ATTACHMENT 1

The Government Finance Officers Association

A Risk-Based Analysis of General Fund Reserve Requirements for the City of Napa, CA

FINAL – March 2015

GFOA Reserve Analysis for the City of Napa

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Executive Summary

Reserves are the cornerstone of financial flexibility. Reserves provide a government with options for responding to unexpected issues and a buffer against shocks and other forms of risk. Managing reserves, however, can be a challenge. The main question is how much money to maintain in reserve—how much is enough and when does it become too much? This is a sensitive question, since money held in reserves is money taken away from constituents, and it could be argued that excessive reserves should be returned to citizens.

The City of Napa, CA (the "City") has been considering this question and has engaged the Government Finance Officers Association (GFOA) to analyze its General Fund reserve requirements based on an assessment of the City's risks compelling it to require a reserve. This report is intended to inform the policy the City might adopt on how much fund balance to retain in the General Fund as a reserve against risk.

The GFOA analyzed a variety of distinct risk factors to judge its implications for the City's reserve strategy. Analyzing risks and, consequently, sizing a reserve requires estimating highly uncertain events, like natural disasters and economic downturns. To develop an adequate response, GFOA used the "Triple-A" approach:

- **Accept.** First we must accept that we are subject to uncertainty, including events that we have not even imagined.
- **Assess.** Next, we must assess the potential impact of the uncertainty. Historical reference cases are a useful baseline.
- **Augment.** The range of uncertainty we really face will almost always be greater than we assess it to be, so we should augment that range. Historical reference cases provide a baseline, but that baseline may not be adequate to account for all future possibilities.

After analyzing the risks using the Triple-A approach, GFOA stepped back from the individual risk factors to consider how the risk analysis leads to a coherent overall strategy for managing risks through financial reserves.

Below is a summary of the risk factors that influenced GFOA's recommendation, with the more detailed analysis available in Section 3 of the report. Following the risk factor summary is a brief description of how GFOA arrived to an overall recommendation for reserves.

Primary Risk Factor – Revenue Volatility. Sales tax and transient occupancy tax (TOT) have historically represented 37 percent of the City's General Fund revenues. GFOA analyzed nearly 20 years of data for sales tax and TOT to identify a reserve recommendation. However, we also consider volatility within the entire General Fund revenue portfolio and reviewed the trends over the past nine years of data. Factoring in the potential budgetary reduction of 5 percent that Napa could make without severely disrupting services, a reserve of $7.5 million to counteract the effects of revenue volatility was determined.

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Primary Risk Factor – Extreme Events and Public Safety. Because of its location along the Napa River and West Napa Fault, the City is vulnerable to earthquakes and flooding. While the City can potentially seek reimbursement from the U.S. Federal Emergency Management Agency as well as the State of California, it does need funds to immediately respond to such extreme events. GFOA gathered data points on damages incurred by other California cities that were impacted by an earthquake and reviewed the City's historic experiences with floods. Because the entire amount for expenditures related to extreme events will be paid for by Napa over time, GFOA reviewed the timing of expenditures for the most recent earthquake to hone in on a reserve to address potential damages in the year following an extreme event. This amounted to a reserve of between $5.8 million and $15.2 million.

Primary Risk Factor – Capital Repairs and Replacement. An analysis by Public Sector Digest and GFOA revealed that four of the City's 20 bridges are assets of concern because they have either a condition score under 60 (poor condition) and/or have high average annual traffic counts (6,000 or higher). To help maintain the assets, the City could budget the average annual maintenance and repair requirement for the bridges, $1.3 million, based on the bridges' total replacement cost of $100.3 million and a useful life of 75 years. Additionally, GFOA recommends that the City adopt an asset management policy to help guide maintenance and replacement funding. GFOA recommends that the City should use the bridge's condition as a heavy weight for identifying and prioritizing projects to be funded from its CIP General Fund Reserve for any one-time improvement projects, as needed.

Primary Risk Factor – Growth of the Community. Napa is anticipating some residential and commercial activities over the near term of three-years. On the residential side, the City estimates 50 new units will be added annually over the next two years, with an additional 250 units in FY 2017/2018. Some commercial activities are anticipated for FY 2015/2016, with more to follow in FY 2017/2018, but there is a one-year lag before Napa collects the revenues from the residential and commercial activities. With population growth, municipalities are concerned about the lag time between when revenues are received from the new development and when residents move. To estimate current cost of services, we calculated cost per resident and applied that to the projected population. Accounting for the historical information on cost per resident, the City should reserve between $172,000 and $860,000 to service the new development before the revenues from the new activities becomes available to the City.

Secondary Risk Factor – Expenditure Volatility. Two risks that will impact the City's General Fund include the State's intervention on local revenues as well as the cost of clean-up due to environmental contamination. On the former, the City has conducted an analysis on its impact from changes to the MS4 Permit compliance program and the upcoming sunset of stormwater system service fees. GFOA drew from that analysis along with the City's records of unknown or unanticipated environmental clean-up costs associated with various projects. To address expenditure volatility, the City should reserve an amount of $939,000, which includes a one-time reserve of $489,000 related to the State's intervention.

Secondary Risk Factor – Leverage. A potential leverage risk is pension liabilities. A scenario where reserves could play a role in ameliorating rising pension costs is if City revenues are flat or declining. Steep increases in pension costs would make it more difficult for the City to reduce expenditures in the face of stagnant or declining revenues. Hence, a reserve could help the City make a more gradual

adjustment to its cost structure. In reviewing the City's projected required employer contribution to both the public safety and miscellaneous plans, GFOA identified the largest annual increase the City will face in the near future. In order to prepare to meet its pension obligations should City revenues decline or stagnant, Napa should reserve $1.4 million.

Recommendations. As outlined below, there are implied reserve amounts[1] for each risk, but in determining the final reserve target, we cannot merely sum up the figures in the table below. We must consider the issues of risk "interdependency" or the relationship between different risk factors and the probability of the risk occurring. Please note that in the table the subtotal for revenue volatility, community growth, expenditure volatility, and pension liabilities is represented separately from extreme events/public safety.

Specific Risk to General Fund	Less Risk Averse	Highly Risk Averse Amount
Revenue Volatility		
Transient occupancy tax (short-term)	$1,200,000	$1,200,000
Sales tax	$2,800,000	$2,800,000
Other General Fund revenues	$3,500,000	$3,500,000
Subtotal	**$7,500,000**	**$7,500,000**
Community Growth		
Subtotal	**$172,000**	**$860,000**
Expenditure Volatility		
State intervention	$489,000	$489,000
Environmental clean up	$450,000	$450,000
Subtotal	**$939,000**	**$939,000**
Pension Liabilities		
Subtotal	**$1,400,000**	**$1,400,000**
Foregoing Risk Factor Subtotal	**$8,600,000**	**$9,300,000**
Extreme Event/Public Safety		
Earthquakes	$4,300,000	$12,100,000
Floods	$1,500,000	$3,100,000
Extreme Event/Public Safety Subtotal	**$5,800,000**	**$15,200,000**
ALL RISK FACTOR TOTAL	**$15,800,000**	**$25,900,000**
Percent of General Fund 2014 Revenues	**22%**	**36%**

If there is a great deal of dependency between the risks, then when one risk occurs it is highly likely that the others will as well. For these risks, it is wise to hold reserves in the full amount of implied reserve for each dependent risk factor. However, if there is some degree of independence, then it is highly unlikely

[1] Targets have been rounded to nearest "whole" numbers for ease of use in policy making. Also, see the main body of the report for a discussion of the independence of the risk factors and the implication for sizing the reserve.

that the independent risks will occur at one time so holding the full implied reserve amount for each independent risk might be excessive. The City's major risk dependency is between extreme event/public safety risks and revenue volatility because a major earthquake or flood in Napa Valley could interrupt the travel and tourism industry that provides the area's sales tax and TOT revenues. When risks are likely to occur, it is wise to hold full implied reserve amount. When risks have a low probability of occurring and are independent of one another, then it is possible to hold less than the implied reserve amount.

In determining its reserve target, Napa should also consider three factors that are relevant to sizing a reserve:

- **Government size:** As a moderate-size municipality, Napa should, at a minimum, observe GFOA's Best Practice to maintain a General Fund reserve of 16 percent of regular general fund operating revenues or regular general fund operating expenditures.[2] Please note that GFOA's recommended reserve level for the City of between 22 and 36 percent of General Fund revenues is above the minimum industry best practice threshold.
- **Borrowing capacity:** The City does not have significant debt. This suggests that Napa has the flexibility to access capital from the debt market. This could be an alternative to reserves.
- **Public safety/Extreme event mitigation strategies:** The City does include in its capital improvement plan projects to mitigate the impact of earthquakes, floods, and other extreme events. These preventative activities may suggest that the City's future exposure to extreme events is lower than its historical experience would indicate. Napa's strategy of reducing its risk of loss from extreme events could justify a reserve target towards the lower end of GFOA's suggested range.

Ultimately, Napa will need to assess its appetite for risk. If the City is more risk averse, then it could reserve the total of the implied reserve amount of $25.9 million or 36 percent of General Fund revenues. If the City has a larger appetite for risk, it could reserve $15.8 million or approximately 22 of its General Fund revenues. The large range is due to the range of possibilities from an earthquake, including the more costly 2014 South Napa event. As such, the upper end of the range represents a worst case scenario and provides coverage for all of Napa's risks occurring at the same time – hence it is a very risk averse approach. In determining an exact amount of reserves to maintain, the City should consider its size, borrowing capacities, and extreme event mitigation strategies and how that affects the amount it needs to reserve. These considerations and more are discussed in greater detail in the main body of the report. Further, GFOA recommends that the City refine its General Fund reserve policy to identify how it will replenish reserves. GFOA also recommends that the City adopt policies on asset management, volatile revenue, grants, and interfund borrowing to help mitigate risks and to be more resilient to shocks and stresses.

[2] GFOA, "Best Practice:
Determining the Appropriate Level of Unrestricted Fund Balance in the General Fund," October 2009, http://www.gfoa.org/determining-appropriate-level-unrestricted-fund-balance-general-fund.

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GFOA applauds the City's fiscal policies for explicitly recognizing the purposes of the reserves and for identifying the target level of the General Fund Emergency and operating reserves in its financial policies. This provides for greater transparency on why the City holds reserves. GFOA does recommend the City review its reserve levels based on the risks analyzed in this report. GFOA also recommends formal policies that Napa may wish to consider that will further support its overall reserve strategy.

- The City should strengthen its formal General Fund reserve policy by providing guidance on how to replenish reserves back to target levels when necessary.
- An asset management policy will help support the City's reserve strategy because acquisition and maintenance of capital assets is a major draw on the City's resources. An asset management policy will only complement the City's strong capital improvement budget policies and standardize its approach to asset maintenance and replacement. This will create greater predictability in capital financing needs thereby improving the flexibility of the City's financing structure.
- A volatile revenue policy declares unusually high yields from volatile revenue sources as the equivalent of one-time revenue. For example, if the City has a record breaking year for retail sales it would be unwise to consider the resulting sales tax as the new baseline for the amount of sales tax revenue the City should expect in future years and to plan spending accordingly. Rather, the revenue above and beyond what might be considered "normal" should be used for non-recurring expenditures.
- A grant policy recognizes the risks of overreliance on grants and directs how to manage those risks. A policy could still encourage grant-seeking, but place caution on how they can impact a government's long-term position.
- An inter-fund borrowing policy could help reduce the amount of reserves needed in the City's General Fund by providing short-term, emergency loans from other funds to cover any risks. Napa should consider whether developing an inter-fund borrowing policy is a strategy it wants to adopt. If so, the City should then analyze the health of the other funds to assess their suitability as "lenders." If they are found to be suitable, then the City should draft a clear policy to describe the conditions under which loans are acceptable, the maximum term of the loans, and guidelines for interest charges on the loan.

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Section 1 - Introduction

Reserves are the cornerstone of financial flexibility. Reserves provide a government with options to respond to unexpected issues and afford a buffer against shocks and other forms of risk. Managing reserves, though, can be a challenge. Foremost, is the question of how much money to maintain in reserve? How much is enough and when does a reserve become too much? This can be a sensitive question because money held in reserve is money taken from constituents, and the argument could be made that excessive reserves should be returned to citizens in the form of lower taxes or additional services.

The City of Napa has been considering this question recently, especially as elastic revenue sources (sales tax and transient occupancy tax (TOT)) are significant portions of its revenue portfolio, the area's vulnerability to earthquakes and flooding, and its aging bridge infrastructure. The City engaged the GFOA to help produce a recommendation. GFOA is a non-profit association of over 18,000 state and local government finance professionals and elected officials from across North America. A key part of GFOA's mission is to promote best practices in good public finance, including reserve policies.

GFOA's approach to reserves does not suppose "one-size-fits-all." GFOA's "Best Practice" on general fund reserves recommends, *at a minimum*, that general-purpose governments, regardless of size, maintain unrestricted fund balance in their general fund of no less than two months of regular general fund operating revenues or regular general fund operating expenditures (i.e., reserves equal to about 16 percent of revenues).[3] However, this 16 percent is only intended as a baseline, and it needs to be adjusted according to local conditions. To make the adjustment, GFOA worked with the City to conduct an analysis of the risks that influence the need for reserves as a hedge against uncertainty and loss.

A "risk" is defined as the probability and magnitude of a loss, disaster, or other undesirable event.[4] The GFOA's framework of risk assessment is based on the risk management cycle: identify risks; assess risks; identify risk mitigation approaches; assess expected risk reduction; and select and implement mitigation methods. The framework focuses primarily on risk retention, or using reserves, to manage risk. However, the framework also encourages the City to think about how other risk management methods might alleviate the need to retain risk by building up larger fund balances. In other words, can the City manage its risks in some other way besides holding a reserve? Hence, a thorough examination of the risk factors should not only help lead to a customized reserve target size, but also improve the City's understanding of the risks it faces and its overall financial risk profile.

As a first step to this project, GFOA conducted a basic review of the risk factors that generally influence the amount of reserves a municipal government should hold.[5] This review enabled the City and GFOA to classify factors as primary risks or as secondary risks. Exhibit 1.1 lists how the risk factors were classified.

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[3] GFOA Best Practice. "Appropriate Level of Unrestricted Fund Balance in the General Fund." GFOA. 2009.

[4] Definition of risk taken from: Douglas W. Hubbard. *The Failure of Risk Management: Why It's Broken and How to Fix It.* John Wiley and Sons, Inc. Hoboken, New Jersey. 2009.

[5] The risk factors and basic review method were developed and published in the GFOA publication: Shayne C. Kavanagh. *Financial Policies*. (Government Finance Officers Association: Chicago, IL) 2012.

Exhibit 1.1 – Categorization of Risk Factors that Influence Reserve Levels for Napa	
Primary Risk Factor	
Revenue Volatility (particularly sales tax and transient occupancy tax)	
Vulnerability to Extreme Events and Public Safety Concerns (particularly earthquakes and flooding)	
Capital Repairs and Replacement (particularly bridges)	
Secondary Risk Factors	
Dependency of other funds on the General Fund	Expenditure Volatility
Leverage	Growth of the Community
Liquidity / Cash Flow	

The rest of this report is composed of the following sections:

- **The approach to uncertainty.** Risks are, by definition, uncertain events. Section 2 describes the "Triple-A" approach to analyzing and planning for uncertain events. The Triple-A approach was used to analyze the risk factors described in Exhibit 1.1.
- **Primary risk factor analysis.** Section 3 analyzes the risk posed by revenue volatility, particularly in sales tax and TOT. This section also addresses risks the City faces from catastrophic natural events such as earthquakes, and the reserves needed to be able to respond effectively.
- **Secondary risk factor analysis.** Section 4 reviews secondary risk factors that have less weighty implications for the City's General Fund reserve strategy.
- **Final recommendation.** Section 5 of the report presents the conclusion of the analysis. It addresses a target reserve level for the City's General Fund and provides other suggestions to improve the financial health of the City and to support a sustainable reserve strategy.

