecast	Official Forecast	Confidence Level
2010	\$1,257.2	\$1,247.8	N/A
2011	\$1,302.0	\$1,264.6	50%
2012	\$1,342.8	\$1,298.0	50%
2013	\$1,396.5	\$1,346.5	50%
2014	\$1,454.9	\$1,398.4	50%
2015	\$1,515.6	\$1,458.0	50%
2016	\$1,578.3	\$1,516.5	50%
2017	\$1,644.4	\$1,575.9	50%
2018	\$1,713.1	\$1,642.3	50%
2019	<u>\$1,785.0</u>	<u>\$1,710.8</u>	50%
Total	\$14,989.8	\$14,458.8	
Ave. CGR	4.0%	3.6%	

For comparison purposes, the September 2008 Official Forecast and the September 2009 Official Forecast are shown below:

FY 2010 Comparative Forecast			
(Dollars in Millions)			
Fiscal	Sep. 08	Sep. 09	
<u>Year</u>	<u>Official</u>	<u>Official</u>	<u>Difference</u>
<u>Forecast</u>	<u>Forecast</u>		
2010	\$1,441.4	\$1,247.8	(\$193.6)
2011	\$1,509.3	\$1,264.6	(\$244.7)
2012	\$1,584.8	\$1,298.0	(\$286.8)
2013	\$1,666.4	\$1,346.5	(\$319.9)
2014	\$1,746.7	\$1,398.4	(\$348.3)
2015	\$1,835.0	\$1,458.0	(\$377.0)
2016	\$1,926.9	\$1,516.5	(\$410.4)
2017	\$2,014.4	\$1,575.9	(\$438.5)
2018	\$2,110.0	\$1,642.3	(\$467.7)
2019	<u>\$2,209.5</u>	<u>\$1,710.8</u>	<u>(\$498.7)</u>
Total	\$18,044.6	\$14,458.8	(\$3,585.8)
Ave. CGR	4.9%	3.6%	

Summary

The Department's Official Forecast for FY 2010-2019 totals \$14,458.8 million, a decrease of \$3,585.8 million from the September 2008 Official Forecast. The Risk Analysis Process panel members overall forecasted lower growth for all the independent variables (Arizona Real Per Capita Personal Income, Arizona Wage and Salary Employment, Arizona Population and Arizona Real Gross Domestic Product), except Arizona real fuel price growth, through FY 2014 when compared to their September 2008 inputs. The panel expressed concern with the Arizona economy due mainly to the uncertainty in the real estate market, negative job growth and slower population growth in the first few years of the forecast period. The RAP panel does not expect Arizona to return to normal growth patterns until FY 2014.

Supplementary Information

The remaining pages of this report present supplementary information on the detailed results of the Risk Analysis Process, the Department's model and the values of the independent variables forecast by the expert panel. While the Official Forecast period is FY 2010-2019, panel inputs were requested for FY 2010-2014, 2016, 2021 and 2026. Data displayed for other than the requested years, has been extrapolated.

HURF OFFICIAL REVENUE FORECAST
With Category Detail and Confidence Interval By Fiscal Year
(Current Dollars in Millions)

Fiscal Year Percentile	2009 Actual	2010 N/A	2011 50%	2012 50%	2013 50%	2014 50%	2015 50%	2016 50%	2017 50%	2018 50%	2019 50%
Gasoline Tax	\$456.8	\$456.8	\$461.8	\$468.6	\$476.7	\$485.1	\$495.7	\$503.6	\$512.8	\$522.4	\$531.8
Use Fuel Tax	173.9	171.7	171.4	172.5	173.3	175.0	177.0	179.8	183.0	187.1	191.1
Motor Carrier Fee	40.5	39.1	40.8	41.9	43.3	44.9	46.7	48.6	50.6	52.5	54.8
Vehicle License Tax	357.5	366.4	373.5	392.2	423.7	457.1	494.9	532.9	570.7	614.1	658.7
Registration	167.6	162.4	164.3	168.3	173.0	177.9	183.3	189.1	194.4	199.8	206.0
Other	52.3	51.4	52.8	54.5	56.5	58.4	60.4	62.5	64.4	66.4	68.4
Total	\$1,248.6	\$1,247.8	\$1,264.6	\$1,298.0	\$1,346.5	\$1,398.4	\$1,458.0	\$1,516.5	\$1,575.9	\$1,642.3	\$1,710.8

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

Fiscal Year	Mean	10%	20%	30%	40%	50%	60%	70%	80%	90%
2010	\$1,257.2	\$1,463.2	\$1,389.8	\$1,331.7	\$1,287.8	\$1,247.8	\$1,210.9	\$1,169.6	\$1,122.0	\$1,062.0
2011	1,302.0	1,603.4	1,491.4	1,406.5	1,339.4	1,264.6	1,228.3	1,170.8	1,102.4	1,020.4
2012	1,342.8	1,698.2	1,564.6	1,461.7	1,383.4	1,298.0	1,253.4	1,184.5	1,106.1	1,013.0
2013	1,396.5	1,790.2	1,641.7	1,530.1	1,439.5	1,346.5	1,297.3	1,221.5	1,134.1	1,034.6
2014	1,454.9	1,888.4	1,721.2	1,598.5	1,502.1	1,398.4	1,346.0	1,266.2	1,169.3	1,063.8
2015	1,515.6	1,977.7	1,800.4	1,672.3	1,565.7	1,458.0	1,396.1	1,312.5	1,213.5	1,099.3
2016	1,578.3	2,072.4	1,878.1	1,743.7	1,632.5	1,516.5	1,450.1	1,360.5	1,259.4	1,139.3
2017	1,644.4	2,165.6	1,958.0	1,820.9	1,705.7	1,575.9	1,506.9	1,410.1	1,304.9	1,174.2
2018	1,713.1	2,259.8	2,048.1	1,895.7	1,772.9	1,642.3	1,567.0	1,460.9	1,355.5	1,214.1
2019	1,785.0	2,360.1	2,137.0	1,978.4	1,852.0	1,710.8	1,629.3	1,518.4	1,404.2	1,259.3

HURF OFFICIAL REVENUE FORECAST DISTRIBUTION
(Current Dollars in Millions)

Fiscal Year	HURF	DPS/ ESP /1	Net HURF	DPS Parity Comp. Fund /2	ADOT 50.5%/3	Cities/Towns 27.5%	Cities +300K 3%	Counties 19%
2010	\$1,247.8	\$79.8	\$1,168.0	(\$2.8)	\$543.9	\$321.2	\$35.0	\$221.9
2011	1,264.6	11.0	1,253.6	(2.8)	630.2	344.7	37.6	238.2
2012	1,298.0	11.0	1,287.0	(3.0)	646.9	353.9	38.6	244.5
2013	1,346.5	11.0	1,335.5	(3.2)	671.2	367.3	40.1	253.7
2014	1,398.4	11.0	1,387.4	(3.5)	697.2	381.5	41.6	263.6
2015	1,458.0	11.0	1,447.0	(3.8)	727.0	397.9	43.4	274.9
2016	1,516.5	11.0	1,505.5	(4.1)	756.2	414.0	45.2	286.0
2017	1,575.9	11.0	1,564.9	(4.4)	785.9	430.3	46.9	297.3
2018	1,642.3	11.0	1,631.3	(4.7)	819.1	448.6	48.9	309.9
2019	1,710.8	11.0	1,699.8	(5.0)	853.4	467.4	51.0	323.0
Total	\$14,458.8	\$178.8	\$14,280.0	(\$37.2)	\$7,131.0	\$3,927.0	\$428.4	\$2,713.2

NOTES:

FY 2010 HURF estimate based on July 2009 Forecast.

FY 2011-2019 HURF estimate based on September 2009 Official Forecast.

/1. The DPS/ESP includes \$1 million for Economic Strength Project (ESP) each year.

