



Agenda
Village of Glen Ellyn
Special Workshop Meeting
Monday, November 6, 2017
7:00 PM
Glen Ellyn Civic Center, Room 301

Village Board Workshop Procedures Statement

Visitors are most welcome to attend all meetings of the Village Board and can find copies of the Agenda on their chairs or online at www.glenellyn.org prior to the meeting. Any individual with a disability requiring a reasonable accommodation in order to participate in a meeting should contact the Village of Glen Ellyn ADA Coordinator, 630-469-5000, at least five (5) business days in advance of the next scheduled meeting. All matters on the Agenda may be discussed, amended, and acted upon.

A. Call to Order

B. Pledge of Allegiance

C. Roll Call

D. Audience Participation

1. Open:

Members of the public are welcome to speak to any item *not* specifically listed on tonight's agenda for up to three minutes. For those items which are on tonight's agenda, the public will have the opportunity to comment at the time the item is discussed. In either case, please complete the Audience Participation form and turn it in to the Village Clerk. It is requested that, if possible, one spokesman for a group be appointed to present the views of the entire group. Speakers who are recognized are requested to step to a microphone and state their name, address and the group they are representing prior to addressing the Village Board.

E. 2018 Budget Workshop Discussion (Finance Director Coyle) (Discussion Only)

1. Finance Director Christina Coyle will present the current status of the 2018 budget and solicit Village Board feedback on pertinent decision points.

F. Other Items

G. Motion to adjourn to Executive Session for discussion concerning salary schedules for one or more classes of employees without returning to open session thereafter.



Glen Ellyn Village Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 11/06/17 07:00 PM
Department: Finance
Department Head: Christina Coyle
Category: Budget
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2950)

DOC ID: 2950

Finance Director Christina Coyle will present the current status of the 2018 budget and solicit Village Board feedback on pertinent decision points.

Background

The Village Board has held a series of workshops to discuss the 2018 budget. The draft 2018 budget is available on the Village's website and hardcopies are available at the Civic Center and the Glen Ellyn Public Library. The public hearing for the budget was held on October 23, 2017. This workshop has been convened to solicit final feedback from the Board on a variety of issues discussed below.

Issues

A. Current Draft Budget

The current draft budget is as published on September 22, 2017 with the following modifications:

General Fund

The draft budget had a deficit of \$478,268. The following were proposed modifications during the workshop process:

- Correction to maintain a 6.5% pension contribution: \$141,000
- Do not reduce tree planting budget: \$43,000
- Add ½ police officer position to reduce vacancies by over-hiring one position: \$50,000
- Reduce property tax revenue by eliminating CPI factor: \$70,000
- Increase Facilities Maintenance Reserve Contribution to keep with the 5-year capital plan, assuming renovation of the Civic Center moves forward: \$50,000
- Purchase Chromebook or similar devices for boardroom: \$3,000
- Add seasonal permit clerk: \$10,000

If these modifications were all made, the General Fund would have a deficit of \$845,268. This would be before any option was considered in balancing the General Fund budget (See Section C).

Central Business District (CBD) TIF Fund

Staff is recommending to add \$200,000 to construct a pedestrian walkway connecting the Civic Center lot to Main Street. The CBD TIF Fund should have adequate monies to cover this addition. If need be, the General Fund can loan the fund monies and be repaid.

Fire Services Fund

The replacement of Squad 1 (\$412,166) will be deferred to 2019.

Village Links/Reserve 22 Fund

The Village Links would like to add the purchase of a turbine mower for \$8,000 to the 2018 budget.

Water & Sewer Fund

The draft budget has been corrected to include nonresident water and sewer revenue. The rate change January 1 has been modified to only include \$0.08 water rate increase to pass along the increase from DuPage Water Commission. The combination of these changes yields \$74,800 less in revenue for 2018.

Facilities Maintenance Reserve Fund

As noted above, it is proposed that the General Fund would contribute an additional \$50,000 to the Facilities Maintenance Reserve Fund annually to catch up on costs associated with Village facilities. Attached is the 5-Year Capital plan which incorporates staff's recommendation to use 100% of the CY16 surplus to pay for the Civic Center renovations based on the master plan completed recently by Dewberry. With the adjustment to the Facilities Fund above, and this surplus, we are able to meet our facilities needs including the estimated costs (\$1.35M) of the Civic Center project. Please note, we have made some adjustments to the timing of specific projects in order to balance the fund over the next five-years, but have maintained the same level of expenditures that will be included in the final budget.

B. Property Tax Levy

The Board must provide staff feedback on how to prepare the property tax levy for the General Fund and the Capital Projects Fund. The summary of the property tax levy, including the components of CPI and new growth is attached for reference. Staff believes the consensus of the Board is to include the new growth for both the General Fund and the Capital Projects Fund. Staff would like the consensus of the Board on whether to include the CPI for the General Fund or the Capital Projects Fund. Staff is recommending that the CPI be included for both Funds. However, staff feels more strongly that the CPI is included for the Capital Projects Fund as increases in the levy are needed to offset declines in the utility tax revenues as well as to remain in line with the long-term capital plan.

C. Balancing the General Fund Budget

As the Village Board discussed previously, the combination of pension cost increases and state revenue declines have created an imbalance in the General Fund. Attached is a summary of those decreases over the years totally close to \$500K, with the largest impact expected next year from reductions in income tax and a new state fee to collect Home Rule Sales Tax revenue.

To balance the General Fund budget, staff is recommending to implement an additional half percent home rule sales tax. This tax would go into effect in July 2017. A year's worth of home rule sales tax would generate approximately \$990,000. On an accrual basis, the Village would receive 6 months of revenue. On a cash basis, the Village would receive 3 months of revenue (amounts are remitted to the Village at a 3 month lag). The Village would then use reserves to bridge the gap between January 1 and the implementation of the new revenue. During the interim, the Village would evaluate fees such as building permit fees, parking fines, etc., and bring them to the Village Board

for review. Staff is recommending this revenue as there is very little cost of implementation and very little administrative burden on our businesses to implement this change. Staff is recommending the home rule sales tax be considered instead of a food and beverage tax. The food and beverage tax would have a much greater cost of implementation for both Village staff and businesses. The Village may also want to consider a food and beverage tax in the future to meet other capital needs such as unique projects including Taylor St Pedestrian Tunnel, Roosevelt Rd. access at Baker Hill, Streetscape Improvements in the CBD, and a potential parking garage in the CBD.