Section 2 - The Approach to Uncertainty

Risks are inherently uncertain. The accomplished forecasting scientist, Spyros Makridakis, suggests a "Triple-A" approach for dealing with highly uncertain phenomena.[6]

1. **Accept.** First we must accept that we are subject to uncertainty. For example, our analysis of sales tax shows that it is subject to relatively little seasonal variation when removing disbursements from Triple Flip (see Section 3), however, it is clearly subject to uncertainty from the economic cycles and other factors that could interrupt economic activity in Napa. Because it is relatively easy to imagine scenarios that could cause the Napa Valley economy or tourism industry to suffer, we must also accept that the City's financial position is also subject to additional potentially dangerous unknowns that we cannot imagine.
2. **Assess.** Next, we must assess the potential impact of the uncertainty. Past history can provide a useful reference point. To illustrate, later in this report we will review the degree of fluctuation Napa has experienced with its sales tax and transient occupancy tax (TOT).

[6] See: Spyros Makridakis, Robin Hogarth, and Anil Gaba. *Dance with Chance: Making Luck Work for You*. (Oneworld Publications: Oxford, England). 2009.

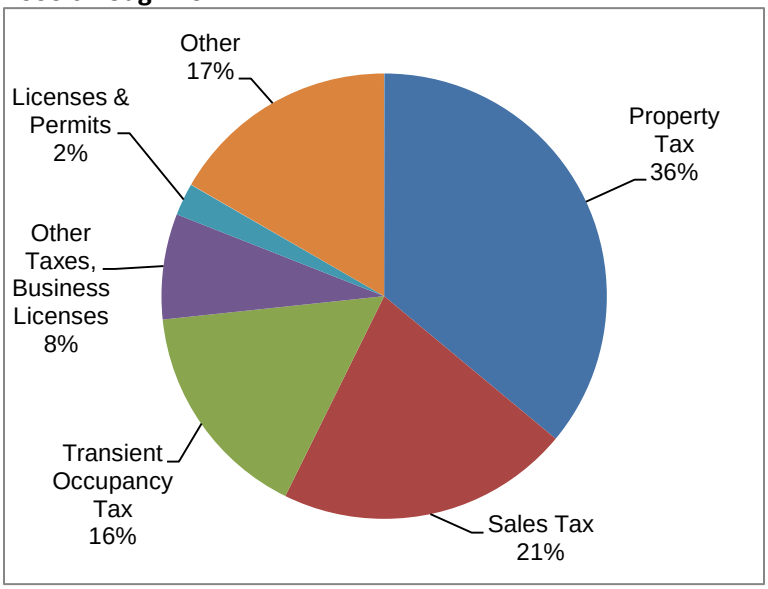
3. **Augment.** The range of uncertainty we actually face will almost always be greater than what we assess it to be, so we should augment that range. For example, we will later see in Section 3 that Napa experienced a 5.5 percent decline in TOT in the wake of the Great Recession. Hence, if we were to look just at that data, we could conclude that a 5.5 percent decline was a reasonable "worst case scenario" given the severity of the Great Recession. However, it is not difficult to imagine the City experiencing an unanticipated event that causes a more dramatic decline in the TOT than occurred during the Great Recession - in fact, as we will see later in this report, the combination of the recession was masked by the additional hotel inventory and resulting increase in the size of the TOT tax base. If the number of available rooms had remained the same as in prior years the City could have experienced a larger decline in TOT revenue. Hence, it would be prudent to augment our expectations of uncertainty to account for more than a 5.5 percent decline in TOT revenues. Makridakis suggests a mathematical rule-of-thumb to guide this augmentation. If you have used relatively little historical data to assess the degree of uncertainty, he suggests doubling your assessed amount of uncertainty. If you have used more historical data, the multiplier need only be 1.5.

We will refer to the Triple-A approach and its guidelines throughout the analysis.

Section 3 - Analysis of the City's Primary Risks

This section presents the analysis of the City's primary risks – the volatility of its revenue portfolio, public safety concerns arising from earthquakes and floods, and capital repairs and replacement needs of its bridges. Subsection "A" will address revenue volatility, "B" will address extreme events, and "C" will address capital repairs and replacement.

Exhibit 3.1 – Relative Share of General Fund Revenues from 2006 through 2014*



*Based on unaudited 2013-2014 figures

Property taxes, sales taxes, and TOT are the three most imporant revenues in the General Fund

A. Revenue Volatility

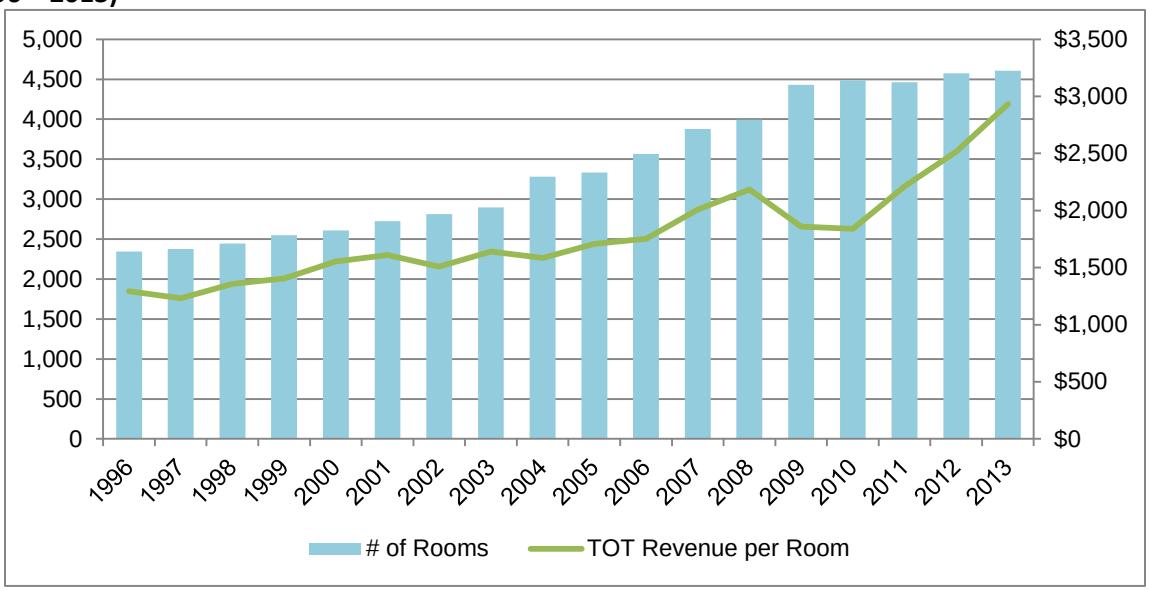
The City of Napa's General Fund relies primarily on three revenue sources: property tax, transient occupancy tax (TOT), and sales tax. As Exhibit 3.1 shows, these three comprise 73 percent of all General Fund revenues since FY 2006. Generally, in local government finance, property taxes have a reputation for being fairly stable and that appears to be true of property taxes in Napa as well. Since FY 2006, property taxes revenues have increased by as much as 14.1 percent year-over-year and decreased by 5.6 percent, for a total range of

19.7 percentage points. This contrasts with sales tax and TOT. Since FY 2006, sales tax revenues have increased by as much as 13.6 percent year-over-year and decreased by as much as 13.0 percent for a total range of 26.6 percentage points. TOT revenues have increased by as much as 24.5 percent and declined by as much as 5.5 percent year-over-year, resulting in a range of 30.0 percentage points (the next subsection explains some of the factors underlying these swings). Hence, understanding revenue volatility in the City's entire General Fund revenue portfolio must start with understanding volatility in TOT and sales taxes in particular. We will examine these revenues in the next two subsections and then return to the City's General Fund revenue portfolio as a whole in the third subsection.

Transient Occupancy Tax. Between FY 1996 and FY 2014 the City has received, on average, about $6.9 million per year from TOT. During that time period TOT revenues recorded a strong compounded annual growth rate of 9.4 percent, but it is within recent years that TOT has become the City's third most important revenue source, eclipsing sales tax. In FY 2014 the City received about $15.2 million from TOT, edging sales tax by approximately $20,000. In comparison, the City only received $3.0 million in TOT revenue in FY 1996. Rising TOT revenues in Napa is primarily due to two factors. First is the increasing demand for hotel rooms: the supply of hotels has increased. In 1996 the number of hotel rooms in Napa County was 2,345, compared to 4,604 in 2013. While this statistic represents a broader geographical area than the City's limits, over half of the County's hotel rooms are located within the City.[7] To place this in the context of TOT revenues, Exhibit 3.2 shows the growth in the number of hotel rooms in the County and the City's revenues per hotel room available in the County. Between 1996 and 2013, the number of hotel rooms has nearly doubled, while TOT revenue per room has increased 1.3 times. This indicates a strong hotel market in the Napa region. The second factor is the average daily rate (ADR) of a hotel room in Napa County has steadily increased over the years from $133 a night in 1996 to $262 a night in 2013.

[7] In 2013, of the 4,604 hotel rooms in Napa County, 2,418 were located in the City.

Exhibit 3.2 – Hotel Room Growth in Napa County and Relative City TOT Revenue per Hotel Room (1996 – 2013)



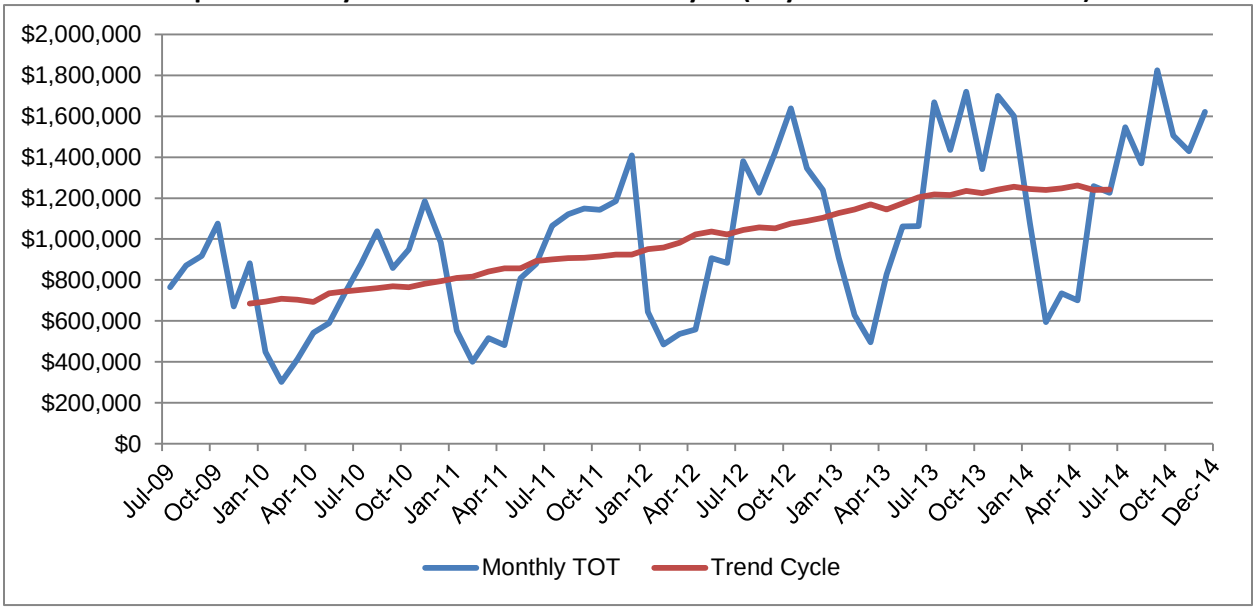
The City's TOT revenue per available hotel room has outpaced hotel room growth in the County.

Another interesting feature of the TOT is that it has a seasonal pattern. Exhibit 3.3 plots monthly revenues from July 2009 through December 2014 as the blue line. Please note that the monthly figures are based on cash basis reporting. Receipts for month end are due 45 days after the close of the month, so January's TOT revenues are based on November/December lodging. The blue line shows that the low point in the City's TOT revenue always occurs in the first quarter of the calendar year and generally occurs in February, with the exception of 2013 when it occurred in March. From there, the TOT revenues ascend into the fourth quarter — usually peaking in October or November, with the exceptions of 2012 when revenues peaked in December and 2014 when revenues peaked in September. Strong TOT revenues in September and October indicate a busy summer season. Similarly, strong TOT revenues in November and December are generally associated with the area's harvest or "crush" season. More striking is the monthly percent changes in TOT revenues during the second half of 2013. As the exhibit illustrates, a monthly gain was recorded in July, followed by a monthly decline in August and this pattern continues through December. Meanwhile, TOT revenues recorded during the second half of 2013 were $9.5 million, compared to $8.3 million for the same period in 2012. Monthly TOT revenues during the second half of 2013 also outpaced 2012, with the exception of November which recorded 0.3 percent less than November 2012. Visit Napa Valley, the area's tourism bureau, suggests that marketing efforts are attributed to improving tourism during the off season. Particularly, the Napa County Tourism Improvement District was created to help fund marketing programs to increase occupancy during the off season from November through April.[8]

[8] Visit Napa Valley, "Fiscal 2013 End of Year Report and Fiscal 2014 Overview," http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0CE4QFjAI&url=http%3A%2F%2Fservices.countyofnapa.org%2FAgendaNet%2FDownloadDocument.aspx%3Ftype%3DBOS%26doctype%3DATTACHME

Of note, the monthly TOT revenue figures do capture initial effects of the August 2014 earthquake. The earthquake closed over 200 rooms for repairs that extended into November 2014. As a result, October's monthly TOT revenue, which reflects lodging for August/September, changed by 17.5 percent compared to the prior month and November's revenue figures were down 5.1 percent compared to October. However, revenues in December rebounded for a three-month high of $1.6 million indicating strong improvement in lodging for October/November. The rebound has been attributed to quick rebuilding and re-opening efforts of businesses.[9]

Exhibit 3.3 – Napa's Monthly TOT Revenues and Trend Cycle (July 2009 – December 2014)



The City's TOT revenues have enjoyed a steady upward trend over the past few years.

Exhibit 3.3 also includes, as the red line, the "trend-cycle." As the name implies, a trend-cycle line is intended to show longer term trends and the impact of business cycles by smoothing out seasonal (i.e., monthly) variation. The trend-cycle line is calculated by using a 12-month "centered moving average." A 12-month centered moving average defines the average value for a given month as the mean of that month plus the six months before, plus the five months after. So, for example, in Exhibit 3.3 the moving average for January 2010 would be an average of August 2010 through July 2011. February 2011 would be an average of September 2010 through August 2011, and so on. As shown in the exhibit, the trend-cycle line gradually moves upward from 2009 through 2014.