The DPS transfer in FY 2010 is \$78.2 million per Laws 2009, 1st Regular Session, Chapter 11, (SB 1188) and \$10 million each year thereafter, which is subject to change.

FY 2010 includes a \$617,000 appropriation to MVD for the registration compliance program per Laws 2009, Chapter 11(SB 1188).

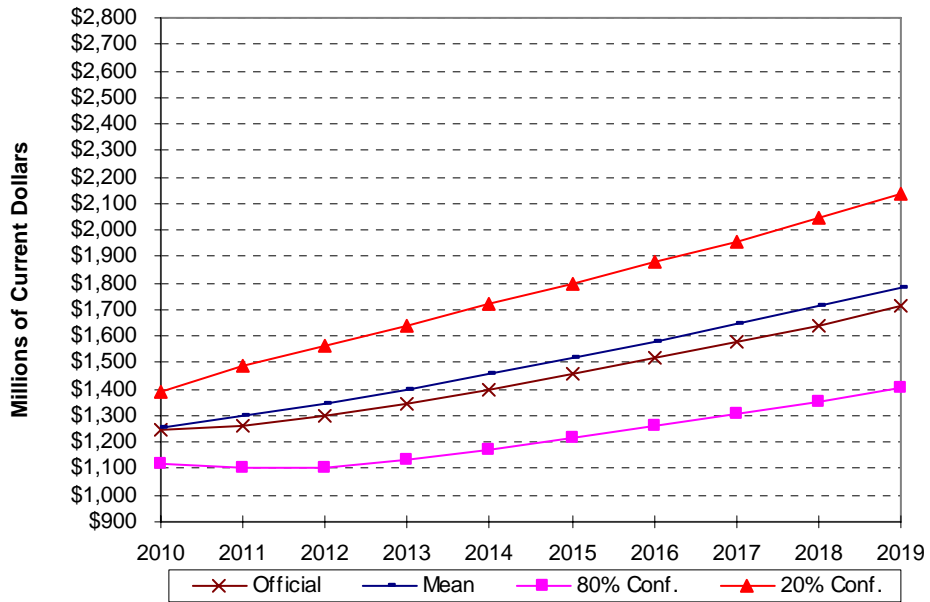
/2. Per Laws 2005, Chapter 306 (SB 1119), 1.51 percent of the state highway fund share of HURF VLT is transferred to the DPS Parity Compensation Fund.

/3 Net of the DPS Parity Compensation Fund. FY 2010 net of a \$43.2 million transfer from the state highway fund share of HURF VLT to the state general fund per Laws 2009, 3rd Special Session, Chapter 11 (HB 2006).

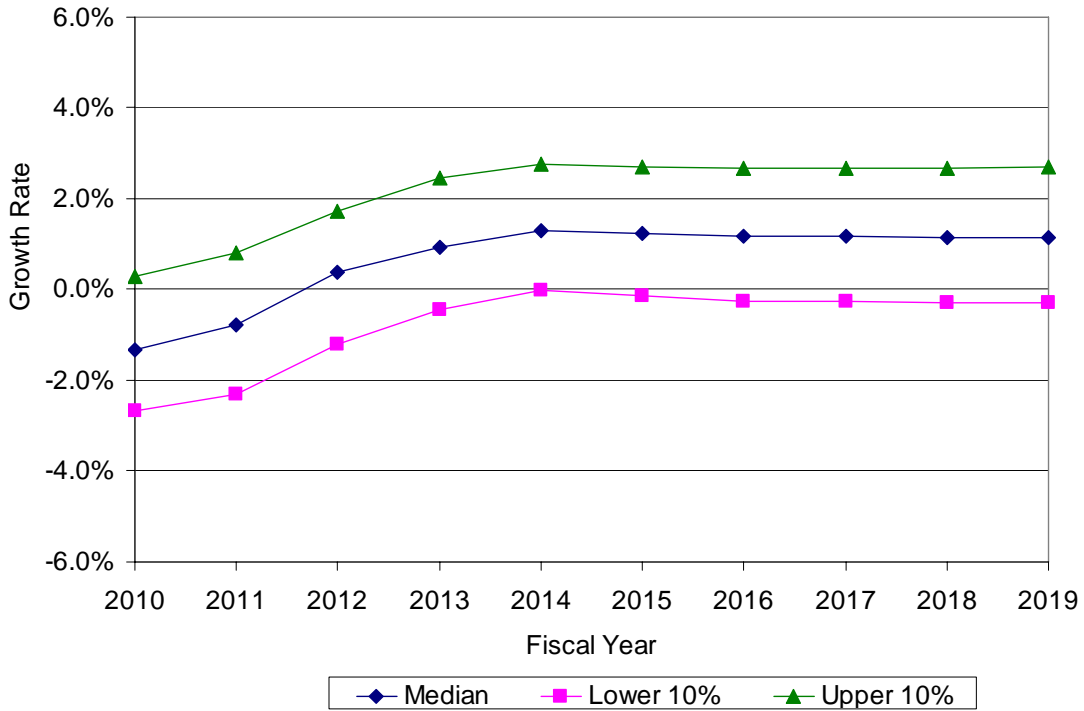
OFFICIAL FORECAST RESULTS

(Current Dollars in Millions)

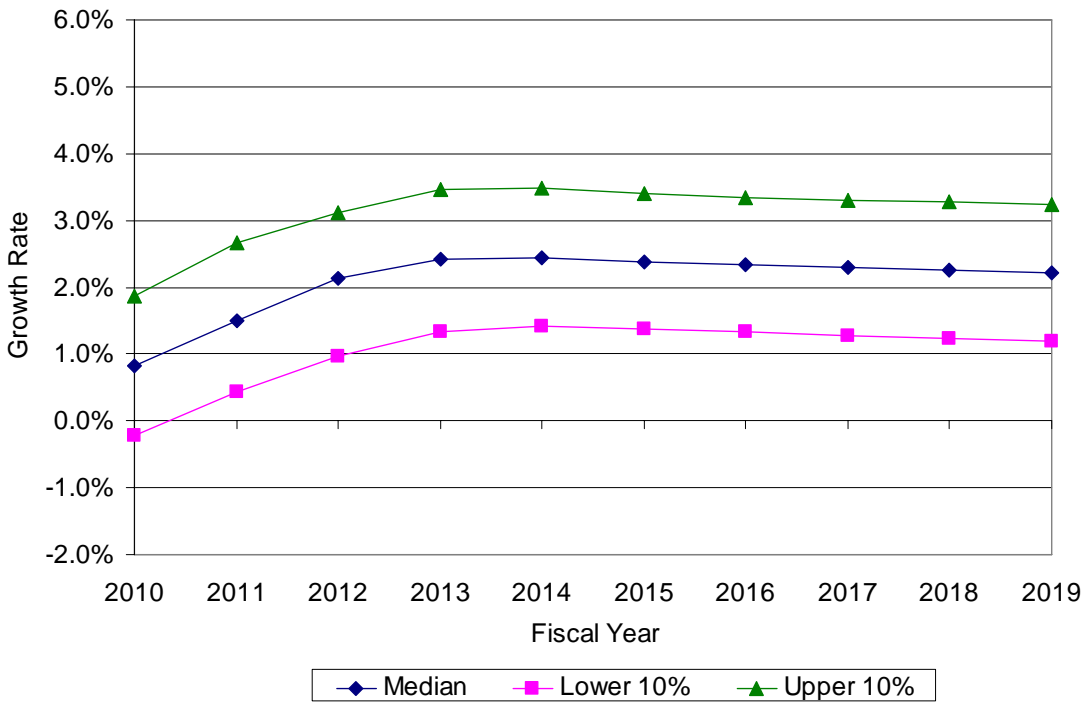
Fiscal Year	Official Forecast	Mean Forecast	80% Conf. Interval	20% Conf. Interval
2010	\$1,247.8	\$1,257.2	\$1,122.0	\$1,389.8
2011	1,264.6	1,302.0	1,102.4	1,491.4
2012	1,298.0	1,342.8	1,106.1	1,564.6
2013	1,346.5	1,396.5	1,134.1	1,641.7
2014	1,398.4	1,454.9	1,169.3	1,721.2
2015	1,458.0	1,515.6	1,213.5	1,800.4
2016	1,516.5	1,578.3	1,259.4	1,878.1
2017	1,575.9	1,644.4	1,304.9	1,958.0
2018	1,642.3	1,713.1	1,355.5	2,048.1
2019	1,710.8	1,785.0	1,404.2	2,137.0
Total	\$14,458.8	\$14,989.8	\$12,171.3	\$17,630.3



