

# Paradise Valley Revenue Risk Assessment



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# Paradise Valley Revenue Model – Research and Analysis

## Executive Summary

The Paradise Valley revenue model is based on: 1) Tourism (Special Use Permits and collection of bed tax) – accounts for 55% of the Town’s operating revenue; 2) New construction sales tax and permit revenues – accounts for 13% of the Town’s operating revenue; and 3) State-shared revenue. The Town of Paradise Valley does not have a primary or secondary property tax or any commercial or industrial zoning-based sales tax.

A number of potential threats to Paradise Valley’s revenue streams exist (e.g. the town has no annexable territory and is near build-out). In June and July of 2018, ASU’s Marvin Andrews Fellows identified and analyzed key risks to Paradise Valley’s revenue. Utilizing the top risks identified, the Fellows assessed the current and forecasted risk to Paradise Valley revenue streams using qualitative and quantitative factors.

The intent of the project is for Paradise Valley to identify and evaluate risks to its revenue streams in order to assist council and city staff as they make policy and financial decisions for the town. Based on the analysis performed, the top risks facing Paradise Valley’s revenue include: State Pre-emption / Legislative Action Risk, State-shared Revenue Modification / Reduction Risk, Population Change / Census Risk, and Income / Recession Risk. These risks, as well as the volatility and materiality of various revenue streams indicate that sales tax, particularly construction sales tax, as well as state shared revenue are at the highest risk for future changes in revenue.

### Objectives

- Analyze sustainability of Paradise Valley revenue model via a risk analysis of revenue streams
- Identify alternative ongoing revenue options (e.g. benchmarking with similar municipalities, researching alternatives)

### Scope

- Benchmark with comparable municipalities to identify:
  - Similarly situated residential metropolitan suburbs
  - Common revenue streams utilized
- Perform data analytics on Paradise Valley revenue trends / forecasts to identify high-risk areas

