CITY OF DANA POINT
Financial Review Committee
AGENDA REPORT

DATE: July 26, 2017

TO: Financial Review Committee

FROM: Mike Killebrew, Assistant City Manager

SUBJECT: Financial Policy Development Update

RECOMMENDED ACTION:

Receive updates and recommend direction for future efforts on each of:

a. GFOA Contract Update
b. Financial Strength Report – Info provided by Member Nelson and Member Rolapp
c. Risk-Based Analysis of General Reserve Requirements – Info provided by Member Nelson
d. Revenue Enhancement – Approach Suggestion provided by Member Nelson

BACKGROUND:

a. GFOA Contract Update - The contract with the Government Finance Officers Association (GFOA) to assist the City with development of financial policies is currently under review and will be executed soon. As part of the first phase of the project, the consultant will conduct a workshop with the City Council and Financial Review Committee on September 12, 2017.

b. Financial Strength Report – Member Nelson distributed via email on June 13, 2017 to all Financial Review Committee Members an article published by the non-profit California Policy Center. The email and article are attached as **Supporting Document A**.

c. Risk-Based Analysis of General Reserve Requirements - Member Nelson distributed via email on June 14, 2017 to all Financial Review Committee Members a report commissioned by the City of Colorado Springs and published by GFOA. The email and report are attached as **Supporting Document B**.

d. Revenue Enhancement - Member Nelson distributed via email on June 14, 2017 to all Financial Review Committee Members suggestions on how to the FRC may want to consider moving forward with gathering ideas to maximize revenue. The email is attached as **Supporting Document C**.

SUPPORTING DOCUMENTS: **PAGE NO.**

SUPPORTING DOCUMENT A

MIKE KILLEBREW

From: Toni Nelson <tonidn1@gmail.com>
Sent: Wednesday, June 14, 2017 1:02 PM
To: Larry Rolapp
Cc: Brian Porter; Buck Hill; Greg Wall; MIKE KILLEBREW
Subject: Re: California City and County Fiscal Strength Index – 2017 Update | California Policy Center

Exactly! Excellent if we can keep it up and not break into reserves. 👍

Sent from my iPhone

On Jun 14, 2017, at 10:46 AM, Larry Rolapp <lrolapp@Fieldman.com> wrote:

> Hi Toni
>
> Thanks for sending this out to everyone. I found the following statement of the analysis most interesting:
>
> **"To receive a perfect 100 score, a city or county must have had all of the following five characteristics in 2015:**
>
> 1. **General fund balance equal to 32% or more of general fund expenditures**
> 2. **Long term liabilities no greater than 40% of total revenues**
> 3. **Actuarially determined pension contributions no greater than 10% of total revenues**
> 4. **Flat or declining unemployment rate**
> 5. **Property value increase of 3% or more**
>
> **It is not necessary to have a perfect score to be regarded as fiscally healthy. I consider a score of 71 or higher to be roughly equivalent to a rating of AAA, but it may be appropriate to make adjustments to the score before using it as a rating proxy."**

While we rank #83 out of 511 (pretty good!!) it appears that Dana Point received a score of 100.

I look forward to further discussions on this matter.

Regards-

Larry

Lawrence G. Rolapp
Cell (949) 981-0515

From: Toni Nelson [mailto:tonidn1@gmail.com]
Sent: Tuesday, June 13, 2017 11:11 PM
To: Brian Porter; Buck Hill; Greg Wall; Larry Rolapp
Cc: Mike Killebrew
Subject: California City and County Fiscal Strength Index – 2017 Update | California Policy Center

Here is the article I was referring to. The California Policy center ranks CA cities by fiscal health. We are #83 of 511 based on 2015 data. San Clemente is #69, Stanton #45, Laguna Niguel #6. It says a major factor is the general fund balance which should be 32% or more of general fund expenditures per their criteria. My apologies for erroneously quoting 42% at the meeting. Their assessment is based on 32% not 42% of expenditures. There are several other factors as well. Just scroll down for the rest.

I'll also look for the case study on reserves I referenced. Both of these will be good starting points when we discuss reserve policy but I agree with Mike - there are many factors to consider such as age and condition of infrastructure, volatility of revenue stream, risk of natural disasters, sensitivity to economic forces, etc..

http://californiapolicycenter.org/california-city-county-fiscal-strength-index-2017-update/

Best, Toni

Sent from my iPad

Sent from my iPad

CALIFORNIA POLICY CENTER

California City and County Fiscal Strength Index – 2017 Update

By Marc Joffe
February 8, 2017

Relative to earlier years and their peers in other states, most California city and county governments were in good financial condition at the end of fiscal year 2015. California Policy Center's study of audited financial statements and socioeconomic indicators show widespread fiscal strength, but a few trouble spots as well.

Our analysis extends a fiscal strength study published in *The Fiscal Times* in January. That study assigned fiscal scores to 116 US cities with population greater than 200,000. The six highest scoring large cities in *The Fiscal Times* review were all located in California. Here, we extend the study universe to include every California city and county that has published audited financial statements in 2014 or 2015 (we used 2015 statements when available, but relied on 2014 statements in a few cases in which 2015 statements could not be obtained).

Of the 511 cities and counties we analyzed, over 60% scored 90 or higher. But fiscal health was not universal: eight cities had scores below 50. Several of these cities appeared on a distressed municipality list published by California Policy Center in November 2014. The earlier CPC analysis used a different scoring system, but relied upon similar variables.

You can see all the scores with links to the financial statements we used here:

State Controller ID	City or County	Year	Link to Audited Financial Statement	Score	Rank
50	Stanislaus County	2015	Statement	100	54
31	Placer County	2015	Statement	98	157
48	Solano County	2015	Statement	99	126
37	San Diego County	2015	Statement	97	194
36	San Bernardino County	2015	Statement	97	184
41	San Mateo County	2015	Statement	97	196
1516	Santa Monica	2015	Statement	96	204
39	San Joaquin County	2015	Statement	96	211
1	Alameda County	2015	Statement	96	219
27	Monterey County	2015	Statement	95	227
1283	Glendale	2015	Statement	94	266
15	Kern County	2015	Statement	94	271
42	Santa Barbara County	2015	Statement	93	282
56	Ventura County	2015	Statement	92	296
1435	Pasadena	2015	Statement	92	297
49	Sonoma County	2015	Statement	91	302
21	Marin County	2015	Statement	91	304
40	San Luis Obispo County	2015	Statement	90	317
54	Tulare County	2015	Statement	87	358
30	Orange County	2015	Statement	87	361
1479	Roseville	2015	Statement	86	365
43	Santa Clara County	2015	Statement	85	381
7	Contra Costa County	2015	Statement	84	386
1489	San Diego	2015	Statement	82	400
1481	Sacramento	2015	Statement	82	404
1511	Santa Clara	2015	Statement	81	415
1414	Oakland	2015	Statement	80	417
19	Los Angeles County	2015	Statement	76	431
1492	San Francisco	2015	Statement	78	425
1496	San Jose	2015	Statement	76	433
10	Fresno County	2015	Statement	72	448

Excluded from the study were 28 local governments for which audited financial statements could not be found. These are mostly smaller towns and cities. In 2015, the federal government required public agencies receiving $500,000 or more in federal grant funds to file audited financials (this threshold has since been raised to $750,000), while financial regulations normally require governments borrowing on the municipal bond market to file these statements. So, if a municipality received less than $500,000 in federal funds and did not have outstanding municipal bonds in 2015, it did not need to prepare audited financials.

The scoring system is described in a new working paper which will be published by the Haas Institute at UC Berkeley in the next few weeks. It is based on empirical research that associates local government fiscal distress with weak revenue performance, high debt burdens and low or negative general fund balances.

While the first two factors are straightforward, the third may require more explanation. A government's general fund is roughly analogous to an individual's checkbook, and a negative general fund balance is like an overdraft. A government or an individual may have other assets available to pay day-to-day bills, but it may be difficult to get access to these assets when needed. The City of Vallejo went bankrupt in 2008, citing exhaustion of its general fund balance, even though it had $100 million of cash elsewhere. Stockton and Sen Bernardino also had low or negative general fund balances at the time of their 2012 bankruptcy filings.

The score is based on the following five factors:

1. the ratio of a city's general fund balance to its expenditures (40 percent weighting)

2. the ratio of its long-term obligations (including the current portion and Other Post-Employment Benefits but excluding pensions) to total government-wide revenues (30 percent weighting)

3. the ratio of actuarially determined pension contributions to total government-wide revenues (10 percent weighting)

4. change in local unemployment rate (10 percent weighting)

5. change in property values (10 percent weighting)

Changes in the unemployment rate and home prices provide an indication of future revenue trends. The long-term obligation and pension contribution ratios provide insight into the government's debt burden – including the debt that arise from making unfunded commitments to retired and retiring employees.

Data for the first three factors were obtained from audited financial statements, unemployment rates were obtained from the Bureau of Labor Statistics and home prices were gathered from Zillow. For some smaller entities, unemployment rates and/or home prices were unavailable. In these cases, data from a nearby city or county was used.

To receive a perfect 100 score, a city or county must have had all of the following five characteristics in 2015:

1. General fund balance equal to 32% or more of general fund expenditures
2. Long term liabilities no greater than 40% of total revenues
3. Actuarially determined pension contributions no greater than 10% of total revenues
4. Flat or declining unemployment rate
5. Property value increase of 3% or more

It is not necessary to have a perfect score to be regarded as fiscally healthy. I consider a score of 71 or higher to be roughly equivalent to a rating of AAA, but it may be appropriate to make adjustments to the score before using it as a rating proxy. Analysts may wish to deduct points for a recent bankruptcy, late filing of audited financial statements or qualified audit opinions.

All 511 scores and supporting data are in an associated Google Sheet. The balance of this paper profiles the eight cities that scored lower than 50 (no county scored in this range).

Several of these low scoring cities were cited in our November 2014 study. Among the cities identified as highly stressed in the earlier analysis, three have significantly improved their financial position: Firebaugh, Huron and Sutter Creek. Ione is no longer required to file audited financial statements. Blythe, Calipatria, King City, Ridgecrest and San Fernando remain near the bottom of our rankings, with scores of between 51 and 60.

Atwater

Atwater, a city located just north of Merced in the Central Valley, has the lowest score in our survey. Like many inland cities, Atwater suffered a steep decline in revenues in the wake of the Great Recession. General fund revenues fell from $11.7 million in 2008 to $9.1 million in 2012. City officials were slow to cut spending in response, wiping out a large general fund balance. In 2008, Atwater reported a general fund balance of $4 million, which was 32% of that year's expenditures. By 2012, the city's general fund balance was negative $3.9 million.

Since then conditions have improved slowly, but Atwater's general fund balance remained deep in negative territory. Most general fund revenue is spent on public safety, which has proved difficult to cut given the city's high crime rate.

In 2013, voters overwhelmingly approved Measure H, a ½ cent sales tax increase to maintain public safety services. The additional revenue from this tax has been placed in a special fund overseen by a citizen's oversight board. But the management of Measure H revenue has come under question. According to Merced County TV News, almost $900,000 of Measure H revenue was spent on a new 100-foot ladder fire truck despite the fact that the city has no building taller than 35 feet.

A large portion of Atwater's public safety expenditures are attributable to pension contributions and retiree healthcare costs. According to CalPERS data, Atwater had 50 retired public safety employees in 2015 – double the number still employed by the city. These retirees benefited from the city's generous 3% at Age 50 formula, so their annual benefits are large for a city of modest means. Required safety pension contributions are rising from $1.1 million in 2014 to over $1.8 million in 2018. Citywide retiree healthcare costs were $600,000 in 2015 and the city has an unfunded OPEB obligation of $5 million.

Aside from pension and OPEB obligations, Atwater is also carrying a heavy load of bonded debt which includes $79 million in outstanding sewer bonds. To the city's credit, it is trying to keep residents informed of its financial difficulties. Atwater's home page prominently links to a slide presentation that explains the situation.

Coalinga

Coalinga is located central California's Pleasant Valley. Its main industries are agriculture, oil and incarceration. Total revenue declines from $30 million in 2009 to $18 million in 2014. The city was hit hard by Governor Brown's decision to shut the Claremont Custody Center in 2011, and the more recent decline in oil prices.

In 2014, Coalinga had general fund revenues of $5.7 million and expenditures of $8.6 million. Some of the deficit was offset by transfers from other funds, but the city's general fund balance deteriorated from negative $2.0 million to negative $3.4 million. Management attributed part of the deficit to difficulties arising from the termination of its 401a defined contribution plan. Coalinga expected to receive a termination payment from the plan sponsor, the International City and County Management Association (ICMA), but didn't. Issues surrounding the plan termination are now being litigated in Fresno County Superior Court (Case Number 16CECG000082), with the city seeking damages from ICMA, Strategic Retirement Advisors (a firm that provides advice to public agencies on their retirement systems) and Verisight (a third-party plan administrator).

Coalinga's 2015 audited financial statements are not available. The city's financial director informed CPC that the long delay in the release of these statements was attributable to staff turnover and that they were expected to be released by the end of March. The city's most recent budget showed a 2015 general fund surplus of $900,000.

More recently, Coalinga had some positive fiscal news. In July 2016, the city sold its vacant prison building to Ocean Grown Extracts, which will use the facility to grow marijuana and produce cannabis oil. The $4.1 million purchase price should eliminate Coalinga's negative general fund balance. The new business will also generate incremental tax revenue for the City.

Compton

In our 2014 report, we named Compton as the state's most fiscally distressed city. Our updated scoring system places the city further down the list, but its fiscal and management problems remain largely unresolved. Since our previous report, the city council has fired two city managers. After G. Harold Duffey vacated the position in December 2014, assistant city manager Jonny Ford stepped into the role. In October 2015, Compton hired former Lynwood city manager Roger Haley to permanently fill the position, but then removed him in July 2016. According to the Compton Herald, Haley was terminated because he spent a large amount of city funds to promote a sales tax increase on the June ballot and for failing to keep the Council properly informed about fiscal conditions. In January, Compton named Cecil Rhambo as its new City Manager.

