Revenue Assumptions (Attachment A)

Base Case Scenario

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Year	Sales Tax Revenue Growth Rate	Total Sales Tax Revenues	Galt (1%)	Isleton (0.04%)	Neighborhood Shuttle Program	Net Sales Tax Revenue	20.75% of Sales Tax for Capital Projects	DIF Revenue Growth Rate	Total DIF Revenues	85% of DIF for Capital Projects	State SB1 Fund Growth Rate	State SB1 Fund	Total Revenues (w/o SB1 Fund)
2018	3.70%	120,659,000	1,206,590	48,264	1,000,000	118,404,146	24,568,860		6,000,000	5,100,000		2,662,953	126,659,000
2019	4.14%	125,655,000	1,256,550	50,262	1,000,000	123,348,188	25,594,749	3.00%	6,180,000	5,253,000	3.00%	4,120,000	131,835,000
2020	3.66%	130,255,000	1,302,550	52,102	1,000,000	127,900,348	26,539,322	3.00%	6,365,400	5,410,590	3.00%	4,243,600	136,620,400
2021	3.30%	134,555,000	1,345,550	53,822	1,000,000	132,155,628	27,422,293	3.00%	6,556,362	5,572,908	3.00%	4,370,908	141,111,362
2022	2.97%	138,555,000	1,385,550	55,422	1,000,000	136,114,028	28,243,661	3.00%	6,753,053	5,740,095	3.00%	4,502,035	145,308,053
2023	3.06%	142,801,000	1,428,010	57,120	1,000,000	140,315,870	29,115,543	3.00%	6,955,644	5,912,298	3.00%	4,637,096	149,756,644
2024	3.25%	147,436,000	1,474,360	58,974	1,000,000	144,902,666	30,067,303	3.00%	7,164,314	6,089,667	3.00%	4,776,209	154,600,314
2025	3.37%	152,407,000	1,524,070	60,963	1,000,000	149,821,967	31,088,058	3.00%	7,379,243	6,272,357	3.00%	4,919,495	159,786,243
2026	3.35%	157,519,000	1,575,190	63,008	1,000,000	154,880,802	32,137,766	3.00%	7,600,620	6,460,527	3.00%	5,067,080	165,119,620
2027	3.35%	162,797,000	1,627,970	65,119	1,000,000	160,103,911	33,221,562	3.00%	7,828,639	6,654,343	3.00%	5,219,093	170,625,639
2028	3.40%	168,336,000	1,683,360	67,334	1,000,000	165,585,306	34,358,951	3.00%	8,063,498	6,853,974	3.00%	5,375,666	176,399,498
2029	3.44%	174,132,000	1,741,320	69,653	1,000,000	171,321,027	35,549,113	3.00%	8,305,403	7,059,593	3.00%	5,536,935	182,437,403
2030	3.42%	180,094,000	1,800,940	72,038	1,000,000	177,221,022	36,773,362	3.00%	8,554,565	7,271,381	3.00%	5,703,044	188,648,565
2031	3.39%	186,191,000	1,861,910	74,476	1,000,000	183,254,614	38,025,332	3.00%	8,811,202	7,489,522	3.00%	5,874,135	195,002,202
2032	3.36%	192,451,000	1,924,510	76,980	1,000,000	189,449,510	39,310,773	3.00%	9,075,538	7,714,208	3.00%	6,050,359	201,526,538
2033	3.29%	198,775,000	1,987,750	79,510	1,000,000	195,707,740	40,609,356	3.00%	9,347,804	7,945,634	3.00%	6,231,870	208,122,804
2034	3.18%	205,102,000	2,051,020	82,041	1,000,000	201,968,939	41,908,555	3.00%	9,628,239	8,184,003	3.00%	6,418,826	214,730,239
2035	3.06%	211,387,000	2,113,870	84,555	1,000,000	208,188,575	43,199,129	3.00%	9,917,086	8,429,523	3.00%	6,611,391	221,304,086
2036	2.95%	217,633,000	2,176,330	87,053	1,000,000	214,369,617	44,481,695	3.00%	10,214,598	8,682,409	3.00%	6,809,732	227,847,598
2037	2.91%	223,962,000	2,239,620	89,585	1,000,000	220,632,795	45,781,305	3.00%	10,521,036	8,942,881	3.00%	7,014,024	234,483,036
2038	2.87%	230,398,000	2,303,980	92,159	1,000,000	227,001,861	47,102,886	3.00%	10,836,667	9,211,167	3.00%	7,224,445	241,234,667
2039	2.85%	236,975,000	2,369,750	94,790	1,000,000	233,510,460	48,453,420	3.00%	11,161,767	9,487,502	3.00%	7,441,178	248,136,767
TOTAL	3.29%	**3,838,075,000**	**38,380,750**	**1,535,230**	**22,000,000**	**3,776,159,020**	**783,552,997**		**183,220,682**	**155,737,580**		**120,810,074**	**4,021,295,682**