While this steady upward trend certainly reflects positively on Napa's financial position, the available historical monthly data does not give us a great sense of what the potential for a decline in the TOT

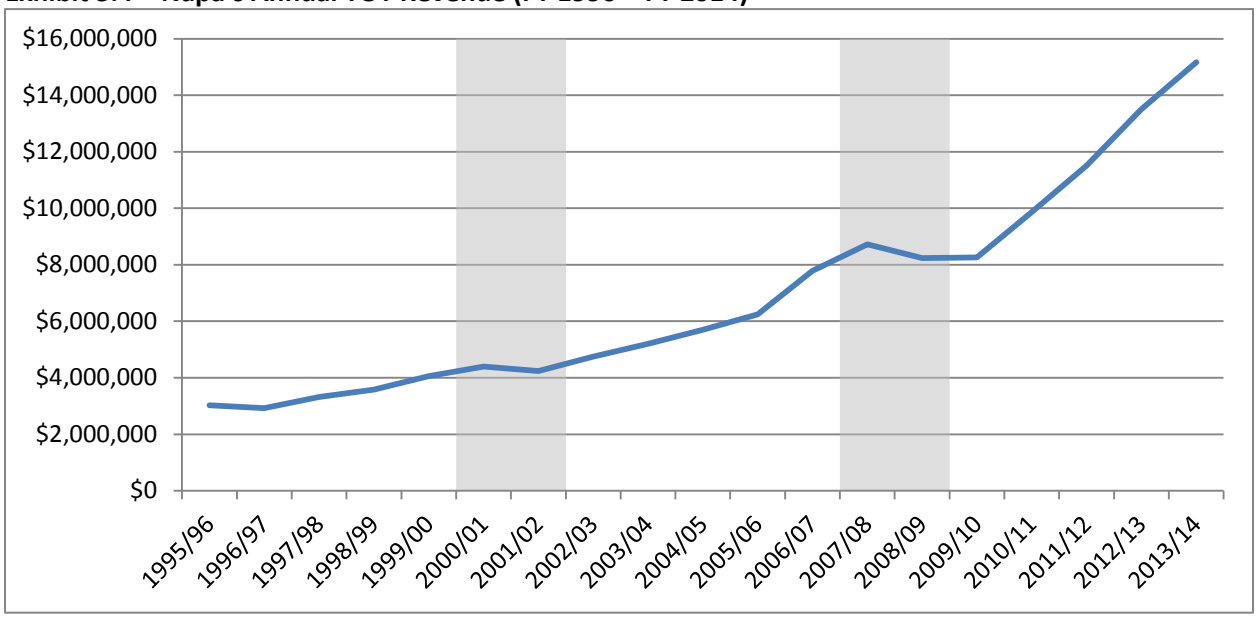
NT%26id%3D28722&ei=ljOjVJi-lomzyAS40IGgAw&usg=AFQjCNFwq6fg_MgHzqg5N0_ppRNTXDXjYg&sig2=fd0i_t9r7RhMfbfcdnmjQw&bvm=bv.82001339,d.aWw&cad=rja.

[9] Janet Fletcher, "Downtown Napa finds its balance after major earthquake," *San Francisco Chronicle*, October 10, 2014, http://www.sfgate.com/travel/article/Downtown-Napa-finds-its-balance-after-major-5815115.php.

might be because it does not capture the 2001 Dot-com Recession and does not fully capture the period of the Great Recession.

Annual TOT data,[10] as shown in Exhibit 3.4, does provide some insight into both business cycles. The City experienced a decline in TOT revenues from FY 2001 to FY 2002 of approximately 3.4 percent. For the more recent Great Recession, the City recorded a 5.5 percent decrease in TOT revenues between FY 2008 and FY 2009. In 2010 TOT revenues rose a nominal 0.2 percent before rapidly rising. Between 2011 and 2014, the City's TOT revenues have seen double digit percent increases—ranging from 12.3 percent to 19.6 percent. By way of comparison, as discussed in the next subsection, sales tax revenues have seen more modest annual increases of between 5.5 percent and 9.6 percent.

Exhibit 3.4 – Napa's Annual TOT Revenue (FY 1996 – FY 2014)



TOT revenues declined slightly post the dot-com crash and the Great Recessions (shaded in gray).

[10] Note that monthly figures on TOT and sales tax revenues are on a cash basis and annual figures are based on an accrued basis.

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Transient Occupancy Tax
Napa Valley, including the City of Napa, has experienced double-digit TOT revenue growth rates in each of the past four years. This growth is expected to level off in the foreseeable future.[11] For the City, a factor that attributes to this is the area's high average daily rate.

To further understand the impact of the business cycles, Exhibit 3.5 compares the annual changes in lodging statistics for the years capturing both recessions.[12] As mentioned earlier in this subsection, hotel demand can be gauged by ADR. Hotel demand can also be gauged by occupancy rates. Additional hotel rooms entering the market can put downward pressure on these two demand indicators as consumers have more hotel options to select from. Based on the statistics below, it is likely that the larger addition of area hotel rooms, 11 percent year-over-year change or 438 rooms, in 2009 placed greater downward pressure on occupancy and ADR than in 2001. In 2001, occupancy decreased by 15 percent and ADR decreased by 5 percent over the previous year, with an additional 5 percent or 118 rooms.

Exhibit 3.5 – Year over Year Percent Change in Lodging Statistics for Napa County, CA (2001-2002 and 2008-2009)

	Year	Occupancy	ADR	Number of Rooms
Dot-Com Recession	2001	(15%)	(5%)	5%
	2002	4%	(1%)	3%
Great Recession	2008	(3%)	14%	3%
	2009	(13%)	(4%)	11%

While the Dot-com Recession appears to have had a more negative impact on the area's hotel occupancy and ADR rates than the Great Recession, the addition of 438 new hotel rooms in 2009 created a larger TOT tax base for the City. In short, a greater supply of hotel rooms resulted in a larger TOT tax base and more TOT revenues as Napa becomes a stronger draw to tourists. However, the City should also prepare for the day when additional room supply cannot mask occupancy or ADR. If we consider how the City's TOT revenues would have behaved without the addition of the 438 hotel rooms in 2009, the year-over-year decline would have been 14.9 percent.[13] While this does not consider how the 438 hotel new rooms affected occupancy, taking into account how revenue would have behave absent the prodigious growth in room availability is a prudent strategy because Napa's TOT revenues will likely flatten out in long-term given the eventual limits on the physical space available for new hotel rooms that the City will run into. Over the next five years, though, the City projects additional hotel developments and expansion of existing properties. This will add an estimated 900 rooms in Napa.

[11] Jennifer Huffman, "Napa lodging revenue rebounds after quake," *Napa Valley Register*, December 13, 2014, http://napavalleyregister.com/news/local/napa-lodging-revenue-rebounds-after-quake/article_019d5a89-f8b4-5e9a-afbb-d2797771fbe7.html.

[12] Note that the lodging statistics are represented in calendar year and Napa's TOT annual revenue figures are represented in fiscal year.

[13] This is based on a removing the new room supply from the total TOT revenue using the TOT revenues per hotel room in 2009 of $1,860.40.

Given the vastly different growth dynamics TOT will be subject to in the long and the short-term, there are two TOT volatility scenarios for which the City could prepare for. In the short-term, it could set aside an amount that reflects the risk of revenue decline the City is subject to under its current rate of TOT tax base growth. That would mean setting aside an amount aligned with the City's largest annual decline in TOT revenues, 5.5 percent in 2009. The longer-term view considers both the maximum annual decline and that the number of rooms cannot continue to grow forever. For that scenario, we reference the 14.9 percent, which removes the additional rooms in 2009 from the annual total TOT revenues.

The Triple-A approach tells us that we should increase our expectations for uncertainty and since we reviewed nearly 20 years of information, we apply a multiplier of 1.5 to the reference point for the short-term scenario (5.5 percent) and long-term scenario (14.9 percent). This equates to a maximum plausible decline in TOT revenues of 8.25 percent during the short-term time horizon and 22.3 percent during the long-term. Stemming from these percentages, a reasonable strategy for Napa would be to set aside $1.3 million for TOT revenue volatility for the near-term, when room growth is expected to continue. At the point when room growth levels off, Napa should revisit its reserve strategy and give consideration to a reserve closer to 14.9 percent of the then current TOT revenues (as of this writing the number is $3.4 million, but the TOT tax base and attendant revenues will presumably be larger in the future).

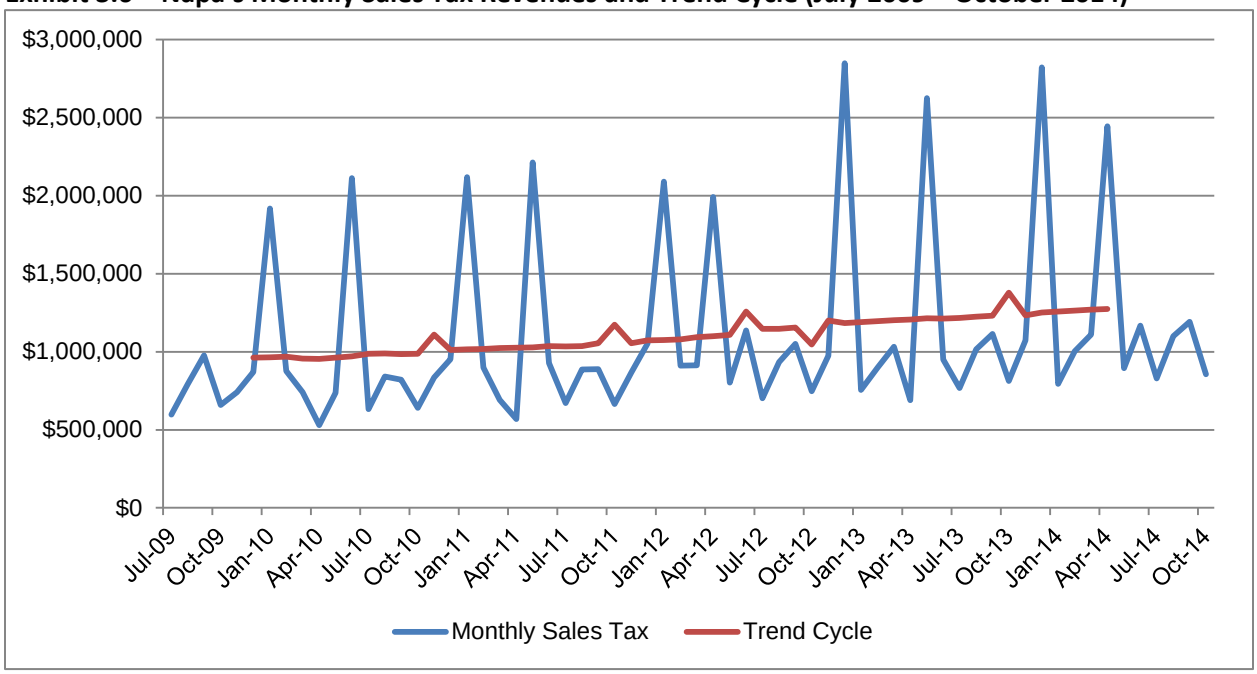
Sales Tax. Since FY 1996 the City has received, on average, $11.0 million per year from sales taxes. Until FY 2014, it was Napa's second largest General Fund revenue source. Between FY 1996 and FY 2014, the City's sales tax revenue recorded a steady compounded annual growth rate of 4.9 percent.

Similar to TOT, Napa's sales tax revenues experience seasonal patterns. This is because of Proposition 57, approved in 2004, a temporary measure whereby the local government portion of the statewide sales tax rate decreased by 0.25 percent and the state portion increased by 0.25 percent in order to repay state bonds. In turn, counties shifted property taxes from school and community college districts to replace the diverted local sales tax dollar by dollar.[14] Napa County provides the City with semi-annual property tax payments in lieu of the diverted monthly sales tax revenue, which are evident in the spikes shown in Exhibit 3.6. The County's payments are also evident as spikes in the trend cycle line, shown in red, which further indicates the volatility of the City's sales tax revenue.

[14] Legislative Analyst's Office, "Triple Flip: Administration's trailer bill proposal related to future "triple flip" unwinding mechanism," *Summary of LAO Findings and Recommendations on the 2013-14 Budget*, last modified March 15, 2013, http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?Yr=2013&KeyCol=727.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.6 – Napa's Monthly Sales Tax Revenues and Trend Cycle (July 2009 – October 2014)

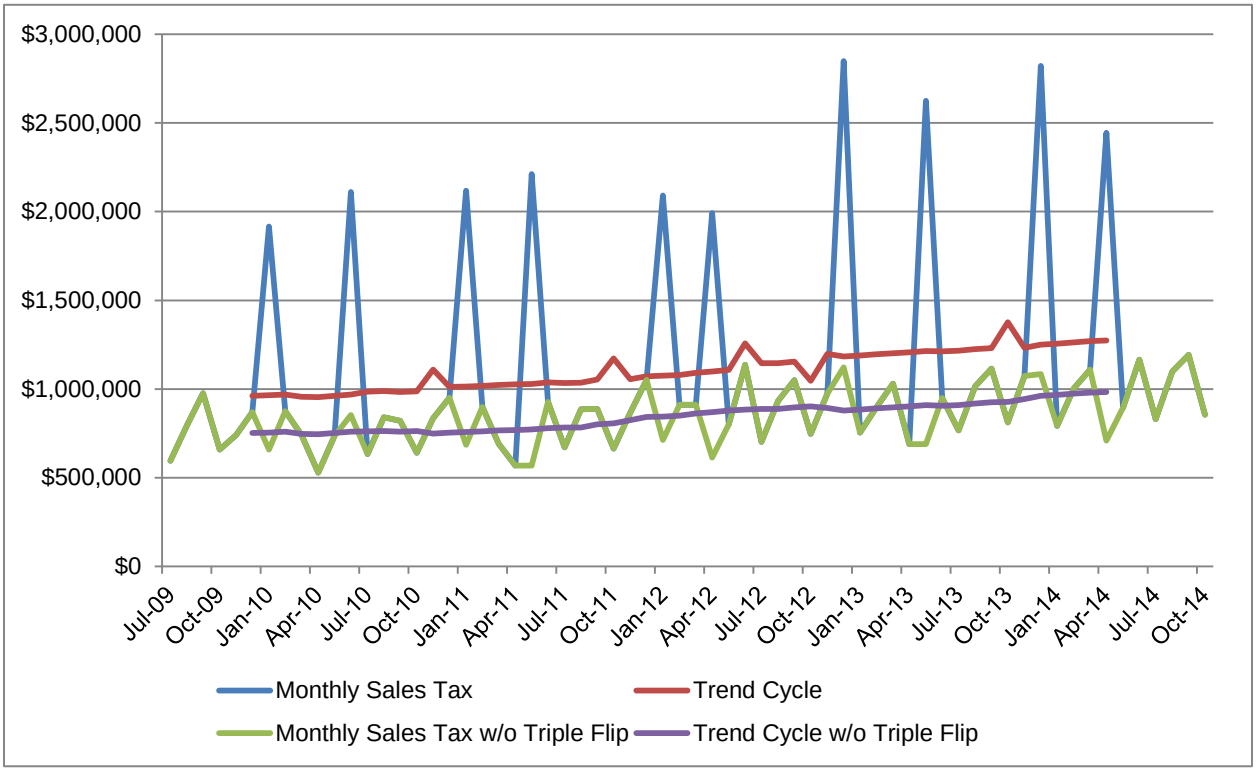


The City's monthly sales tax revenues are quite volitale due to Triple Flip disbursements.