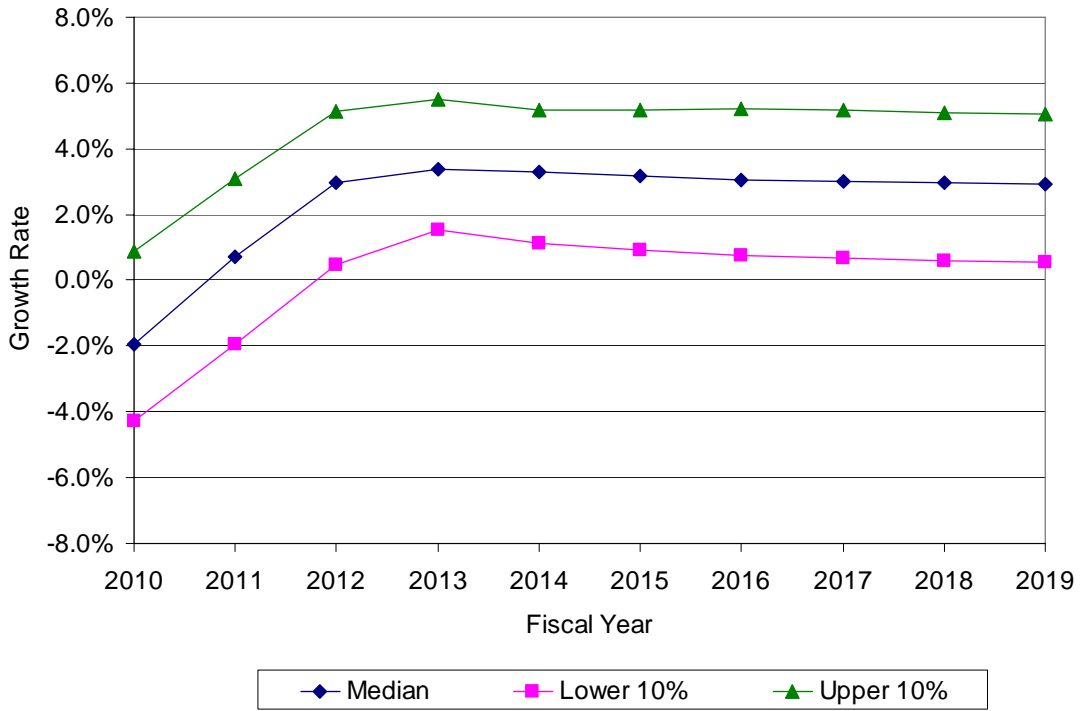
ARIZONA REAL INCOME PER CAPITA



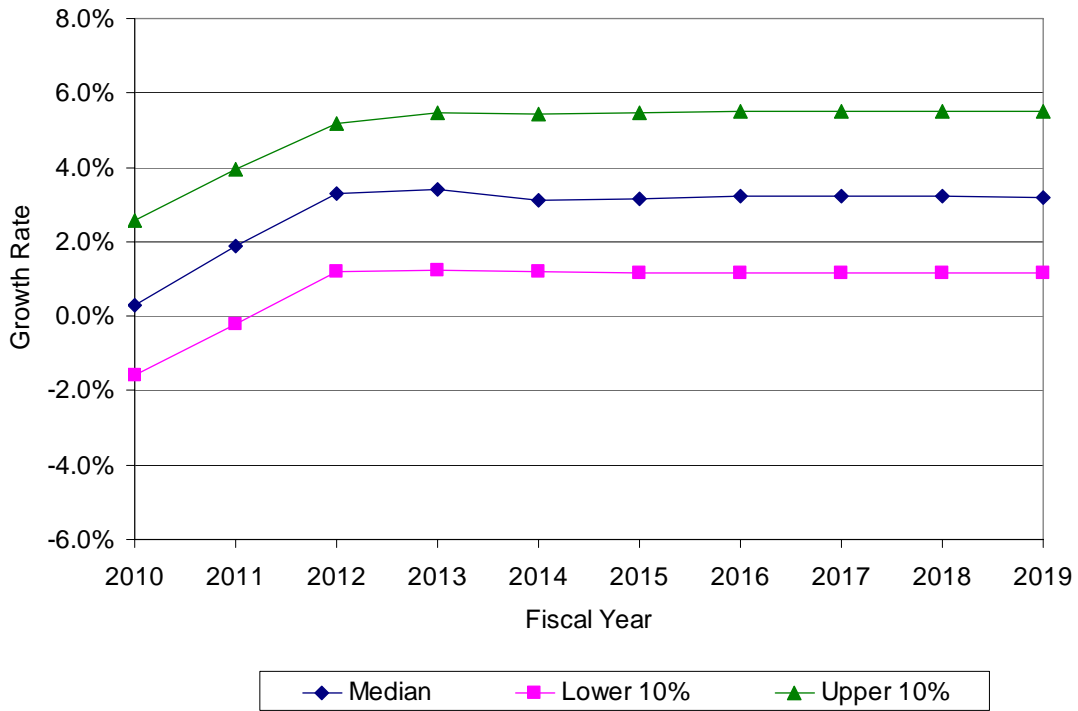
ARIZONA POPULATION GROWTH



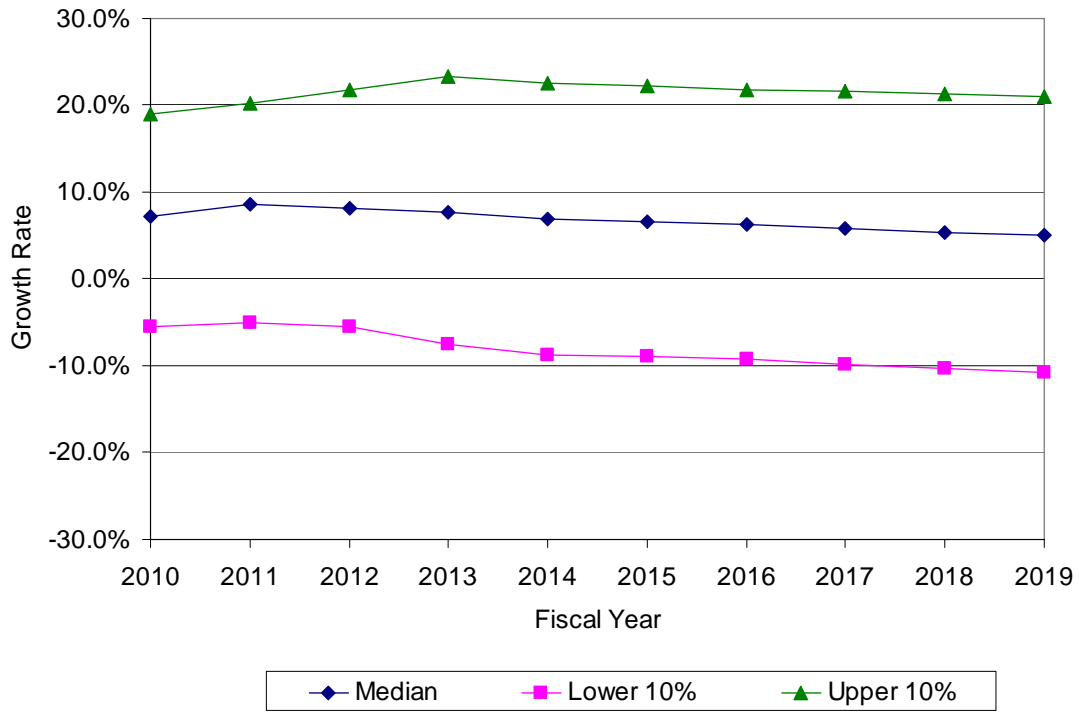
ARIZONA WAGE & SALARY EMPLOYMENT



ARIZONA GROSS DOMESTIC PRODUCT



ARIZONA NOMINAL GAS PRICE



PANELIST MEAN DATA VALUES

	Income Growth	Population Growth	Wage & Salary Employ. Growth	AZ GDP Growth	AZ Nominal Gas Price Growth
FY 2010					
Upper 10%	0.30	1.86	0.86	2.59	18.93
Lower 10%	-2.66	-0.21	-4.27	-1.58	-5.57
Median	-1.32	0.83	-1.95	0.29	7.25
FY 2011					
Upper 10%	0.81	2.67	3.08	3.94	20.28
Lower 10%	-2.32	0.43	-1.93	-0.22	-5.09
Median	-0.77	1.49	0.73	1.88	8.67
FY 2012					
Upper 10%	1.71	3.12	5.13	5.19	21.72
Lower 10%	-1.21	0.97	0.46	1.19	-5.50
Median	0.39	2.14	2.98	3.29	8.18
FY 2013					
Upper 10%	2.46	3.46	5.49	5.48	23.34
Lower 10%	-0.45	1.33	1.54	1.22	-7.46
Median	0.94	2.41	3.38	3.39	7.69
FY 2014					
Upper 10%	2.75	3.48	5.17	5.43	22.54
Lower 10%	0.00	1.41	1.12	1.19	-8.72
Median	1.30	2.43	3.28	3.12	6.86
FY 2016					
Upper 10%	2.66	3.33	5.21	5.52	21.84
Lower 10%	-0.27	1.33	0.74	1.18	-9.24
Median	1.17	2.34	3.05	3.22	6.22
FY 2021					
Upper 10%	2.72	3.19	4.97	5.51	20.42
Lower 10%	-0.30	1.09	0.43	1.18	-11.90
Median	1.15	2.15	2.86	3.18	4.15
FY 2026					
Upper 10%	2.79	3.05	5.01	5.49	19.29
Lower 10%	-0.30	1.02	0.37	1.05	-12.17
Median	1.17	2.07	2.86	3.11	3.86

All data in the above table are percentage growth rates.

ARIZONA REAL PER CAPITA INCOME GROWTH

	2010	2011	2012	2013	2014	2016	2021	2026
Panelist 1								
Upper 10%	1.00	1.00	1.00	1.50	1.50	1.50	1.50	2.00
Lower 10%	-2.00	-2.00	-2.00	-1.50	-1.50	-1.00	-1.00	0.00
Median	-0.50	-0.50	0.00	0.00	0.50	0.50	0.50	0.50
Panelist 2								
Upper 10%	-2.24	-1.74	0.80	3.20	3.00	2.40	2.20	2.20
Lower 10%	-4.44	-3.45	-0.50	1.20	1.20	0.00	0.00	0.00
Median	-3.34	-2.60	0.26	2.30	2.21	1.37	1.40	1.40
Panelist 3								
Upper 10%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lower 10%	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	3.00	3.00
Median	-2.00	-2.00	-0.40	-2.30	-3.10	-3.10	-3.10	-3.10
Panelist 4								
Upper 10%	-0.20	-0.80	0.40	1.80	2.10	2.80	2.60	2.50