The minutes of a March 2016 Council Meeting support the belief that Haley misinformed elected officials. At that meeting, a financial advisor is quoted as saying that the city was about to have its credit ratings restored and that the city has not been distressed since late 2012. Since that meeting, the city has sold two bond issues, neither of which carried a rating. Further, a review of Moody's and Standard and Poor's web sites show that the city remains unrated.

One reason that the ratings were withdrawn was that Compton could not produce audited financial statements on a timely basis. Normally, local governments must provide audited financial statements within nine months of their fiscal year end. According to

a disclosure filed with the Municipal Securities Rulemaking Board, the city failed to file audited financial statements for its 2011 fiscal year, filed its 2012 statements 16 months late and filed its 2013 statements 21 months late.

The city's audited financial statements for the fiscal year ended June 30, 2014 are dated November 17, 2016, which is 19-1/2 months after the March 30, 2016 filing deadline. The continual filing delays makes a rating restoration unlikely. Moreover, the city's 2014 audit is qualified – which means that the independent auditor could not fully verify the amounts reported by the city.

The auditor's letter notes that "the City could not provide documentation to support $6.3 million in additions to capital assets." The auditor could also not determine whether the city had earned $2.9 million in federal grant revenues, raising the possibility that the grant money was not spent for the intended purpose.

According to the city's unaudited 2015 financial report. Compton's general fund revenues were $1.4 million greater than expenditures. However, the city general fund balance was *negative* $33.5 million, which is the equivalent of a huge overdraft on an individual's checking account. Compton has other funds, some of which have positive balances, but its aggregate fund balances totaled *negative* $20.9 million – rendering the city essentially insolvent. (According to an email message I received from Compton's financial manager, the general fund balance improved in 2016 and the recently approved sales tax will accelerate this trend.)

Compton can continue operating because it issues annual revenue anticipation notes. The most recent offering floated last July has a term of 11 months and carries an interest rate of 2%. This is quite a low borrowing cost for an unrated city with known financial problems. It is only possible because the revenue required to repay the bonds never passes through the city's hands. Instead, property tax and vehicle license fee revenue collected by Los Angeles County on behalf of Compton is transferred directly to a bond trustee, who then pays bond investors.

While 2% may seem a small price to pay to keep the city going, Compton also has to pay underwriting, legal and financial advisor fees when issuing these bonds. For the June 2016 offering, these costs of issuance totaled 2.21% of principal according to the State Treasurer's Debt Watch site, so the city's overall borrowing cost was closer to 4%.

Aside from this short-term debt, Compton has other bond and loan obligations, as well as pension and OPEB liabilities. But as a proportion of city revenues, these obligations are in line with many other cities in California and across the country. Also, the city has had a special property tax dedicated to paying retirement obligations since 1947.

Compton also experienced lower unemployment and increasing property values in 2015, suggesting a positive revenue trend. Recent commercial developments including a new Amazon shipment/cargo center and a new Walmart should also brighten the city's revenue picture.

Under the circumstances, it is likely that Compton can struggling along – rolling over and whittling down its short-term bond debt – as long as we don't have another economic downturn. If a regional or national recession strikes however, the city will once again be at risk of bankruptcy.

Marysville

As a small, lower middle class city with few jobs outside of service and retail, Marysville fits the profile of many struggling cities in America. But unlike some other cities in our survey, Marysville's revenue decline in the aftermath of the Great Recession was modest: total revenues fell from roughly $12 million in 2007 to $11 million in 2015. However, the city is burdened by a large amount of debt in relation to its limited revenue and small economic base. Marysville has a population of 12,216 and its median household income is only about $35,000 a year.

The city's 2015 financial statements show a general fund balance of negative $10.5 million but most of this red ink is due to an incorrect accounting treatment. Marysville accounted for its $9 million Net Pension Liability in its general fund, but this amount is only supposed to appear in the Government-Wide financial statements. Removing the pension liability still leaves a significant amount of red ink: a negative $1.5 million balance.

Marysville is burdened with $32 million of long-term debts apart from its pension obligations, including sewer bonds and Certificates of Participation (COPs) – which are primarily serviced from tax revenues. On the plus side, only one city employee and his spouse are eligible for retiree healthcare benefits.

In 2014, city leaders proposed Measure W, which would have authorized a 1% sales tax for ten years with revenues directed to the general fund. However, voters narrowly defeated the new tax. In September 2015, Moody's Investors Service downgraded the city's issuer rating to Baa3, and 2011 Taxable Refunding Certificates of Participation (COPs) to B2, reflecting the risk that tax revenues would be insufficient to service the COPs and fund public safety. A rating of B2 is five notches below Moody's lowest investment grade rating, and is thus deep into "junk bond" territory.

In June 2016, voters were asked to approve a similar 1% sales tax hike under Measure C. This tax increase passed with a 55% majority. Moody's responded by upgrading Marysville to Baa2 again. The rating agency also upgraded the city's COPs to Ba2, which is still two notches below investment grade. If the additional sales tax revenue reaches the forecast level of $1.6 million annually, and the new funds are not spent on new initiatives, the City should be able to reverse its negative general fund balance in the near future.

Maywood

Like its southeast Los Angeles County neighbor, the City of Bell, Maywood is a small municipality that has experienced chronic management problems. In 2015, the State Auditor identified Maywood as one of six high risk cities requiring special monitoring. The Auditor since deferred actions on four of the six cities, focusing on Hemet and Maywood. Although Hemet scored well in our model, Maywood was among the ten worst general purpose governments we evaluated in 2014 and again in our new survey.

After its review, the State Auditor concluded that "Maywood's city council has failed to properly oversee the city's operations and has allowed numerous financial and administrative problems to remain uncorrected, such as the city's failure to maximize revenue and lack of the most rudimentary internal controls. Further, it has accepted flawed budgets and frequently ignored its municipal code when it approved non-competitively bid contracts."

According to the auditor's report, Maywood's fiscal problems date back several years. In 2010, the city lost its general liability and workers compensation insurance, triggering the layoff of all municipal employees and the disbanding of its police force. Although Maywood no longer had employees, it was still obligated to fund pensions for its former workforce, but failed to pay the bills it received from CalPERS. Maywood has also suffered substantial turnover among mayors and City managers. It is also facing an investigation by the Los Angeles District Attorney for failing to abide by the Brown Act, a state law that sets standards of transparency for City Council meetings.

Maywood's 2015 CAFR contains a going concern opinion from the city's auditor reflecting doubts that the city could continue to operate as an independent entity. Triggering this opinion was the city's negative $1 million general fund balance and its government-wide net unrestricted position of negative $27 million. On the plus side, the city only has $3 million in bonded debt.

Soledad

Located south of Salinas in Monterey County, Soledad's economy is largely dependent on agriculture and two state prisons. While the city has a positive general fund balance, it received a low score due to a high ratio of debt to revenues. Most of the city's debt takes the form of an interest-free loan from the state of California to finance the construction of a new sewer plant. Through 2010 Soledad borrowed $46 million, which it was supposed to pay in 20 annual installments. The city later negotiated an extension of the loan to 30 years reducing annual payments to $1.5 million.

This debt service burden is relatively large for a city that collected only $18 million of revenue in 2015. Soledad's total revenues had exceeded $23 million before the recession in 2008. The city has already published its 2016 financial statements, which show higher revenue and lower debt – due to principal repayments. It should thus receive a higher score on our next survey.

Vernon

Vernon, located south of downtown Los Angeles, has only 210 residents but also plays host to 1800 mostly industrial businesses employing over 50,000 workers. In a previous report, we found that municipal employees outnumber residents and are paid, on average, $107,848 per year.

The city reported revenues of $249 million in 2015, mostly from power, light and water bills collected by municipal utilities. The general fund had $39 million in revenue and $53 million in expenditures. Its negative balance improved from negative $23 million to negative $16 million as a result of transfers from the utilities and the sale of property.

While city utilities were profitable, they are heavily encumbered by debt. As of June 30, 2015, the utilities had $383 million in outstanding bonds.

Victorville

Due to a depressed economy, Victorville has suffered poor revenue performance in the wake of the Great Recession. After peaking in 2008 at $130 million, governmental fund revenues cratered – falling to $70 million by 2013 – and have only recovered slightly thereafter, reaching $76 million in 2015. Total government revenues of $173 million are well below the $236 million recorded in 2008. With a shrinking to stagnant revenue base, the city will be challenged to service its large debt burden which includes over $300 million in bonds issued between 2005 and 2008 (however, as discussed below, city management considers much of this debt to not be the city's responsibility). The city's bonded debt dwarfs its $36 million net pension liability and $18 million OPEB liability.

Weak revenues have also been draining the city of cash. In fiscal year 2015, Victorville's general fund balance declined from $4.8 million to $3.4 million – enough to cover only about 6% of annual spending. According to City Manager, Doug Robertson, the city's general fund balance climbed back to nearly $4 million in fiscal year 2016.

Victorville has also been struggling with bonds issued by the Southern California Logistics Airport Authority (SCLAA). Because SCLAA is separate legal entity, Robertson disputes the inclusion of its debt in our calculations, however city officials have administrative control over this entity and its debt is consolidated with that of the city for financial reporting purposes.

The Authority has been defaulting on bond payments since 2011. The most recent default affected interest and principal payments on subordinated bonds due December 1, 2016, with some bondholders receiving as little as 12% of their promised payments.

In April 2013, the Securities and Exchange Commission sued Victorville, a city official, SCLAA and the bond underwriter for fraud in connection with the sale of the defaulted bonds. The SEC complaint alleges that the defendants inflated the value of an airport hangar used as collateral for the bonds and that they misappropriated a portion of the bond proceeds. The defendants tried unsuccessfully to have the case dismissed, but it has yet to come to trial – almost four years after the initial filing. (the case number is EDCV13-0776, US District Court, Central District of California).

Although the case does not relate to bonds issued by Victorville, officials claim that payments to lawyers and the costs of complying with SEC subpoenas have weighed on the city finances

SUPPORTING DOCUMENT B

MIKE KILLEBREW

From: Toni Nelson <tonidn1@gmail.com>
Sent: Wednesday, June 14, 2017 6:34 AM
To: Brian Porter; Larry Rolapp; Buck Hill; Greg Wall
Cc: MIKE KILLEBREW
Subject: Case study
Attachments: GFOAColoradoSprings.pdf; ATT00001.txt

Here is the case study I referenced yesterday. It's a GFOA study to assist the city of Colorado Springs in determining its risk factors. Obviously, Dana Point is very different from Colorado Springs, but the approach taken here makes sense to me. Ultimately, determining reserve levels is more art than science but it clearly should be based on the unique risks faced by each City.

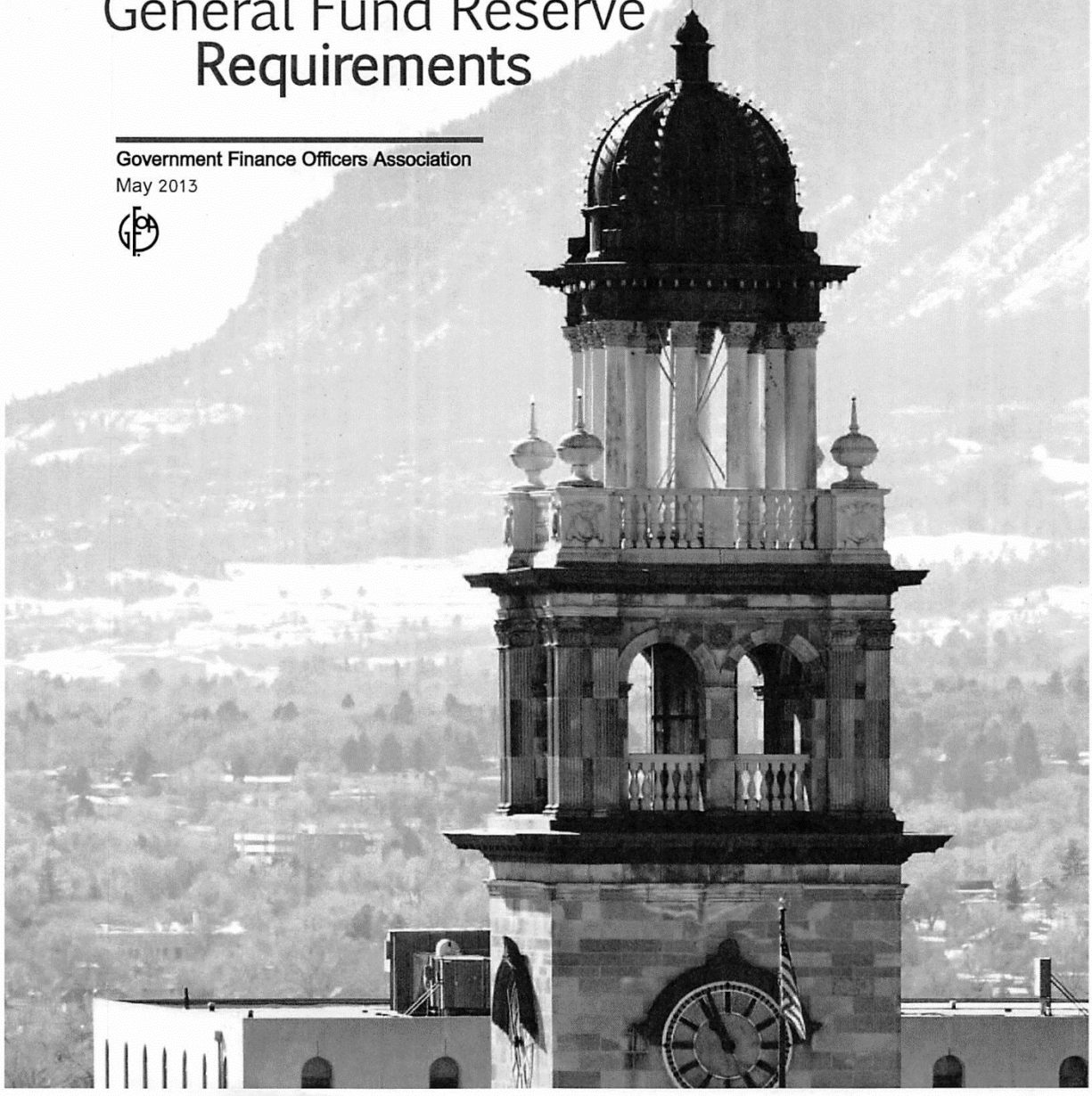
Colorado Springs faced volatility in sales tax, while we face it in TOT and tourism related sales tax revenue. They faced wildfire risk, while we have to think about earthquakes, beach erosion and bluff failure. Every city faces economic uncertainty and the need to plan for facilities and infrastructure maintenance and replacement. I think you'll find this interesting.