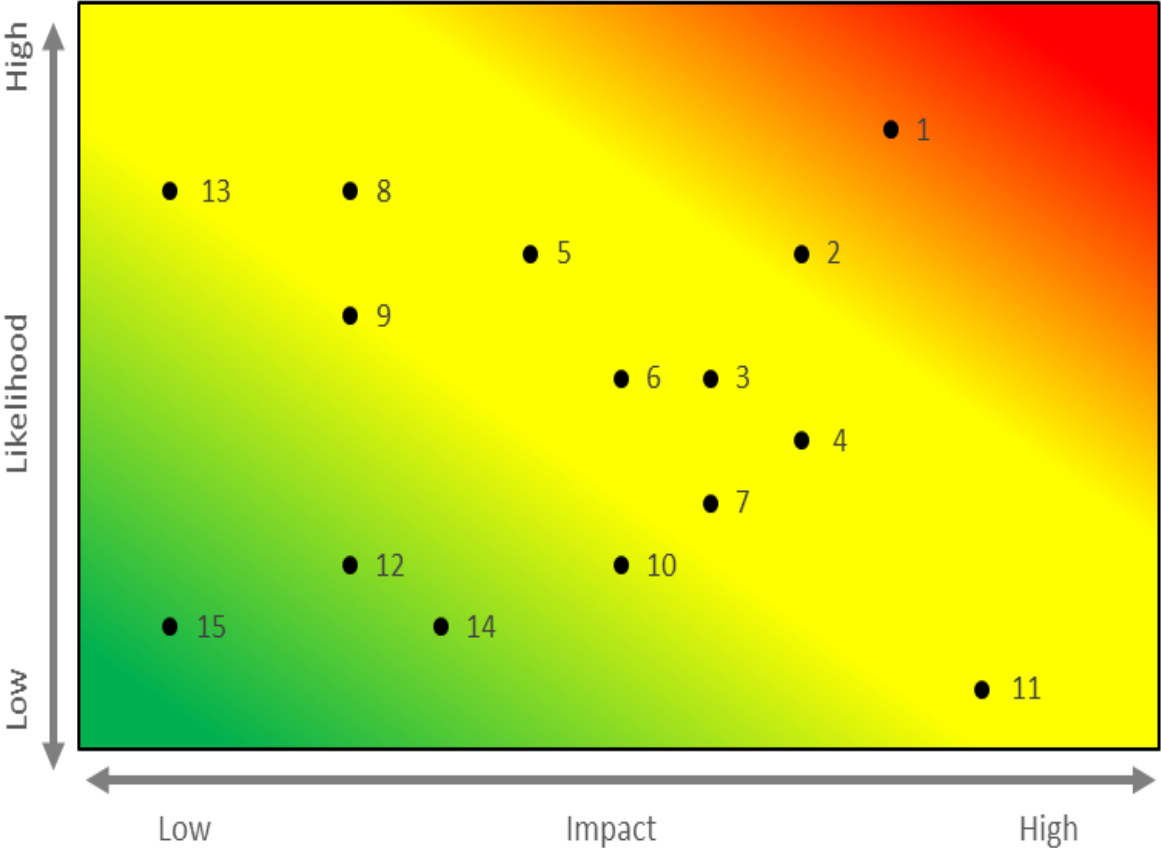


# Paradise Valley Revenue Risk Heat Map

## Purpose

The Revenue Risk Heat Map graphically displays potential risks to Paradise Valley's revenue streams based on their likelihood of occurring and quantitative impact if were to occur.

#	Risk Name
1	Stagnant Population
2	Revenue Sharing Redistribution
3	Recession
4	State Pre-emption
5	Home Sharing Popularity
6	Reduced Construction
7	Resident / Council Priorities Change
8	Occupancy Rates Decrease
9	Autonomous Vehicles
10	Revenue Collection Inefficiencies
11	Severe Weather / Climate Events
12	Demographic Changes
13	Red Light Camera
14	Partnership Agreements
15	Misappropriation / Fraud



# Paradise Valley Revenue Risk Assessment

## Purpose

The Revenue Risk Assessment qualitatively and quantitatively evaluates the vulnerability Paradise Valley's revenue streams.

Statement of Activities	Year Ended June 30, 2017	Quantitative*		Qualitative*				Revenue Risk Rating	
		Significance / Materiality	Volatility	State Pre-emption / Legislative Action Risk	State-shared Revenue Modification / Reduction	Population Change / Census Risk	Income / Recession Risk	Calculated Risk Rating (H, M, L)	Overall Risk Rating (May be manually adjusted)
<b>General Revenue</b>									
Sales Tax**	17,151,386	H	M	M	L	M	H	H	H
Construction	4,327,639	H	H	L	L	H	H	H	H
Hospitality	5,287,561	H	L	L	L	L	H	L	M
Communications and Utilities	957,578	M	L	M	L	M	M	L	L
Retail Trade	2,082,847	M	H	M	L	L	H	L	L
Manufacturing, Finance, Insurance and	441,528	L	H	M	L	L	L	L	L
Other	721,164	M	H	L	L	M	M	M	M
Bed Tax	3,701,739	H	M	M	L	L	H	M	M
Franchise Tax	1,056,547	M	M	L	L	L	M	L	L
State Revenue Sharing	1,703,256	M	M	H	H	H	L	H	H
State Sales Tax Revenue Sharing	1,277,675	M	L	M	M	M	H	M	M
Auto Lieu Tax Revenue Sharing	548,523	L	L	M	M	L	L	L	L
Investment Income	185,141	L	H	L	L	L	H	M	M
<b>Program Revenue</b>									
Fees, Fines and Charges for Service	4,719,896	H	H	M	L	L	M	M	M
Operating Grants and Contributions	1,144,233	M	M	L	L	L	M	L	L
Capital Grants and Contributions	208,085	L	H	L	L	L	L	L	L
<b>Total Revenues</b>	<b>27,994,742</b>								