D. General Fund Reserve Policy

The Village Board has expressed an interest to review the General Fund Reserve Policy. Attached to this memo is the agenda item that has been prepared for the Finance Commission meeting on November 3. The Commission will be asked to provide a recommendation to the Village Board on the reserve policy which staff will relay via email in advance of Monday's meeting. Staff is recommending to continue with the current reserve policy for the General Fund and utilize any surplus funds in future years for one-time capital and special projects as the Village Board determines are priorities. As an example, we shifted reserve fund surplus to the capital fund to keep up with construction costs of the streets plan in 2009.

E. Pension Funding

Staff is recommending to maintain the current investment return assumption of 6.5% for the Police Pension Fund rather than reduce the assumption further (which would increase the contribution). This would result in a contribution for 2018 of \$1.959 million. At its October meeting, the Police Pension Board recommended staying at the 6.5% assumption as it is in line with the outlook of the Board's investment consultant. Attached to this memo is the agenda item presented to the Finance Commission for their consideration. The Finance Commission will be making its recommendation at its November 3 meeting. That recommendation will be relayed to the Village Board. The Finance Commission made the following recommendation in 2014, which it reaffirmed in 2015 and 2016:

"The Village of Glen Ellyn Finance Commission Recommends to the Board of Trustees for the Village of Glen Ellyn the following rate of return assumptions for the Village of Glen Ellyn Police Pension Fund:

1) 6.00% per annum if the policy of the Police Pension Board is to limit the equity allocation of the portfolio to the current 45%; and

2) 6.25% per annum if the policy of the Police Pension Board is changed to allow an equity allocation up to the statutorily allowed 55%.

This recommendation is not intended to communicate an opinion on the allocation limits set by the Police Pension Board. These recommendations are solely a reflection of the Commission's view of probable long-term return experience for the above allocation cases."

F. FY2016 General Fund Surplus

Distribution of the FY2016 surplus was tabled so that it could be considered along with the 2018 budget process. This surplus is \$548,331. Staff is recommending that this surplus be transferred to

the Facilities Maintenance Reserve Fund to help fund the Civic Center renovations. Staff would like direction from the Board on distributing this surplus. Although this does not directly impact the CY18 Budget, direction is needed to balance the Facilities Fund and move forward with the Civic Center project.

Feedback Requested

Staff is asking for the Board to provide feedback on the following questions so that staff can draft a final budget for approval on November 13.

1. Does the Board support funding the draft budget as presented with the modifications to date? (See “Section A” above)
2. Does the Board prefer the final draft budget include a CPI increase for the General Fund property tax levy (See “Section B” above)?
3. Does the Board prefer the final draft budget include a CPI increase for the Capital Projects Fund property tax levy (See “Section B” above)?
4. Staff has presented an option above as the recommended course balancing the 2018 General Fund budget (See “Section C” above). Does the Board concur with this option? If not, what modifications does the Board agree upon?
5. Staff has recommended continuing with the current reserve policy for the General Fund (See “Section D” above). Does the Board agree with this recommendation? If not, what modifications are agreed upon by the Board?
6. Staff, the Pension Board, and the Finance Commission have presented their recommendations for pension funding (See Section “E” above). Which option for funding the Police Pension Fund does the Board prefer for FY2018? Does the Board have any input on beyond 2018?
7. Staff has recommended that the FY2016 surplus be contributed to the Facilities Maintenance Reserve Fund to help fund the renovation to the Civic Center. Does the Board agree with this recommendation?

ATTACHMENTS:

- Glen Ellyn 2017 Property Tax Levy Analysis (PDF)
- Rate Survey (PDF)
- General Fund Reserve Item from FCPacket 2017-11-03 (PDF)
- Police Pension Funding Item from FCPacket 2017-11-03 (PDF)
- 5 Year Forecast (PDF)
- State Budget Impact (PDF)

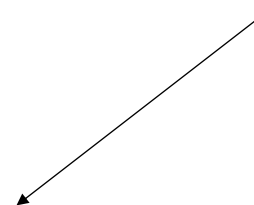
VILLAGE OF GLEN ELLYN

2017 PROPERTY TAX LEVY

(to be collected in FY2018)

	2016	2016	2017	Change from Taxes Extended		Change from Original Levy	
	<u>Levy</u>	<u>Taxes Extended</u>	<u>Proposed Levy</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
				<u>Inc/(Dec)</u>	<u>Inc/(Dec)</u>	<u>Inc/(Dec)</u>	<u>Inc/(Dec)</u>
VILLAGE LEVY:							
Operating - General Fund	\$ 3,365,351	\$ 3,399,521	\$ 3,473,471	\$ 73,950	2.2%	\$ 108,120	3.2%
Operating - Capital Fund	<u>3,587,720</u>	<u>3,624,147</u>	<u>3,702,984</u>	<u>78,837</u>	2.2%	<u>115,264</u>	3.2%
Total	6,953,071	7,023,668	7,176,455	152,787	2.2%	223,384	3.2%

Components of Change from Original 2016 Levy	<u>CPI (2.1%)</u>	<u>New Growth (1.1%)</u>	<u>Total</u>
Operating - General Fund	\$ 70,672	\$ 37,448	\$ 108,120
Operating - Capital Fund	<u>75,342</u>	<u>39,922</u>	<u>115,264</u>
Total	\$ 146,014	\$ 77,369	\$ 223,384



Village of Glen Ellyn
Rate Survey
As of October 2017

	Food & Beverage Tax	Home Rule/Non- Home Rule Sales Tax
Glen Ellyn		1.00%
Addison		1.00%
Antioch		
Arlington Heights	1.25%	1.00%
Aurora	1.75%	1.25%
Bannockburn	1.00%	0.50%
Barrington		
Bartlett		
Buffalogrove	1.00%	1.00%
Bensenville		1.00%
Bloomington		0.5-1.5%
Bolingbrook	1.50%	1.50%
Burr Ridge	1.00%	0.25%
Carol Stream		0.75%
Cary		
Clarendon Hills	1.00%	
Deerfield	1.00%	1.00%
Des Plaines	1.00%	1.00%
Downers Grove	1.00%	1.00%
Elmhurst	1.00%	1.00%
Evanston		1.00%
Glendale Heights	1.00%	1.25%
Glenview		0.75%
Hanover Park	3.00%	0.75%
Highland Park	1.00%	1.00%
Hinsdale	1.00%	1.00%
Hoffman Estates	2.00%	1.00%
Itasca	1.00%	0.50%
Lake Forest		0.50%
Lemont		
Libertyville	1.00%	
Lincolnshire		1.00%
Lincolnwood	1.00%	1.00%
Lisle		
Lombard	1.00%	1-2%
Mount Prospect	1.00%	1-1.25%
Naperville	1-1.50%	0.50%
Northbrook		0.75%
Northfield		0.75%
Oak Brook		0.50%
Oakbrook Terrace		1-2%
Park Ridge	1.00%	1.00%
Rolling Meadows	2.00%	1.00%
Roselle	1.00%	0-1%
Schaumburg	2.00%	1.00%
Streamwood	2.00%	1.00%
Vernon Hills		0.25%
Villa Park	1.50%	1-2%
Warrenville	1.50%	1.25%
Wayne		
West Chicago		0.75%
Westmont	2.00%	0.50%
Wheaton		1.00%
Wheeling	1.00%	1.00%
Willowbrook	1.00%	0-1%
Wilmette		1.00%
Winfield		0.50%
Wood Dale		1.00%
Woodridge		0.75%
# with fee	32	49
# w/o fee	26	9

Naperville has an additional F&B tax on its downtown

Those municipalities with a range of HRST rates
have a business district that charges a supplemental
tax.