Best,
Toni

A Case Study of the City of Colorado Springs

A Risk-Based Analysis of General Fund Reserve Requirements

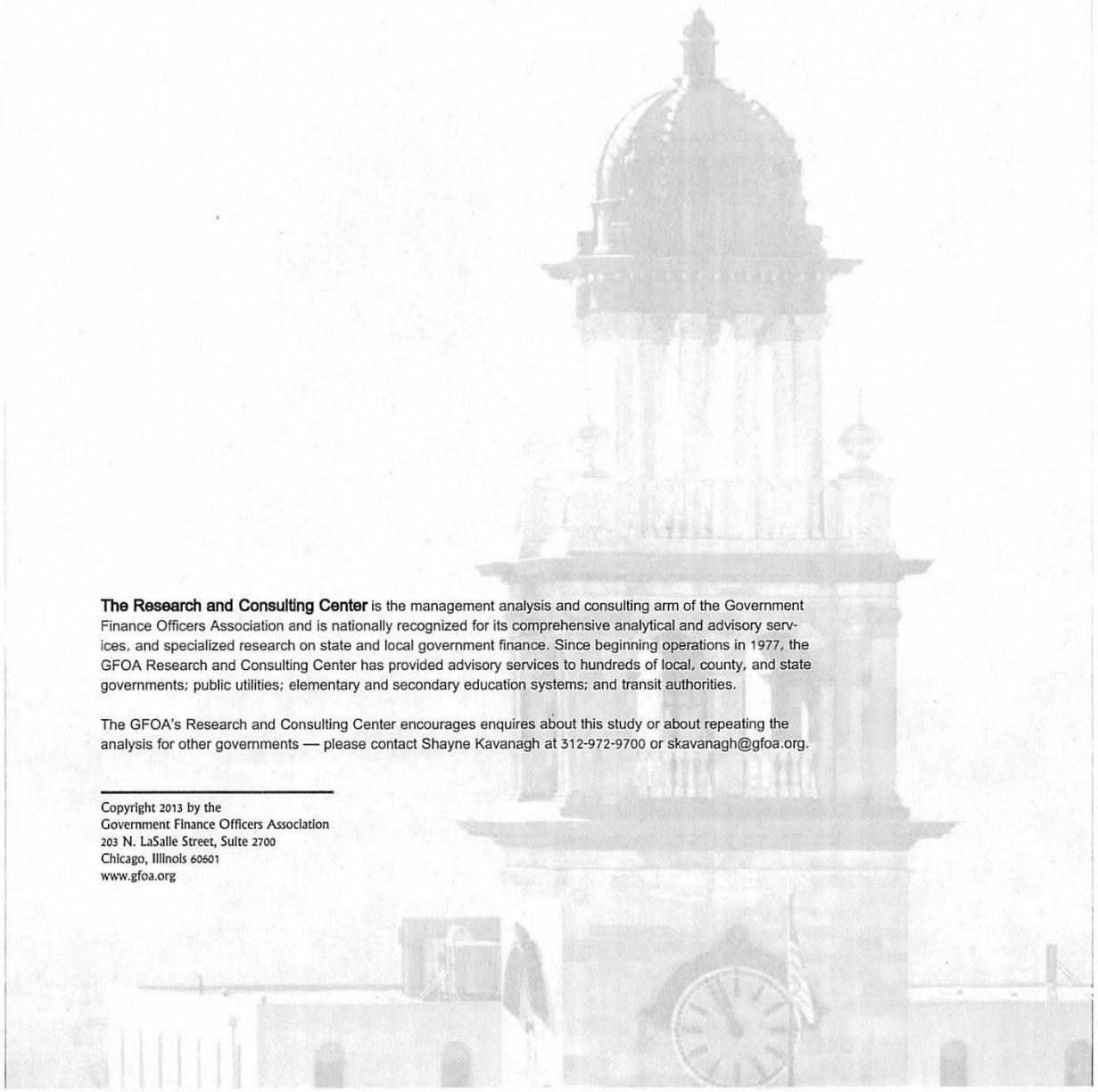
Government Finance Officers Association
May 2013



By **Shayne C. Kavanagh**, Senior Manager of Research, GFOA

Reviewers: Marc D. Joffe, Principal Consultant, Public Sector Credit Solutions, and Bill Statler, Consultant and Trainer; retired Director of Finance & Information Technology, City of San Luis Obispo, California.

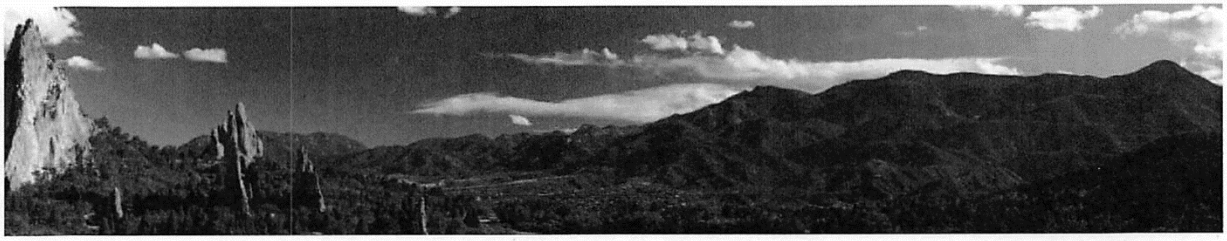
The GFOA would like to thank the City of Colorado Springs for allowing us to share this information, and *Public Sector Digest* for their assistance.



The Research and Consulting Center is the management analysis and consulting arm of the Government Finance Officers Association and is nationally recognized for its comprehensive analytical and advisory services, and specialized research on state and local government finance. Since beginning operations in 1977, the GFOA Research and Consulting Center has provided advisory services to hundreds of local, county, and state governments; public utilities; elementary and secondary education systems; and transit authorities.

The GFOA's Research and Consulting Center encourages enquires about this study or about repeating the analysis for other governments — please contact Shayne Kavanagh at 312-972-9700 or skavanagh@gfoa.org.

The Case of the City of Colorado Springs



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 can be a sensitive question, since money held in reserve is money taken from constituents, and it can be argued that excessive reserves should be returned to citizens in the form of lower taxes.

The City of Colorado Springs, Colorado, has been considering this question, especially in light of its volatile revenue portfolio and the fact that it cannot easily increase taxes to compensate for other changes in its financial condition; for example, the Taxpayer Bill of Rights – a statewide provision restricting all governments in the state from raising tax rates without voter approval – limits the City's ability to increase taxes. The City engaged the Government Finance Officers Association to help produce an answer. The GFOA is a non-profit association of approximately 17,500 state and local government finance professionals and elected officials from across North America, and a key part of its mission is to promote best practices and good public finance, including reserve policies.

The GFOA worked with Colorado Springs to analyze the risks (based on the model originally described in the GFOA publication, *Financial Policies*) that influence the level of reserves the City needs as a hedge against uncertainty and loss. Three primary risks were identified: volatility of sales tax revenue; the potential for the City's storm sewer and bridge infrastructure to fail; and the City's vulnerability to extreme events such as wildfires, floods, and, to a lesser extent, snowstorms. Secondary risk factors were also examined, including cash flow and the potential for unexpected spikes in expenditures. In addition, a benchmarking survey of the reserves held by comparable cities provided context.

CALCULATING THE RESERVE

The GFOA reviewed three primary risk factors in order to assess the potential magnitude of the City's exposure. The "Triple-A" approach to accounting for uncertainties was an important part of GFOA's analysis.

Accounting for Uncertainty – The "Triple-A" Approach

Sizing a reserve requires estimating highly uncertain events, like natural disasters and economic downturns. To develop an adequate response, the GFOA used the "Triple-A" approach:[1]

- **Accept**. First, we must accept that we are subject to uncertainty, including events that we haven't 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.

Revenue Volatility. The City's primary concern was the volatility of sales tax income, and its most important vulnerability in this area would be an economic downturn. The GFOA reviewed sales tax volatility back to 1996 in order to observe monthly variations and longer-term trends. Past experiences suggested that Colorado Springs should prepare for a 20 percent decline in sales tax revenues over 25 months as a plausible worst-case scenario; this would equal about $23 million in reserves. However, since the City would presumably reduce its spending in the event of such a severe downturn, the reserve fund wouldn't have to cover the entire decline in revenue. The City budget office estimated that the budget could be reduced by almost $10 million without creating a major disruption to services (although there would of course be some degree of negative impact on service quality). Thus, Colorado Springs should maintain a reserve of at least $13 million to cover the remaining portion of the worst-case revenue gap and to help the City make a "soft landing" under those circumstances. An additional $7.5 million is required to cover the other revenues that make up the general fund; these were found to be considerably less volatile than the sales tax.

Infrastructure Risks. A government might need general fund reserves to repair or replace an asset that fails unexpectedly. In Colorado Springs, the two major asset classes deemed to have the greatest associated risk were bridges and storm sewers. Thirteen bridge structures had a high risk rating, with an estimated replacement value of almost $23 million – an average of roughly $1.75 million per bridge. A reserve that covers one or two bridges should be adequate, but covering three might be more prudent, for a $5.25 million reserve. No installation dates or condition assessments were available for the 406 miles of storm lines the City manages, but the estimated replacement cost for all storm sewers was a little more than $588 million.[2] Since this lack of information made it impossible to assess the risk of failure, the best that could be done was to make an assumption. The GFOA did know that about 10 percent of the total dollar value of the City's bridge inventory is in the higher-risk category, so it started with that number for storm sewers, which translates to $58 million. The recommended reserve amount is about 20 percent of the high-risk bridges, which equates to $11.6 million for storm sewers.

Extreme Events. Finally, the City is subject to extreme events that pose significant threat to life and property, particularly wildfires and floods. Historically, however, the financial impact of these events has been manageable. For example, the 2012 wildfire was the worst in Colorado history, but the total cost to the City was only $3.75 million – out of an annual budget of approximately $220 million. Of course, the scale of future events is uncertain, as is the timing of FEMA reimbursement and the portion of event response costs that would likely already be covered by existing budgeted resources. Taking this into account, a reserve of $5 million to $7.5 million for extreme events appears reasonable.

Adding It Up. The analysis above, along with the analysis of the secondary risk factors (particularly uncertainty regarding future payments for pension liabilities and expenditures for unfavorable lawsuit judgments) led to the following reserve components. The GFOA further recommended that the reserve amounts be categorized by component, making the purpose of the reserve more transparent. For example, having a reserve for emergencies and a reserve for economic uncertainty would make their purpose more clear than one all-encompassing reserve.[4]

Budgetary Uncertainty Reserve

$13 million for sales tax economic uncertainty +

$7.5 million for economic uncertainty in other revenues +

$6.25 million for pension payment uncertainty =

$27 million, or approximately 12.5 percent of general fund revenues[3] as budgetary uncertainty reserve

Emergency Reserve

$5.25 million for critical bridge failure +

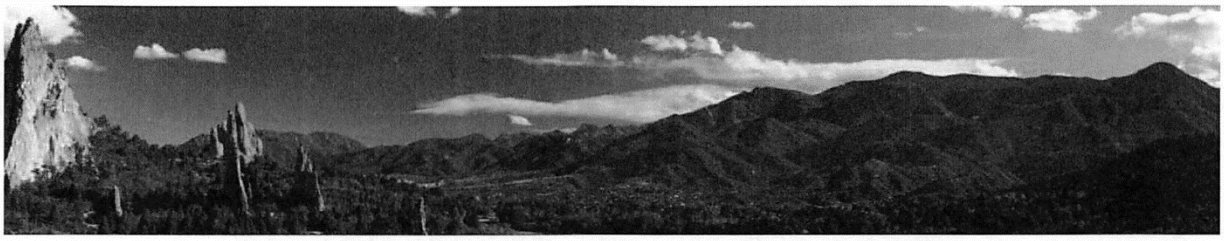
$11.6 million for critical storm sewer replacement +

$5 million to $7.5 million for extreme events +

$2 million to $4 million for expenditure spikes from lawsuits =

$27 million, or approximately 12.5 percent of general fund revenues as an emergency reserve

Combining the components gives us **a target of approximately 25 percent of general fund revenues**, which is in line with the range of reserves actually maintained by other cities that are comparable to Colorado Springs. It is also greater than the 16 percent the GFOA considers a minimum baseline level.[5]



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.

The Origin of this Report

This report was originally developed as a consulting product for the City of Colorado Springs. The City graciously gave the GFOA its permission to use the report for more general education and information sharing about risk-based assessment of reserve requirements.

The City of Colorado Springs (the "City") has been considering this question recently, especially in light of the volatility of its revenue portfolio and the fact that the City cannot easily increase its taxes to compensate for other changes in its financial condition.[6] The City engaged the Government Finance Officers Association (GFOA) to help produce an answer. The GFOA is a nonprofit association of over 17,000 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.