The State projects that Triple Flip distributions will end in spring/fall of 2015, though a precise timeframe has not been determined. Exhibit 3.7 duplicates Exhibit 3.6 but adds in lines for monthly sales tax revenue (green) and its trend cycle (purple) that have been modified to remove the Triple Flip disbursements. What is important about these lines are the trends that they depict, not so much the dollar amounts, because they depict the volatility of monthly sales tax revenues. As the exhibit shows, the monthly sales tax revenues are volatile, but are stable when considered over the course of an entire year.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.7 – Napa's Monthly Sales Tax Revenues and Trend Cycle with and without Triple Flip (July 2009 – October 2014)

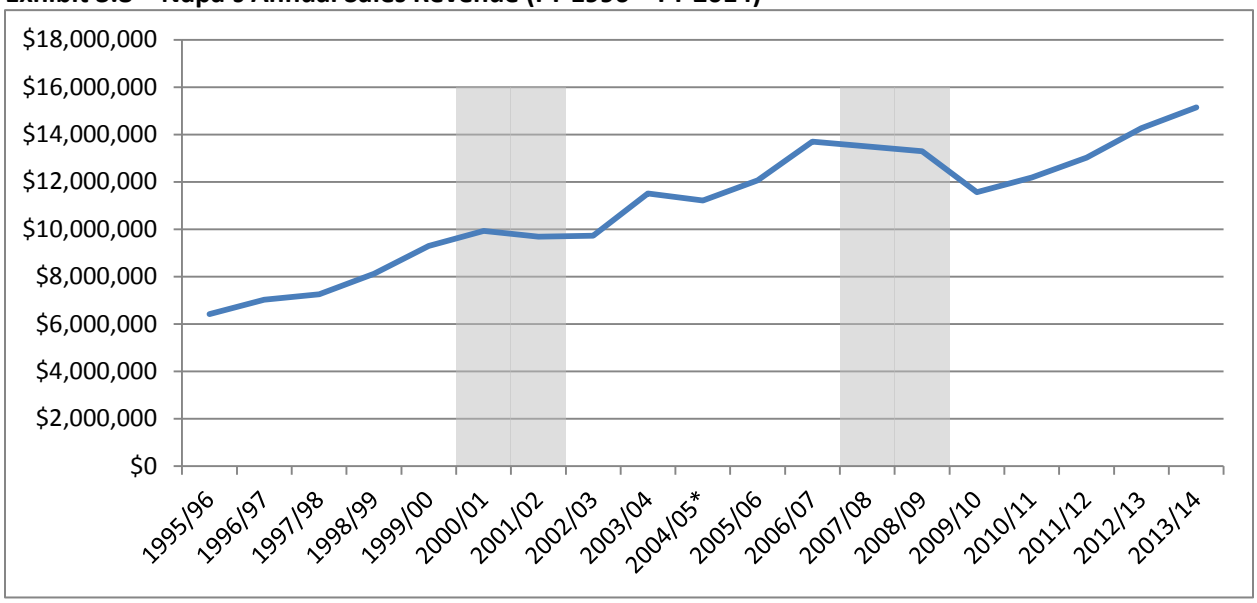


Without the affects of Triple Flip, the City's monthly sales tax revenues remain volatile, but are steady when considered over an entire year.

As with the historic monthly TOT revenue figures, the monthly sales revenue figures do not capture the 2001 Dot-com Recession and does not fully capture the period of the Great Recession. Exhibit 3.8 shows Napa's annual sales tax revenues between FY 1996 and FY 2014. During the Dot-com Recession between FY 2001 and FY 2002, the City's sales tax revenue declined by 2.5 percent before rebounding the following year. The Great Recession had a more significant impact. At the start of the Great Recession, the City's sales tax revenues were already trending downwards. Sales tax revenues for FY 2008 were down 1.4 percent compared to FY 2007, when it reached a previous peak of nearly $13.7 million. In FY 2009, sales tax revenue further decreased by 1.6 percent and by FY 2010 had sharply declined by an additional 13.0 percent. Since that time the City's sales tax revenues have been trending upwards, with year-over-year increases ranging from 5.5 percent to 9.6 percent.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.8 – Napa's Annual Sales Revenue (FY 1996 – FY 2014)



*Triple flip distributions began in FY 2005.

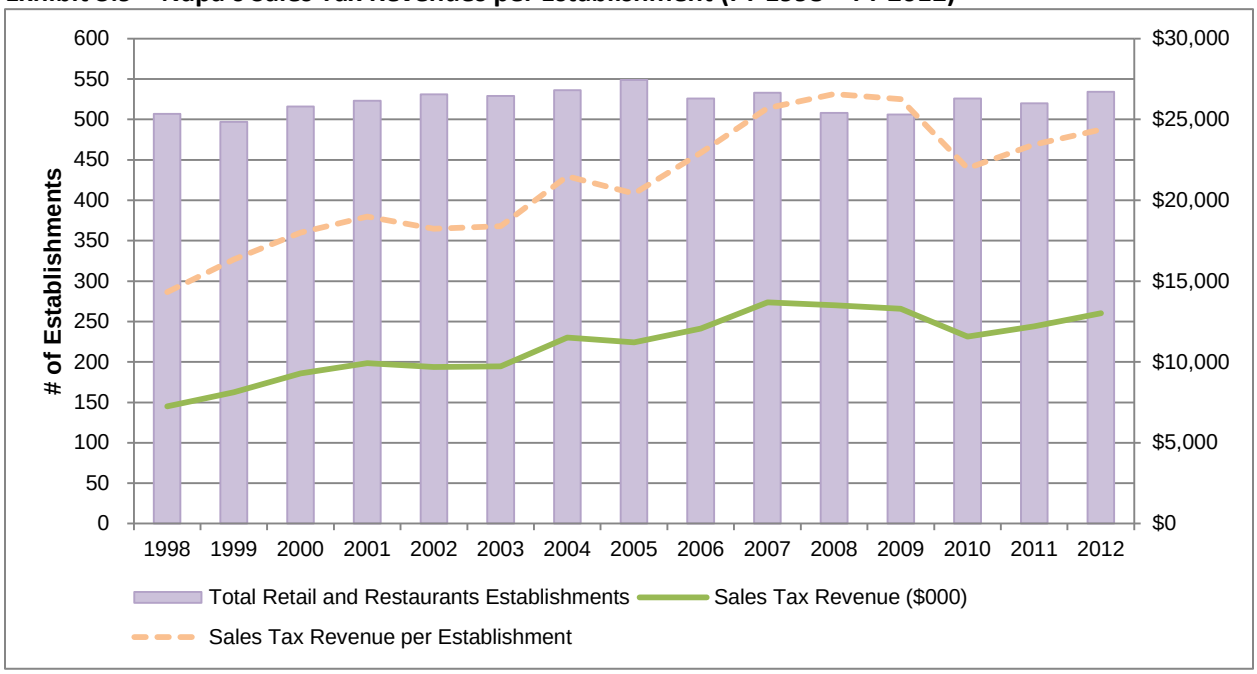
The Great Recession had a more lasting impact on the City's sales tax revenue than the post Dot-com crash (shaded in gray).

To further the analysis, we consider Napa's growth in commercial activity, particularly those that are subject to sales tax. If there has been strong growth since 2001, then the effects of the recessions on the City's tax revenues could have been much greater absent the growth if businesses were generating less in sales on a per business basis. In particular, we focus on the number of retail and restaurant establishments located within Napa using information from the U.S. Census Bureau for 1998 through 2012, the most recent year available. It is important to note that the information is based on zip codes, thus it includes a broader geographic area than the city limits, but smaller than the county boundary.

Exhibit 3.9 shows the number of local retail and restaurant establishments (purple bars) on the left-hand vertical axis and Napa's sales tax revenue per establishment in actual dollars (orange dotted-line) and annual sales tax revenues in thousands (green line) on the right-hand vertical axis. Note that the number of establishments is reflected in calendar year and revenue figures are based on fiscal year. It is evident from the exhibit that sales tax revenue and sales tax revenue per establishment follow a similar pattern. During the 15-year period, the number of establishments ranged from a low of 497 in 1999 to a high of 549 in 2005, for a variation of 10 percent. Considering that the City's sales tax revenue grew by nearly 80 percent during this period suggests healthy retail and restaurant sectors in Napa. Just prior to the Dot-com Recession, the number of establishments declined by 2.0 percent from 1998 to 1999, before increasing steadily through 2002 before a slight decline in 2003 of 0.4 percent. Sales tax revenues per retail and restaurant establishment were strong from FY 1998 through FY 2001, before a 4.0 percent year-over-year decrease in FY 2002. For the Great Recession, comparatively, there were 533 retail and restaurant establishments in 2007, but this figure declined annually through 2009 and only returned to pre-Great Recession levels in 2012. What is interesting, though, is sales tax revenue per retail and restaurant establishments was at its highest in FY 2008 and FY 2009 at over $26,000. This suggests that

though there were fewer retail and restaurant establishments, they recorded, on average, stronger sales.

Exhibit 3.9 – Napa's Sales Tax Revenues per Establishment (FY 1998 – FY 2012)



Healthy retail and restaurant sectors are a factor in the City's sales tax growth.

Examining Napa's sales tax revenues for a period of nearly 20 years, it appears that the sales tax is vulnerable to macroeconomic cycles. While the Dot-com Recession negatively affected the City's sales tax revenues, the lingering effects of the Great Recession resulted in a 13.0 percent annual decline in the sales tax revenues in FY 2010. As such, we use the 13.0 percent decline in FY 2010 as the reference point. Applying the Triple-A approach to this analysis, it suggests a lower risk multiplier (1.5 times) when preparing for future downturns given the number of data points analyzed. This suggests that the City might prepare for a downturn to have as strong of an impact as 19.5 percent in the sales tax, which equates to about $3.0 million.

Other Revenues. The previous subsections describe the volatility of Napa's TOT and sales tax revenues. However, in order to determine a dollar amount that the City should reserve in its General Fund other revenue sources must be considered.

Exhibit 3.10 shows totals for each General Fund operating revenue category and Exhibit 3.11 shows the year-to-year percent change. As the exhibits show the City's total General Fund operating revenues increased annually from FY 2006 through FY 2008, but declined in FY 2009 and FY 2010. After that total General Fund operating revenues rebounded with year-over-year increases from FY 2011 through FY 2013. The exhibits also indicate that Napa experiences some revenue volatility. Over the nine-year period total General Fund operating revenues have declined by as much as 6.7 percent and increased as much as 18.3 percent for a range of 25.0 percentage points.

GFOA Reserve Analysis for the City of Napa

To assess the overall volatility of City's General Fund revenue portfolio, we exclude TOT and sales tax as they were the focus of the preceding subsections. When reviewing all other General Fund operating revenues, year-over-year changes have ranged from a 6.0 percent decline in FY 2010 to 18.9 percent gain in FY 2007. The significant increase in FY 2007 is associated with greater revenue from property tax, licenses and permits, and other revenues sources, particularly charges for services. The decline in FY 2009 is largely due to decreases in other revenue sources, including interest and rent, intergovernmental, and charges for services.

In reviewing the City's General Fund operating revenues, its smaller revenue sources exhibit greater volatility than property tax, sales tax, TOT, or other taxes/business licenses. Interest and rents had a year-over-year range of 197.1 percentage points and intergovernmental revenues had a range of 133.5 percentage points over this nine-year period. The large variance in year-over-year changes is partly attributed to significant spikes between FY 2006 and FY 2007 as a result of greater economic activity. In FY 2007 interest and rent recorded an annual change of 125.6 percent, but declined by 71.5 percent year-over-year in FY 2010. Intergovernmental revenues declined by 52.4 percent between FY 2006 and FY 2007, but recorded an increase of 81.1 percent the following year. Charges for service and licenses and permits, two of the more significant of the smaller revenue sources, also exhibited volatility. Charges for services increased by 98.2 percent year-over-year in FY 2007 and recorded an annual decline of 8.0 percent in FY 2009 when the City experienced an 18-year low in residential development activity. Similarly, revenue from licenses and permits saw an annual gain of 45.0 percent in FY 2007, but decreased by 30.8 percent between FY 2009 and FY 2010 due to the impact of the recession on commercial activity.

To determine the reserves necessary to counteract volatility in the rest of the revenue portfolio, we reference 2010, which recorded the largest annual decrease in the City's other General Fund operating revenues of 6.0 percent. This year should provide a reasonable reference point for the upper limit of downside risk the City faces in its other revenues. The Triple-A approach to managing uncertainty directs that we multiply the level of risk suggested by historical reference points. This approach suggests a multiple of 2.0 if we have little data to draw from and a multiple of 1.5 if we have more data. Since we have examined nearly ten years of data, including data around the time period of the Great Recession, a multiple of 1.5 is sufficient. This means the worst downturn the City should plan for in its other General Fund revenues would be 9.0 percent decrease, which equates to about $3.7 million.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.10 - City of Napa, CA General Fund Operating Revenues ($000) (FY 2006 - FY 2014)									
	FY 2006	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014***
Property Tax	18,640	21,267	23,365	23,251	23,111	21,822	22,794	22,959	24,033
Sales Tax	12,057	13,695	13,502	13,288	11,559	12,192	13,019	14,267	15,150
Transient Occupancy Tax (TOT)	6,249	7,779	8,725	8,242	8,256	9,872	11,505	13,506	15,170
Other Taxes, Business Licenses	4,694	4,680	4,848	4,823	4,325	4,571	4,744	4,928	5,178
Licenses & Permits	1,555	2,254	1,960	1,398	968	1,046	1,423	1,180	1,328
Interest & Rents	508	1,146	2,040	1,392	397	477	394	181	319
Intergovernmental	1,601	762	1,380	679	916	1,047	649	637	818
Charges for Service	2,773	5,497	5,378	4,950	4,718	4,436	4,801	5,062	5,073
Transfers/Other	2,816	3,137	4,445	4,341	3,938	3,825	3,986	4,005	4,432
Total Revenues	**$50,893**	**$60,217**	**$65,643**	**$62,364**	**$58,188**	**$59,288**	**$63,315**	**$66,725**	**$71,501**
Total Revenues Excluding TOT and Sales Tax	**$32,587**	**$38,743**	**$43,416**	**$40,834**	**$38,373**	**$37,224**	**$38,791**	**$38,952**	**$41,181**

* Unaudited figures

Exhibit 3.11 - City of Napa, CA Annual Change in General Fund Operating Revenues (FY 2006 - FY 2014)								
	FY 2007	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014***
Property Tax	14.1%	9.9%	-0.5%	-0.6%	-5.6%	4.5%	0.7%	4.7%
Sales Tax	13.6%	-1.4%	-1.6%	-13.0%	5.5%	6.8%	9.6%	6.2%
Transient Occupancy Tax (TOT)	24.5%	12.2%	-5.5%	0.2%	19.6%	16.5%	17.4%	12.3%
Other Taxes, Business Licenses	-0.3%	3.6%	-0.5%	-10.3%	5.7%	3.8%	3.9%	5.1%
Licenses & Permits	45.0%	-13.0%	-28.7%	-30.8%	8.1%	36.0%	-17.1%	12.5%
Interest & Rents	125.6%	78.0%	-31.8%	-71.5%	20.2%	-17.4%	-54.1%	76.2%
Intergovernmental	-52.4%	81.1%	-50.8%	34.9%	14.3%	-38.0%	-1.8%	28.4%
Charges for Service	98.2%	-2.2%	-8.0%	-4.7%	-6.0%	8.2%	5.4%	0.2%
Transfers/Other	11.4%	41.7%	-2.3%	-9.3%	-2.9%	4.2%	0.5%	10.7%
Total	**18.3%**	**9.0%**	**-5.0%**	**-6.7%**	**1.9%**	**6.8%**	**5.4%**	**7.2%**
Total Revenues Excluding TOT and Sales Tax	**18.9%**	**12.1%**	**-5.9%**	**-6.0%**	**-3.0%**	**4.2%**	**0.4%**	**5.7%**

* Unaudited figures

GFOA Reserve Analysis for the City of Napa

Conclusion on Revenue Volatility. The preceding subsections analyze the reserves that might be necessary to counteract volatility in the City's revenues. Sometimes cities have a certain amount of cushion built into their budget such that should the municipality experience a decrease in revenues it could respond by reducing its budget and not solely on reserves to make up for revenue downturns. The City's finance department estimates that the budget could be reduced by approximately 5 percent, without creating a major disruption to services (though service quality would be negatively affected to some degree, of course). So, we reduced 5 percent from each of the implied reserve amounts for revenue volatility ($1.3 million for TOT, $3.0 million for sales tax, and $3.7 million for other General Fund resources). This totals to approximately $7.5 million ($1.2 million for TOT, $2.8 million for sales tax, and $3.5 for all other General Fund revenue sources) and should provide the City with an adequate cushion against revenue volatility risks.