Finance Commission
535 Duane St.
Glen Ellyn, IL 60137

Meeting: 11/03/17 07:00 AM
Department: Finance Commission
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2944)

DOC ID: 2944

Motion to Recommend a General Fund Reserve Policy Level to the Village Board

Background

The Village has an adopted cash reserve policy for the General Fund. As with any policy, it is intended to be a long-term guiding policy that shapes the financial health of the Village. The policy was last updated in 2012, the Village updated its reserve policies. At that time, the General Fund reserve policy was set at 25% of operating expenditures in the General Fund, increasing by 1% until the reserve reached 35%. Prior to that update, the policy minimum had been set at 25%, which stretched far back into the 1990's.

The policy was changed in 2012 based upon Village Board feedback. The Village Board discussed the General Fund Reserve level at the October 24, 2011 Board meeting. Consensus was to increase the reserve levels to provide a greater buffer given the recent economic decline as well as that the 25% reserve level was low when benchmarked against comparable communities.

Issues

Outlined below are some general questions which should be considered when deciding if a modification to the General Fund Reserve Policy is necessary and what that change might be.

Why do we have reserves in General Fund?

The Village maintains reserves in the General fund to protect against risk, provide for cash flow due to revenue cycles, and to provide funding for non-structural budgetary issues.

What else has the Village used General Fund reserves for?

In some years, the Village experienced surpluses at the end of the fiscal years which built up the General Fund reserves. The Village has used these surpluses to be able to fund capital projects, facility funding, and pensions. In 2009, the Village transferred \$3 million of General Fund reserves from the General Fund to the Capital Projects Fund. Construction costs had escalated greater than was projected in the 2000 Capital Plan. This \$3M transfer was done to provide funding relief for the Capital Projects Fund. In 2016, the Village Board approved transferring the FY2015 General Fund surplus to the Police Pension Fund (\$400K) and the Facility Maintenance Reserve Fund (\$200K). Being able to pay for these projects and pensions from reserves is a prudent financial practice. By saving in years of plenty, we can fund projects that arise without raising additional revenue.

What are some of our cash flow challenges?

In the General Fund, the biggest cash flow challenge from a timing aspect is that the property taxes are received primarily in June and September. This means from October through May, we use more cash than we bring in. Therefore, some reserve is needed during that time to be able to meet cash flow needs to get us to our next property tax payment. In October 2015 – May 2017, we used \$1.7M in cash. In October 2016-May 2017, we used \$1.4 million in cash. From this, I would

recommend that at least \$2M be retained in a reserve to bridge the gap between property tax cycles. This would need to grow as our costs grow.

What was the impact of the last recession?

Attached is a slide from 2013 which looked at the effect of Village revenues without implementing the Home Rule Sales Tax. As can be seen, from 2008 – 2010, Village revenues dropped \$1.1 million without the Home Rule Sales Tax. This is a good indicator for another economic downturn.

What does the GFOA Reserve Model say on our cash reserves?

The Government Finance Officers Association (GFOA) has issued some best practice documents on reserve policies. Those are attached to this memo. GFOA also has an assessment tool which can guide you through making a decision on reserve levels. Staff has completed this tool and the result recommended a 26-35% reserve level.

How do reserves affect our Standard & Poor's Bond Rating and the cost to issue debt?

Standard and Poor's indicated that the Village's strong reserve level was one of the reasons that the Village was upgraded to a AAA rating. When we received our rating in July of 2015, our reserve levels were approximately 40-45%, depending on the time of the year. It is possible that lowering the level of reserves could jeopardize our bond rating. Our current policy was in existence during the time of the rating. Some excerpts from our rating document are as follows:

Budgetary Flexibility Score (10% of indicative rating) – See pages 21-23 of the S&P Criteria

We show the Village as having a score of 1 (best score) which is a result of having an Available Fund Balance as a % of General Fund Expenditures greater than 15%. The criteria states that a qualitative adjustment could be made for "Maintenance of an available fund balance exceeding 30% of general fund expenditures for the most recently report year, the current year and the next year." We estimate the ratio to be over 40% as of FY 2016. Per the Village's 2014 rating report, the Village's ratio was 42% and the analyst noted in the report "We expect the available fund balance will remain above 30% for the current and next fiscal years." The Village's score would become a 2 if Available Fund Balance as a % of General Fund Expenditures dropped to 8%-15%. Assuming no change in General Fund Expenditures, lowering the Village's unassigned General Fund balance to \$3 million would result in a ratio of approximately 15% and likely lower this score to 2. If this score were to drop to a 2, we don't know that it would be enough to lower the rating on its own, but there is the potential risk. Please note that a negative qualitative adjustment (one point score increase) could be made if "projections for the current year and the following year suggest a worse initial score."

The paragraph above suggests that the rating suggests that the available fund balance will remain above 30% for the next few years. Our financial advisors, RW Baird, suggest that there is a 10 basis point adjustment in interest rate for each rating level that we go down. That means if we issued debt for the police station with one rating lower, it would cost the Village an additional \$170,000 in interest over the life of the bonds.

How should we view reserves in light of the current economy?

We are currently in a bull economy. This is the time to be building cash reserves in order to prepare for the next economic downturn, which will come at some point. The Village still remains under

threat from the State of Illinois. There are several property tax freeze bills circulating in Springfield which would limit the Village's ability to increase revenues through property taxes. The State has also been diverting funds out of the Personal Property Replacement Taxes (PPRT) which negatively impacts our General Fund. The State also still does not have a balanced budget, so there is still a level of uncertainty surrounding how the State's financial future could affect the Village.

What are benchmarks for other communities?

Below are the General Fund reserve policies for those communities that have been used in our Scorecard. The average policy level is 33%. Some of the communities that have lower reserve levels are those that have larger sales tax base and therefore greater revenue diversification.