The 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).[7] However, this 16 percent is only intended as a baseline, and it needs to be adjusted according to local conditions. To make the adjustment, the 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.[8] 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 method. 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. For example, perhaps a risk could be transferred by

purchasing insurance or relying on another organization or accounting fund to manage the risk. It might also be possible to avoid a risk by discontinuing activities that are creating a risk for the general fund. Hence, a thorough examination of the risk factors should not only help lead to customized reserve target size, but also should improve the City's understanding of the risks it faces and its overall financial risk profile.

As a first step in this project, the GFOA conducted a basic review of the risk factors that generally influence the amount of reserves a municipal government should hold.[9] This review enabled the City and the GFOA to classify factors as either primary risks or as secondary risks. Exhibit 1.1 lists how the risk factors were classified.

The next section presents an overview of the primary risk factors and the City's level of exposure. The third section reviews secondary risk factors that have less weighty implications for the City's general fund reserve strategy, but which still should be considered. The fourth and final section of the report presents the findings of the analysis, including a customized target reserve level for the City's general fund and other ideas to improve the financial health of the City.

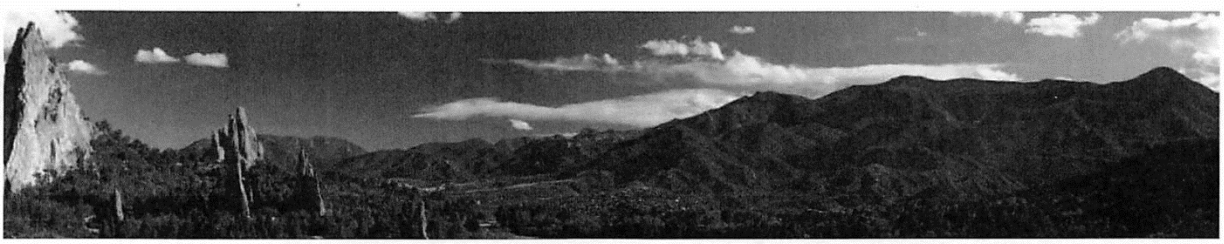
Exhibit 1.1
Categorization of Risk Factors that Influence Reserve Levels for Colorado Springs

Primary Risk Factors

- Revenue (Sales Tax) Volatility
- Infrastructure Upkeep
- Vulnerability to Extreme Events and Public Safety Concerns

Secondary Risk Factors

- Leverage
- Expenditure Volatility
- Liquidity/Cash Flow
- Growth of the Community



2. Primary Risk Factor Analysis

This section presents the three most important risk factors examined by the GFOA and the City's exposure: the volatility of the City's revenue portfolio, maintenance/replacement of the City's infrastructure (focusing on bridges and storm sewers), and vulnerability to extreme events and public safety concerns.

REVENUE SOURCE STABILITY

Volatile revenue sources call for a higher reserve level in order to avoid the need for sudden service cutbacks should revenues drop unexpectedly. Some revenues are inherently volatile. The sales tax is usually considered to be a volatile revenue source because it is much more sensitive to swings in the economy than a revenue source like the property tax, for instance. This is an important consideration for Colorado Springs, considering that sales taxes (and the closely associated use tax) account for over half of the general fund's revenues.[10] No other revenue source comprises more than a fifth of general fund revenue (the next largest is transfers from other funds, at about 17 percent); the property tax, normally a large revenue source for municipal governments, accounts for less than 10 percent.

This section will first analyze the volatility of the sales tax, as well as two closely associated revenues – the use tax and sales tax audit revenue. Following that, the stability of the general fund's other important revenue sources will be examined.

Sales and Use Tax

A first step is to understand the level and nature of volatility in the sales tax. The sales tax appears to follow fairly predictable seasonal patterns. Exhibit 2.1 shows annual sales tax revenues for 2007 through 2011 and Exhibit 2.2 shows monthly sales tax revenue since 2006.[11] In Exhibit 2.1, use tax and revenues from sales tax audits are removed. These revenues add "noise" to the pure sales tax data, making it more difficult to analyze. They are also much smaller revenue sources – use tax is 7 percent the size of sales tax and audit revenues are 3 percent of all sales tax revenue. These revenues will be discussed later in the report.

Exhibit 2.1
Five-Year Trends for Sales Tax

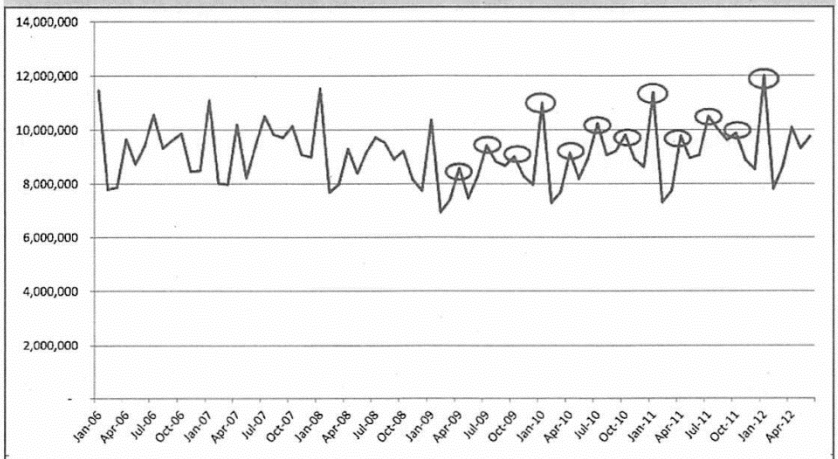
	2011	2010	2009	2008	2007
Revenue	$111,735,533	$108,212,533	$101,247,887	$107,356,298	$113,211,788
Annual Change	3.3%	6.9%	-5.7%	-5.2%	1.7%

The red circles in Exhibit 2.2 denote January revenues, which are always the highest of the year due to holiday shopping. The green circles show revenues from July, October, and April, which all see revenue spikes (due to quarterly sales tax filings for smaller vendors). This pattern and even the relative magnitude of the spikes are quite consistent from year to year, even as far back as 1996. In fact, a statistical analysis shows that only a 2 percent change in sales tax revenue is attributable to random variation. About 91 percent is due to fundamental economic trends/business cycles (also known simply as "trend-cycle"), and 7 percent is explained by seasonal variation.[12]

This means that random fluctuations in the sales tax should not concern the City. However, it also means that the influence of economic cycles is very strong. An unexpected shift in the economy could have serious ramifications for City revenues, as the City has experienced in the wake of the 2001 recession and the more recent Great Recession. Exhibit 2.3 (on the following page) shows the trend-cycle line for sales tax[13] overlaid on monthly sales tax revenues. The red arrows show the beginning and end-points of significant downtrends. The first one started in April 2001 and lasted until May 2003. The trend-cycle declined 6.6 percent over 25 months, or about a quarter percent per month. The second started in July 2007 and lasted until April 2009. The trend-cycle declined 11.2 percent, or just over half a percent per month.

Obviously, the decline associated with the Great Recession was much sharper than the 2001 recession, both in terms of overall decline and speed of the decline. In fact, so severe was some of the financial fallout from the Great Recession that some have dubbed it what acclaimed financial thinker Nasim Talib has termed a "Black Swan" event – a rare and unpredictable event that has an extreme impact.[14] Black Swans are, by definition, impossible to predict, so the best that anyone can do is to be prepared. The accomplished forecasting scientist Spyros Makridakis has suggested a "Triple-A" approach (described on the next page) for dealing with this kind of uncertainty.[15]

Exhibit 2.2
Seasonal Peaks in City Sales Tax Revenue



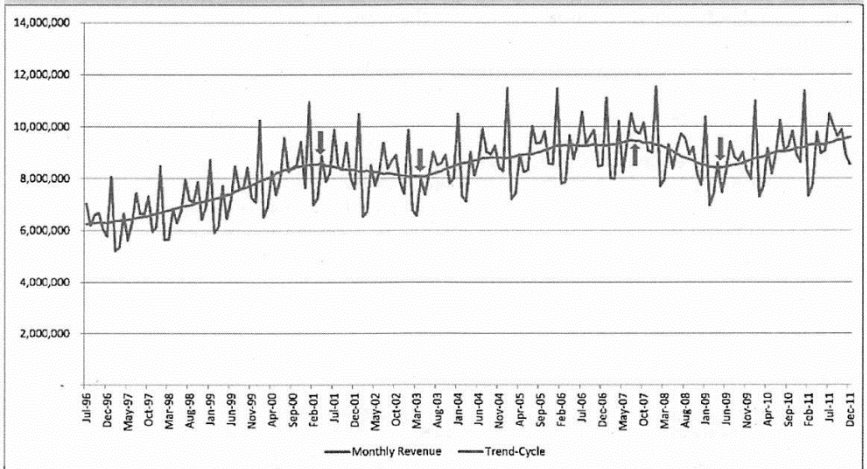
There are four consistent spikes in sales tax revenue during the year, with January being the most important. The other spikes occur in July, October, and April.

1. **Accept.** First we must accept that we are subject to uncertainty. Even though the sales tax is subject to relatively little random variation, it is clearly subject to Black Swans. Because it is relatively easy to imagine scenarios that could cause the Colorado Springs economy to suffer (e.g., European financial crisis, federal debt crisis, a significant reduction in military spending due to federal budget shortfalls, etc.), we must also accept that the economy is 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. We saw earlier that a downturn in the trend-cycle has lasted as long as 25 months and has been as severe as a 0.53 percent monthly decline. The rate of decline is more relevant to the discussion of general fund reserves because a more protracted decline should be dealt with by restructuring the budget, not necessarily with continuous use of fund balance. Even so, it is important to consider both.

3. **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. For example, we used the experience of the Great Recession as a reference point for our worst-case monthly decline (0.53 percent). However, many economists believe that the effects of the Great Recession would have been much worse had the federal government not taken the actions that it did.[16] Who is to say that continued gridlock in the federal political system (or other circumstances) won't prevent an effective mitigating response to the next crisis? As a rule of thumb, Makridakis suggests doubling your range of uncertainty if you have little historical data to rely on or multiplying it by 1.5 if you have more. We have a good deal of data, so a 1.5 multiplier seems appropriate, giving us a 0.8 percent monthly decline. That translates to a potential 20 percent decline over 25 months. This does not necessarily mean that the City should reserve this entire amount, though, because

Exhibit 2.3
Sales Tax Monthly Revenue and Trend-Cycle



The City has experienced two major downturns in the sales tax trend-cycle. The first one started in April 2001 and lasted until May 2003. The trend-cycle declined 6.6 percent over 25 months. The second started in July 2007 and lasted until April 2009. The trend-cycle declined 11.2 percent.

presumably, in the event of a financial Black Swan, the City would take action to reduce spending – not just continue to spend as it had before. The implications of the sales tax analysis, along with the other analyses performed by the GFOA, for the City's reserve strategy will be addressed in the fourth section of this report.

As mentioned earlier, audit revenues were removed from the sales tax data for purposes of this analysis. As Exhibit 2.4 shows, from 2007 through 2011, audit revenues ranged between $3.3 million and $2.2 million. It has experienced some fairly significant swings in this time as well. However, a $1 million potential for variation is probably not material in the entire City revenue portfolio. The City expects sales tax audit revenues to continue into the future within the same general range that they have occurred in the past.

Sales Tax Point of Comparison

Appendix 1 provides a similar analysis of monthly sales tax data from the City of Boulder, Colorado, in order to provide a sense of context for how volatile sales tax revenue is in another jurisdiction.

Use taxes were also removed from the sales tax data. Exhibit 2.5 (on the following page) shows the five-year trend analysis for use taxes. Use taxes are not quite as volatile as audit revenues, but are still rather volatile. In fact, GFOA's statistical analysis showed that almost 15 percent of the variation in use tax is attributable to simple randomness (compared to 2 percent for sales tax). However, more importantly, the use tax has experienced a notable decline since 2008. Examination of the long-term history shows that the revenue experienced a rapid increase in 2005, coinciding with the construction boom and use taxes from commercial construction and manufacturing equipment. Revenue stayed at about this level until 2008, when tax revenue declined considerably as these industries experienced a slowdown in their growth. Hence, the change we see in Exhibit 2.5 is less a product of random variation and more a product of a fundamental change in the tax base. Hence, use taxes have likely settled in at a new, lower level of yield that is reflective of reduced economic activity in commercial construction and manufacturing equipment (in fact, the lowest level since 1996). As such, there is probably little risk of another significant downside move.[17] In fact, an analysis of the sources of the use tax shows that income from construction-related trades has fallen substantially in recent years. For example, revenue from building general contractors in 2011 was 12 percent of what it was in 2007, and revenue from subcontractors was 27 percent of 2007 levels. Also, total vacancy rates for commercial properties have hovered around 10 percent for the last two years, up from 7.7 percent in 2008. This indicates that there may be excess capacity in Colorado Springs, such that a significant uptick in building is not likely in the near term.

Exhibit 2.4
Five-Year Trends for Sales Tax Audit Revenue

	2011	2010	2009	2008	2007
Revenue	$3,284,390	$2,369,723	$3,250,245	$2,189,116	$2,210,099
Annual Change	32.8%	-27.1%	48.5%	-0.9%	51.3%

While sales tax is clearly the most important revenue, an analysis of reserve requirements should take account of other revenues as well, given that other revenues comprise half of the City's budget. Below is a summary of other major sources of revenue and their associated volatility risk.