Why an "Implied" Reserve Component?
The reader will notice that the blue summary boxes for each risk factor refer to "implied" reserve components. This is because the amounts described are implied reserve amounts based on analysis of that risk factor in isolation. As will be addressed later, a final recommended reserve target must consider all of the risks together.

Implied Reserve Component for Revenue Volatility

- **A reserve in the amount of $7.5 million to counteract the effects revenue volatility, specifically:**
  - **$1.2 million for TOT revenue volatility in the near term when room growth is expected to continue for a maximum plausible TOT revenue decline of 8.25 percent,**
  - **$2.8 million for sales tax volatility based on a maximum plausible decline in sales tax revenues of 19.5 percent, and**
  - **$3.5 million for volatility in its other General Fund revenue sources based on a maximum plausible decline of 9.0 percent.**

B. Public Safety and Extreme Events

Reserves are important for responding quickly and decisively to extreme events, such as natural disasters. Because of its location along the Napa River and West Napa Fault, the types of extreme events that are of greatest concern to the City are earthquakes and flooding, which are the focus of GFOA's risk analysis. However, it is important to note that the City has identified other types of extreme events that it is at risk for, including wildfire and acts related to terrorism.

FEMA, CalOES, and Reserves
Federal Emergency Management Agency reimburses local governments for monies spent in response to a federally-declared disaster. The California Governor's Office of Emergency Services (CalOES) provides assistance to local governments for State of California-declared disasters.

In both cases, reimbursement is only partial (typically 75 percent for FEMA) and is often not immediate. Therefore, local governments must have the financial capacity to respond quickly and decisively, independent of other governmental financial support.

Earthquakes. Napa is at risk for earthquakes, with its location along the West Napa Fault. Additionally, researcher at U.S. Geological Survey and University of California, Berkley found that traces of the San Andreas Fault and Holocene faults were activated when the City experienced its strongest earthquake in

history in August 2014.[15] The 6.0 magnitude South Napa earthquake resulted in estimated damages of $23.2 million in public infrastructure cost to the City, of which $12.0 million is related to public utilities. Additionally, Napa suffered from a 5.0 magnitude earthquake in 2000 that resulted in nearly $980,000 in damages to the City.

To gather additional points of reference on potential losses from an earthquake, GFOA identified select past earthquakes, including the California cities that were impacted and the estimated damages using FEMA public assistance data from 1998 through 2014.[16] Exhibit 3.12 provides information on select past earthquakes, their magnitude, and identifies all cities that received FEMA assistance as a result of the earthquake as well as the estimated damages incurred in their communities both in nominal and 2014 dollars. There are several important points to note about the exhibit and the following analysis. First, FEMA did not participate in the public assistance for the City's 2000 earthquake, but CalOES did provide assistance and the figure from CalOES is shown. Second, the figure for the 2014 earthquake represents estimated damages because the federal share obligated has not been determined as of the writing of this report. Additionally, the total estimated figure for Napa's 2014 earthquake excludes public utilities. Unlike the 2000 earthquake, the recent earthquake resulted in significant damages to utilities, which impacts the City's enterprise funds, not the General Fund and the focus of this analysis. Further, without access to the records of each comparative event identified in Exhibit 3.12, we assume that the total damages for the other cities do not include utilities.

[15] Christine Beyzaei, Jonathan Bray, Julien Cohen-Waeber, Tim Dawson, Les Harder, Ken Hudnut; Keith Kelson, Tadahiro Kishida, Robert Lanzafame, Roberto Luque, Dan Ponti, Michelle Shriro, Nicholas Sitar, Nathaniel Wagner, and John Wesling, "Geotechnical Engineering Reconnaissance of the August 24, 2014 M6 South Napa Earthquake," GEER Association Report No. GEER-037, (Washington, DC: National Science Foundation, 2014) http://www.geerassociation.org/GEER_Post%20EQ%20Reports/SouthNapa_2014/GEER_SouthNapa_01-08-2015_reduced.pdf.

[16] FEMA Public Assistance Funded Projects Summary provides information on "Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations." Federal Emergency Management Agency, "FEMA Public Assistance Funded Projects Summary," http://www.fema.gov/media-library/assets/documents/28344, updated December 5, 2014.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.12 Estimated Damages from Select California Earthquakes						
Earthquake	Magnitude	City	Population (at time of earthquake)	Federal Share Obligated	Total Estimated Damages	Total Estimated Damages ($ in 2014)
2000 Yountville	5.0	Napa	72,585	N/A	$979,527	$1,348,539
		Mean	**72,585**	**N/A**	**$979,527**	**$1,348,539**
2003 San Simeon	6.6	Arroyo Grande	16,373	$18,302	$22,878	$28,756
		Atascadero	27,015	$17,964,396	$22,455,496	$28,224,858
		Morro Bay	10,372	$224,540	$280,675	$352,788
		Paso Robles	26,413	$4,681,168	$5,851,460	$7,354,842
		Pismo Beach	8,560	$19,254	$24,067	$30,251
		San Luis Obispo	44,202	$5,863	$7,328	$9,211
		Guadalupe	5,869	$552,412	$690,516	$867,926
		Santa Maria	81,944	$30,930	$38,663	$48,596
		Mean	**27,594**	**$2,937,108**	**$3,671,385**	**$4,614,653**
2010 Baja California	7.2	Brawley	24,953	$31,978	$39,972	$43,524
		Calexico	38,572	$5,868,102	$7,335,128	$7,986,946
		Calipatria	7,705	$119,676	$149,595	$162,888
		El Centro	42,598	$1,863,387	$2,329,234	$2,536,216
		Holtville	5,939	$2,185,315	$2,731,644	$2,974,384
		Imperial	14,752	$883,743	$1,104,679	$1,202,843
		Mean	**22,420**	**$1,825,367**	**$2,281,709**	**$2,484,467**
2014 South Napa*	6.0	Napa	77,698	N/A	$11,242,680	$11,242,680
		Mean	**77,698**	**N/A**	**$11,242,680**	**$11,242,680**
		TOTAL MEAN	**31,597**	**$2,460,648**	**$3,455,221**	**$4,025,953**

*Figures for the 2014 South Napa earthquake represent estimated losses and exclude utilities.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency and U.S. Census Bureau

As reflected in the exhibit above, the estimated damages vary greatly by earthquake and by each affected city. The 2000 Yountville earthquake resulted in $1.3 million in damages, compared to the $11.2 million in damages for the 2014 South Napa earthquake. The range of damages by affected cities is even greater. For example, the 2003 San Simeon earthquake resulted in damages ranging from $9,000 in San Luis Obispo to $28.2 million in Atascadero. The variation in damages is because several factors, aside from magnitude, can affect an earthquake's impact, including density of an area, depth of the earthquake, distance from the epicenter, local geological conditions, secondary effects (e.g. floods,

landslides, fires), and architecture.[17] While it is difficult to assess several of these factors for the purposes of this report, we do consider the how an area's density affects total losses. Exhibit 3.13 provides statistics on each city's population at the time of the earthquake, land area in square miles, and resident population per square mile. Exhibit 3.14 provides estimated damages based on these density factors. When considering damages per resident population at the time of the earthquake it varies from nearly nothing in San Luis Obispo to $1,045 per resident in Atascadero both for the 2003 earthquake. Estimated damages per square mile ranged even more greatly from $721 as experienced by San Luis Obispo for the 2003 San Simeon earthquake to nearly $2.6 million per square mile as experienced by Holtville for the 2010 Baja California earthquake. As a result estimated damages per resident per square mile show similar variations. San Luis Obispo serves as the lower end of the range at $3 and Atascadero serves as the higher end of the range at nearly $27,000.

[17] Sarah Zielinski, "Seven Factors that Contribute to the Destructiveness of an Earthquake," *Smithsonian*, February 23, 2011, http://www.smithsonianmag.com/science-nature/seven-factors-that-contribute-to-the-destructiveness-of-an-earthquake-44395116/.

GFOA Reserve Analysis for the City of Napa

Exhibit 3.13 - Population and Density of Cities During Select California Earthquakes					
Earthquake	Magnitude	City	Population (at time of earthquake)	Land Area (Sq. Mile)	Residents per Sq. Mile
2000 Yountville	5.0	Napa	72,585	17.84	4,069
		Mean	**72,585**	**17.84**	**4,069**
2003 San Simeon	6.6	Arroyo Grande	16,373	5.84	2,804
		Atascadero	27,015	25.64	1,054
		Morro Bay	10,372	5.30	1,957
		Paso Robles	26,413	19.12	1,381
		Pismo Beach	8,560	3.60	2,378
		San Luis Obispo	44,202	12.78	3,459
		Guadalupe	5,869	1.31	4,480
		Santa Maria	81,944	22.76	3,600
		Mean	**27,594**	**12.04**	**2,639**
2010 Baja California	7.2	Brawley	24,953	7.68	3,249
		Calexico	38,572	8.39	4,597
		Calipatria	7,705	3.72	2,071
		El Centro	42,598	11.08	3,845
		Holtville	5,939	1.15	5,164
		Imperial	14,752	5.86	2,517
		Mean	**22,420**	**6.31**	**3,574**
2014 South Napa*	6.0	Napa	77,698	17.84	4,355
		Mean	**77,698**	**17.84**	**4,355**
		TOTAL MEAN	**31,597**	**10.62**	**3,186**

*Figures for the 2014 South Napa earthquake represent estimated losses and exclude utilities.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency and U.S. Census Bureau

GFOA Reserve Analysis for the City of Napa

Exhibit 3.14 Estimated Damages per Resident, Sq. Mile, and Resident per Sq. Mile from Select California Earthquakes by Factors

Earthquake	Magnitude	City	Estimated Damages per Resident	Estimated Damages per Sq. Mile	Estimated Damages per Resident per Sq. Mile
2000 Yountville	5.0	Napa	$19	$75,591	$331
		Mean	**$19**	**$75,591**	**$331**
2003 San Simeon	6.6	Arroyo Grande	$2	$4,924	$10
		Atascadero	$1,045	$1,100,813	$26,788
		Morro Bay	$34	$66,564	$180
		Paso Robles	$278	$384,667	$5,324
		Pismo Beach	$4	$8,403	$13
		San Luis Obispo	$0	$721	$3
		Guadalupe	$148	$662,539	$194
		Santa Maria	$1	$2,135	$13
		Mean	**$189**	**$278,846**	**$4,066**
2010 Baja California	7.2	Brawley	$2	$5,667	$13
		Calexico	$207	$951,960	$1,737
		Calipatria	$21	$43,787	$79
		El Centro	$60	$228,900	$660
		Holtville	$501	$2,586,421	$576
		Imperial	$82	$205,263	$478
		Mean	**$145**	**$670,333**	**$590**
2014 South Napa*	6.0	Napa	$145	$630,195	$2,581
		Mean	**$145**	**$630,195**	**$2,581**
		TOTAL MEAN	**$159**	**$434,909**	**$2,436**

*Figures for the 2014 South Napa earthquake represent estimated losses and exclude utilities.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency and U.S. Census Bureau

Because of the strong variance in estimated damages even with density considered, we use the mean in 2014 dollars for each city affected by the selected earthquakes, $4.0 million, as the lower range when determining a reserve level. The damage from the 2014 earthquake, $11.2 million, represents the upper range since it is the more costly of Napa's experiences. While there are fewer data points to draw from, the City's seismic improvement projects is considered when applying Triple-A. Using a multiplier of 1.5 for the $4.0 million and $11.2 million results to $6.0 million and $16.9 million. However, the City does not need to reserve the full amount. For instance, in the first six months after the 2014 South Napa earthquake, the City has expended 36 percent of the total estimated losses. If extrapolated over the course of the first year then that equates to 72 percent. The remaining 28 percent will be spent over

time. Applying 72 percent to $4.3 million equals $12.1 million, which is the amount the City should reserve for the first year response following an earthquake.

Floods. Napa is susceptible to floods. The most recent flood occurred in late December 2005 through early January 2006 when a series of storms produced significant runoff. Flood damages concentrated in the Napa River Basin, resulting FEMA to declare the County, and by extension the City, a disaster area. The severities of floods are measured by their recurrence intervals, which also suggest their probability of occurring. For example, floods that have a 50 percent chance of occurring in a given year have a recurrence interval of 2 years. More severe floods that have a chance of occurring once in 100 years are dubbed 100-year floods. The exhibit below summarizes common recurrence intervals.

Exhibit 3.15 - Flood Recurrence Intervals and Probabilities of Occurrences

Recurrence Interval (in years)	Probability of Occurrence in Any Given Year	Percent Chance of Occurrence in Any Given Year
100	1 in 100	1
50	1 in 50	2
25	1 in 25	4
10	1 in 10	10
5	1 in 5	20
2	1 in 2	50

Source: U.S. Geological Survey

Exhibit 3.16 summarizes the expenditures the City has incurred from flood incidents over the past 28 years. Less severe floods typically result in smaller losses to the City, but there has been some degree of variation. The 1993 and 1995 floods, both with a recurrence interval of 1.1-1.5 years, resulted in City expenditures of nearly $144,000 and $1.5 million (in 2014 dollars), respectively. The more severe 50-year storm, the 1986 flood, recorded the most rainfall the City has experienced in the 20th century.[18] That flood resulted in damages of over $2.5 million to Napa. In comparison, the 2005-2006 flood amounted to $4.1 million in City expenditures. The variation is attributed to many factors, including the soil's ability to absorb the water. For example, the 2005-2006 flood resulted from a series of storms starting before Christmas 2005 and ending after New Year's Day 2006, which caused significant runoff for Napa River.[19]

[18] Kevin Courtney, "Flood of the century: 1986 death, destruction led to reform along Napa River," *Napa Valley Register*, February 20, 2011, retrieved December 10, 2014, http://napavalleyregister.com/news/local/article_86af1860-3cb5-11e0-af1c-001cc4c002e0.html.

[19] U.S. Department of the Interior, U.S. Geological Survey, *Storms and Flooding in California in December 2005 and January 2006–a Preliminary Assessment*, by Charles Parrett and Richard A. Hunrichs, Open-File Report 2006–1182, U.S. Geological Survey (Reston, Virginia, 2006), http://pubs.usgs.gov/of/2006/1182/pdf/ofr2006-1182.pdf.

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Exhibit 3.16 - Cost of Historic Floods in Napa					
Year	Recurrence Interval (in year)	Population	Total Expenditures	Total Expenditures ($ in 2014)	Expenditure Per Capita
1986	50	61,842*	$1,161,657	$2,512,740	$41
1993	1.1-1.5	64,098	$87,744	$143,956	$2
1995	1.1-1.5	64,723	$964,202	$1,499,903	$23
1997	5-10	66,255	$991,596	$1,464,670	$22
1998	2-5	67,056	$393,845	$572,820	$9
2005-2006	25-50	74,620	$3,512,866	$4,130,963	$55
	Mean	**66,432**	**$1,185,318**	**$1,720,842**	**$25**

*Based on 1990 population

To further consider other factors affecting the variation in cost, we reviewed the per capita expenditures for each flood event. The exhibit above includes the City's population at the time of the flood. Note that the 1986 flood is compared to the 1990 Census population. When we look at the expenditure per capita, it varies less than total expenditures. For example, the City's population grew by over 20 percent between 1990 and 2006, so the difference in expenditure per capita for the 1986 flood and 2005-2006 flood is 36 percent, compared to 64 percent when we only look at total expenditures in 2014 dollars. While reviewing expenditure per capita helps to factor in a certain variable that drive cost, e.g. population, the range is still great.