Lower 10%	-1.40	-1.80	-0.60	0.10	1.10	1.80	1.00	0.70
Median	-0.80	-1.30	-0.10	0.80	1.60	2.30	2.00	1.80
Panelist 5								
Upper 10%	0.00	2.00	2.50	2.80	3.00	2.80	2.00	2.00
Lower 10%	-2.50	-2.00	-1.00	0.00	0.50	0.50	0.00	0.00
Median	-1.00	0.50	1.00	1.50	1.50	1.50	1.00	1.00
Panelist 6								
Upper 10%	2.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00
Lower 10%	-1.00	-1.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	-0.20	-0.30	1.20	1.50	1.80	1.80	1.50	1.50
Panelist 7								
Upper 10%	-2.50	0.00	1.50	1.75	2.00	2.25	2.50	2.50
Lower 10%	-7.50	-5.00	-2.00	0.00	0.50	0.50	0.50	0.50
Median	-5.00	-2.00	1.00	1.00	1.25	1.50	1.50	1.50
Panelist 8								
Upper 10%	1.10	1.40	2.70	3.00	3.40	3.60	4.00	4.60
Lower 10%	-1.90	-1.90	-0.80	-0.30	0.00	-0.60	-0.70	-1.00
Median	-0.40	0.00	1.20	1.30	1.50	1.50	1.60	1.60
Panelist 9								
Upper 10%	1.00	1.50	1.80	2.80	3.50	3.50	3.40	3.30
Lower 10%	-3.00	-2.50	-1.80	-0.80	-0.50	-0.50	-0.60	-0.70
Median	-1.00	-0.50	0.00	1.00	1.50	1.50	1.40	1.30
Panelist 10								
Upper 10%	0.00	1.00	2.00	3.00	3.00	3.00	3.00	3.00
Lower 10%	-3.00	-2.00	0.00	0.00	1.00	1.00	1.00	1.00
Median	-2.00	0.00	1.00	1.47	2.00	2.00	2.00	2.00
Panelist 11								
Upper 10%	-0.20	0.80	1.50	1.80	2.20	2.50	2.75	2.75
Lower 10%	-2.00	-1.80	-1.50	-1.00	-0.50	-0.40	-0.50	-0.50
Median	-0.70	-0.30	0.20	0.90	1.50	1.60	1.50	1.50
Panelist 12								
Upper 10%	1.50	2.00	3.00	3.00	4.00	3.00	3.00	3.00
Lower 10%	-2.00	-2.00	-1.00	-1.00	0.00	-1.00	-1.00	-1.00
Median	-1.00	-0.50	0.00	1.00	2.00	1.00	1.00	1.00
Panelist 13								
Upper 10%	1.49	1.09	1.99	2.99	3.25	3.30	3.50	3.50
Lower 10%	-2.00	-2.29	-1.39	-0.39	0.21	-0.70	-0.45	-0.51
Median	-0.50	-0.60	0.50	1.00	1.30	1.50	1.50	2.00
Panelist 14								
Upper 10%	1.00	1.00	2.00	3.20	3.80	3.50	4.00	4.50
Lower 10%	-2.10	-2.40	-1.50	-0.50	0.00	-0.90	-0.50	-0.50
Median	-0.40	-0.80	0.00	1.20	1.80	1.20	1.60	1.60
Panelist 15								
Upper 10%	-0.50	-0.10	0.50	2.00	2.50	1.80	2.30	2.00
Lower 10%	-2.00	-1.60	-1.00	0.50	1.00	0.30	0.80	0.50
Median	-1.00	-0.60	0.00	1.50	2.00	1.30	1.80	1.50

All data in the above table are percentage growth rates.