Property Taxes. Property taxes comprise only about 9 to 10 percent of the City's budget. The City has experienced a steady decline in property tax revenues in recent years, with a primary cause being a reassessment and lower property values owing to the decline in the housing market. Nationally, the housing market seems to have stabilized, at least to the point where another major decline is unlikely.[18] An examination of Colorado Springs' housing prices shows that Colorado Springs seems to essentially follow national trends.[19]

Charges for Service. Charges for service are about 6 to 7 percent of the general fund budget. Revenues from charges for service have fallen substantially in recent years, now budgeted at 70 percent of the 2009 actual revenues. This is mostly due to a sharp decline in charges for services for construction/development regulation. Hence, the user fees do have some vulnerability to economic cycles. A reserve could be useful, but the City might also consider other policies to mitigate risk. For example, a policy that sets cost recovery goals for fees would prompt a discussion of how to reduce costs if revenues were not up to expectations. Regardless, it may be helpful to have a small reserve in order to allow gradual adjustments to drop-offs in revenues. In recent history, the total charges for service revenues have dropped $3 million in one year. At this point, fees that are more sensitive to economic conditions (e.g., construction-related fees) have probably reached or are approaching a bottom. Accordingly, a $3 million reserve should probably be more than adequate.

Intergovernmental Revenue. Intergovernmental revenue is about 9 to 10 percent of the general fund budget. By far, the most important component of this is the highway users tax, at about 90 percent of the total. The highway users tax is intended to support traffic safety and road maintenance programs. There has been political pressure at the state level to reduce the resources that support the tax, but, so far, this has not happened. However, if one of these efforts were successful the City would find itself with reduced revenue. City staff believes that the Funding Advancements for Surface Transportation and Economic Recovery (FASTER) portion of the highway users tax is the most vulnerable to being eliminated (about $1.5 million), so reserve strategy could focus on replacing that amount for one year (after which point the City would presumably have adapted).

The City also receives a number of grants for capital projects, and some for operations. These grants are not accounted for in the general fund, but if the grants were to be lost there could be some pressure on the general fund to continue the associated service. For capital projects, the City would likely cancel or defer the project or find another source of funding, rather than using reserve to make up the shortfall from a lost grant. Lost grants for operations may require some support from the general fund in order to provide continuity in service (assuming the City cannot simply discontinue the service). A reserve of $3 million appears to be adequate to cover this risk, based on the level of grants used to support core operating programs currently.

Exhibit 2.5
Five-Year Trends for Use Tax

	2011	2010	2009	2008	2007$
Revenue	$6,024,785	$6,454,560	$5,668,451	$8,490,105	$9,264,952
Annual Change	-6.7%	13.9%	-33.2%	-8.4%	-12.4%

Grant Policy

The City auditors have pointed out that overreliance on grants is a potential risk for the City. A policy that limits the City's exposure to the risky elements of grants could be helpful. Section 4 of this report describes how grant policies might be helpful.

Transfers from Other Funds. The City receives about 17 percent of its revenue from transfers from other funds (from City utilities). This transfer is a matter of City Council policy. There do not appear to be any major threats to the continued economic viability of this policy, so any change would have a political genesis. A decision to reduce the transfer should be made in the context of how it will impact the budget, so a reserve should not be necessary.

INFRASTRUCTURE

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. In Colorado Springs, the two asset classes that were deemed to be of the greatest importance are bridges and storm sewers.

Exhibit 2.6 shows a risk profile for bridges and culverts. Risk is defined as the product of probability of failure and the consequences of failure. Probability of failure is based on the bridge sufficiency index (BSI) provided by the City staff. A lower BSI indicates a bridge that is in worse condition and ultimately a higher risk (probability) to fail. Consequence is based on cost – the higher the replacement cost of an asset, the higher the consequence to the City if that asset were to fail.[20] As can be seen in the exhibit, 13 bridge structures have been identified as having a high risk rating (those bridges in the red area, which have a total score of between 8 and 10, when the scores from each axis are added together). These bridges have an estimated replacement value of $22,752,672. This averages to about $1.75 million per bridge. A reserve that covers one or two bridges should be adequate,

Exhibit 2.6
Risk Profile for Bridges and Culverts

Consequence of Failure	1	2	3	4	5
5 (High)	34 Assets $97,543,123.50	6 Assets $14,341,650.00	8 Assets $17,801,817.00	1 Asset $1,544,010.00	No Assets N/A
4	39 Assets $25,177,155.00	7 Assets $6,959,355.00	No Assets N/A	2 Assets $1,772,910.00	2 Assets $1,633,935.00
3	48 Assets $18,897,532.50	5 Assets $3,852,240.00	4 Assets $1,345,308.00	2 Assets $412,344.00	No Assets N/A
2	64 Assets $13,759,009.50	14 Assets $5,716,803.00	7 Assets $711,121.50	1 Asset $741,195.00	3 Assets $1,353,675.00
1 (Low)	104 Assets $20,381,443.50	35 Assets $8,967,537.00	13 Assets $2,933,257.50	9 Assets $889,242.00	77 Assets $1,090,359.00

Probability of Failure

but using the "Triple-A" rule (described earlier) of doubling our expectation for uncertainty, preparing for the premature failure of three of these bridges might be more prudent. This equates to a $5.25 million reserve.

In addition to the bridges and culverts, the City manages 406 miles of storm lines. However, neither install dates nor condition assessments were available for any storm lines. The estimated replacement cost for all storm sewers is $588,052,836.[21] Since the information necessary to assess risk of failure is not available, the best that can be done is to make an assumption. We do know that about 10 percent of the total dollar value of the City's bridge inventory is in the higher risk category, so it may be reasonable to start with that number for storm sewers, which would translate to $58 million. We also know that about 20 percent high risk category of bridges was recommended as a reserve amount, which would equate to $11.6 million.

We will review how this analysis for bridges and storm sewers fits into an overall reserve strategy in Section 4 of this report.

VULNERABILITY TO EXTREME EVENTS AND PUBLIC SAFETY CONCERNS

This factor concerns the extreme events (e.g., natural disasters) the City is vulnerable to, the public safety programs that must be funded during the occurrence of an extreme event, and the federal or state programs that would help and how long it would take to get assistance. For example, reimbursement from the Federal Emergency Management Agency (FEMA) does not always occur right away, so it is important to have reserves to absorb the cost in the meantime, and FEMA does not necessarily reimburse 100 percent of the cost of responding to an event.

Discussions with the City's Emergency Operations Manager reveal that Colorado Springs is most at risk for wildfires and floods. Wildfires are probably the most important risk, as the fires of 2012 underlined. About 20-25 percent of homes in Colorado Springs are subject to wildfire risk, although fires that damage homes are not that common. The most recent fire was the most destructive in Colorado history. It impacted around 12,000 acres and burned 347 homes. By comparison, the most recent other fires of an extreme size were in 2005 and 2000 and impacted 35 and 800 acres, respectively. No homes were burned in either of those fires – in fact, one must look back to around 1950 to find the last time before 2012 that homes in the City of Colorado Springs were burned by wildfire.

Large wild fires can be expensive to respond to, requiring police and fire personnel for suppression of the fire and evacuation of people. Many other city departments are involved in the recovery efforts. FEMA reimbursement is not immediate and does not typically cover all the City's costs of responding. Further, a fire is likely to interrupt the City's sales tax revenue.

Currently, the City only has estimated costs for the most recent fire, which is $3.75 million in personnel time, mutual aid costs, and other direct expenses. The estimate pertains to the actual firefighting within the City limits and the emergency protective measures taken (e.g., evacuation, security, activation of the emergency operations center, etc.). Of this, the expenses eligible for a 75 percent FEMA reimbursement are estimated to be $2.15 million. Adding together the FEMA ineligible expenses, plus the 25 percent unreimbursed expenses results in a figure of $2.14 million. At least some of this represents expenses that the City would have incurred anyhow (e.g., firefighters on duty). The City government did not incur any significant direct property damage as a result of the fire (probably around $30,000), but there may be some indirect damage to storm sewers later on, as a result of increased run-off, from the fire-damaged areas. The City engages in mitigation efforts, such as deforestation of areas that are at risk for wildfire, but it is still important for the City to retain a reserve to be prepared for future wildfires.

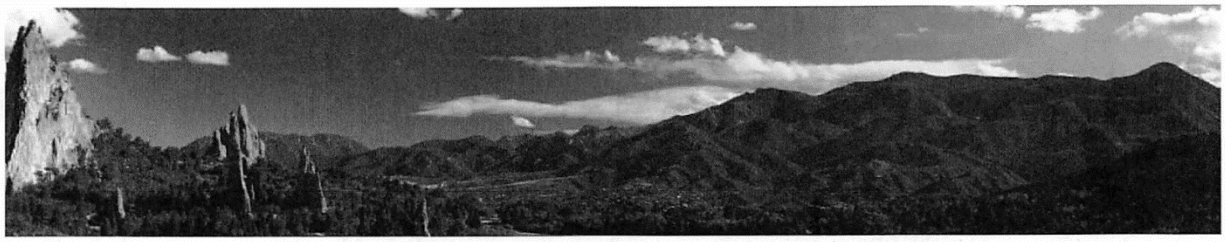
Floods are also a concern because they damage infrastructure, require a City emergency response, and require debris removal afterwards. The most severe floods were in 1935 and 1965. Otherwise, smaller floods occur about 6 or 7 times in a 10-year period. The last flood that qualified as a FEMA disaster occurred in 1999, though it wasn't on the scale of the 1965 or 1935 floods. The cost to the City to address the flood damage of 1999 was $2,670,158. The federal share of the project was 75 percent, or $2,002,619; the state share was 12.5 percent, or $333,770; and the City share was the remaining 12.5 percent, or $333,770. This would equate to about $3.67 million in total costs and $460,000 for the City's final share in today's dollars.

Blizzards represent a final, less severe risk. The magnitude of impact is not as great as for fires or floods, but the City still incurs an unexpected cost. The last significant cost was in 2007, when the City needed to appropriate an additional $400,000 to deal with snow storms.

In summary, Colorado Springs faces a risk from several types of extreme events that have the potential to cause loss of life and property and to disrupt business. The City has taken steps to protect the health, safety, and welfare of the community in light of these risks. Fortunately, however, these extreme events do not appear to constitute a large risk to the City's financial position. For example, a reserve of $4 million (compared to annual City revenues of about $220 million) would be more than adequate to cover the cost of either the most recent fire or a flood of similar severity to the 1999 flood, before FEMA reimbursement.

However, using Makridakis's "Triple-A" approach (described earlier), it may behoove the City to augment the level of risk it is preparing for. We have a very limited number of data points to inform us, so a higher multiplier seems appropriate. If we multiplied $3.75 million by 2 we would get $7.5 million. However, much of an extreme event's cost would be reimbursed by other parties (e.g., a 75 percent reimbursement from FEMA) and some of this figure would represent costs the City would incur anyhow (e.g., regular salaries for public safety personnel), so a $7.5 million reserve might be excessive. Discussions with City staff indicated that the City would have incurred about one third of the most recent fire's costs in the normal cost of doing business, and that about half of the reimbursement from FEMA can be expected to be received within six months of the expenditure. Using this as a reference point, a reserve of $3.3 million might represent the minimum prudent reserve amount because it accounts for the fact that the City will have to bear some of the costs of responding to an extreme event in its regular budget, and that another significant portion of the cost will be reimbursed quickly by FEMA. A reserve of $5 million might be a middle ground because it does not account for FEMA reimbursement (which is outside the control of the City).

Section 3 will consider the all the foregoing analyses together in order to present a final recommended reserve target for the City.



3. Secondary Risk Factor Analysis

This section presents an overview of risk factors that are less complex or of lower magnitude than the primary risk factors, but that also have implications for the City's general fund reserve strategy.

LEVERAGE

A highly leveraged organization has less flexibility. Examples of leverage include long-term debt, pension obligations, and obligations for post-employment health care. Reserves are a critical source of financial flexibility, so high leverage may call for higher reserves. This section will address each of the aforementioned sources of leverage.

Debt

The City has very little debt. Exhibit 3.1 demonstrates this by comparing the City's level of indebtedness to other cities. Exhibit 3.1 includes a group of cities that Colorado Springs has identified as "Best in Class" for the purpose of comparing the City's business practices to those of other, similar cities. Exhibit 3.1 also includes two "sales tax comparable" cities – Colorado cities that receive a large portion of their revenue from sales taxes, but are not otherwise as similar to Colorado Springs. Finally, the exhibit provides summary statistics of all these municipalities. Exhibit 3.1 compares debt along

Exhibit 3.1
Comparison of Colorado Springs' Indebtedness with Other Cities

	"Best in Class Cities"					
	Colorado Springs	Fort Collins	Oklahoma City	Denver	Indianapolis	Charlotte
Population	422,816	144,875	580,000	619,968	820,445	731,424
Debt per Capita	256	342	1,072	2,702	1,445	1,829
Debt Service as a % of Expenditures	5.9%	3.5%	10.2%	10%	13.8%	15.2%

	Sales Tax Comparables			Summary Statistics	
	Colorado Springs	Lone Tree	Centennial	Average	Median
Population	422,816	11.097	100,377	553,255	599,984
Debt per Capita	256	2,558	28	1,274	1,258
Debt Service as a % of Expenditures	5.9%	10.4%	0.3%	9.8%	10.1%

The City has substantially lower debt levels than the average of the comparison group.

two 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 measures the pressure placed on the budget by debt payments. Colorado Springs is well below the average on both of these measures. This means that Colorado Springs should not find its financial flexibility reduced by excess debt. In fact, the City's debt capacity could offer an alternative source of financial flexibility. For example, if the City were found liable for an exceedingly large judgment that was due immediately, it might be able to use debt instruments to pay the amount over time.

The reader should note that the GFOA did not use only the general fund financial information to calculate these ratios, but rather used the broader categories of "governmental activities" and "governmental funds," which can be found in any comprehensive annual financial report. This is because all the cities accounted for debt in different funds, so looking at just the general fund would provide a partial, and inaccurate, impression. However, the aforementioned categories have fairly standard meanings across government and they include most of the general government services one would typically associate with a municipality, such as public safety and public works. Therefore, they address debt of a general nature, which does have direct relevance to the financial flexibility of the general fund.

These general government categories, though, exclude utilities and other more business-like activities. The business-like category of services was excluded for two main reasons. First, municipalities do not provide these types of services as consistently as they do general government services. Second, these services, particularly utilities, often carry large amounts of debt, and would therefore have had a major impact on the indebtedness measures. However, this debt has a much more indirect relationship to the financial flexibility of the general fund.