Geneva	25%
LaGrange	50-75%
Lisle	50%
Lombard	25%
Wheaton	25%
Elmhurst	25-33%
Naperville	20%
Hinsdale	25%
Oak Brook	50%
Clarendon Hills	40%
Downers Grove	16-33%
Arlington Heights	25%
Western Springs	30%

Staff Recommendation

Staff recommends continuing with our current policy for the following reasons:

1. There is still uncertainty at the State of Illinois and how it could impact the Village. Healthy reserves help us to mitigate this uncertainty and prevent the Village from needed to make hasty decisions to trim costs if the State cuts revenues further.
2. We are currently in a boom economy. This is the time to build reserves for the next recession. Economic cycles are a certainty. There will be a downturn at some point in the future.
3. The AAA bond rating cited our strong reserves and policies as the reason that we received the AAA rating. Glen Ellyn is inherently flawed when it comes to the limits of our EAV (i.e. we will never be as large as Naperville). Therefore, we must stand strong in other areas of our financial scorecard. Lowering the reserves could jeopardize this rating, which could incur additional interest cost should we need to issue debt.
4. The GFOA model yielded a range of 26-35%, which falls in line with our current policy.
5. One of the factors that make Glen Ellyn stand out among its peers is its dedication to trying to fund projects on a pay-as-you-go basis rather than issuing debt. Our scorecard yielded that our debt outstanding is low in comparison to our peers. Building strong reserves helps

to continue that methodology. As prudent management yields surpluses in the General Fund, those additional funds can be used to pay for a project or portion of a project that the Village would have otherwise needed to fund with debt.

Action Requested

Staff requests that the Finance Commission provide a recommendation to the Village Board on a General Fund reserve policy level.

ATTACHMENTS:

- GFOA Best Practice on Fund Balance for General Fund (PDF)
- Risk Based Analysis of Reserve Funds (PDF)
- Normalized General Fund Revenue (PDF)
- GFOA Risk Analysis Template - General Fund (PDF)



Government Finance Officers Association

BEST PRACTICE

Fund Balance Guidelines for the General Fund

BACKGROUND:

In the context of financial reporting, the term *fund balance* is used to describe the net position of governmental funds calculated in accordance with generally accepted accounting principles (GAAP). Budget professionals commonly use this same term to describe the net position of governmental funds calculated on a government's budgetary basis.¹ While in both cases *fund balance* is intended to serve as a measure of the financial resources available in a governmental fund; it is essential that differences between GAAP *fund balance* and budgetary *fund balance* be fully appreciated.

1. GAAP financial statements report up to five separate categories of fund balance based on the type and source of constraints placed on how resources can be spent (presented in descending order from most constraining to least constraining): *nonspendable fund balance*, *restricted fund balance*, *committed fund balance*, *assigned fund balance*, and *unassigned fund balance*.² The total of the amounts in these last three categories (where the only constraint on spending, if any, is imposed by the government itself) is termed *unrestricted fund balance*. In contrast, budgetary fund balance, while it is subject to the same constraints on spending as GAAP fund balance, typically represents simply the total amount accumulated from prior years at a point in time.
2. The calculation of GAAP fund balance and budgetary fund balance sometimes is complicated by the use of sub-funds within the general fund. In such cases, GAAP fund balance includes amounts from all of the subfunds, whereas budgetary fund balance typically does not.
3. Often the timing of the recognition of revenues and expenditures is different for purposes of GAAP financial reporting and budgeting. For example, encumbrances arising from purchase orders often are recognized as expenditures for budgetary purposes, but never for the preparation of GAAP financial statements.

The effect of these and other differences on the amounts reported as *GAAP fund balance* and *budgetary fund balance* in the general fund should be clarified, understood, and documented.

It is essential that governments maintain adequate levels of fund balance to mitigate current and future risks (e.g., revenue shortfalls and unanticipated expenditures) and to ensure stable tax rates.

In most cases, discussions of fund balance will properly focus on a government's general fund. Nonetheless, financial resources available in other funds should also be considered in assessing the adequacy of unrestricted fund balance in the general fund.

RECOMMENDATION:

GFOA recommends that governments establish a formal policy on the level of unrestricted fund balance that should be maintained in the general fund for GAAP and budgetary purposes.³ Such a

guideline should be set by the appropriate policy body and articulate a framework and process for how the government would increase or decrease the level of unrestricted fund balance over a specific time period.⁴ In particular, governments should provide broad guidance in the policy for how resources will be directed to replenish fund balance should the balance fall below the level prescribed.

Appropriate Level. The adequacy of unrestricted fund balance in the general fund should take into account each government's own unique circumstances. For example, governments that may be vulnerable to natural disasters, more dependent on a volatile revenue source, or potentially subject to cuts in state aid and/or federal grants may need to maintain a higher level in the unrestricted fund balance. Articulating these risks in a fund balance policy makes it easier to explain to stakeholders the rationale for a seemingly higher than normal level of fund balance that protects taxpayers and employees from unexpected changes in financial condition. Nevertheless, GFOA recommends, at a minimum, that general-purpose governments, regardless of size, maintain unrestricted budgetary fund balance in their general fund of no less than two months of regular general fund operating revenues or regular general fund operating expenditures.⁵ The choice of revenues or expenditures as a basis of comparison may be dictated by what is more predictable in a government's particular circumstances.⁶ Furthermore, a government's particular situation often may require a level of unrestricted fund balance in the general fund significantly in excess of this recommended minimum level. In any case, such measures should be applied within the context of long-term forecasting, thereby avoiding the risk of placing too much emphasis upon the level of unrestricted fund balance in the general fund at any one time. In establishing a policy governing the level of unrestricted fund balance in the general fund, a government should consider a variety of factors, including:

1. The predictability of its revenues and the volatility of its expenditures (i.e., higher levels of unrestricted fund balance may be needed if significant revenue sources are subject to unpredictable fluctuations or if operating expenditures are highly volatile);
2. Its perceived exposure to significant one-time outlays (e.g., disasters, immediate capital needs, state budget cuts);
3. The potential drain upon general fund resources from other funds, as well as, the availability of resources in other funds;
4. The potential impact on the entity's bond ratings and the corresponding increased cost of borrowed funds;
5. Commitments and assignments (i.e., governments may wish to maintain higher levels of unrestricted fund balance to compensate for any portion of unrestricted fund balance already committed or assigned by the government for a specific purpose). Governments may deem it appropriate to exclude from consideration resources that have been committed or assigned to some other purpose and focus on unassigned fund balance, rather than on unrestricted fund balance.

Use and Replenishment.