ARIZONA POPULATION GROWTH

	2010	2011	2012	2013	2014	2016	2021	2026
Panelist 1								
Upper 10%	1.60	2.40	2.80	3.00	3.00	3.40	3.00	3.00
Lower 10%	0.80	1.00	1.00	1.00	1.50	1.80	1.80	1.80
Median	1.20	1.80	2.20	2.40	2.40	2.80	2.50	2.50
Panelist 2								
Upper 10%	1.64	2.39	3.02	3.36	3.43	3.25	3.00	2.88
Lower 10%	0.96	1.40	1.76	1.96	2.00	1.90	1.75	1.68
Median	1.50	1.99	2.40	2.70	2.80	2.60	2.40	2.30
Panelist 3								
Upper 10%	2.40	2.40	2.60	2.80	2.90	2.90	2.90	2.90
Lower 10%	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Median	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Panelist 4								
Upper 10%	-2.50	1.00	2.20	3.60	3.70	3.70	3.50	3.50
Lower 10%	-5.90	-3.00	0.20	1.80	2.20	2.70	2.20	2.20
Median	-4.70	-1.50	1.60	2.50	2.80	3.10	2.90	2.90
Panelist 5								
Upper 10%	2.00	3.00	3.30	3.50	3.50	3.30	3.00	3.00
Lower 10%	1.00	1.30	1.50	1.50	1.50	1.50	1.00	1.00
Median	1.30	2.00	2.30	2.50	2.50	2.50	2.00	2.00
Panelist 6								
Upper 10%	1.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00
Lower 10%	-1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Median	0.60	1.10	1.20	1.30	1.50	1.80	1.80	1.80
Panelist 7								
Upper 10%	1.50	1.50	2.25	3.00	3.50	3.50	3.50	3.50
Lower 10%	-2.00	-1.00	0.00	1.00	1.50	1.75	1.75	1.75
Median	1.00	1.00	1.75	2.00	2.50	2.40	2.00	2.00
Panelist 8								
Upper 10%	2.70	2.90	3.60	3.90	3.80	3.60	3.70	3.70
Lower 10%	1.00	1.00	1.10	1.20	1.10	0.90	0.70	0.60
Median	1.70	1.90	2.20	2.50	2.50	2.10	2.00	2.00
Panelist 9								
Upper 10%	2.50	2.80	3.10	3.40	3.20	2.80	2.70	2.40
Lower 10%	0.50	0.80	1.10	1.40	1.20	1.20	1.10	1.20
Median	1.50	1.80	2.10	2.40	2.20	2.00	1.90	1.80
Panelist 10								
Upper 10%	3.00	3.50	4.00	4.00	4.00	3.00	3.00	2.00
Lower 10%	0.00	1.00	1.50	2.00	2.00	1.50	1.00	0.50
Median	1.50	2.00	3.00	3.00	3.00	2.50	2.00	1.50
Panelist 11								
Upper 10%	2.10	2.60	3.10	3.50	3.60	3.20	3.00	3.00
Lower 10%	1.10	1.20	1.40	1.80	1.80	1.50	1.00	1.00
Median	1.30	1.80	2.40	2.60	2.90	2.70	2.50	2.40
Panelist 12								
Upper 10%	3.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50
Lower 10%	-1.00	0.00	1.00	1.50	1.50	1.00	0.50	0.50
Median	1.00	2.00	2.00	2.50	2.50	2.50	2.50	2.50
Panelist 13								
Upper 10%	2.00	3.00	3.25	3.50	3.60	3.60	3.60	3.60
Lower 10%	0.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Median	0.50	1.00	2.30	2.50	2.50	2.50	2.50	2.50
Panelist 14								
Upper 10%	2.40	3.10	3.60	4.00	3.50	3.50	3.00	2.60
Lower 10%	1.70	1.00	1.40	1.60	2.00	1.00	0.80	0.60
Median	1.60	2.10	2.80	3.00	2.50	2.00	1.90	1.90
Panelist 15								
Upper 10%	2.50	3.50	4.00	4.40	3.90	3.74	3.39	3.12
Lower 10%	0.00	1.00	1.50	1.90	1.40	1.24	0.89	0.62
Median	1.00	2.00	2.50	2.90	2.40	2.24	1.89	1.62

All data in the above table are percentage growth rates.

ARIZONA WAGE & SALARY EMPLOYMENT GROWTH

	2010	2011	2012	2013	2014	2016	2021	2026
Panelist 1								
Upper 10%	1.00	1.50	1.50	2.00	3.00	3.50	4.00	4.00
Lower 10%	-4.00	-3.00	-1.00	0.00	0.00	0.50	1.00	1.00
Median	-2.00	-1.00	1.00	1.50	2.00	2.20	2.20	2.20
Panelist 2								
Upper 10%	-3.00	1.20	5.00	6.00	6.50	5.00	4.50	4.50
Lower 10%	-8.00	-3.00	1.00	2.00	2.00	2.00	1.50	1.50
Median	-5.50	0.50	2.46	4.80	5.00	3.60	2.60	2.50
Panelist 3								
Upper 10%	1.00	2.50	3.00	3.00	3.00	3.00	5.00	5.00
Lower 10%	-1.40	-0.10	0.00	0.60	1.00	1.00	1.00	1.00
Median	-0.60	1.90	2.00	2.40	2.70	3.00	3.60	4.10
Panelist 4								
Upper 10%	0.00	0.60	2.10	3.60	3.50	6.00	5.90	6.00
Lower 10%	-6.00	-2.70	0.40	1.50	1.70	0.00	-0.30	-0.40
Median	-3.40	-0.50	1.70	3.10	2.90	3.10	3.00	2.90
Panelist 5								
Upper 10%	0.00	3.00	5.00	5.50	6.50	6.00	5.00	5.00
Lower 10%	-3.00	-1.00	1.50	2.50	3.00	3.00	2.00	2.00
Median	-2.00	1.50	3.50	4.50	5.00	5.00	4.00	4.00
Panelist 6								
Upper 10%	2.00	2.00	3.00	3.00	5.00	5.00	5.00	5.00
Lower 10%	-3.00	-1.00	0.00	0.00	1.00	1.00	1.00	1.00
Median	0.00	0.50	1.80	2.30	2.80	3.60	3.80	3.80
Panelist 7								
Upper 10%	0.00	2.00	2.50	3.50	3.50	3.50	3.50	3.50
Lower 10%	-4.00	-2.00	1.00	2.00	2.00	2.00	2.00	1.75
Median	-2.00	0.00	1.50	2.50	2.75	3.00	2.75	2.50
Panelist 8								
Upper 10%	2.90	4.50	5.00	5.50	5.70	6.00	6.10	6.50
Lower 10%	-2.50	-1.00	0.00	0.70	0.40	-0.80	-1.50	-2.00
Median	1.50	1.90	2.00	2.60	2.80	2.80	2.50	2.50
Panelist 9								
Upper 10%	1.50	4.00	5.50	6.00	5.50	5.50	5.00	5.00
Lower 10%	-3.50	-1.00	0.50	0.60	0.50	-0.50	-1.00	-1.00
Median	-1.00	0.20	3.00	1.00	3.00	0.40	2.00	2.00
Panelist 10								
Upper 10%	5.00	12.00	20.00	18.00	8.00	8.00	5.00	5.00
Lower 10%	-5.00	0.00	5.00	10.00	3.00	3.00	3.00	3.00
Median	0.00	8.00	15.00	12.00	5.00	5.00	3.50	3.50
Panelist 11								
Upper 10%	0.50	1.20	2.80	3.80	4.60	4.40	3.60	3.60
Lower 10%	-3.80	-3.20	-1.50	0.20	0.50	0.00	-1.00	-1.00
Median	-3.20	-2.00	0.50	2.20	3.40	3.30	2.80	2.70
Panelist 12								
Upper 10%	2.00	4.00	5.00	5.00	6.00	6.00	6.00	6.00
Lower 10%	-5.00	-2.00	-1.00	0.00	0.00	0.00	0.00	0.00
Median	-2.00	0.00	1.00	1.50	2.50	3.00	3.00	3.00
Panelist 13								
Upper 10%	2.00	3.70	4.50	5.00	5.50	5.50	5.50	5.50
Lower 10%	-3.82	-2.00	-1.00	0.00	0.00	-0.31	-0.81	-0.82
Median	-2.00	1.50	2.80	2.80	2.80	2.30	2.20	2.20
Panelist 14								
Upper 10%	1.00	5.00	7.00	7.00	6.00	6.00	6.00	6.00
Lower 10%	-4.00	-2.00	1.00	1.50	0.50	-0.50	-1.00	-1.00
Median	-2.00	1.40	3.50	4.00	3.40	2.80	2.50	2.50
Panelist 15								
Upper 10%	-3.00	-1.00	5.00	5.50	5.20	4.70	4.50	4.50
Lower 10%	-7.00	-5.00	1.00	1.50	1.20	0.70	0.50	0.50
Median	-5.00	-3.00	3.00	3.50	3.20	2.70	2.50	2.50

All data in the above table are percentage growth rates.