Pensions

The City is involved in four different self-funded pension arrangements, all of which are closed to new participants.

- The Old Hire Police Pension Fund has been closed and has 166 total members. The plan is 81 percent funded as of January 1, 2012. GFOA Best Practices call for 100 percent funding of pension liabilities.[22] The plan has an unfunded liability of $16.1 million, which translates into an annual actuarial required contribution (ARC) of $1.5 million for 2013, up from $1.4 million in 2012.
- The New Hire Pension Plan – Police Component has 650 members and a funded ratio of 80.2 percent. The plan has an unfunded liability of $48.8 million, which translates into an annual ARC of $10.6 million for 2013, up from $9.6 million in 2012.
- The Old Hire Fire Pension Fund has 193 members and is 84.1 percent funded. The plan has an unfunded liability of $15.5 million, which translates into an annual ARC of $1.5 million for 2013, which is about the same as 2012.
- The New Hire Pension Plan – Fire Component has 286 members and is 79.2 percent funded. The plan has an unfunded liability of $25.9 million, which translates into an annual ARC of $4.7 million for 2013, which is down from $ 5.2 million in 2012.

The City also participates in two statewide plans. The Colorado Public Employees Retirement Association for is for civilian employees. As of December 31, 2011, the PERA Local Government Division's funded ratio was 69.3 percent, with an unfunded liability of $1.277 billion. Of course, this underfunding could have some impact on the City in the form of increased contribution rates in the future. The Fire and Police Pension Association of Colorado provides a defined benefit plan for sworn officers. It is funded at over 100 percent as of January 1, 2011.

Another issue common to all pension funds is the assumed rate of return on pension fund assets. Pension funds often assume return rates of around 7 to 8 percent annually. The recent performance of investment markets has led some to question the return assumptions the Colorado Public Employees Retirement Association uses. If circumstances were to require the association to lower its return assumptions, then member governments would have to increase contributions to make up the difference.[23]

Assuming that the City keeps up with its ARC payments, the unfunded accrued liabilities should, in theory,[24] be covered by the end of the amortization period (which can vary with the plan, but typically is between 20 and 30 years). Keeping up with the ARC payments is a matter of City budgetary policy, and not really an issue that should be addressed through using reserves. However, given the uncertainty around pension issues, it is difficult to say when increases would occur or how much they might be. Accordingly, it would be prudent to hold some reserve to help make a more gradual adjustment to any potential large increases in contribution rates. The City currently pays about $10.5 million in annual contributions to the Colorado Public Employees Retirement Association and about $14.5 million to the other pensions, for total of about $25 million. A reserve of $6.25 million would cover a 25 percent increase in pension costs. Of course, an increase in the City's contribution would be felt over many years, but the reserve will allow the City to make a gradual adjustment or to more easily absorb a larger increase in contributions in one year.

The City has considered different actions to mitigate its pension liabilities, including increasing the contributions required from employees and switching to a defined contribution pension plan. It has also shifted away from a single-employer plan to the state plan for the most newly hired sworn officers, which should be less volatile and help mitigate risk.

Other Post-Employment Benefits (OPEB)

The City allows retired sworn police officers to stay on a City-sponsored medical plan. The cost of this benefit is paid for by the City as it is incurred. The City's annual required contribution for OPEB is $2.2 million and there is a net obligation of $11.2 million. The City has taken steps to contain its OPEB liability, such as eliminating the City-provided subsidy for retiree health care for new hires and going to a flat (instead of variable) subsidy for existing employees. Hence, similar to pensions, the City will likely not experience near-term, large expenditure spikes or a drastic decrease in the City's financial flexibility owing to OPEB liabilities. Also, like pensions, the financial pressure created by OPEB liabilities is best addressed through the budget process, not general fund reserves.

EXPENDITURE VOLATILITY

This risk factor refers to potential spikes in expenditure, usually arising from a special, non-recurring circumstance. Expenditures of a recurring nature should not be addressed through the use of reserves, since reserves do not represent a sustainable source of funding for recurring expenditures. Rather, recurring expenditures should be accommodated in the operating budget.

In Colorado Springs, lawsuits appear to be the most important potential source of expenditure spikes, especially because the City's risk management funds do not carry a large amount of reserves themselves, requiring the general fund to backstop them.

Discussions with the City's attorney and risk management professional reveal the following:

- The City faces a number of litigation cases each year. The average potential liability tends to be pretty consistent from year to year. The City normally budgets between $600,000 and $800,000 each year for claims, which generally has proven sufficient. In more recent years, the number of litigation cases has risen somewhat, but this does not appear to be a significant trend.

- The City is a facing a couple of extraordinary special cases. Due to the sensitivity of the cases, they will not be discussed in detail in this report, but there is a significant degree of uncertainty around the amount the City could be liable for and if the City will be liable for anything at all. Hypothetically, the liability could represent tens of millions of dollars, but the City Attorney believes that an amount of between $2 million and $4 million is a more realistic estimate of the City's potential risk. Also, under certain circumstances the City could negotiate a multi-year payment schedule for a large liability.
- In the State of Colorado, certain forms of cancer have been designated as work-related injuries for firefighters. Hence, the City's worker's compensation fund will face an increased liability, which will, in part, be covered by the general fund (since the general fund is one of the contributing funds to the worker's compensation fund). This would not create an expenditure spike, but rather would manifest as an increased annual contribution (probably not to exceed $1 million to $2 million per year). Accordingly, this change to the City' recurring expenditure structure should be handled through the City's budget process.

In conclusion, it would seem prudent for the City to account for at least some of the risk associated with the extraordinary lawsuits in its reserves. The final section of this report will address how this risk fits in with the City's total reserve goals.

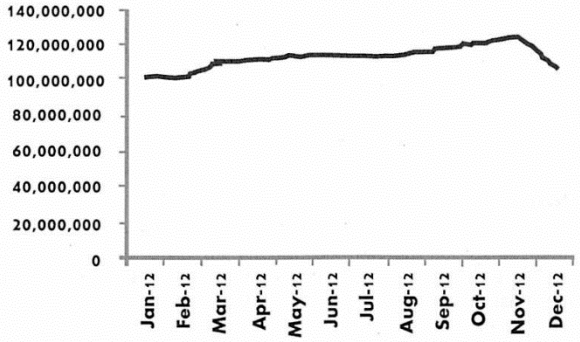
GROWTH OF THE COMMUNITY

Rapid growth of the community could call for larger levels of reserves, lest service requirements expand beyond the City's ability to continue services in the face of revenue interruption. For instance, property tax revenues may not be received until a couple of years after development occurs, yet the government will still need to provide for the public safety, health, and welfare of these members of the community in the meantime. Colorado Springs is a moderate growth community in a higher growth region. The City averages 1.5 percent growth in a region that grows 2 percent annually. The City does not rely heavily on property taxes, so is not heavily impacted by a lag between when services are required by a new development and when revenues are received. Also, the City requires developers to build much of the infrastructure associated with development (roads, parks, etc.), so it does not have to cover that expense. In conclusion, the fact that Colorado Springs is only expecting moderate growth in the next few years and that its development financing approach does not require City resources for large capital outlays means that the implications of growth for the City's reserves are minimal.

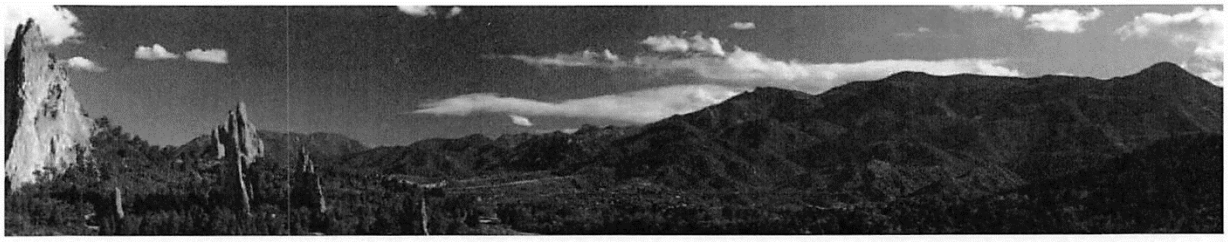
LIQUIDITY

A larger amount of unreserved fund balance may be needed to avoid cash flow problems if the average maturity of receivables significantly exceeds the average maturity of payables. A common example of this can be found in governments that are heavily reliant on property taxes. The bulk of taxes may only be received at one or two times during the year, requiring reserves to bridge the months with lower receipts. As stated, Colorado Springs is not very reliant on property taxes at all. In fact, its revenue tends to come in fairly evenly over the year. Exhibit 3.2 (on the following page) shows the projected monthly balances for 2012. As the chart shows, the City's ending balance actually moves steady upwards for almost the entire year, eventually dropping near the end (due to bond repayments), but still ending up higher than it started. Hence, the City does not appear to have a liquidity problem that requires reserves to cover the gap.

Exhibit 3.2
The City's Projected Monthly Ending Balances for 2012



The City's ending balances rise steadily throughout most of the year.



4. Recommendations

This section provides GFOA's recommendations to Colorado Springs, based on the analysis presented in this paper. The first sub-section addresses the primary purpose of this report: to recommend a reserve target for Colorado Springs. The second sub-section provides other ideas related to reserve management strategy that Colorado Springs might find helpful, based on GFOA's experience with best practices in public finance.

RECOMMENDED RESERVE TARGET FOR COLORADO SPRINGS

This section establishes the recommended reserve target for Colorado Springs. As a first step, the report will review the essential findings of the analysis for each risk factor. Next, the report will provide some helpful comparative information, such as the reserve levels maintained by other cities as well as rating agency standards. Finally, all of this information will be synthesized to reach a reserve target.

Comparative Reserve Information

When considering a reserve target it is helpful to consult outside standards. Two widely cited standards are GFOA's Best Practices and rating agency guidelines. The GFOA Best Practice 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 (16 percent) of regular general fund operating revenues or regular general fund operating expenditures.[25] Standard & Poor's considers reserves of between 1 percent and 4 percent of revenues to be "adequate," while reserves above 15 percent are "very strong."[26]

It is also useful to consider the experiences of other governments. Exhibit 4.1 compares Colorado Springs' unrestricted fund balances as a percent of general fund revenues to the same cities that appeared in the debt comparison (Exhibit 3.1). "Unrestricted fund balance" is usually used to describe the portion of fund balance that is available to serve as a reserve for the types of risk mitigation purposes that were described in this report (i.e., respond to extreme events, protect against revenue downturns, etc.). This is because unrestricted fund balance is the portion of fund balance that does not have restrictions placed on its use by outside authorities.

As Exhibit 4.1 shows, the typical unrestricted fund balance falls somewhere in between 20 percent and 25 percent of general fund revenues. Most of the cities in the analysis were closer to 20 percent, but two outliers (Indianapolis and Centennial) pulled up the average.

The average level of unrestricted fund balance (i.e., reserves) falls between 20 percent and 25 percent for the comparable group. Colorado Springs falls within this range right now. The outliers in the comparable group (Indianapolis and Centennial) have special circumstances.

Indianapolis had a very large amount of "committed" fund balance, which is a subcategory of "unrestricted" fund balance. "Committed" fund balance is considered to be the most constrained of three subcategories of unrestricted fund balance because the City's management has committed those reserves for a very specific purpose (the other two subcategories are "assigned" and "unassigned"). While it is impossible to say from Indianapolis's public reports, it could be that this unusually large amount has been accumulated to pay for a special project of some kind or is otherwise not intended as a hedge against risk. In fact, if this amount is removed, Indianapolis's reserve drops to 22 percent – much more consistent with the other cities. None of the other cities had nearly as large an amount, by any measure, of committed reserves. For example, 61 percent of Indianapolis's reserves are committed, while Colorado Springs only has about 3 percent in this category and Denver has about 8 percent, making Denver's fund balances the most highly committed after Indianapolis.

As for Centennial, about 75 percent of Centennial's reserves are in the "unassigned" subcategory (the least constrained of the three), which suggests that Centennial has simply accumulated a much higher relative level of reserves than the other governments in Exhibit 4.1. Interestingly, Centennial also has, by far, the lowest debt burden of any of the cities (see Exhibit 3.1). This high reserve, coupled with an extremely low debt burden suggests that Centennial has a significantly different economic base than the other cities. For example, the median household income in Centennial is $85,500, compared to $51,000 in Colorado Springs and $55,400 in the State of Colorado. The median home value in Centennial is $260,000, compared to $182,000 in Colorado Springs and $205,000 in the State of Colorado.[27] In 2010, the unemployment rate in Centennial was 4.8 percent, compared to 9.4 percent in Colorado Springs. Although neither municipality relies very heavily on property taxes, it is interesting to note that the total assessed value of properties in Centennial is 34 percent greater on a per person basis than in Colorado Springs. Finally, Centennial's general fund revenues are, on a per capita basis, 20 percent greater than those of Colorado Springs, even though Centennial appears to

Exhibit 4.1
Unrestricted Fund Balance Comparison

	"Best in Class Cities"					
	Colorado Springs	Fort Collins	Oklahoma City	Denver	Indianapolis	Charlotte
Unrestricted Fund Balance as a % of Revenues	22.6%	23.1%	12.7%	18.3%	56.9%	17.3%

	Sales Tax Comparables			Summary Statistics	
	Colorado Springs	Lone Tree	Centennial	Average	Median
Unrestricted Fund Balance as a% of Revenues	22.6%	29.6%	52.9%	25.2%	20.5%

The average level of unrestricted fund balance (i.e., reserves) falls between 20 percent and 25 percent for the comparable group. Colorado Springs falls within this range right now. The outliers in the comparable group (Indianapolis and Centennial) have special circumstances.

provide a more limited set of services to its citizens (for example, Centennial is served by a separate fire protection district and recreation district, while Colorado Springs provides these service directly). These distinctive characteristics have likely made it more practical for Centennial to accumulate a sizable reserve.