A	B	C	D	E	F	G	H	I	J	K	L
STA Base Case Capacity Analysis (September 2017)											
Attachment B											
			(a)	(b)	(c)	(d)	(f) = c + d	(g) = a - f	(h)	(j) = b + g + h	
Year	**Gross Sales Tax Revenue**	**Net Sales Tax Revenue**	**Sales Tax Revenue Allocated to CIP (20.75%)**	**Bond Proceeds**	**Total Existing Debt Service**[1 2 3 4]	**Series 2019 Debt Service**[5 6]	**Total Projected Debt Service**	**Remaining CIP Sales Tax after Debt Service**	**85% Development Impact Fee Revenues**	**Total CIP Capacity**	**Annual Debt Service Coverage**[7]
2018	120,659,000	118,404,146	24,568,860		18,986,201		18,986,201	5,582,659	5,100,000	10,682,659	6.36x
2019	125,655,000	123,348,188	25,594,749		19,512,029		19,512,029	6,082,720	5,253,000	11,335,720	6.44x
2020	130,255,000	127,900,348	26,539,322	61,148,212	19,513,819	5,025,021	24,538,839	2,000,483	5,410,590	68,559,285	5.31x
2021	134,555,000	132,155,628	27,422,293		19,509,219	5,912,625	25,421,844	2,000,449	5,572,908	7,573,356	5.29x
2022	138,555,000	136,114,028	28,243,661		19,508,754	6,730,500	26,239,254	2,004,407	5,740,095	7,744,502	5.28x
2023	142,801,000	140,315,870	29,115,543		19,511,504	7,600,000	27,111,504	2,004,039	5,912,298	7,916,337	5.27x
2024	147,436,000	144,902,666	30,067,303		19,517,394	8,545,125	28,062,519	2,004,784	6,089,667	8,094,451	5.25x
2025	152,407,000	149,821,967	31,088,058		19,511,344	8,545,125	28,056,469	3,031,589	6,272,357	9,303,946	5.43x
2026	157,519,000	154,880,802	32,137,766		19,510,254	8,547,125	28,057,379	4,080,388	6,460,527	10,540,915	5.61x
2027	162,797,000	160,103,911	33,221,562		19,509,879	8,545,250	28,055,129	5,166,433	6,654,343	11,820,776	5.80x
2028	168,336,000	165,585,306	34,358,951		19,515,269	8,548,500	28,063,769	6,295,182	6,853,974	13,149,156	6.00x
2029	174,132,000	171,321,027	35,549,113		35,448,589	--	35,448,589	100,524	7,059,593	7,160,116	4.91x
2030	180,094,000	177,221,022	36,773,362		36,546,897	--	36,546,897	226,465	7,271,381	7,497,845	4.93x
2031	186,191,000	183,254,614	38,025,332		36,478,349	--	36,478,349	1,546,983	7,489,522	9,036,505	5.10x
2032	192,451,000	189,449,510	39,310,773		36,467,745	--	36,467,745	2,843,028	7,714,208	10,557,235	5.28x
2033	198,775,000	195,707,740	40,609,356		36,403,006	--	36,403,006	4,206,350	7,945,634	12,151,984	5.46x
2034	205,102,000	201,968,939	41,908,555		36,393,714	--	36,393,714	5,514,840	8,184,003	13,698,843	5.64x
2035	211,387,000	208,188,575	43,199,129		36,332,052	--	36,332,052	6,867,077	8,429,523	15,296,600	5.82x
2036	217,633,000	214,369,617	44,481,695		36,318,104	--	36,318,104	8,163,591	8,682,409	16,846,000	5.99x
2037	223,962,000	220,632,795	45,781,305		36,245,246	--	36,245,246	9,536,059	8,942,881	18,478,940	6.18x
2038	230,398,000	227,001,861	47,102,886		36,216,548	--	36,216,548	10,886,338	9,211,167	20,097,506	6.36x
2039	236,975,000	233,510,460	48,453,420		36,127,474	--	36,127,474	12,325,947	9,487,502	21,813,449	6.56x
TOTAL	**3,838,075,000**	**3,776,159,020**	**783,552,997**	**61,148,212**	**613,083,389**	**67,999,271**	**681,082,660**	**102,470,336**	**155,737,580**	**319,356,128**	**4.91x**