The fund balance policy should define conditions warranting its use, and if a fund balance falls below the government's policy level, a solid plan to replenish it. In that context, the fund balance policy should:

1. Define the time period within which and contingencies for which fund balances will be used;
2. Describe how the government's expenditure and/or revenue levels will be adjusted to match any new economic realities that are behind the use of fund balance as a financing bridge;
3. Describe the time period over which the components of fund balance will be replenished and the means by which they will be replenished.

Generally, governments should seek to replenish their fund balances within one to three years of use. Specifically, factors influencing the replenishment time horizon include:

1. The budgetary reasons behind the fund balance targets;
2. Recovering from an extreme event;
3. Political continuity;
4. Financial planning time horizons;
5. Long-term forecasts and economic conditions;
6. External financing expectations.

Revenue sources that would typically be looked to for replenishment of a fund balance include nonrecurring revenues, budget surpluses, and excess resources in other funds (if legally permissible and there is a defensible rationale). Year-end surpluses are an appropriate source for replenishing fund balance.

Unrestricted Fund Balance Above Formal Policy Requirement. In some cases, governments can find themselves in a position with an amount of unrestricted fund balance in the general fund over their formal policy reserve requirement even after taking into account potential financial risks in the foreseeable future. Amounts over the formal policy may reflect a structural trend, in which case governments should consider a policy as to how this would be addressed. Additionally, an education or communication strategy, or at a minimum, explanation of large changes in fund balance is encouraged. In all cases, use of those funds should be prohibited as a funding source for ongoing recurring expenditures.

Notes:

1. For the sake of clarity, this recommended practice uses the terms GAAP fund balance and budgetary fund balance to distinguish these two different uses of the same term.
2. These categories are set forth in Governmental Accounting Standards Board (GASB) Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions*.
3. Sometimes restricted fund balance includes resources available to finance items that typically would require the use of unrestricted fund balance (e.g., a contingency reserve). In that case, such amounts should be included as part of unrestricted fund balance for purposes of analysis.
4. See Recommended Practice 4.1 of the National Advisory Council on State and Local Budgeting governments on the need to "maintain a prudent level of financial resources to protect against reducing service levels or raising taxes and fees because of temporary revenue shortfalls or unpredicted one-time expenditures" (Recommended Practice 4.1).
5. In practice, a level of unrestricted fund balance significantly lower than the recommended minimum may be appropriate for states and America's largest governments (e.g., cities, counties, and school districts) because they often are in a better position to predict contingencies (for the same reason that an insurance company can more readily predict the number of accidents for a pool of 500,000 drivers than for a pool of fifty), and because their revenues and expenditures often are more diversified and thus potentially less subject to volatility.
6. In either case, unusual items that would distort trends (e.g., one-time revenues and expenditures) should be excluded, whereas recurring transfers should be included. Once the decision has been made to compare unrestricted fund balance to either revenues and/or expenditures, that decision should be followed consistently from period to period.

Applicable to Canadian Governments:

A Case Study of the City of Colorado Springs

A Risk-Based Analysis of General Fund Reserve Requirements

Government Finance Officers Association
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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.

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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 312-977-9700 or skavanagh@gfoa.org.

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203 N. LaSalle Street, Suite 2700
Chicago, Illinois 60601
www.gfoa.org

The Case of the City of Colorado Springs

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Executive Summary

Reserves are the cornerstone of financial flexibility. Reserves provide a government with options for responding to unexpected issues and a buffer against shocks and other forms of risk. Managing reserves, however, can be a challenge. The main question is how much money to maintain in reserve – how much is enough, and when does it become too much? This 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 revenues³ as budgetary uncertainty reserve

Emergency Reserve

\$5.25 million for critical bridge failure +

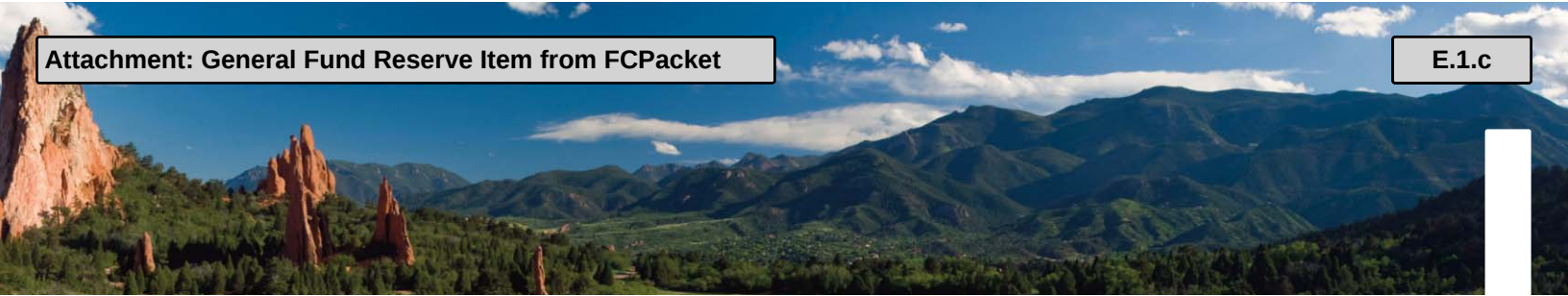
\$11.6 million for critical storm sewer replacement +

\$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

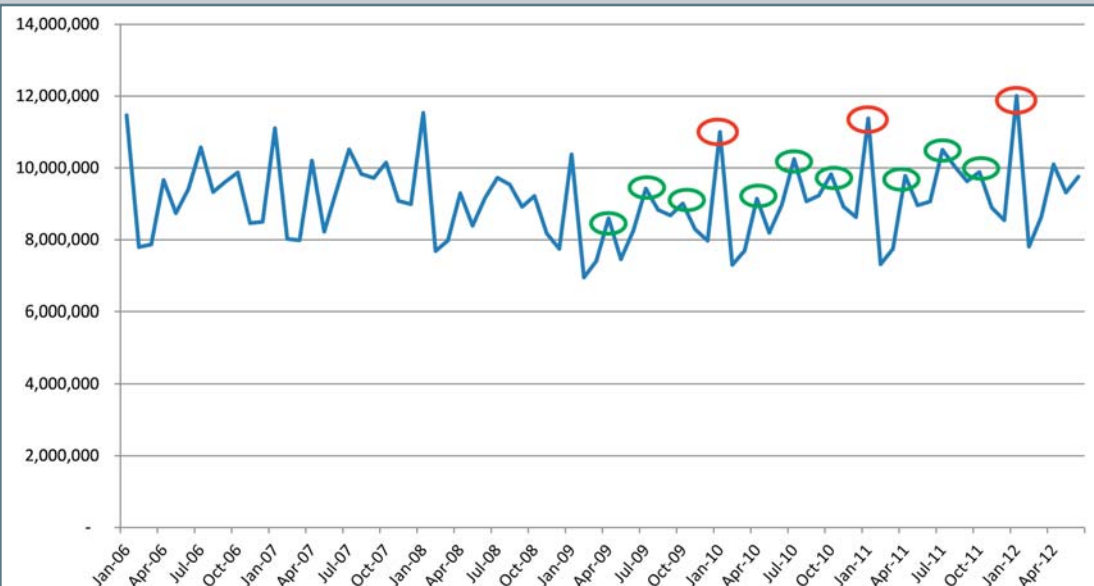
	2011	2010	2009	2008	2007
Revenue	\$111,735,533	\$108,212,533	\$101,247,887	\$107,356,298	\$113,211,788
Annual Change	3.3%	6.9%	-5.7%	-5.2%	1.7%

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 tax¹³ 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.