Putting it All Together: The Reserve Recommendation

In order to reach the final recommendation for a reserve target for Colorado Springs, let's first review the individual analysis results from each of the risk factors.

Primary Risk Factor – Revenue (Sales Tax) Volatility. While the sales tax does show some volatility, this is due almost entirely to economic cycles and seasonal effects (as opposed to random variation). Therefore, the most important vulnerability the City has with respect to sales taxes is an economic downturn. A review of past economic downturns leads us to believe that the City should prepare for a potential 20 percent decline in sales tax revenues over 25 months as a plausible "worst case scenario" (this amounts to about $23 million in reduced revenue). However, the City would presumably reduce its spending in the event of such a severe downturn, such that a reserve to cover the entire amount of the revenue decline would not be necessary. The City budget office estimates that the budget could be reduced by just under $10 million without creating a major disruption to services (though service quality would be negatively affected to some degree, of course). This means the City should maintain a reserve of at least $13 million to fill the remaining portion of the revenue gap and to help the City make a "soft landing" in the case of a major revenue decline.

The City's other revenue sources are fairly stable as a group, but as a prudent measure the GFOA has recommended establishing some reserves to account for volatility. These reserves added up to $7.3 million.

Primary Risk Factor – Infrastructure. General fund reserves may be needed to repair or replace an asset that fails unexpectedly. In Colorado Springs, the two asset classes that were deemed to be of the greatest importance are bridges and storm sewers.

Thirteen bridge structures have been identified as having a high risk rating. These bridges have an estimated replacement value of $22,752,672, an average of about $1.75 million per bridge. A reserve that covers one or two bridges should be adequate; it might be more prudent, however, to use the "Triple-A" rule of doubling our expectation for uncertainty and prepare for the premature failure of three of these bridges. This equates to a $5.25 million reserve.

The City manages 406 miles of storm lines. Installation dates and condition assessments were unavailable for any storm lines. The estimated replacement cost for all storm sewers is $588,052,836.[28] Since the information necessary to assess risk of failure is not available, the best that can be done is to make an assumption. We do know that about 10 percent of the total dollar value of the City's bridge inventory is in the higher risk category, so it may be reasonable to start with that number for storm sewers, which would translate to $58 million. We also know that about 20 percent high risk category of bridges was recommended as a reserve amount, which would equate to $11.6 million.

Primary Risk Factor – Vulnerability to Extreme Events. Although the City is subject to extreme events that pose a significant threat to life and property, historical experience has demonstrated that the financial impacts of these events have been manageable. For example, the most recent fire was the worst in Colorado history, but the total cost to the City was only $3.75 million (the City's annual budget is about $220 million). Taking into account the uncertainty associated with the scale of future extreme events as well, as well as the timing of FEMA reimbursement and the portion of event response costs that are likely going to be already covered by existing budgeted resources a reserve for extreme events of $5 million seems reasonable, but an argument for a reserve of up to $7.5 million could also be made.

Secondary Risk Factor – Leverage. The City has very little debt, so the City's reserve strategy does not need to account for reduced financial flexibility from debt.

The City has some financial pressure from pension obligations. It participates in a number of plans, none of which is 100 percent funded. The Colorado Public Employees Retirement Association is a particular concern for City officials because it has a low funding ratio and its assumptions around the return on plan assets have been publicly questioned for being too high. Both of these factors mean that the Association may require significantly increased contributions from its member governments.

Assuming that the City keeps up with its annual pension payments, the unfunded accrued liabilities should, in theory, be covered by the end of the amortization period (which can vary with the plan, but typically is between 20 and 30 years). Keeping up with the ARC payments is a matter of City budgetary policy, and not really an issue that should be addressed through using reserves. However, given the uncertainty around pension issues, it is difficult to say when increases would occur or how much they might be. Accordingly, it would be prudent to hold some reserve to help make a more gradual adjustment to any potential large increases in contribution rates. The City currently pays about $10.5 million in annual contributions to the Colorado Public Employees Retirement Association and about $14.5 million to the other pensions, for total of about $25 million. A reserve of $6.25 million would cover a 25 percent increase in pension costs. Of course, an increase in the City's contribution will be felt over many years, but the reserve will allow the City to make a gradual adjustment or to more easily absorb a larger increase in contributions in one year.

Secondary Risk Factor – Expenditure Volatility. The City is facing a few large lawsuits that could entail significant settlement costs if judgment goes against the City. The City attorney believes that $2 million to $4 million is a reasonable range to prepare for.

Secondary Risk Factor – Liquidity/Cash Flow. The City faces no important liquidity or cash flow problems that create a shortage of working capital.

Secondary Risk Factor – Growth of the Community. The fact that Colorado Springs is only expecting moderate growth in the next few years and that its development financing approach does not require City resources for large capital outlays means that the implications of growth for the City's reserves are minimal.

In summary, the components of a recommended reserve are:

- $13 million for sales tax economic uncertainty
- $7.5 million for economic uncertainty in other revenues
- $6.25 million for pension payment uncertainty
- $5.25 million for critical bridge failure and $11.6 million critical storm sewer replacement, for a total of $16.85 million
- $5 million to $7.5 million for extreme events
- $2 million to $4 million for expenditure spikes from law suits

Many cities express their reserve policy target as single number (e.g., 16 percent of revenues). However, the GFOA has found that leading municipalities often find it helpful to segment their reserves into different categories because this makes the purpose of the reserve more transparent. For example, a reserve for "emergencies" and a reserve for "economic uncertainty" would provide more clarity on the purpose of the reserves than one all-encompassing reserve. The first three bullets above could comprise the budgetary uncertainty reserve, while the last three would form the emergency reserve,

leading to the following targets (which have been rounded to the nearest whole numbers for ease of use in policymaking):[29]

Budgetary Uncertainty Reserve

$13 million for sales tax economic uncertainty +

$7.5 million for economic uncertainty in other revenues +

$6.25 million for pension payment uncertainty =

$27 million or about 12.5% of general fund revenues[30] as budgetary uncertainty reserve

Emergency Reserve

$5.25 million for critical bridge failure and $11.6 million critical storm sewer replacement, for a total of $16.85 million +

$5-7.5 million for extreme events +

$2-4 million for expenditure spikes from lawsuits =

$27 million or about 12.5% of general fund revenues as an emergency reserve

This provides **a target of about 25 percent of general fund revenues**, which is also in line with the range of reserves maintained by cities comparable to Colorado Springs and is above what the GFOA considers to be the minimum baseline level that a government should maintain (16 percent).[31] These reserves would be considered part of the "unrestricted" portion of the City's fund balance.[32]

OTHER IDEAS TO SUPPORT THE GENERAL FUND RESERVE STRATEGY

This section presents other ideas that Colorado Springs may wish to consider, relative to its reserve strategy. These ideas include: enhanced sales tax monitoring, a user fee cost recovery policy, a volatile revenue policy, a short-term borrowing policy, and a grants policy.

Sales Tax Monitoring

Because a potential decline in sales tax revenue is the major driver for the City's need to retain reserves, it might consider additional methods to monitor the potential direction of its sales tax revenue. The City already employs some fairly sophisticated long-range forecasting methods. It should continue to refine these practices, and continue looking for leading indicators of sales tax performance. However, the GFOA did not conduct an in-depth examination of the City's long-range forecasting methods, so this report will focus on how some of the techniques presented in this paper might be helpful going forward.

First, the City might monitor a 12-month, centered moving average, updating it each month. As Exhibit 2.3 demonstrated, the 12-month moving average reveals long-term trends that are not as readily apparent from monthly data, especially when month-to-month fluctuations are so dramatic (even if the fluctuations are rather predictable). If the moving average starts to turn down, it could indicate a real trend. Of course, the problem with this approach is that a moving average will always be five to six months behind, since the analysis must wait for the historical data to become available. A more immediately useful technique would be to compare monthly fluctuations to the average. If a month that is normally a high-yield month does not come in as strong as expected or if a month with normally low yield is particularly bad, it could portend trouble. Exhibit 4.2 (on the following page) shows how the months of the year compare to both the 12-month moving average and to the month before it (e.g., how January compared to December, etc.). The month-to-month numbers are often larger because revenues sometimes go from peak to valley and vice versa very quickly. The month-to-month numbers will also be easier to use, because they don't rely on the availability of moving average data.

User Fee Cost Recovery Policy

User fees represent about 6 percent of all general fund revenue. User fees are an increasingly popular way to fund municipal services because they assign the cost of the service directly to the customer, as opposed to the general taxpayer. The City could strengthen its user fee base by adopting an official policy on the extent to which it will seek to recover the costs of providing services through a user fee.

A user fee cost recovery policy could be very detailed – setting precise targets for the percent of cost to recover for different types of services.[33] However, most governments take an approach that allows for more discretion, where the policy establishes full recovery as the goal for user fees, but recognizes that there will be occasional exceptions. This policy from Minneapolis, Minnesota, illustrates:

The city shall establish user charges and fees at a level that reflects the service costs... Full cost charges shall be imposed unless it is determined that policy, legal, or market factors require lower fees.

This policy approach will require that it be decided, on a case-by-case basis, where subsidization of a service with general tax dollars is appropriate.

User fees can be a complex and, sometimes, controversial revenue source. It may be helpful to establish a policy that describes the fundamental goals of user fees and a mechanism for regular fee review. The GFOA has made available considerable detailed information on fee policies.[34]

Volatile Revenue Policy

As we have seen, the sales tax can be strongly influenced by the state of the economy. Just as an economic downturn can depress sales taxes, a buoyant economy can lead to a rapid increase. This presents a financial risk if these new revenues are used to fund recurring expenditures (e.g., new on-going programs and their associated personnel) and if these new revenues stem from an unsustainable level of consumer spending. A volatile revenue policy encourages a government to examine its past revenue trends to determine when it may next experience an anomalously high level of revenue income, and then to apply this revenue toward non-recurring uses, such as paying off debt, building up a reserve, or special projects that will reduce future operating costs.

Exhibit 4.2
Average Monthly Variations in Sales Tax Revenue

	Average % Difference from Previous Month	Average % of the 12-Month Moving Average
January	35.7%	125.0%
February	-33.8%	82.5%
March	3.1%	84.4%
April	22.1%	103.1%
May	-10.9%	91.4%
June	7.8%	98.5%
July	15.2%	113.0%
August	-8.2%	102.5%
September	-0.3%	102.2%
October	5.6%	107.4%
November	-8.0%	95.4%
December	-4.5%	92.4%

The policy for the City and County of Denver, Colorado, illustrates this type of policy:

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.

Short-term Borrowing Policy

As Exhibit 3.1 showed, the City has a very low level of debt. Debt can be a source of financial flexibility, thereby mitigating the need to hold reserves. Short-term debt could be useful if the City finds itself with the need for a temporary cash infusion (to deal with an unexpected situation). However, short-term borrowing from external sources is usually considered undesirable due to, among other things, the administrative costs of arranging the deal. Accordingly, a policy usually places limits on short-term external borrowing. For example, a policy might specify that short-term instruments be used only if the transaction costs plus interest of the short-term debt are less than the cost of internal financing and if available cash is insufficient to meet working capital requirements. A policy could also state that short-term debt issued for operating purposes will be limited to cases where there is reasonable certainty that a known revenue source will be received in the current fiscal year sufficient to repay the debt, or where there is a clear financial emergency.

For many governments, interfund borrowing is preferred to external borrowing. For example, the City's utility may make a loan to the general fund or vice versa. This is another way to increase financial flexibility, beyond that provided by reserves. A policy for interfund loans is useful because, if not carefully managed, the loans can become a cross-fund subsidization, which could lead to one group of taxpayers or ratepayers subsidizing another group. A policy can establish terms and guidelines to help avoid overly burdensome loans. The following are suggested elements for an internal loan policy:

Definition of a Loan vs. a Transfer. A policy should differentiate a loan from a transfer since the implications of each are different. Essentially, the difference is that operating transfers move financial resources from one fund to another, permanently, while interfund borrowings are usually made for temporary cash flow reasons and are not intended to result in a transfer of financial resources by the end of the fiscal year.

Criteria for Making Loans. Just as a private lender would apply criteria to a potential borrower, a policy should describe the general conditions under which an internal loan is permissible. A policy should describe these conditions and designate the appropriate authority responsible for authorizing the loan. Here are some examples of such conditions:

- The lending fund has funds available.
- The borrowing will not adversely impact the lending fund's long-term financial condition.
- A specific source of repayment has been identified in the borrowing fund.
- The loan can be repaid within a specified period of time.
- Any legal requirements/restrictions are satisfied.

Interest Rates and Terms. A policy should also provide guidelines on terms and interest rates. Typically, interest rates would match prevailing rates, with the exact rate set by the finance office. For long-term loans, a repayment schedule must be set, but the loan should typically be fully amortized, preferably on a level or accelerated repayment schedule.

Grants Policy

Grants are an attractive form of funding for many local governments because they offer the possibility to reduce reliance on taxes and fees drawn from the community. On the other hand, grants can harm the government's long-term financial position if they lead to implementation of an ongoing program that later requires support from general tax dollars when the grant expires. Further, many grants require matching funds and overhead costs that might end up diverting funds from higher-priority services. A policy can encourage grant-seeking, but should also recognize the risks of overreliance on grants and direct the organization to manage those risks. The policy from the City of Long Beach, California, instructs staff to analyze the long-term costs and benefits of a grant before accepting it:

City staff will seek out, apply for, and effectively administer federal, state, and other grants that address the city's priorities and policy objectives and provide a positive benefit to the city. Before any grant above $50,000 is pursued, staff shall provide a detailed pro-forma to the city manager that addresses the immediate and long-term costs and benefits to the city. A pro-forma must be submitted to the city manager for all grants prior to accepting the grant award.