A final consideration is the improvements that the City has made for flood mitigation. The Napa River-Napa Creek Flood Protection Project is intended to alleviate flooding for up to a 100-year event. Work on Napa Creek has been completed and, as of the timing of this report, work on the Napa River portion is 65 percent completed. With the work incomplete, it is possible for the City to sustain damages from a flood.

Both the 2005-2006 and 1986 floods were destructive to the entire City. The 2005-2006 flood resulted in greater expenditures than the more severe 1986 flood, a 50-year storm. Because of the higher cost associated with the more recent flood, we consider the $4.1 million as the upper end of a reserve range. To determine the lower end, we account for the varying levels of magnitude and control for the City's population growth. Taking the average expenditure per capita from these six events ($25), we apply that to Napa's current population of 77,698. That equates to approximately $2.0 million. The Triple-A approach advises us to use a higher risk multiplier when we have fewer data points, but as discussed earlier the City has made flood mitigation improvements. As such, we apply a multiplier of 1.0. That gives us a potential range of reserves from about $2.0 million to $4.1 million.

As with our analysis in the preceding subsection, Napa may not need to hold the full amount as it will expend repair cost over time. Taking the reference from the South Napa earthquake that 76 percent of total damages are expected to be expended within the first year, we apply that to the $2.0 million and $4.1 million figures. This equates to $1.5 million and $3.1 million. The higher end of the range may be more prudent in order to account for the impact of other potential extreme events for which we do not have reference point data.

Implied Reserve Components for Public Safety and Extreme Events

- **The data suggest a reserve between $5.8 million and $15.2 million for immediate response to public safety and extreme events. A reserve closer to $15.2 million might be more prudent given the relatively small number of data points on extreme events the City has experienced. Less data means we are less certain about what the future could hold. The specific implied reserve components include:**
  - **between $4.3 million and $12.1 million to response within the first year of an earthquake event and**
  - **between $1.5 and $3.1 million to response within the first year to a flood event.**
- **The City should consider a policy to replenish a reserve for public safety and extreme events as it receives reimbursements from federal and state agencies, as appropriate.**

C. Capital Repair and Replacement

Healthy infrastructure makes for an economically vital community. However, worn infrastructure poses a potential risk of untimely failure. General fund reserves may be needed to repair or replace an asset that fails unexpectedly. Napa is particularly concerned about its bridges.

In determining a reserve amount for the assets, we reviewed the risk profile of the City's bridges. Risk is defined as the product of probability of failure and consequences of failure. Probability of failure is based on the bridges' sufficiency condition rating taken from the California Department of Transportation's bridge inspection report. A lower assessed condition score indicates a bridge that is in worse condition. A bridge with a condition rating of 60 is in poor condition. Consequence is based on the average annual daily traffic – the higher the traffic count (high is defined by an average annual traffic count of 6,000 or more), the higher the consequence to the City if the bridge were to fail.[20]

Exhibit 3.17 is a risk profile of the Napa's bridges. As shown in the exhibit, the City has 20 large bridges, of which four have high risk rating (the red areas of the graph that have a total score of between 8 and 10, when the scores from each axis are added together). These four bridges have an estimated replacement value of $36.5 million, or approximately $9.1 million per bridge. For two of these bridges (one located on Trancas Street and the other on Lincoln Ave) actual condition information and traffic count were unavailable, so the analysis is based on age and replacement cost. These two bridges are nearing 60 years and have a higher replacement cost than the average City bridge at $6 million each, so they receive a score of 8. The Third Street Bridge also receives a score of 8. While the asset is fairly young (15 years) and in excellent condition, the high traffic count increases it risk score. The concrete arch stone bridge on Jefferson Street at Cedar Avenue also has a score of 8. This is because of high traffic count and the condition of the bridge. The California Department of Transportation's recommends spalling work to improve the bridge and the City has applied for and has allocated $85,000 in federal funds for its repairs.

[20] Note that further analysis could be conducted with City staff to refine the risk rating to incorporate more factors into the consequence, such as location, cost, material, etc.

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Exhibit 3.17 - Risk Profile of Napa's Bridges

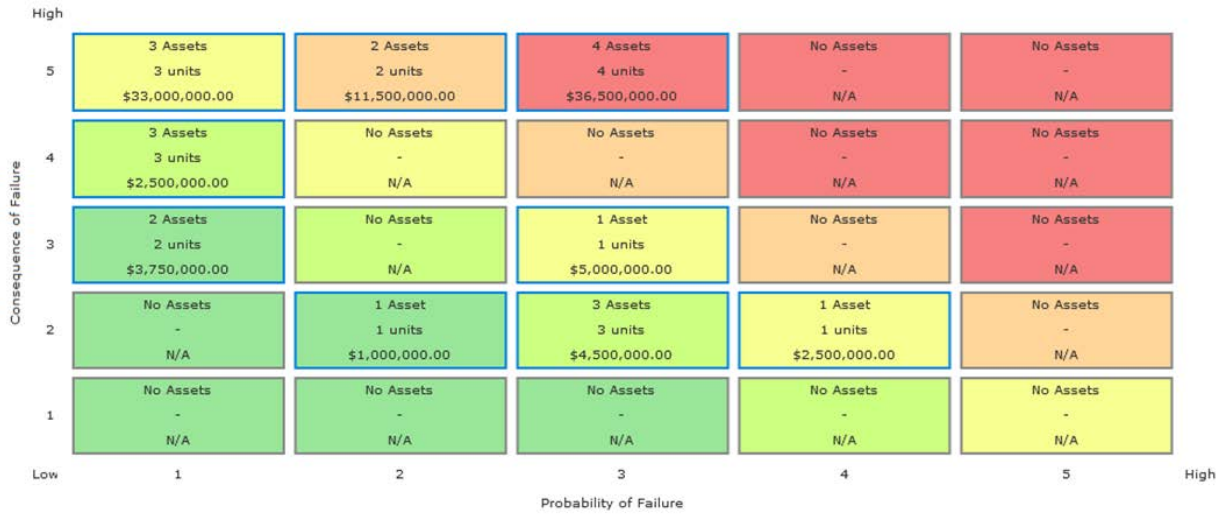
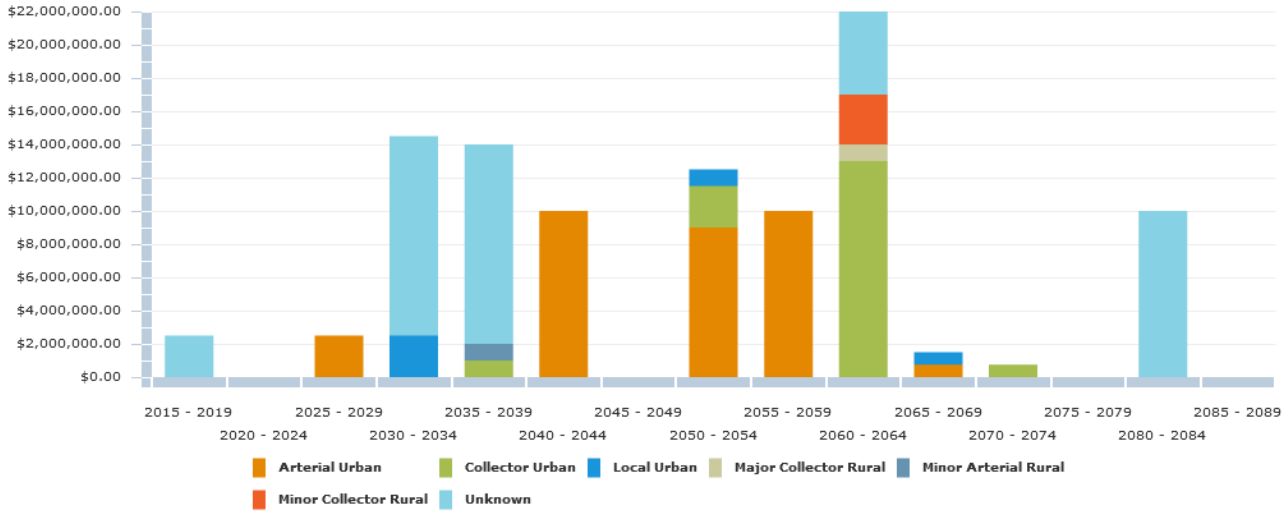


Exhibit 3.18 – Napa's Bridge Replacement Profile Based on Condition (5-Year Blocks)



To insure that the assets continue through their useful life, the City could set aside an amount equivalent to the average annual replacement cost based on the bridges' expected useful life of 75 years. Since the total replacement cost of the bridges is approximately $100.3 million, Napa could budget $1.3 million annually for bridge repair and maintenance. Such an annual investment strategy could certainly reduce and manage risk of failure and prepare the City as maintenance and repair occur. Exhibit 3.18 depicts the replacement profile of the bridges based on conditions. As shown, maintenance and repairs of the bridges are expected to spike in 2030-2034. An annual investment strategy could certainly reduce and manage risk of failure and prepare the City as maintenance and repair occur.

As one-time improvements, not recurring maintenance, is needed, the City could consider infrastructure condition as a heavy weight when identifying and prioritizing projects for its General Fund Capital

Improvement Reserve. Further, the City should consider developing an asset management policy to help guide asset maintenance and replacement funding.

Implied Reserve Components for Capital Repair and Replacement

- **The City should consider heavily weighing infrastructure condition when identifying and prioritizing projects for its General Fund Capital Improvement Reserve.**
- **The City should develop an asset management policy to help guide maintenance and replacement funding. The asset management policy is separate of the General Fund reserve.**

Section 4 - Secondary Risk Factor Analysis

This section overviews risk factors that have implications for Napa's General Fund reserve strategy, but are less complex or of lower magnitude than the primary risk factors of revenue volatility, extreme events, and capital repair and replacement.

A. Growth

Napa has experienced modest growth in its resident population. Between 2000 and 2013, its population recorded a compounded annual growth rate of 0.5 percent. In the short-term, there is potential for population growth. The City's Community Development Department estimates 50 new residential units will be added annually in the next two years and an additional 250 units in FY 2017/2018 when the first phase of Tulocay Village, a residential rental development, comes on line. Over the next three years, the City anticipates additional commercial and hotel developments as well. In FY 2015/2016, the City anticipates additional retail at Napa Crossing South as well as a restaurant, but larger, near-term activities will begin in FY 2017/2018. Because there is a gap between when the City will collect revenue from potential commercial activity and when new residents require service as well as concern that the timing of the commercial developments may be delayed, it would be prudent for the City to set aside funds to meet estimated net cost related to the initial population growth.

According to the U.S. Census Bureau, the average household size in Napa is 2.6. In the near-term, the City anticipates an additional 50 units annually for two years, resulting in 128 residents, and an additional 250 units in the FY 2017/2018, resulting in 640 residents. Some commercial activities are anticipated for FY 2015/2016, with more to follow in FY 2017/2018, but there is a one-year lag before Napa collects the revenues from the residential and commercial activities. Thus, the City should prepare for the cost to service between 128 and 640 new residents. Using Napa's adopted FY 2015 General Fund expenditures of $69.7 million, we derive the cost to provide service per resident, which amounts to $897. To service the initial population growth in FY 2015/2016 can cost the City approximately $115,000. Similarly, the cost associated with the population growth of 640 residents in FY 2017/2018 is approximately $574,000.

To estimate an amount the City should set aside in reserves for community growth, we apply the Triple-A approach. Accounting for the historical information on cost per resident, we multiply the lower and upper range of $115,000 and $574,000, respectively, by 1.5. To meet the needs of the incremental cost associated with population growth, the City should reserve between $172,000 and $860,000.

Implied Reserve Component for Growth

- **A reserve between $172,000 and $860,000 to meet estimated cost related to the initial population growth in the near three-year term.**

B. Expenditure Volatility

The City identified four types of expenditure volatility it is at risk for, including those related to legal claims, the State of California's impact on local revenues, the cost of clean-up due to environmental contamination, and grant subsidies for activities.

Legal Claims. The City maintains a self-insurance reserve dedicated for risk management, including insurance liability and workers compensation. It is City policy to maintain a reserve for general liability and workers' compensation claims for the short and long-term at the 80 percent confidence level as identified by actuarial study. At the end of FY 2014, the City reserved $1.5 million for general liability claims and $4.2 million for workers' compensation claims. Napa also maintains a liability insurance policy that will cover cost up to $25 million. The policy includes a self-insured retention (SIR) provision that requires the City to pay $150,000 before the insurance policy responds to the loss. Though the City is diligent about managing its risks from lawsuits, some of these cases could present large, unanticipated cost. Between FY 2010 and the first half of FY 2015, the City has made payments of approximately $2.5 million in legal settlements from past claims. Napa recently settled one lawsuit in the amount of $700,000, but is responsible for only $150,000 of the settlement. The City is in the midst of settling another lawsuit. If the claim is approved by the City's insurer, then Napa will be reimbursed for the full cost, $210,000, minus the SIR provision. If denied, the City will be liable for the full cost of settlement. Thus, the City's recent legal claims can amount to $300,000 to $360,000.

Because cost related to these two claims would be drawn from the City's Risk Management Fund, no specific reserve is needed for the General Fund. The City will need to replenish its Risk Management Fund after the settlements to ensure adequate reserves for future legal claims.

State Intervention. The State of California has a history of affecting local government revenues. Examples include Triple Flip, as discussed in Section 3 of this report, as well as vehicle license fees, and shut down of redevelopment agencies. GFOA spoke with Michael Coleman of the California Local Government Finance Almanac, an authority on California local government finance, who believes there is little else the State can take from local revenue sources. However, the City does have to address changes in Municipal Separated Storm Sewer (MS4) Permit compliance as well as to replace its stormwater system service assessment that sunsets in 2016.

According to the City's Public Works Department, MS4 permit compliance costs will increase from $790,000 in FY 2015 to nearly $1.1 million in FY 2018. The largest incremental increase will occur in FY 2016 when compliance costs increase by $271,000. Additionally, the City's existing stormwater system service fee is scheduled to sunset in May 2016, which will reduce annual CIP and MS4 Permit compliance program revenues. According to the City's Finance Department, in FY 2017 Napa will lose approximately $218,000 in program revenues, which will escalate to $492,000 in FY 2021.

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While the City is exploring potential alternative funding options to mitigate the higher compliance cost and loss of program revenue, voter approval is required. This has proven challenging for local governments across the state. To prepare for the challenges with public referendum, the City could set aside on-time reserves in the amount of $489,000 for the increase in MS4 compliance cost in FY 2016 and the loss of program revenues in FY 2017. Since the City has an historic account and has prepared an analysis on the increased cost and lost revenues, no multiplier is applied.

Environmental Clean Up. The City has experienced contamination issues with several projects. On a few projects, the City was identified as the responsible party for addressing contamination issues that have resulted in unanticipated environmental clean-up costs.