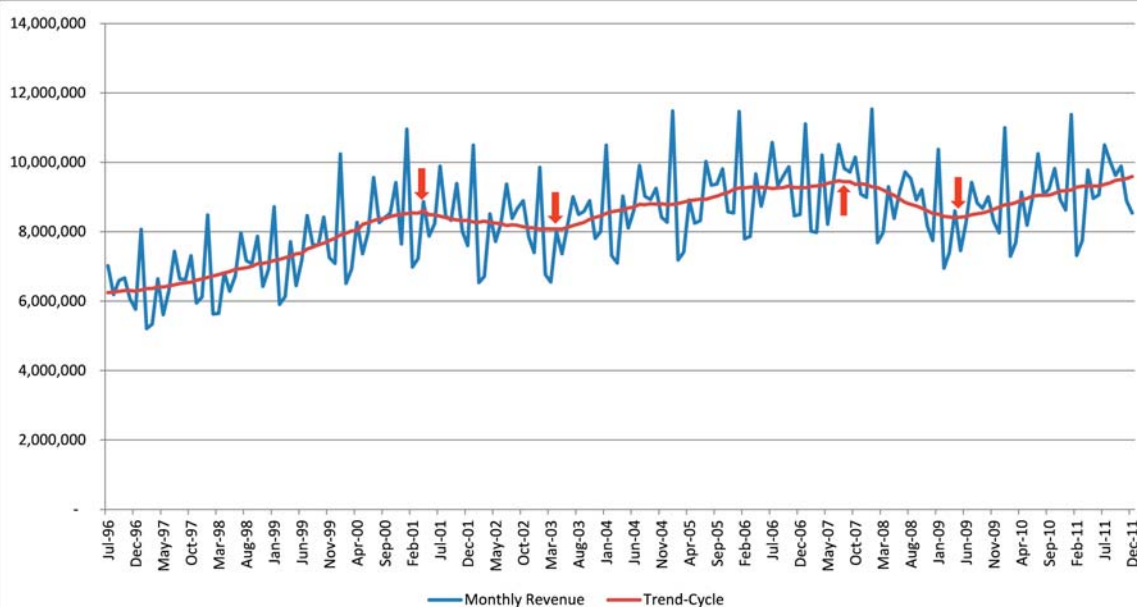
Obviously, the decline associated with the Great Recession was much sharper than the 2001 recession, both in terms of overall decline and speed of the decline. In fact, so severe was some of the financial fallout from the Great Recession that some have dubbed it what acclaimed financial thinker Nasim 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.

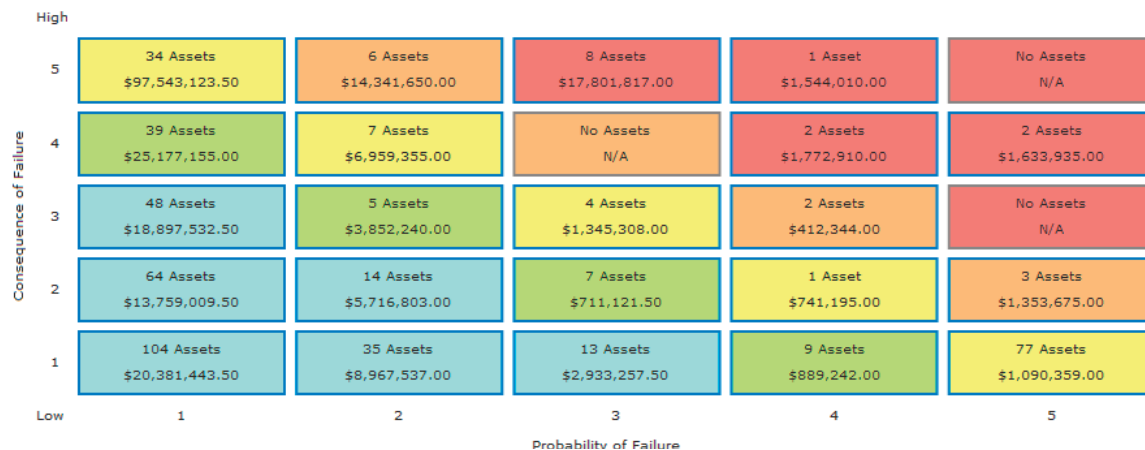
Transfers from Other Funds. The City receives about 17 percent of its revenue from transfers from other funds (from City utilities). This transfer is a matter of City Council policy. There do not appear to be any major threats to the continued economic viability of this policy, so any change would have 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



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 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 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's 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.

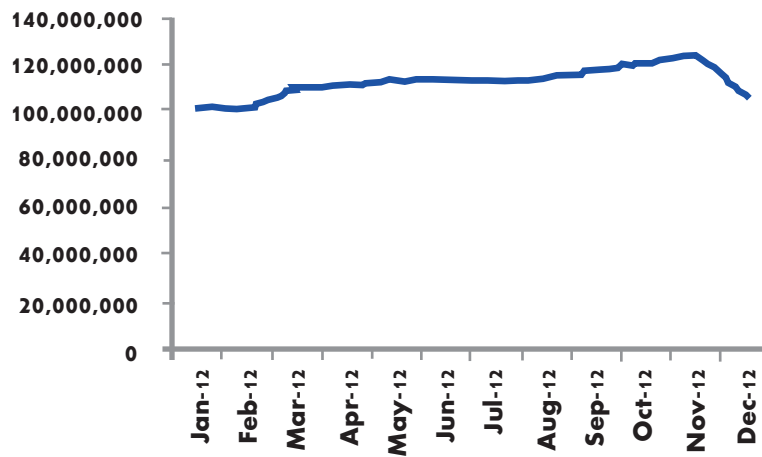
GROWTH OF THE COMMUNITY

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.