1. Remarketing Fees are 10 bps for the Series 2009C Bonds and the Series 2015A Bonds

2. Liquidity Facility costs 34 bps for Series 2009C Bonds (US Bank) starting 12/1/2013 through 2/28/2018; liquidity facility rate increases to 50 bps thereafter

3. Series 2014A (Wells Fargo) Direct Purchase has an applicable spread of 34 bps starting 10/1/2014 through 9/1/2017; the spread increases to 50 bps thereafter

4. Liquidity Facility costs 35 bps for Series 2015A Bonds (Mizuho) starting 4/1/2015 through 3/12/2018; liquidity facility rate increases to 50 bps thereafter

5. 2018 bond issuance structured as fixed-rate bonds with no Debt Service Reserve Fund

6. Interest rates for the 2018 Bonds are based on MMD as of 9/19/17 + 2-22 bps (Credit Spread) + 50 bps (Volatility Spread)

7. Debt Service Coverage is calculated using current year gross revenue and total projected debt service including liquidity and remarketing fees

Sacramento Transportation Authority

Revenue Forecast

STA

August 2017

BEACON ECONOMICS

Sacramento Transportation Authority Revenue Forecast

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Sacramento Transportation Authority

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Report Overview

This revenue forecast for the Sacramento Transportation Authority (STA), extending to 2038–39, uses standard time-series econometric techniques based on historical correlations and forecasts of economic trends. Long-run economic growth, and subsequent tax revenue for STA that result from local spending, are driven primarily by demographic and labor force trends, and by inflation. By forecasting population and employment growth at the local level, together with an outlook on long-run inflation, **Beacon Economics** can make projections for STA tax revenue that are grounded in long-run economic fundamentals.

Beacon Economics' method of long-run forecasting takes a layered approach. A U.S. forecast model is first built that includes demographics, labor force participation, unemployment and inflation. **Beacon** then crafts a Sacramento County model that incorporates these trends at the national level with countywide trends in labor markets and spending to forecast STA sales tax revenue to 2038–39.

Sacramento Transportation Authority Revenue Forecast

Revenue Stream	Actual	Forecast					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Taxable Sales ($ 000s)	22,662,517	23,742,974	24,539,218	25,514,523	26,482,152	27,343,521	28,172,937
Growth(%)	5.2	4.8	3.4	4.0	3.8	3.3	3.0
Sales and Use Tax ($ 000s)	110,708	116,354	120,659	125,655	130,255	134,555	138,555
Growth(%)	4.9	5.1	3.7	4.1	3.7	3.3	3.0

Source: Forecast by Beacon Economics

National and State Economies

The Sacramento County economy is heavily dependent on the national and state economies. In the most recent edition of **Beaconomics** (free of charge at `www.BeaconEcon.com`), **Beacon Economics** analyzes national and state economic trends in depth. Below is a summary of what **Beacon** sees happening in the U.S. and California economies.

United States Economy

- Consumer spending has been the mainstay of the U.S. economy, contributing nearly 2 percentage points to headline GDP growth over the last two years. Continuing a seasonal pattern of the last few years, consumer spending slowed sharply in the first quarter of 2017 but picked up in the second quarter and should be solid through the rest of the year as a tight labor market puts upward pressure on wages.
- The U.S. unemployment rate fell to its lowest point, 4.3%, in 16 years in May, supporting the idea that the labor force is essentially at full employment. The 25-year low is 3.8%, so there is still room for the rate to fall.
- The economy is clearly gathering momentum despite uncertainty surrounding new policies from the Trump administration and Republican-controlled Congress. The most recent read on industrial production, for example, was 2% higher in June than one year earlier—when production was declining. Similarly, the ISM Purchasing Manager diffusion indexes are at levels not seen since 2015, before last year's economic slowdown.

- The better numbers in 2017 stem from the fading of the global commodity glut, which began with the sharp decline in commodity prices in 2015. Falling prices hurt many commodity-producing economies—including Saudi Arabia, Brazil, Texas and California's Central Valley. This in turn caused a sharp pullback in investment in commodity-producing industries.
- The U.S. economy is lining up for yet another 2%-to-2.3% growth year—not great in terms of speed, but there is little sign of an end to the expansion. This appears to be at odds with a growing concern in some circles that the current expansion is getting long in the tooth. In July the U.S. economy entered its ninth year of an expansion that started in 2009—not yet a record in terms of length, but getting close.