- **645 Soscol Avenue Underground Storage Tank Investigation Project.** Napa County's Department of Environmental Management found the City the responsible party for investigating and remediating an underground storage tank site in 2006. The City applied for reimbursement through the State, but funding is unlikely. Similarly, reimbursement from the City's insurance carrier could also be denied. The cost of cleanup totals nearly $214,000, with the potential for additional cleanup cost.
- **City of Napa Second Street Project.** In 2008 the City entered into a contract for packing of and disposing of waste related to the 1st and 2nd Street underground utility district project. This amounted to approximately $87,000.
- **Starbucks at Lincoln/Jefferson.** Contaminated soil was discovered during construction of a Starbucks, which required the City to contract for soil cleanup and removal as well as drum removal. This resulted in $190,000 in unanticipated cleanup cost to the City. Further work may be needed at an additional $300,000.
- **Saratoga Drive Extension.** Soil contamination, asbestos removal, and other cleanup efforts were identified for this road construction project. The City incurred over $497,000 in unanticipated cleanup cost.
- **California Boulevard Widening.** Environmental testing was required for this project for contaminated soil. This resulted in approximately $33,000 in additional cost.
- **Fire Station No. 1 Roof Retrofit.** Asbestos removal was built into the cost of demolition for this project. Total project cost was $27,000.

Because the City has experienced instances of unknown or unanticipated environmental clean-up costs, it would be prudent to set aside funds for such purposes. The City may not need to set aside the full total of all six projects identified above as it is unlikely that multiple contamination projects will be uncovered in one year. As such, we identified the average cost of these projects, which is $225,000. With only three projects to draw from, we apply a multiplier of 2.0 to determine an amount to reserve. This equates to $450,000.

Grant Funding. Grants are a revenue resource for governments. However, if the grants expire and the General Fund needs to provide operating subsidies to continue the on-going activities that the grant funded, then that is a risk that needs to be considered. The City receives grants that could potentially have such impact, most of which are received by its police department. According to the Napa Police

Department, such grants fund approximately $557,000 in labor, overtime, and equipment and supplies. While we do not recommend a specific reserve, we recommend that the City adopt a grant policy to consider a grant's long-term costs and benefits and to guide decision on whether or not to continue a service once a grant ends. We will discuss this in Section 5 of the report.

Implied Reserve Component for Expenditure Volatility

- A reserve of $939,000 to address the potential for expenditure volatility. This includes:
  - A one-time reserve of $489,000 due to state changes on the MS4 Permit compliance and the upcoming sunset of stormwater system service fees.
  - A reserve of $450,000 for unknown or unanticipated environmental clean-up costs.
  - No specific reserve is recommended for grant-funded positions, but it is recommended that the City adopt a policy on grants to consider their long-term costs and benefits.

C. Liquidity

If the City were to experience a significant gap between the timing of its payables and receivables it might need a certain amount of working capital to keep in a reserve to cover the risk of a cash shortfall. However, the City does not experience cash flow problems as a result of timing differences between its receivables and payables. The City receives its sales tax and TOT revenues monthly, so there is a regular inflow of cash. Thus, a special reserve for working capital appears unnecessary.

Implied Reserve Component for Liquidity

- **No reserve for working capital is needed.**

D. Dependency of Other Funds on the General Fund

Between FY 2006 and FY 2013, the City's General Fund has transferred between $550,000 and $10.1 million to other governmental funds as shown in Exhibit 4.1. The largest transfers are to the City Capital Projects Fund. In 2013, the General Fund transferred $9.1 million to the City Capital Projects Fund, of which $7.1 million were transfers from the General Fund and non-recurring General Fund surplus from FY 2011-2012 and FY 2012-2013 to the CIP General Fund and CIP Facilities reserves per the City's fiscal policy. The remaining $2.0 million in transfers were for capital projects funded by General Fund revenues. The large expenditures are also attributed to the cyclical construction activities of the capital projects. The spikes in FY 2006 and FY 2008 were due to a flood control initiative.

GFOA Reserve Analysis for the City of Napa

Exhibit 4.1 - City of Napa General Fund Transfers (FY 2006 - FY 2013)							
	Development Fee	City Capital Projects	Home	Golf	Non-Major Governmental	Internal Service	Total
2006		1,295,451			40,000		$1,335,451
2007		998,349			40,000		$1,038,349
2008		8,715,390			37,508	1,380,085	$10,132,983
2009		4,343,602	136,425			1,422,184	$5,902,211
2010		252,649		162,682	136,466		$551,797
2011	5,177[a]	487,145		70,000	162,682	8,233	$728,060
2012		540,645		100,000	162,682	98,462	$901,789
2013		9,055,242		125,000	631,814	65,848	$9,877,904

[a] Correction to revenue posted in the General Fund in FY 2010 that should have been posted to the Fire/Paramedic Impact Fee

Aside from capital projects, the Internal Services Fund has historically been the second largest recipient of General Fund transfers. The figures related to interval services transfers have declined in recent years compared to FY 2008 and FY 2009. This is because Napa reclassified the normal annual transfers, such as IT and fleet maintenance/replacement rates, to charges for services. They are now included in the revenue and expense numbers. Transfers from the General Fund to the Internal Service Fund amounted to approximately $66,000 in FY 2013 for fire fleet apparatus and computer purchases.

Transfers to non-major governmental funds in FY 2013 increased significantly from prior years. This is due to $500,000 to fund a sidewalk improvement program. The program is on-going as budgeted in the City's two-year budget cycle. City Council has the authority to continue or discontinue the transfers. The other area of General Fund transfers is to the Golf Fund. Though, the City entered into a lease agreement with a private operator, who assumes losses and risks associated with the golf course, and will end the General Fund's subsidy. Aside from capital programs and capital reserves, the City has had a relatively small amount of transfers from the General Fund to other funds. Thus, no reserve is needed. However, the City may want consider a policy on asset management so that it set asides an appropriate amount for future needs and on-going repair and maintenance. Section 5 of this report will review the City's current reserve strategy.

Implied Reserve Component for Dependency of Other Funds on General Fund

- **While no reserve is required for inter-fund dependency, the City may consider adopting a policy on asset management to ensure appropriate amounts are set aside for future needs.**

E. Leverage

Any form of leverage could reduce the City's financial flexibility, thus increasing the need for reserves to provide some offsetting flexibility. GFOA examined two forms of leverage: outstanding debt and pension/OPEB.

GFOA Reserve Analysis for the City of Napa

Outstanding debt. The City has no outstanding general obligation bonds, but has approximately $101,000 in debt associated with governmental activities related to a lease agreement for an asphalt paver.

Currently, Napa does not have a bond rating for its general fund, so it is important to review how the City compares to its peers. Exhibit 4.2 includes a group of California cities that are comparable to Napa based on a combination of different factors, including geography, general fund revenue portfolio, and size. The exhibit provides FY 2013 summary statistics based on the cities, including four commonly used measures of indebtedness. The first, debt per capita, measures the burden placed on citizens by municipal indebtedness. The second measure is debt service (principal and interest payments) as a percent of city expenditures. This figure gauges the pressure placed on the budget by debt payments. The third measure shows direct debt as a percent of the city's full value and the fourth measure compares direct plus the debt of overlapping jurisdictions as a percent of full value.

Exhibit 4.2 - Comparison of Napa's Indebtedness with Other Cities (FY 2013)

	Napa	American Canyon	Livermore	Petaluma	Pleasanton	St. Helena	Santa Rosa	Vacaville
Population	*77,881*	19,862	83,325	58,804	71,871	5,854	170,093	92,677
Debt per Capita	*$2,395*	$3,270	$4,531	$3,607	$3,544	$4,720	$1,794	$3,281
Debt Service as a % of Expenditures	*0.0%*	4.3%	8.5%	0.3%	18.8%	8.5%	1.0%	4.1%
Direct Net Debt as % of Full Value	*0.0%*	0.1%	0.7%	0.0%	0.0%	0.2%	0.3%	0.1%
Overall Debt Burden (Overall Net Debt as % Full Value)	*2.1%*	3.1%	3.0%	2.9%	1.5%	10.4%	1.7%	3.4%

As the exhibit shows, Napa has a low level of debt relative to the group of comparable California cities. Only Santa Rosa has a lower debt per capita amount—$1,794 compared to Napa's $2,395. Napa also recorded virtually no debt service, unlike the seven other peer cities whose debt service as a percent of expenditures ranged from 0.3 percent for Petaluma to 18.8 percent for Pleasanton. The cities in the peer set also have relatively low levels of direct debt. Napa, Petaluma, and Pleasanton effectively have no direct debt compared to their full values. Livermore, at 0.7 percent, recorded the highest level of direct debt as a percent of full value. When debt of overlapping jurisdictions is factored, each city's overall debt level increases. For Napa its overall debt becomes 2.1 percent of full value, third lowest behind Pleasanton at 1.5 percent and Santa Rosa at 1.7 percent, and on par with the other cities, except St. Helena's whose overall debt burden spikes to 10.4 percent of full value.

To conclude our discussion on debt, the Napa's low level of debt provides future financial flexibility. In Section 5 of this report we will examine how this relates to the City's reserve strategy.

GFOA Reserve Analysis for the City of Napa

Pension liabilities. The City's defined benefit pension plan is part of the Public Agency portion of the California Public Employees' Retirement System (CalPERS) pool.[21] The City participates in separate plans for public safety (police and fire) and miscellaneous (all other employees). The plans are facing some challenges,[22] though the state has enacted legislation to reduce costs and increase both employee and employer contribution requirements.

Napa's employer contribution rate for FY 2015 is 37.2 percent for the public safety plan and 24.3 percent for the miscellaneous plan. These rates will increase annually to 47.6 percent and 32.4 percent, respectively by FY 2021. The average annual increase between FY 2015 and FY 2021 is approximately 4.2 percent for the public safety plan and 4.9 percent for the miscellaneous plan. Increasing pension contributions are normally a cost that would be dealt with within the annual budgeting process. Since rising pension costs are a recurring expenditure, reserves, as a one-time resource, are not a sustainable solution for rising pension costs.

However, a scenario where reserves could play a role in ameliorating rising pension costs is if City revenues are flat or declining. Steep increases in pension costs would make it more difficult for the City to reduce expenditures in the face of stagnant or declining revenues. Hence, a reserve could help the City make a more gradual adjustment to its cost structure – otherwise the City might be forced into more abrupt cost reductions, thereby interrupting crucial services and preventing a long-term, coherent approach to achieving the City's public service goals. The City's projected required employer contribution is $5.7 million for the public safety plan and $5.6 million for the miscellaneous plan. The annual increase from FY 2015 to FY 2016 in the City's pension costs is expected to be about $684,000.[23] Since this figure is not based on a wealth of historical experiences, but rather a single projection based on data from CalPERS, the Triple-A approach would advise doubling our expectation for risk. Hence, a reserve of $1.4 million should be adequate to provide the City with capacity to make an orderly adjustment to its cost structures in face of declining or stagnant revenues, despite increasing pension costs. City Council has already been prudent in this area, having set aside $870,000 from excess revenues in FY 2013 in a pension reserve.

OPEB liabilities. The City's policy on OPEB is to fund the benefits on a pre-funded basis. The annual required contribution (ARC) for FY 2015 is estimated at $960,000 and will decline slightly to $919,000 in FY 2016 and $949,000 in FY 2017. The City's ARC is projected to decrease and then return to FY 2015 levels in FY 2018 when the ARC contribution reaches $970,000. Because the City's ARC for OPEB is projected to be lower over the next two years, there is no risk-specific reserve needed. However, it may be prudent to set aside a sinking fund or lockbox so that the City is prepared for when its contribution returns to a higher amount. The greatest variance in the City's ARC for OPEB is between FY 2018 and FY 2016 amounts, which equates to $51,000. The current two-year budget continues with the current contribution rate of 2.7 percent of payroll, rather than reducing the rate or setting aside a reserve.

[21] CalPERS assumes a discount rate of 7.50 percent. While this is in line with most public pension plans, researchers and rating agencies caution against the use of aggressive discount rates.
[22] The public safety plan is funded at 68.3 percent and the miscellaneous plan is funded at 65.7 percent.
[23] The increases are about $273,000 annually for the public safety plan and $411,000 for the miscellaneous plan.

Implied Reserve Components for Leverage

- **A reserve in the amount of $1.4 million to meet pension obligations should the City's revenues decline or stagnant.**
- **The City's annual OPEB obligations are expected to decline in the next two years, but will continue its current contribution rate to keep appropriations in line and to decrease future ARC. No specific reserve is needed.**

Section 5 - Recommendations

This section provides GFOA's recommendations to Napa based on the analysis presented in this report. Subsection "A" reviews the risk factors that were analyzed independently in Section 3 and Section 4, and considers issues relative to analyzing the risk factors as a whole. Subsection "B" addresses the primary purpose of this report: to recommend a reserve target for Napa. Subsection "C" discusses formal policies the City could adopt to support the City's reserve management strategy.

A. Review of Risk Factors and Holistic Analysis

We will start with a brief overview of the risk factors that have implications for the City's reserves in Exhibit 5.1. Please note that the subtotal for revenue volatility, community growth, expenditure volatility, and pension liabilities is represented separately from extreme events/public safety.

GFOA Reserve Analysis for the City of Napa

Exhibit 5.1 – Risk Factor Overview

Specific Risk to General Fund	Less Risk Averse	Highly Risk Averse Amount
Revenue Volatility		
Transient occupancy tax (short-term)	$1,200,000	$1,200,000
Sales tax	$2,800,000	$2,800,000
Other General Fund revenues	$3,500,000	$3,500,000
Subtotal	**$7,500,000**	**$7,500,000**
Community Growth		
Subtotal	**$172,000**	**$860,000**
Expenditure Volatility		
State intervention	$489,000	$489,000
Environmental clean up	$450,000	$450,000
Subtotal	**$939,000**	**$939,000**
Pension Liabilities		
Subtotal	**$1,400,000**	**$1,400,000**
Foregoing Risk Factor Subtotal	**$8,600,000**	**$9,300,000**
Extreme Event/Public Safety		
Earthquakes	$4,300,000	$12,100,000
Floods	$1,500,000	$3,100,000
Extreme Event/Public Safety Subtotal	**$5,800,000**	**$15,200,000**
ALL RISK FACTOR TOTAL	**$15,800,000**	**$25,900,000**
Percent of General Fund 2014 Revenues	**22%**	**36%**

However, determining a final reserve target is not as straightforward as summing the numbers in Exhibit 5.1. There are three issues we must consider before arriving at a final target:

- Risk interdependency,
- Risk's probability of occurring, and
- The City's ability to reduce its budget in the event of a downturn.

Risk interdependency. Risk interdependency refers to the relationship between the different risk factors. To illustrate, if two risks are highly dependent, then there is a strong likelihood that both will occur at the same time. If two risks are independent there is no particular reason they should occur at the same time. There are some dependencies between revenue volatility and pension cost increases. For example, an economic slowdown would result in downward revenue pressures, coupled with cost pressures. There is also some dependency between extreme event/public safety risks and revenue volatility because a major earthquake or flood in Napa Valley could interrupt the travel and tourism industry that provides the area's sales tax and TOT revenues. Expenditure volatility associated with potential lawsuits, State of California's intervention, environmental cleanup, and grants subsidies appear

to be an independent risk because the occurrence of any of these risks has little to do with the occurrence of other risks.

Where risks are highly dependent, it is wise to hold reserves closer to the full implied reserve amount for each dependent risk factor because if one happens it is likely the other one will occur as well. Where risks are independent and the risks have a low probability of occurring it may not be necessary to hold the full amount of implied reserves for each risk because one shared reserve for multiple risk factors that is less than the total implied reserve amounts of the individuals risks will probably be sufficient to protect the City.

Risk's probability of occurring. Some risks have a low probability of occurring, but have extreme consequences if they occur. An earthquake is the leading example of this. Some risks are almost certain to occur, but the consequences are not necessarily so severe. General revenue instability is certain to occur and the impact to the City in the past has been manageable. When risks are likely to occur, it is wise to hold the full implied reserve amount. When risks have a low probability of occurring it is possible to hold less than the implied reserve amount if the low probability risks are independent of each other. The odds that these risks occurring at the same time are very small, thus the City could elect to hold reserves that are less than the amount that would needed to cover all low probability events happening at the same time.