ARIZONA GROSS STATE PRODUCT GROWTH

	2010	2011	2012	2013	2014	2016	2021	2026
Panelist 1								
Upper 10%	2.50	2.70	2.70	3.00	3.00	3.20	3.00	3.00
Lower 10%	0.50	0.80	0.80	0.80	1.00	1.20	1.50	1.50
Median	1.50	2.00	2.40	2.70	2.70	3.10	2.80	2.80
Panelist 2								
Upper 10%	3.89	5.49	6.49	6.42	6.16	6.65	7.61	7.20
Lower 10%	-1.49	0.11	1.11	1.04	0.77	0.69	0.84	0.20
Median	-0.50	2.50	4.00	4.20	3.60	3.70	4.00	3.80
Panelist 3								
Upper 10%	2.50	3.50	5.00	5.00	4.10	4.10	4.10	4.10
Lower 10%	-1.00	0.00	1.50	1.00	0.00	0.00	0.00	0.00
Median	0.40	1.50	3.50	2.90	1.10	0.70	0.70	0.70
Panelist 4								
Upper 10%	2.50	3.00	5.10	5.60	5.50	5.90	6.00	6.40
Lower 10%	-2.20	-0.50	0.80	1.40	1.60	1.10	1.00	1.10
Median	0.50	1.60	3.70	4.20	4.00	4.50	4.30	4.00
Panelist 5								
Upper 10%	2.00	3.00	4.00	5.00	5.00	5.00	4.50	4.50
Lower 10%	-2.00	-1.00	1.50	1.50	2.00	2.00	1.50	1.00
Median	0.00	2.00	2.50	3.00	3.00	3.00	2.50	2.50
Panelist 6								
Upper 10%	2.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00
Lower 10%	-1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Median	0.00	1.00	2.00	2.00	2.50	2.50	2.80	2.80
Panelist 7								
Upper 10%	0.00	1.00	2.50	3.50	4.50	5.00	5.00	5.00
Lower 10%	-4.00	-2.00	1.00	1.50	2.00	2.50	2.50	2.50
Median	-2.00	0.00	1.50	2.00	3.00	3.50	3.50	3.50
Panelist 8								
Upper 10%	3.50	4.90	5.50	6.00	6.80	7.10	7.50	7.80
Lower 10%	-1.00	-0.20	0.20	0.70	0.50	0.50	0.00	-0.50
Median	0.90	2.70	3.30	3.60	3.70	4.00	4.00	3.80
Panelist 9								
Upper 10%	4.00	5.50	6.50	6.50	6.80	6.70	6.50	6.50
Lower 10%	-2.00	-0.50	0.50	0.50	-0.20	-0.30	-0.50	-0.50
Median	1.00	2.50	3.50	3.50	3.30	3.20	3.00	3.00
Panelist 10								
Upper 10%	3.00	5.00	7.00	6.00	6.00	6.00	6.00	6.00
Lower 10%	0.00	1.00	5.00	2.00	2.00	2.00	2.00	2.00
Median	1.00	3.00	7.00	5.00	3.00	3.00	3.00	3.00
Panelist 11								
Upper 10%	2.00	3.00	4.00	4.50	4.70	4.50	4.20	4.20
Lower 10%	-1.00	0.00	1.00	1.60	2.20	1.80	2.20	2.20
Median	0.00	1.00	2.00	2.50	3.00	2.70	2.90	3.10
Panelist 12								
Upper 10%	3.00	4.00	7.00	7.00	6.00	6.00	6.00	6.00
Lower 10%	-2.50	-1.00	1.00	1.00	1.00	1.00	1.00	1.00
Median	1.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00
Panelist 13								
Upper 10%	3.89	5.49	6.00	6.00	6.00	6.00	5.00	5.00
Lower 10%	-2.50	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Median	0.50	2.50	3.50	3.50	3.00	3.00	3.00	3.00
Panelist 14								
Upper 10%	3.00	6.00	7.00	8.00	7.50	7.00	7.00	7.00
Lower 10%	-2.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Median	0.00	2.40	3.50	4.00	3.50	3.80	3.00	3.00
Panelist 15								
Upper 10%	1.00	2.50	4.00	4.73	4.46	4.67	5.22	4.70
Lower 10%	-1.50	0.00	1.50	2.23	1.96	2.17	2.72	2.20
Median	0.00	1.50	3.00	3.73	3.46	3.67	4.22	3.70

All data in the above table are percentage growth rates.

ARIZONA NOMINAL GAS PRICE GROWTH

	2010	2011	2012	2013	2014	2016	2021	2026
Panelist 1								
Upper 10%	15.00	15.00	10.00	10.00	10.00	10.00	10.00	10.00
Lower 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	10.00	10.00	5.00	5.00	5.00	5.00	4.00	3.00
Panelist 2								
Upper 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lower 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Panelist 3								
Upper 10%	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Lower 10%	-10.00	-5.00	0.00	5.00	5.00	5.00	5.00	5.00
Median	10.00	12.00	14.00	10.80	8.60	8.80	8.80	8.80
Panelist 4								
Upper 10%	28.00	28.91	35.01	38.81	34.51	27.80	27.90	25.10
Lower 10%	-10.01	-9.11	-13.01	-19.21	-23.51	-21.20	-29.30	-22.70
Median	9.00	9.90	11.00	9.80	5.50	3.30	-0.70	1.20
Panelist 5								
Upper 10%	20.00	25.00	35.00	35.00	35.00	30.00	25.00	20.00
Lower 10%	-10.00	-10.00	-10.00	-15.00	-15.00	-15.00	-15.00	-15.00
Median	7.50	10.00	10.00	10.00	7.50	5.00	0.00	0.00
Panelist 6								
Upper 10%	5.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
Lower 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	1.00	1.00	1.00	2.00	2.00	4.50	4.50	4.50
Panelist 7								
Upper 10%	10.00	12.00	15.00	15.00	10.00	9.00	9.00	9.00
Lower 10%	-2.00	0.00	5.00	4.00	4.00	4.00	3.00	3.00
Median	5.00	7.50	10.00	7.50	7.00	6.00	5.00	5.00
Panelist 8								
Upper 10%	25.00	26.00	30.00	33.00	35.00	36.00	36.00	37.00
Lower 10%	-15.00	-12.00	-17.00	-19.00	-22.00	-24.00	-30.00	-32.00
Median	7.00	8.00	10.00	10.00	8.00	5.00	1.00	1.00
Panelist 9								
Upper 10%	27.00	25.00	24.00	28.00	27.00	30.00	27.00	32.00
Lower 10%	-3.00	-5.00	-6.00	-12.00	-13.00	-20.00	-23.00	-28.00
Median	12.00	10.00	9.00	8.00	7.00	5.00	2.00	2.00
Panelist 10								
Upper 10%	10.00	15.00	5.00	5.00	2.00	2.00	2.00	2.00
Lower 10%	0.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
Median	5.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
Panelist 11								
Upper 10%	11.00	17.00	21.00	27.00	31.00	33.00	29.00	28.00
Lower 10%	-2.00	2.00	3.00	3.00	4.00	-2.00	-5.00	-5.00
Median	7.00	10.00	12.00	13.00	15.00	14.00	12.00	12.00
Panelist 12								
Upper 10%	25.00	30.00	30.00	30.00	30.00	30.00	20.00	10.00
Lower 10%	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-20.00	-30.00
Median	10.00	10.00	10.00	10.00	10.00	10.00	5.00	0.00
Panelist 13								
Upper 10%	30.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Lower 10%	-10.01	-9.11	-13.01	-19.21	-23.51	-21.20	-29.30	-22.70
Median	5.00	10.00	7.50	7.50	7.50	7.50	7.50	7.50
Panelist 14								
Upper 10%	30.00	30.00	35.00	40.00	35.00	30.00	30.00	25.00
Lower 10%	-8.00	-10.00	-15.00	-20.00	-25.00	-22.00	-20.00	-20.00
Median	8.00	8.00	8.00	8.00	8.00	8.00	4.00	4.00
Panelist 15								
Upper 10%	9.00	9.00	11.00	10.00	9.00	9.00	9.00	9.00
Lower 10%	2.00	2.00	4.00	3.00	2.00	2.00	2.00	2.00
Median	5.00	5.00	7.00	6.00	5.00	5.00	5.00	5.00