California Economy

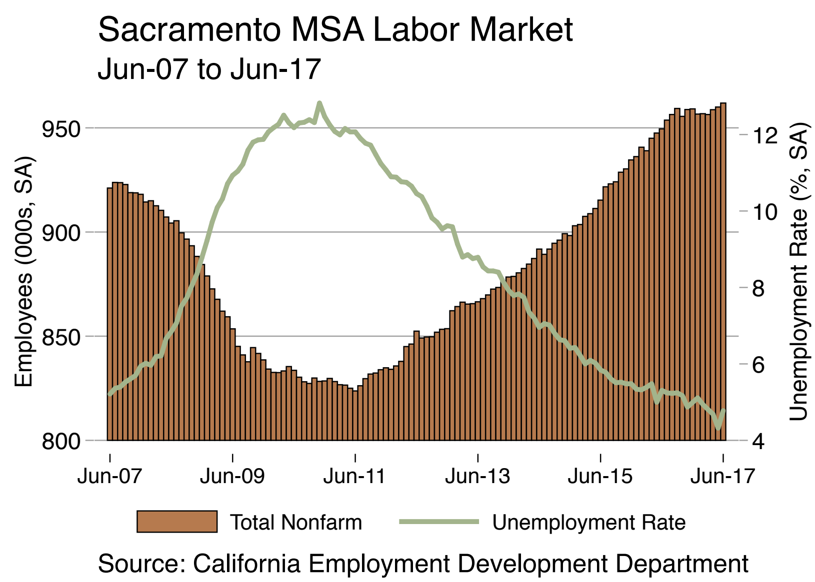
- As of June, the State's wage and salary (nonfarm) employment had grown 1.6% over the previous year, or a gain of 261,400 jobs. Most of the State's private industries added jobs in yearly terms in the first half of 2017. With the unemployment rate hitting a 16-year low of 4.7% in June and labor force participation stabilizing at just over 62% for now, the State is effectively at full employment even as some labor force growth continues.
- Although the California economy has continued to grow, the pace has slowed markedly in recent months: The 1.6% employment gain in June 2017 was less than half of the 3.3% rate one year earlier. The slowdown was evident across all industries. Keep in mind that California has had impressive job gains over the last five years and that the current slowdown is not exclusive to the State. In fact, U.S. job growth slowed from 1.7% in June 2016 to 1.6% in June of this year.
- Housing affordability concerns are ever-present in California, and although affordability isn't at an all-time low, it has worsened in recent years as home prices have risen. Arguably, low housing affordability limits job growth in the State. This highlights the need to increase supply, especially that which aligns with the State's housing needs.
- One limit to growth in the State is the uncertain outlook on federal policy in the near term. Although the notion that uncertainty can lead to inaction makes sense, it is not so easy to find hard evidence of it. Still, it stands to reason that firms must make plans regarding future sales, capital expenditures and hiring, and will sit on their hands, or at best move slowly, if the future is cloudy for any reason.
- Federal policies on trade, immigration, health care and taxes are akin to the "rules of the road" for businesses and employers. Given that those rules may change under the current administration in Washington, there is every incentive to wait and see what will transpire.

Sacramento Transportation Authority Revenue Forecast

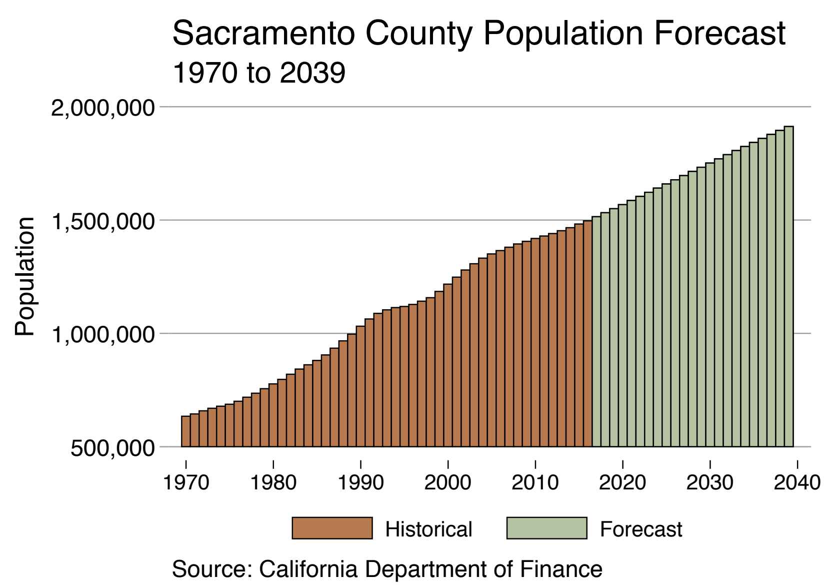
Beacon Economics' forecast for STA sales tax revenue assumes a baseline trajectory for the national economy. That is, the forecast assumes that federal government policies will not change in a way that affects the underlying dynamics of economic growth, and that the U.S. economy will continue to expand at a moderate pace. It should be noted, however, that with considerable uncertainty surrounding President Trump's policy actions, our outlook on short-term growth could change significantly. **Beacon** will monitor the situation and reassess as new information becomes available.