City's ability to reduce budget in the event of downturn. In Section 3, we established that the City does have some ability to reduce its budget in the event of a downturn in revenues. The 5 percent reduction in General Fund revenues was taken into account when we explored the analysis on revenue volatility.

B. Recommended Reserve Target for Napa

This section addresses a recommended range of reserves for Napa. First, we synthesize the risk analysis into a recommended range of reserves. Then, we discuss how the recommendation fits with Napa's existing reserve strategy.

Reserve Amount Derived from Risk Analysis

If we consider the risks to have high degree of dependency the City should reserve $25.9 million or 36 percent of the General Fund revenues in order to cover the risks addressed in this report. This represents a more "risk averse" approach to reserves. As mentioned in the preceding subsection, there are some dependencies between the risks but they are not all completely dependent. A reserve of $15.8 million (22 percent of General Fund revenues) would represent a less risk averse approach.

The risk factors, however, are not all completely dependent or independent. Focusing on expenditure volatility, there is some independence with the risk factors associated with expenditure volatility. For example, an environmental clean-up project does not affect the amount of General Fund revenue collected and vice versa. Because expenditure volatility is largely an independent risk, the City could hold $939,000 less than the upper end of the target range. Additionally, there is some dependency between extreme events/public safety and revenue volatility associated with economic conditions, though it is not complete. The City could hold an amount less than the combined total of the two

amounts. Adopting such strategies could still result in reserve targets still fall within the range that GFOA's analysis would consider reasonable.

Hence, the City should choose a reserve target for its General Fund between $15.8 million and $25.9 million to cover the risks addressed in this analysis. This equates to a reserve equal to about 22 percent and 36 percent of the City's General Fund revenues, respectively. The large range is due to the range of possibilities from an earthquake, including the more costly 2014 South Napa event. As such, the upper end of the range represents a worst case scenario and provides sufficient coverage for Napa to cover all of its risks at the same time (though it is unlikely that all would occur at the same time). Hence, the top of the range represents a very risk-averse approach. In determining an exact reserve percentage, the City should consider its size, borrowing capacities, and extreme event mitigation strategies and how that affects the amount it needs to reserve. GFOA also recommends that the City adopt policies on asset management, volatile revenue, grants, and interfund borrowing to help mitigate risks and to be more resilient to shocks and stresses. Issues to help the City consider the exact amount of reserves to maintain are explored in more detail in the following paragraphs.

First, to help the City consider the exact amount of reserves to maintain, Exhibit 5.2 provides a table of General Fund balances as a percent of General Fund revenues for California municipalities that are comparable to Napa. A couple of notes should be made about Exhibit 5.2 in order for the reader to fully understand its meaning. First, "fund balance" is an accounting term that describes the difference between the assets and liabilities in the General Fund. "Reserves" (which are the main topic of GFOA's analysis for Napa) are the portion of fund balance that is set aside, by City council policy, as a hedge against risk. Hence, not all "fund balance" is necessarily available as a reserve. The right-hand section of Exhibit 5.2 shows how much each municipality holds in fund balances as a percent of general revenue. Each of three columns in this section examines fund balances from a different perspective on the relationship between fund balances and risk mitigation.

The first column shows "unrestricted" fund balance. This is an accounting term that includes fund balances that do not have constraints placed on their use by an outside entity (e.g., a bond covenant might restrict the use of some portion of fund balance to debt service) and that are spendable (e.g., do not represent inventory or other non-liquid assets). "Unrestricted" fund balances may still have constraints placed upon their use, but these constraints would be created by the municipal government itself. One common constraint is to dedicate some portion of fund balance to hedging against the types of risks described in this report. However, other constraints have nothing to do with this kind of risk mitigation - to illustrate, a common self-imposed constraint is putting aside fund balance to pay for a special capital project. While such a constraint *could* be removed and, thus, the entirety of monies in the "unrestricted" category made available for risk mitigation, it is not the intent of the municipality to do so.

The second column shows the amount of fund balance that is available for risk mitigation after fund balances that have self-imposed restrictions that are not germane to risk mitigation are removed from consideration. This leaves self-imposed restrictions that are germane to risk mitigation as well as fund

balance that does not have any restrictions placed upon it at all, so could easily be used for responding to emergency events if needed.

The third category includes only those fund balances that have been specifically identified by the municipality as intended for creating a risk mitigating reserve. It should be noted that since the analysis in Exhibit 5.2 is based only upon the information included in each municipalities' FY 2013 comprehensive annual financial report (CAFR), it is possible that the amount dedicated to risk mitigation could be somewhat higher for some of the municipalities as a legislative policy document might call for maintaining a given amount in fund balances as a reserve without creating an accounting restriction that would show up in the financial report. This is the case for Napa as it sets aside 3 percent of its operating budget in the General Fund Undesignated Fund Balance. The City also has a Contingency appropriation of 1 percent for non-recurring unanticipated expenditures or to cover known contingencies with unknown cost.[24] If these reserves are included in the dedicated to risk mitigation category, then the share relative to General Fund revenues increases to 15 percent for Napa. Similarly, Vacaville sets aside a portion of its General Fund as an emergency reserve to meet an unexpected downturn in the local economy, state imposed reductions in city revenues, unanticipated cost increases, and catastrophic losses or natural disasters. This emergency reserve amounted to approximately $2.7 million in FY 2013. That said the figures in Exhibit 5.2 are probably inclusive of most of the funds these municipalities have dedicated to risk mitigation.

Exhibit 5.2 – Fund Balance as a Percent of General Fund Revenues for Comparable California Cities

		Fund Balances as Percent of General Fund Revenue for FY 2013		
Municipality	**Population**	**Unrestricted**	**Available for Risk Mitigation**	**Dedicated to Risk Mitigation**
Napa	*77,698*	*29%*	*18%*	*12%*
American Canyon	19,862	55%	36%	10%
Livermore	83,325	27%	27%	23%
Petaluma	58,804	11%	5%	NA
Pleasanton	71,871	14%	14%	10%
St. Helena	5,854	45%	45%	24%
Santa Rosa	170,093	26%	18%	15%
Vacaville	92,677	14%	12%	NA
Average	***72,523***	***28%***	***22%***	***16%***
Median	***74,785***	***26%***	***18%***	***14%***

Unsurprisingly, the averages at the bottom of the table decline as one reads from left to right, as the scope of fund balance included declines.

[24] The City's Contingency appropriation for FY 2013-2014 was $300,000, which is under the $664,000 policy level. However, Napa is working to achieve compliance through $100,000 annual increases over the next four years.

GFOA Reserve Analysis for the City of Napa

For Napa's purposes, the figures in the second and third columns are most relevant. These figures tell us that the City's previous practices did result in it carrying a slightly less fund balance for risk mitigation than the comparable cities. It also tells us that the GFOA recommendation of a reserve equal to between 22 and 36 percent of the City's revenues would not be out of line with the amounts available for risk mitigation maintained by peer cities as, including Livermore as well as other Napa County cities, e.g. American Canyon and St. Helena.

In terms of fund balances dedicated to risk mitigation, St. Helena had the highest at 24 percent. It assigns fund balance to an economic uncertainty reserve. Livermore has similar self-imposed restrictions, with $12.0 million committed for financial stabilization and $8.0 million assigned to economic uncertainty. Napa falls close to the mid-point for the peer cities with 12 percent of General Fund revenues assigned to its emergency reserve. With the exception of Petaluma and Vacaville, the peer cities all commit or assign a portion of their General Fund balance for risk mitigation.

As further input into considering the range of reserve targets, the City should consider three factors that are relevant to sizing a reserve:

- **Government size:** As a moderate-size municipality, Napa should, at a minimum, observe GFOA's Best Practice to maintain a General Fund reserve of 16 percent of regular general fund operating revenues or regular general fund operating expenditures.[25] Of course, GFOA's recommended reserve level for the City of between 22 and 36 percent of General Fund revenues is above the minimum industry best practice threshold.
- **Borrowing capacity:** The City does not have significant debt. This suggests that Napa has the flexibility to access capital from the debt market. This could provide an alternative to reserves, to some extent.
- **Public safety/Extreme event mitigation strategies:** The City does include in its capital improvement plan projects to mitigate the impact of earthquakes, floods, and other extreme events. These preventative activities may suggest that the City's future exposure to extreme events is lower than its historical experience would indicate. Napa's strategy of reducing its risk of loss from extreme events could justify a reserve towards the lower end of GFOA's suggested range.

In conclusion, to zero in on a final reserve target GFOA recommends that the City Council and staff have a conversation about their risk appetite. A low risk appetite should suggest that a reserve closer to 36 percent for the General Fund would be safer for the City. If the City has a higher risk appetite it would adopt a reserve target closer to 22 percent. Napa could also adopt a target between these two poles. In short, there is no one "correct" answer as the final target is a product of the City's willingness to assume risk.

[25] GFOA, "Best Practice:
Determining the Appropriate Level of Unrestricted Fund Balance in the General Fund," October 2009, http://www.gfoa.org/determining-appropriate-level-unrestricted-fund-balance-general-fund.

Relation to the City's Existing Reserve Strategy

Four categories of the City's existing reserve strategy directly affect the General Fund:

- **General Fund Emergency Reserve.** The primary purpose is to protect the City's essential service programs and funding requirements during periods of economic downturn (defined as a recession lasting two or more years), or other unanticipated or emergency expenditures, such as a natural disaster, that could not be reasonably foreseen during preparation of the budget. It is City policy to maintain the General Fund Emergency reserve at 12 percent of budgeted operating expenditures. Use of the reserve must be approved by City Council.
- **General Fund Undesignated Fund Balance (Operating Reserve).** The operating reserve is to be maintained at 3 percent of the City's operating budget. The City transfers Undesignated Fund Balance in excess of this 3 percent as of June 30 of any year, after the Operating, Emergency, and Contingency funds threshold for the next fiscal year have been met. The transfers are to one-time expenditure accounts, including Reserves or Capital Projects as reviewed and approved by the Council. Unless priority is described, the Capital Facilities Replacement Reserve will receive the first transfer in an amount not to exceed 2 percent of the operating budget and the CIP General Fund Reserve will receive the second transfer in the remaining balance.
- **Capital Facilities Replacement Reserve.** The purpose of this reserve is for the expansion of existing City facilities or the creation/renovation/acquisition of new facilities that meet the workforce needs of city services.
- **CIP General Fund Reserve.** The purpose of this reserve is to fund ongoing and future Capital Improvement Projects. Amounts transferred to this fund shall be from the General Fund's Undesignated Fund Balance, and, unless otherwise directed, will equate to any remaining General Fund Undesignated funds as of June 30 of any year, after the Operating, Emergency, and Contingency funds threshold for the next fiscal year have been met, and an amount equal to 2 percent of the operating budget has been transferred to the Capital Facilities Replacement Reserve.
- **Financial Policies.** Section C, below, describes a number of financial policies that the City can adopt to support its reserve strategy. Some of these policies even have the effect of making the City more financially resilient, thereby possibly reducing the City's need to hold reserves as a risk-mitigation tool. For example, a volatile revenue policy would prevent the City from becoming overly reliant on sales and transient occupancy taxes, thereby reducing the City's vulnerability to an economic downturn. An inter-fund borrowing policy could provide access to additional funding, should the General Fund need it in an extreme emergency. This would reduce the General Fund's need to hold as much reserves since it would not need to be totally self-reliant.

GFOA applauds the City for this practice of explicitly recognizing the purposes of the reserves and for identifying the target level of the General Fund Emergency and operating reserves. Further, GFOA recommends that the City review the amounts it reserves in these reserves based on discussions of its risks as analyzed in this report.

C. Policies to Support the General Fund Reserve Strategy

This section presents ideas for formal policies that Napa may wish to consider that would support the City's overall reserve strategy.

General Fund Reserve Policy

The City should strengthen its formal General Fund reserve policy. Already the City's General Fund Emergency reserve:

- Officially establishes the intent of the City to maintain the target level of reserves.
- Describes the acceptable uses of reserves. This prevents the reserves from being used inappropriately and, thus, degrading the City's risk mitigation capabilities.
- Describes who is authorized to use the reserves.

To further enhance its General Fund reserve policy, the City could provide guidance on how to replenish reserves back to target levels when necessary. After making such adjustments, the City could also memorialize the final reserve target in a document that receives formal City Council approval. A specific implied reserve component where this could apply is extreme event/public safety. For example, reimbursements received by federal and state agencies could help replenish the reserve.

Asset Management Policy

An asset management policy will help support the City's reserve strategy because acquisition and maintenance of capital assets is a major draw on the City's resources. An asset management policy will only complement the City's strong capital improvement budget policies and standardize its approach to asset maintenance and replacement. This will create greater predictability in capital financing needs thereby improving the flexibility of the City's financing structure. Greater flexibility helps reduce the pressure on reserves. GFOA has provided the City with an example of an asset management policy, including wording for establishing sinking funds to finance asset replacement and maintenance.

Volatile Revenue Policy

The City has a revenue policy that directs non-recurring sources of revenue (e.g., asset sale, settlement from a lawsuit that the City wins, etc.) to be used for non-recurring expenditures (e.g., pay down debt, buy a capital asset,[26] etc.). One-time revenues are, by definition, undependable so should not be used to fund expenditures of a recurring nature. GFOA commends the City for having this policy in place. A volatile revenue policy takes the concept a step further by declaring unusually high yields from volatile revenue sources as the equivalent of a one-time revenue. For example, if the City has a record breaking year for retail sales it would be unwise to consider the resulting sales tax as the new baseline for the amount of sales tax revenue the City should expect in future years and to plan spending accordingly. Rather, the revenue above and beyond what might be considered "normal" should be used for non-recurring expenditures.

Below is an example of a volatile revenue policy for sales taxes. A similar policy could be adopted for TOT and investment income. The City will note that the policy calls for extraordinary revenues to be

[26] Assuming that the future operating and maintenance costs of the asset can be handled with recurring revenues.

directed towards one-time uses. A sinking fund to pay for important unfunded capital projects could be one such use and could be explicitly stated as such in a policy. GFOA has provided the City wording for a sinking fund (along with other asset management policies).

It is not prudent to allocate sales tax revenue that exceeds the normal growth rate (defined as the average annual growth rate over the last ten years) to ongoing programs. Therefore, sales tax revenues that exceed the normal growth rate should be used for one-time expenditures or to increase reserves for the inevitable economic downturns.

Grant Policy

Grants are an attractive form of funding because they offer the possibility to reduce reliance on other revenue sources, e.g. taxes and fees. Grants also can harm a government's long-term position if they lead to implementation of a program that requires on-going support after the grant expires. Additionally, matching funds and overhead costs could divert funds from higher-priority projects. A grant policy could encourage grant-seeking, but also should recognize the risks of overreliance on grants and directs how to manage those risks. GFOA has provided the City with an example of a grant policy.

Interfund Borrowing

A strong, detailed inter-fund borrowing policy could help reduce the amount of reserves needed in the City's General Fund by providing for short-term, emergency loans from other funds to cover any risks. GFOA's review of Napa CAFR indicates that there are sizable reserves in other funds. However, it is not in the scope of our analysis to assess the financial health of these funds.

The City should consider whether developing a strong and rigorous interfund borrowing process is a risk mitigation strategy it wants to adopt. If so, Napa should then analyze the health of the other funds to assess their suitability as "lenders." If they are found to be suitable, then the City should draft a clear policy to describe the conditions under which loans are acceptable, the maximum term of the loans, and guidelines for interest charges on the loan.