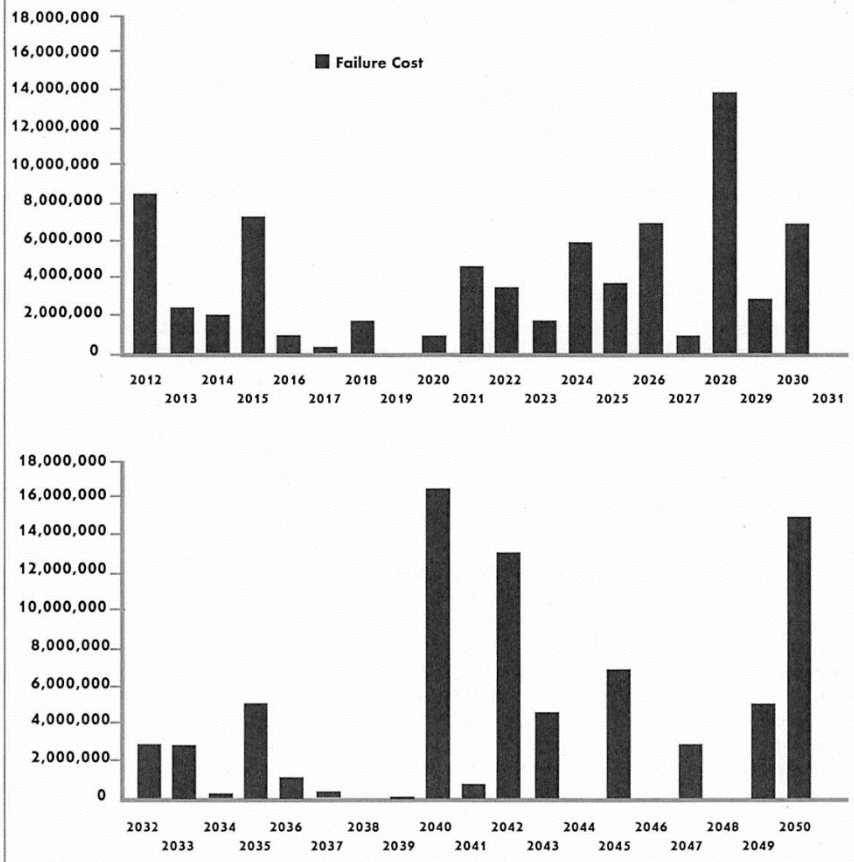
A policy should direct that any grants pursued are consistent with the government's mission and strategic priorities. Spotsylvania County's policy states that "before applying for and accepting intergovernmental aid, the county will assess the merits of a particular program as if it were funded with local tax dollars."

After the grant has been accepted, a policy should address the possibility that the grant will end, leaving the government to decide whether to continue the program. Spotsylvania County's policy reads that "local tax dollars will not be used to make up for losses of intergovernmental aid without first reviewing the program and its merits as a budgetary increment."

Infrastructure Maintenance/Replacement Schedule

Rather than reserving funds to guard against the failure of worn assets, the City should develop a plan and schedule to maintain and replace assets, as needed. Exhibit 4.3 (on the following page) shows what yearly capital expenditures would be to keep up with bridge and culvert replacements. Obviously, the pattern is quite volatile. The City might consider translating this into a regular schedule, with a set annual contribution to funding that schedule. The GFOA estimates that a $10.9 million approximate annual contribution would be necessary to fund the schedule. Not only would this reduce the amount the City would have to hold in reserve (since assets would not deteriorate to critical condition), but it would greatly reduce the actual risk the City faces.

Exhibit 4.2
Average Monthly Variations in Sales Tax Revenue



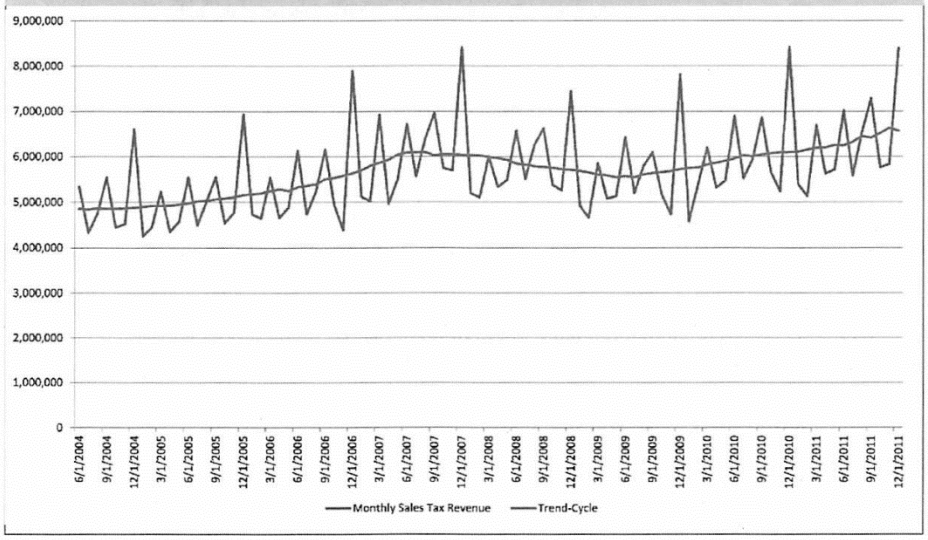
For storm sewers, the average annual contribution for a regular maintenance/replacement schedule would be about $36 million, though this is a less precise figure because the underlying information on asset condition is not as detailed.

Appendix 1. Sales Tax Revenues in Boulder, Colorado

In order to provide a little better comparative context for examining Colorado Springs' sales tax, the GFOA requested permission from the City of Boulder to use its monthly sales tax data in a similar analysis to Colorado Springs.' Exhibit A1.1 shows Boulder's revenues since June 2004. Like Colorado Springs, Boulder has four "spikes" during the year, with a holiday spike being the largest. Boulder's sales tax revenue is a little more volatile, with about 4 percent of the variation attributable to random factors.

Boulder also experienced a protracted decline in its trend-cycle in the wake of the Great Recession – a 10 percent drop over 21 months. This is just under half a percent per month, not too different from Colorado Springs.

Exhibit A1
Monthly Sales Tax Revenue from the City of Boulder, Colorado



Endnotes

1 The Triple-A approach is adapted from: Spyros Makridakis, Robin Hogarth, and Anil Gaba. Dance with Chance: Making Luck Work for You (Oneworld Publications: Oxford, England, 2009).

2 Drainage basins, open drainage features, discharge points, and point features are not included in the replacement cost. Adding these items would likely push it to more than $1 billion.

3 Targets have been rounded to nearest "whole" numbers for ease of use in policymaking. 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.

4 Based on the 2012 budget estimate of approximately $220 million in general fund revenue.

5 See the GFOA best practice, Appropriate Level of Unrestricted Fund Balance in the General Fund, available at www.gfoa.org. According to this best practice document, governments should establish a formal policy of maintaining reserves equal to about 16 percent of revenues or expenditures, and the actual target should be based on an analysis of the salient risks the government faces – which in many cases calls for a reserve level of more than 16 percent.

6 TABOR, for example, limits the City's ability to increase taxes.

7 GFOA Best Practice, "Appropriate Level of Unrestricted Fund Balance in the General Fund" (2009).

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

9 The risk factors and basic review method were developed and published in: Shayne C. Kavanagh, Financial Policies (Chicago: Government Finance Officers Association, 2012).

10 The use tax is much smaller than the sales tax – comprising only around 5 percent of the total of the two.

11 This is City general fund only and excludes other sales tax revenues, such as the 2002 public safety sales tax (which is accounted for outside of the general fund, in a special revenue fund).

12 The GFOA used a method of data de-seasonalization known as multiplicative decomposition to arrive at this conclusion.

13 The trend-cycle line is calculated by taking a 12-month centered moving average of actual monthly sales tax revenue. For example, the moving average for January 2005 would be

an average of August 2004 through July 2005. February 2005 would be an average of September 2004 through August 2005, and so on. A 12-month moving average smooths out seasonal variation, leaving only the trend-cycle.

14 The term "Black Swan" derives from a belief held in England before 1697 that all swans were white – in fact, the term "Black Swan" was a common metaphor for an impossibility. Black swans were discovered in Australia in 1697, demonstrating the limits of human knowledge about the world.

15 See Makridakis, Hogarth, and Gaba, Dance with Chance, 2009.

16 Of course, the long-term impacts of those actions are still unknown.

17 According to the Case-Shiller Housing Index, home prices nationally since 2009 have varied in a range consistent with housing values in 2003. As of this writing, values have experienced increases for six consecutive months.

18 According to David M. Blitzer, Chairman of the Index Committee at S&P Dow Jones Indices (which includes the Case-Shiller Housing Index), "the housing market seems to be stabilizing, but we are definitely in a wait-and-see mode for the next few months."

19 Based on sales prices from Zillow.com.

20 Note that further analysis could be conducted with City staff to refine asset replacement costs, as well as reviewing the risk rating to incorporate more factors into the consequence (i.e., traffic count, location, major structure, etc.).

21 Drainage basins, open drainage features, discharge points, and point features are not included in the replacement cost, which would likely push it over $1 billion.

22 See GFOA Best Practice, "Sustainable Funding Practices of Defined Benefit Pension Plans" (2009), www.gfoa.org. An 80 percent funded ratio is often cited as an acceptable funding benchmark, but this figure does not have a sound actuarial basis. See, for example, Girard Miller, "Pension Puffery," www.governing.com. Miller does state that an 80 percent funding ratio might be acceptable at the bottom of an investment market because the funded ratio will presumably rise with the market. Conversely, though, the funded ratio should be above 100 percent at the top of a market to protect against a fall.

23 On top of this, the City is leasing its hospital system, so the employees will no longer be contributing to the Colorado Public Employees Retirement Association, which adds further uncertainty to the City's future pension position.

24 Even if all ARC payments are made, an employer could still end up with an unfunded liability at the end of the amortization period if the actuarial assumptions used to calculate the ARC do not hold up (e.g., the rate of return on plan investments).

25 GFOA Best Practice, "Appropriate Level of Unrestricted Fund Balance in the General Fund" (2009), www.gfoa.org.

26 David G. Hitchcock, Karl Jacob, and James Wiemken, Key General Obligation Ratio Credit Ranges – Analysis vs. Reality (New York: Standard & Poor's, 2008).

27 Based on values from Zillow.com.

28 Drainage basins, open drainage features, discharge points, and point features are not included in the replacement cost, which would likely push it over $1 billion.

29 Note that many of the risks listed in the table can be considered "independent," meaning that the occurrence of one risk has little to do with the potential occurrence of another risk. For example, the occurrence of an extreme event has little or nothing to do with whether the City

also experiences an increase in its pension payments. In these cases, there could be a justification for holding less reserves than the total of the two numbers because it is rather unlikely that the City will experience both of these problems at once. However, other risks are not independent. For example, an economic downturn that causes a reduction in sales tax revenue would likely also impact other revenues, a natural disaster could make the City more likely to experience a critical infrastructure failure, or a natural disaster could result in interruption to sales tax revenue. Because the risk factors appear to have at least some level of significant inter-dependency (a level which is difficult to know), the approach of adding the reserve components together represents a conservative approach to sizing reserves for Colorado Springs. This approach would leave the City without any exposure to risk arising from risk factor dependency. Note that zero exposure to risk also means that the City will hold more reserves that it will probably need at any one time.

30 Based on about $220 million general fund revenue, as per 2012 budget estimates.

31 See GFOA Best Practice, "Appropriate Level of Unrestricted Fund Balance in the General Fund" (2009), www.gfoa.org. The Best Practice states that reserves equal to about 16 percent of revenues or expenditures is the minimum a government should consider for its policy and that the actual target that a government adopts should be based on an analysis of the salient risks that a government faces (which in many cases may call for a higher reserve level than 16 percent).

32 Within the "unrestricted" portion of fund balance, the City could choose to locate the reserves within the "unassigned" or "committed" categories. Municipal governments typically choose the unassigned category because the accounting requirements to place funds in the committed category are more stringent (e.g., the commitment must be made by formal action of the City Council and the language describing the conditions for using the reserves must meet a high level of precision).

33 See for example, the policy of the City of San Luis Obispo, California, which is available on the GFOA website at www.gfoa.org/finanicalpolicies.

34 See Kavanagh, Financial Policies, 2009.

SUPPORTING DOCUMENT C

MIKE KILLEBREW

From: Toni Nelson <tonidn1@gmail.com>
Sent: Wednesday, June 21, 2017 8:25 AM
To: Buck Hill
Cc: DYANNE WEAMIRE; Brian Porter; Larry Rolapp; greg@advantagegraphics.net; MIKE KILLEBREW
Subject: Re: Financial Review Committee Meeting

I would like to add to the agenda an item to discuss possible ways to enhance revenue. Let's all bring our own ideas for how we can maximize revenue in every category. Mike, it would be helpful to FRC to have a list of the development projects Ursula mentioned at last night's Council meeting with projected revenue categories and expected dates for coming on stream. I think it's important to look at both sides of the equation in order to plug the structural deficit. In particular, I'm wondering what happened to our recommendation to Council that they direct staff to recommend fee increases of no more than 20% in the planning department. There is clear evidence that our fee schedule is woefully out of date. Can staff bring their recommendations for increases in particular fees that are in line with other cities and they think will be palatable to the public? There's no reason not to increase revenue where there is clear justification, and this is something tangible we can review and hopefully recommend to Council.

Also, let's bring our own research and ideas on the legal expense item which Council threw back to FRC last night for creation of a "study" to help them understand the pros and cons of in-house legal counsel.

Thanks, Toni

On Wed, Jun 21, 2017 at 8:07 AM, Buck Hill <buckhill10@gmail.com> wrote:
I will be attending the meeting.

On Jun 21, 2017 8:04 AM, "DYANNE WEAMIRE" <DWEAMIRE@danapoint.org> wrote:
Agenda for this meeting and minutes from the July 13th meeting will follow.