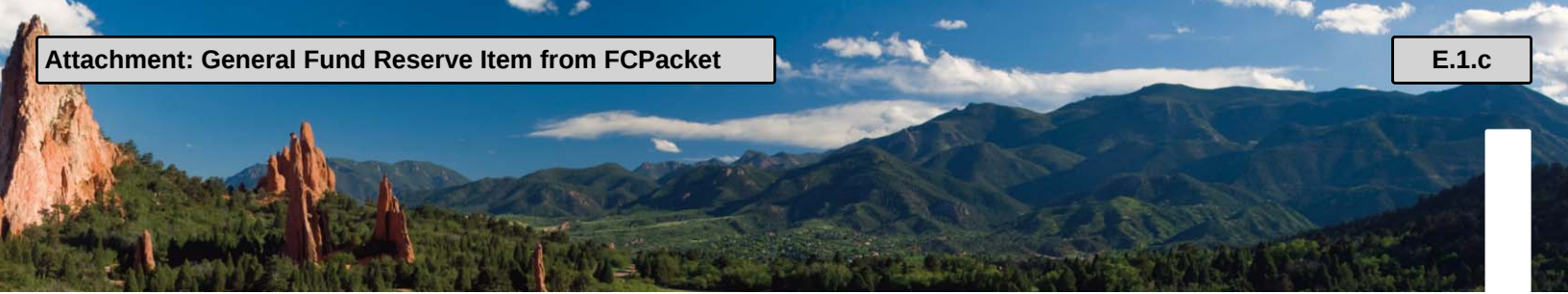
LIQUIDITY

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 services 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 revenues³⁰ 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.

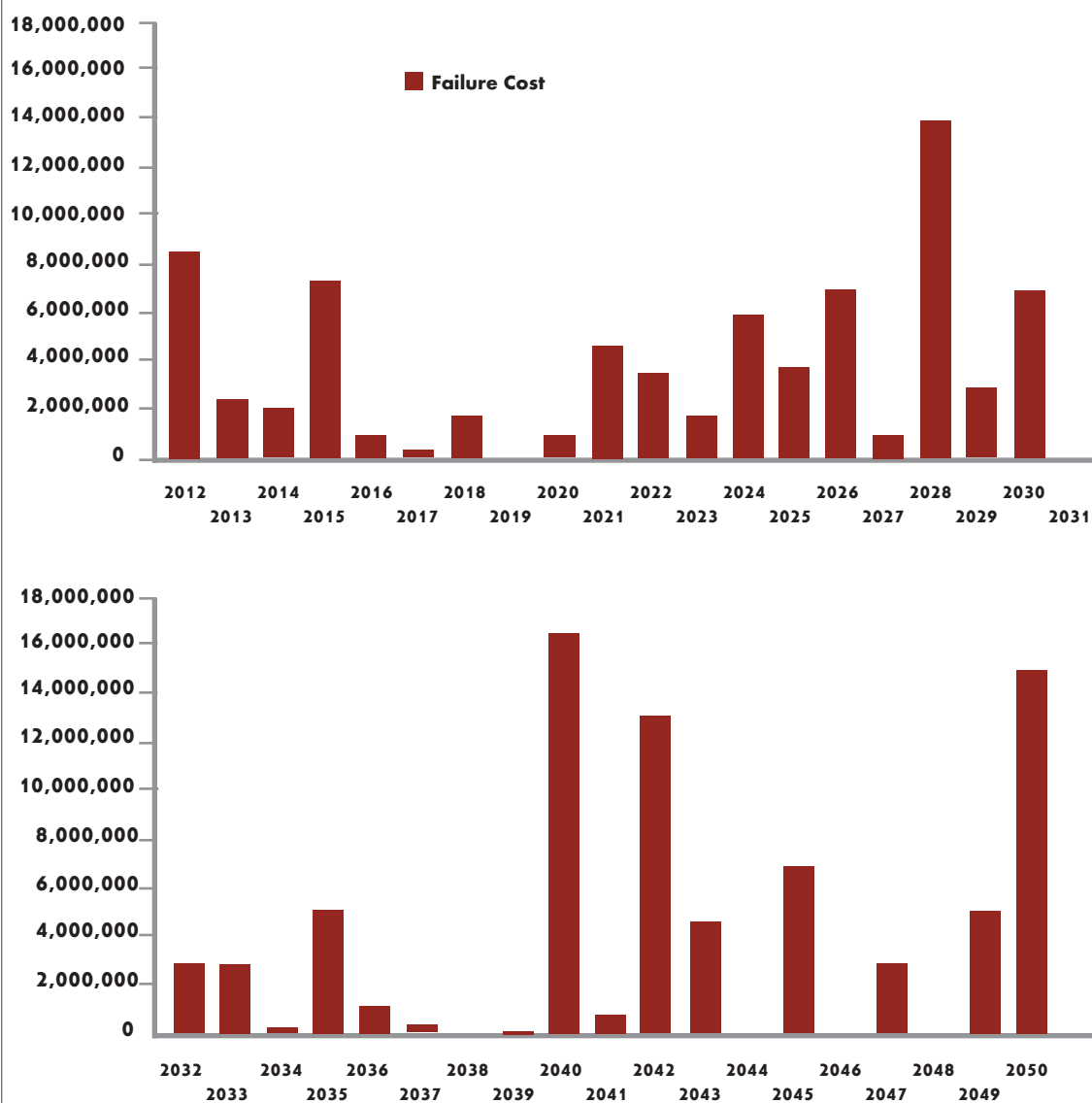
A policy should direct that any grants pursued are consistent with the government's mission and strategic priorities. Spotsylvania County's policy states that "before applying for and accepting intergovernmental aid, the county will assess the merits of a particular program as if it were funded with 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 4.3:
Estimate of Annual Bridge and Culvert Replacement Costs