# A. Paradise Valley Revenue Risk Assessment Set-Up

## Data Sources

- Paradise Valley Comprehensive Annual Financial Report (Statement of Activities) for Fiscal Years ending June 30th, 2015, 2016, and 2017

## Risk Assessment Ranking Criteria

Each revenue stream is evaluated and ranked as High, Medium, or Low risk for the quantitative and qualitative criteria outlined below. Each individual criteria will be combined to generate a calculated score used as a preliminary indicator of risk associated with that revenue stream. This calculated risk rating is just a starting point; judgment may be applied to determine the final rating. Refer to tab B. Risk Assessment Calculations for the thresholds utilized to quantify the calculated risk rating.

Quantitative	
1. Significance / Materiality	<p>Defined as the importance of the individual revenue source as a percentage of total revenue. The higher the materiality, the larger impact on the city's financial status. Significance and materiality is assessed as noted below and these risk assessment assumptions may be modified on the B. Risk Assessment Assumptions tab.</p> <ul style="list-style-type: none"> <li>- High: <math>\geq 5\%</math> of total revenue</li> <li>- Medium: <math>&gt; 1\%</math> and <math>&lt; 5\%</math> of total revenue</li> <li>- Low: <math>\leq 1\%</math> of total revenue</li> </ul>
2. Volatility	<p>Defined as the historic period over period change in the revenue source, indicating the ease with which it can be relied upon, monitored, and forecasted. The greater the degree of change year-over-year, the less predictability for the revenue source. Volatility is assessed as noted below and these risk assessment assumptions may be modified on the B. Risk Assessment Assumptions tab.</p> <ul style="list-style-type: none"> <li>- High: <math>\geq 35\%</math> fluctuation year over year</li> <li>- Medium: <math>&gt; 10\%</math> and <math>&lt; 35\%</math> fluctuation year over year</li> <li>- Low: <math>\leq 10\%</math> fluctuation year over year</li> </ul>
Qualitative (Top four risks identified via heat map)	
1. State Pre-emption / Legislative Action Risk	<p>Defined as the risk of state-level legislation negatively impacting revenue sources used by the city. Questions to consider around this risk include:</p> <ul style="list-style-type: none"> <li>- Could this revenue stream be impacted by state preemption?</li> <li>- Has the state historically changed legislation around this revenue area?</li> <li>- Are there any politically "hot topics" around this revenue stream?</li> </ul> <p>The more "yes" answers to the questions above, the higher the degree of state preemption or legislative action risk.</p>
2. State-shared Revenue Modification / Reduction Risk	<p>Defined as the risk of the state modifying intergovernmental revenue sharing calculations or distributions. Questions to consider around this risk include:</p> <ul style="list-style-type: none"> <li>- Is the distribution of this revenue source dictated by government outside of the city level?</li> <li>- Are modifications to the revenue formula around this area frequent?</li> <li>- Have technological, environmental, or social factors changed significantly around this area, indicating a future change might be forthcoming?</li> </ul> <p>The more "yes" answers to the questions above, the higher the degree of state preemption or legislative action risk.</p>
3. Population Change / Census Risk	<p>Defined as the risk of Valley-area population changes negatively impacting revenue sources used by the city. Questions to consider around this risk include:</p> <ul style="list-style-type: none"> <li>- Is the city population trending or forecasted to remain steady or decrease?</li> <li>- Are other cities in the same state-shared revenue pool) growing at a faster rate than the city?</li> </ul> <p>The more "yes" answers to the questions above, the higher the degree of state preemption or legislative action risk.</p>
4. Income / Recession Risk	<p>Defined as the risk of a financial recession or changing tastes negatively impacting currently stable revenue sources used by the city:</p> <ul style="list-style-type: none"> <li>- Have prior financial downturns had a significant negative impact on the city's revenue?</li> <li>- Is this revenue source sensitive to changes in retail, consumer preferences, or resident incomes?</li> <li>- Has recovery from prior financial downturns taken a significant amount of time?</li> </ul> <p>The more "yes" answers to the questions above, the higher the degree of state preemption or legislative action risk.</p>