All data in the above table are percentage growth rates.

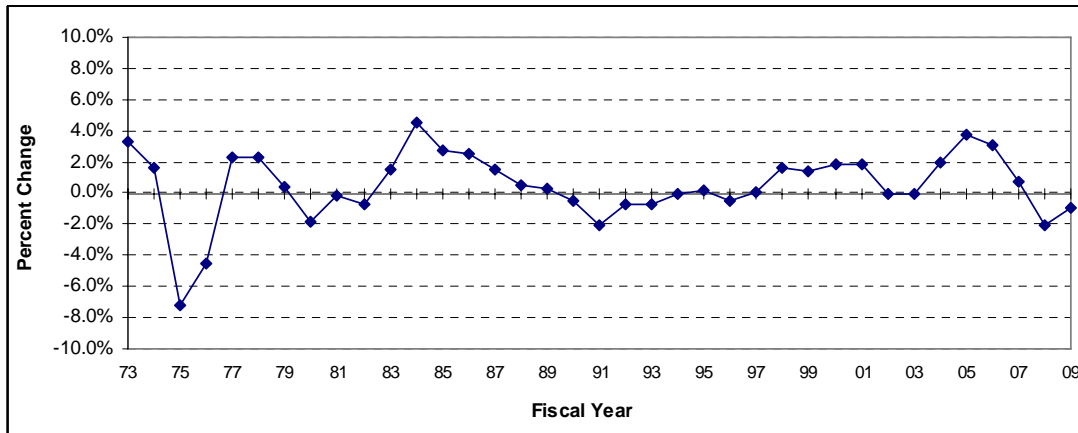
HISTORICAL DATA
ARIZONA REAL PER CAPITA INCOME GROWTH
Using Phoenix CPI to Measure Inflation
(Annual Percent Change)

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

1960	1970	1980	-1.8%	1990	-0.5%	2000	1.9%
1961	1971	1981	-0.2%	1991	-2.0%	2001	1.9%
1962	1972	1982	-0.8%	1992	-0.7%	2002	0.0%
1963	1973	1983	1.5%	1993	-0.7%	2003	0.0%
1964	1974	1984	4.5%	1994	0.0%	2004	2.0%
1965	1975	1985	2.7%	1995	0.1%	2005	3.7%
1966	1976	1986	2.5%	1996	-0.5%	2006	3.0%
1967	1977	1987	1.6%	1997	0.1%	2007	0.7%
1968	1978	1988	0.5%	1998	1.6%	2008	-2.1%
1969	1979	1989	0.3%	1999	1.4%	2009 *	-0.9%

* Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-2.1%	3.7%	0.9%	2.5%	-1.6%	3.5%
10 Years	-2.1%	3.7%	1.0%	1.8%	-1.1%	3.1%
Full Period	-7.2%	4.5%	0.5%	2.2%	-1.9%	2.9%

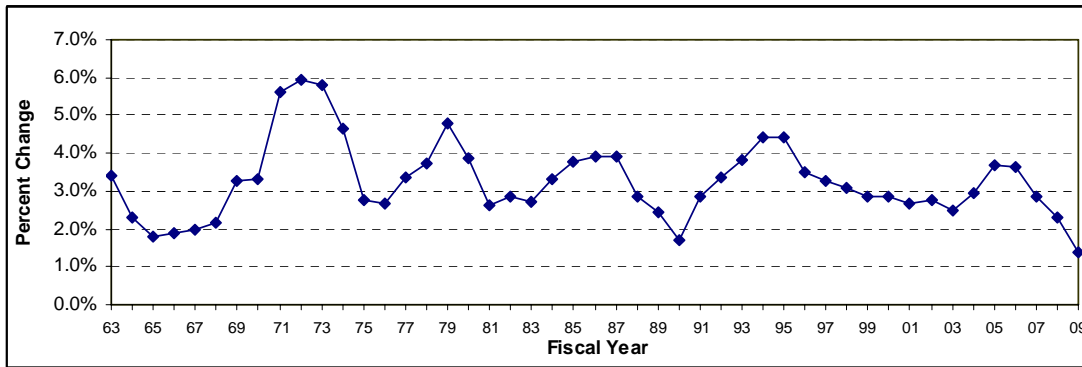
**HISTORICAL DATA
ARIZONA POPULATION GROWTH
(Annual Percent Change)**

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

1960		1970	3.3%	1980	3.9%	1990	1.7%	2000	2.8%
1961		1971	5.6%	1981	2.6%	1991	2.8%	2001	2.6%
1962	4.5%	1972	5.9%	1982	2.8%	1992	3.4%	2002	2.7%
1963	3.4%	1973	5.8%	1983	2.7%	1993	3.8%	2003	2.5%
1964	2.3%	1974	4.6%	1984	3.3%	1994	4.4%	2004	3.0%
1965	1.8%	1975	2.8%	1985	3.8%	1995	4.4%	2005	3.7%
1966	1.9%	1976	2.7%	1986	3.9%	1996	3.5%	2006	3.6%
1967	2.0%	1977	3.4%	1987	3.9%	1997	3.3%	2007	2.8%
1968	2.2%	1978	3.7%	1988	2.9%	1998	3.1%	2008	2.3%
1969	3.3%	1979	4.8%	1989	2.5%	1999	2.9%	2009 *	1.4%

BEA FY 1962-2008. FY 2009 * and FY 2010 based on June 2009 Arizona Blue Chip estimate while FY 2011-13 from ADOT staff. FY 2014-2026 based on DES Arizona Population Projections 2006-2055 growth rates dated March 31, 2006.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	1.4%	3.7%	2.8%	1.0%	1.8%	3.7%
10 Years	1.4%	3.7%	2.8%	0.6%	2.2%	3.6%
Full Period	1.4%	5.9%	3.3%	1.0%	2.1%	4.6%