The outlook for the Sacramento economy in the short run calls for steady growth, with nothing on the immediate horizon that would signal a reversal of the positive trends in the latest data. Total nonfarm employment in the Sacramento metropolitan area reached a record high in June 2017, and the unemployment rate was at a post-recession low of 4.3% in May.

The pace of job growth has slowed notably from prior years, but this is due to an increasing shortage of labor in the region rather than a slowdown in business activity that would decrease the demand for labor. Employment growth has outpaced labor force growth in recent years, and the pace of job creation cannot continue to increase if the supply of labor grows at a slower rate. It is only a matter of time before the slack in the labor market (the number of unemployed and those who dropped out of the labor force) left over from the Great Recession is depleted.



Beacon's long-run outlook for STA sales tax revenue is driven by long-run assumptions about population growth, labor force participation and inflation. Sales tax revenue is based on spending, which is driven by employment dynamics. Ultimately this is driven by population growth and the share of the population that is working. Given that sales tax revenue is a nominal figure, inflation is also a critical component in determining long-run projections.



The California Department of Finance (DOF) projects Sacramento County's population will grow about 1.2% through 2021, slow to 1.1% through 2030 and then grow about 1% through 2039. This rate of population growth is well below the long-run average of 1.87% since 1970 and fits with demographic trends of slowing population growth over time.

Steady population growth will help fuel the region's labor force and spending base, supporting positive growth for STA revenue in the decades to come. For 2016, the California Employment Development Department estimated the labor force in Sacramento County to be 697,400. Given the DOF's estimate of the County's working-age population in 2016 of 1,186,007, labor force participation was at 58.8%. Labor markets across the country are essentially at full employment, which puts upward pressure on wages. In the years to come, labor force participation is expected to rise slightly as higher wages bring more people back into the labor force.

Higher wages are also expected to push inflation more in line with the Federal Reserve's 2% target, up from the weak price growth of the last few years. Although the national economy has recovered from the Great Recession, inflation has remained stubbornly low. In the second quarter of 2017 the price index for personal consumption expenditures (PCE), the Federal Reserve's preferred measure of inflation, was up 1.6% from the second quarter of 2016.

Aside from a blip in the first quarter of 2017 when the PCE price index increased 2% year over year, inflation has been below 2% on a quarterly basis since the first quarter of 2012. The weak inflation has been in large part due to the collapse in oil prices of the last few years. Now that the oil market has stabilized, higher wages driven by tight labor markets should push inflation toward the Fed's 2% target and support nominal growth in STA sales tax revenue.

Summary

Beacon Economics' forecast represents an optimistic outlook through 2038–39 and assumes that the U.S. economy will grow at a moderate pace, much as it has in recent years. Because of uncertainty surrounding Trump's policies, there is an inherent uncertainty within this forecast. **Beacon** continues to closely monitor policies as they are announced. Depending on what policies are enacted, **Beacon** will adjust its economic outlook accordingly.

Overall, the Sacramento economy is trending in the right direction, and nothing on the immediate horizon signals a reversal of that trend. The regional labor market is in good health, despite a general slowdown in job growth. Fuel prices have stabilized and are trending higher, which will support nominal growth in taxable sales. Long-run population growth, labor force participation and inflation are all expected to trend favorably, resulting in growth in STA revenue in the years to come.

Sacramento Transportation Authority Forecast

Revenue Stream	Actual	Forecast					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Taxable Sales ($ 000s)	22,662,517	23,742,974	24,539,218	25,514,523	26,482,152	27,343,521	28,172,937
Growth(%)	5.2	4.8	3.4	4.0	3.8	3.3	3.0
Sales and Use Tax ($ 000s)	110,708	116,354	120,659	125,655	130,255	134,555	138,555
Growth(%)	4.9	5.1	3.7	4.1	3.7	3.3	3.0

Source: Forecast by Beacon Economics

About Beacon Economics

Beacon Economics, LLC is a leading provider of economic research and forecasting, industry analysis, public policy analysis, and economic data services. By delivering independent, rigorous analysis, we give our clients the knowledge they need to make the right strategic decisions about investment, growth, revenue, and policy. Learn more at **www.BeaconEcon.com**.

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