## B. Risk Assessment Materiality and Volatility Calculations

### Statement of Activities FY 2017 Actual

Revenue Materiality			Total Revenue	\$	27,994,742.00
High Threshold	10%	>= 10% of Total Revenue:	High	Range	
Low Threshold	2%	> 2% and < 10% of Total Revenue:	Medium	Greater Than	\$ 2,799,474
		<= 2% of Total Revenue:	Low	\$ 559,895	\$ 2,799,474
				\$ 559,895	Or Less

Volatility (Historic and Forecasted)			
High Threshold	35%	>= 35% fluctuation year over year:	High
Low Threshold	10%	> 10% and < 35% fluctuation year over year:	Medium
		<= 10% fluctuation year over year:	Low

Calculated Risk Ranking of Weighted Average Risk Scores			
High Threshold	2	>= 2 weighted average risk score:	High
Low Threshold	1.5	> 1.5 and < 2 weighted average risk score:	Medium
		<= 1.5 weighted average risk score:	Low

## C. Paradise Valley Revenue Risk Rankings

### Summary

The following list of risks represents potential negative impacts on Paradise Valley's revenue streams. This range of risks should be considered in forecasting revenues and establishing revenue-related policies and procedures.

### Applicable Definitions

Risk: Any item which could negatively impact one or more of the city's revenue streams.

Likelihood: Rated on a 0-5 scale, likelihood is the probability of the risk occurring.

Impact: Rated on a 0-5 scale, impact is the magnitude of the negative effect on the city's revenue if the risk does occur.

#	Risk Name	Risk Detail	Likelihood	Impact	Total
1	Stagnant Population	The city's population does not grow as fast as other area cities, accounting for a reduced percentage of state population and resulting in a smaller share of state-shared revenue.	5.0	4.5	23
2	Revenue Sharing Redistribution	State legislative action modifies revenue sharing formulas or calculations resulting in reduced revenue for the city.	4.0	4.0	16
3	Recession	A recession negatively impacts hotel occupancy, reducing a major revenue source.	3.0	3.5	11
4	State Pre-emption	State legislative action removes or significantly alters one of the city's revenue sources or a state-shared revenue sources / collection resulting in reduced revenue for the city.	2.5	4.0	10
5	Home Sharing Popularity	Rising interest in home sharing (e.g. Air BnB, HomeAway) leads to a decrease occupancy rates in resorts and decreased bed tax.	4.0	2.5	10
6	Reduced Construction	Construction in the city slows, negatively impacting the permitting and fees revenue collected from it.	3.0	3.0	9
7	Resident / Council Priorities Change	Local priorities shift, voters and community leaders pursue changes in revenue structure.	2.0	3.5	7
8	Occupancy Rates Decrease	Increased hotel rooms within city boundaries decrease the city's hotel occupancy rate.	4.5	1.5	7
9	Autonomous Vehicles	Self-driving cars / car sharing could reduce auto shared revenue.	3.5	1.5	5
10	Revenue Collection Inefficiencies	Inefficiencies in revenue collection, misalignment between set fees and billing practices.	1.5	3.0	5
11	Severe Weather / Climate Events	A natural event or climate change decreases the popularity of the city as a tourist destination.	0.5	5.0	3
12	Demographic Changes	Demographic changes in the city results in differing or increased demand for services, requiring additional revenue sources.	1.5	1.5	2
13	Red Light Camera	Legislation could change regarding red-light cameras, resulting in a modification in public safety revenue.	4.5	0.5	2
14	Partnership Agreements	Partnership agreements with service partners (water, sewer, etc.) may be modified or cancelled resulting in the need for increased revenue.	1.0	2.0	2
15	Misappropriation / Fraud	Employee misappropriation of funds, fraud, or collusion impacts city revenue.	1.0	0.5	1