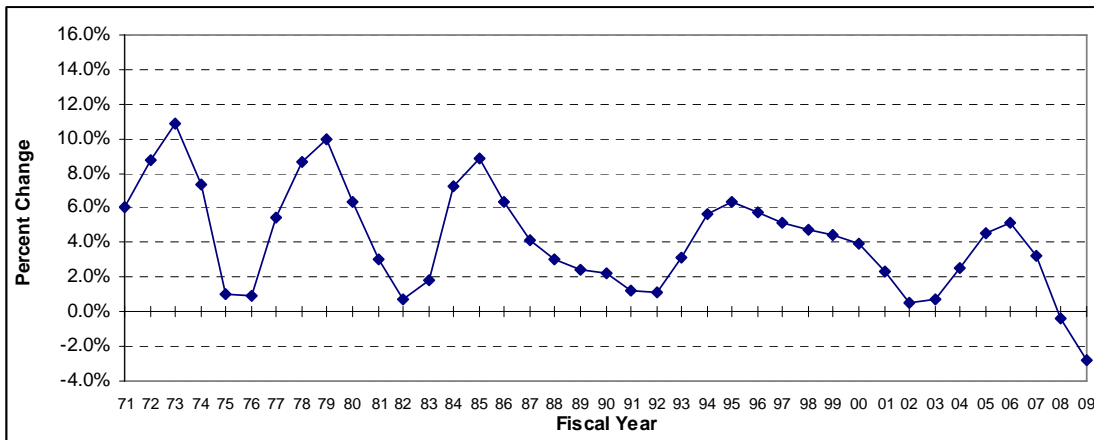
**HISTORICAL DATA
ARIZONA WAGE & SALARY EMPLOYMENT GROWTH
(Annual Percent Change)**

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

1960	1970	1980	6.3%	1990	2.2%	2000	4.0%	
1961	1971	6.0%	1981	3.0%	1991	1.2%	2001	2.3%
1962	1972	8.8%	1982	0.8%	1992	1.1%	2002	0.5%
1963	1973	10.8%	1983	1.8%	1993	3.1%	2003	0.7%
1964	1974	7.3%	1984	7.2%	1994	5.6%	2004	2.5%
1965	1975	1.0%	1985	8.9%	1995	6.4%	2005	4.5%
1966	1976	0.9%	1986	6.3%	1996	5.7%	2006	5.2%
1967	1977	5.4%	1987	4.1%	1997	5.2%	2007	3.2%
1968	1978	8.7%	1988	3.0%	1998	4.7%	2008	-0.3%
1969	1979	10.0%	1989	2.4%	1999	4.4%	2009 *	-2.8%

* Estimate based on June 2009 Arizona Blue Chip.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-2.8%	5.2%	2.0%	3.4%	-1.8%	4.9%
10 Years	-2.8%	5.2%	2.0%	2.5%	-0.6%	4.6%
Full Period	-2.8%	10.8%	4.2%	3.1%	0.8%	8.7%

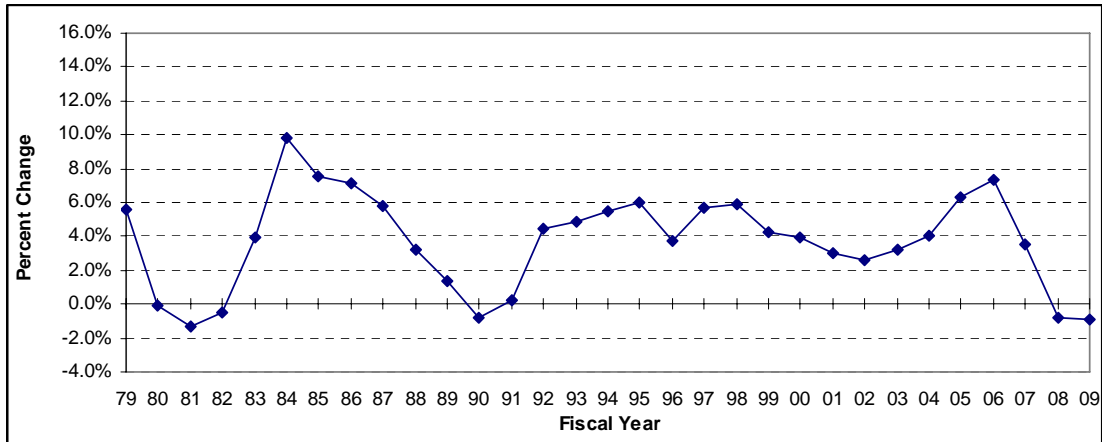
**HISTORICAL DATA
ARIZONA REAL GROSS DOMESTIC PRODUCT GROWTH
Using Phoenix CPI to Measure Inflation
(Annual Percent Change)**

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

1960	1970	1980	-0.1%	1990	-0.8%	2000	4.0%
1961	1971	1981	-1.3%	1991	0.2%	2001	3.0%
1962	1972	1982	-0.5%	1992	4.5%	2002	2.6%
1963	1973	1983	4.0%	1993	4.9%	2003	3.2%
1964	1974	1984	9.8%	1994	5.5%	2004	4.0%
1965	1975	1985	7.6%	1995	6.0%	2005	6.3%
1966	1976	1986	7.1%	1996	3.7%	2006	7.3%
1967	1977	1987	5.8%	1997	5.7%	2007	3.5%
1968	1978	1988	3.2%	1998	5.9%	2008	-0.8%
1969	1979	1989	1.3%	1999	4.3%	2009 *	-0.9%

* Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-0.9%	7.3%	3.1%	3.9%	-0.8%	6.9%
10 Years	-0.9%	7.3%	3.2%	2.6%	-0.8%	6.4%
Full Period	-1.3%	9.8%	3.7%	2.9%	-0.8%	7.1%

**HISTORICAL DATA
ARIZONA NOMINAL GAS PRICE GROWTH
(Annual Percent Change)**

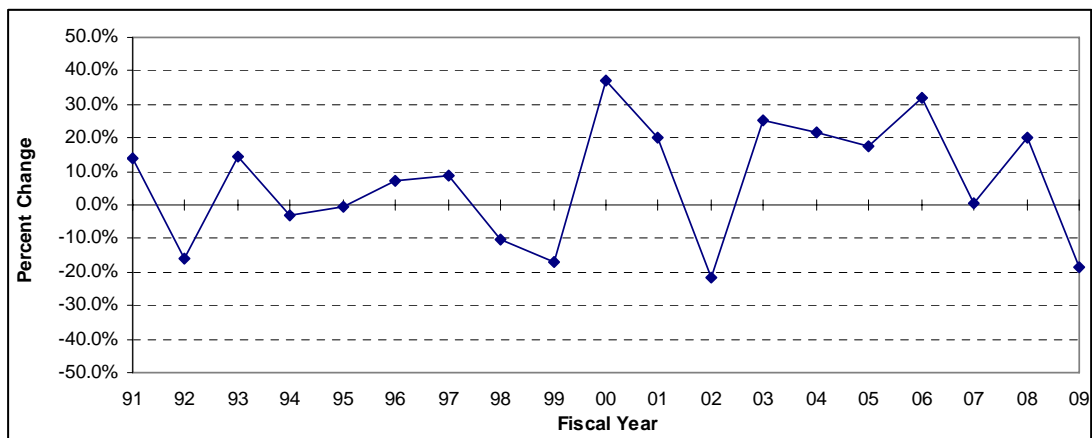
HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1960	1970	1980	1990	2000	37.2%		
1961	1971	1981	1991	13.8%	2001	20.2%	
1962	1972	1982	1992	-16.0%	2002	-21.9%	
1963	1973	1983	1993	14.2%	2003	25.4%	
1964	1974	1984	1994	-3.3%	2004	21.6%	
1965	1975	1985	-0.3%	1995	-0.5%	2005	17.4%
1966	1976	1986	-9.2%	1996	7.2%	2006	32.1%
1967	1977	1987	-25.2%	1997	9.0%	2007	0.5%
1968	1978	1988		1998	-10.3%	2008	20.2%
1969	1979	1989		1999	-16.8%	2009 *	-18.5%

* Estimate

** Data not available for June 1987-December 1988.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-18.5%	32.1%	10.4%	19.7%	-10.9%	27.3%
10 Years	-21.9%	37.2%	13.4%	20.2%	-18.8%	32.6%
Full Period	-21.9%	37.2%	6.9%	17.8%	-17.1%	26.7%