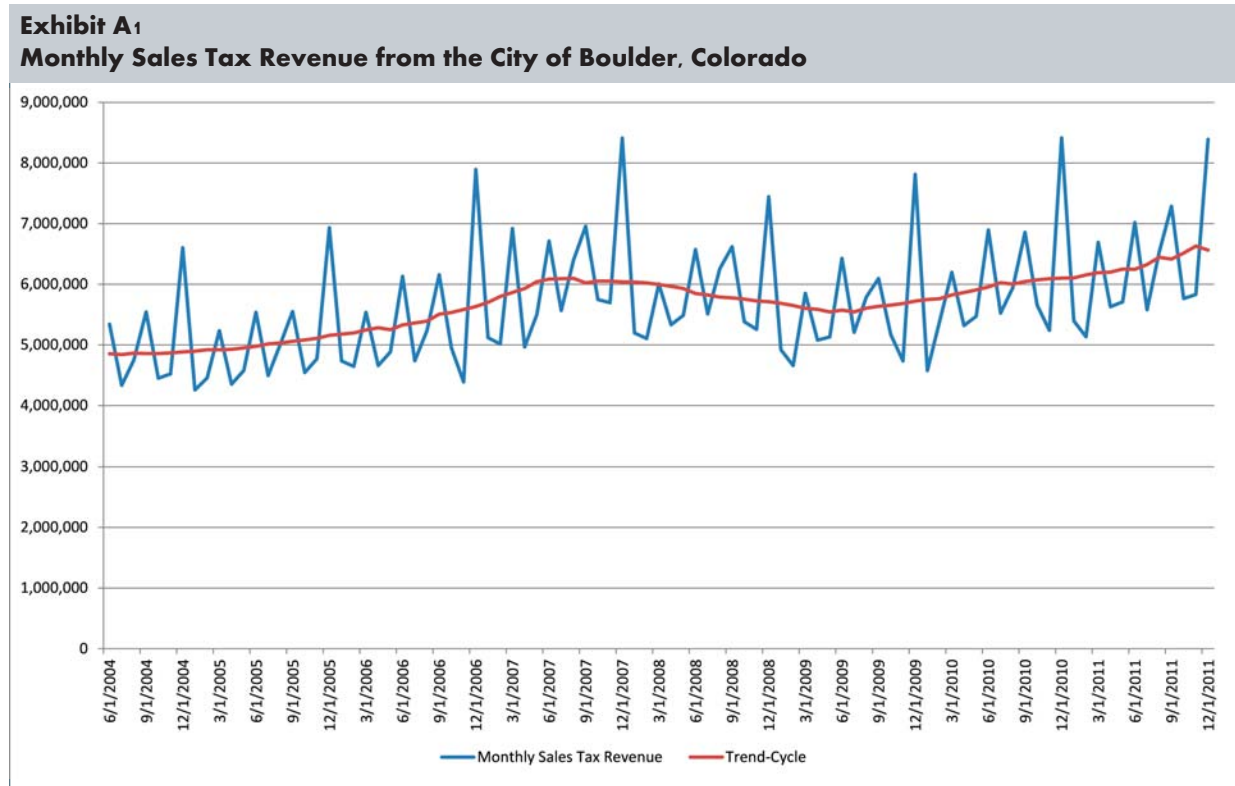


For storm sewers, the average annual contribution for a regular maintenance/replacement schedule would be about \$36 million, though this is a less precise figure because the underlying information on asset condition is not as detailed.

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.



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. Blitzler, 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.

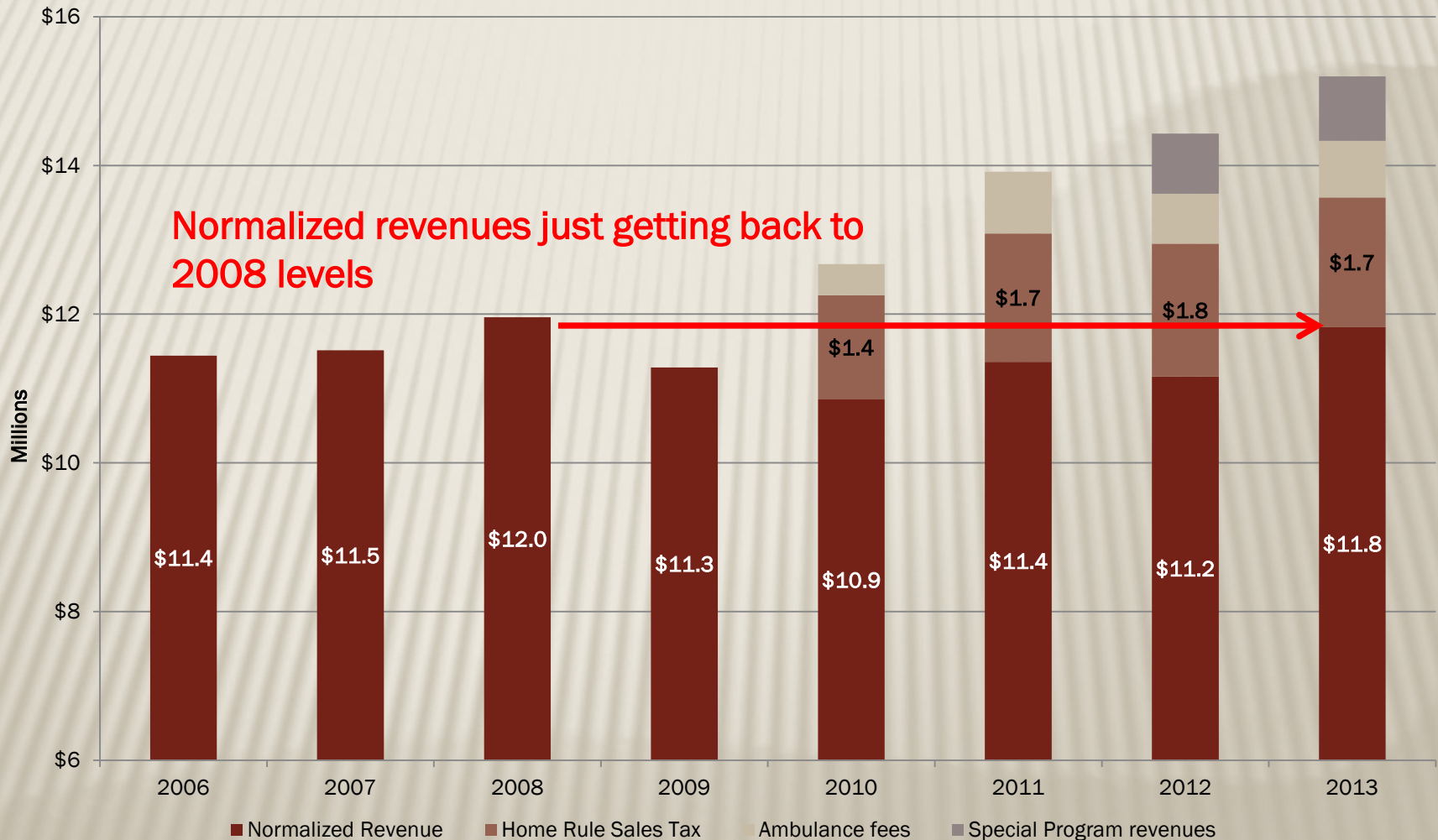
31 See GFOA Best Practice, "Appropriate Level of Unrestricted Fund Balance in the General Fund" (2009), www.gfoa.org. The Best Practice states that reserves equal to about 16 percent of revenues or expenditures is the minimum a government should consider for its policy and that the actual target that 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/financialpolicies.

34 See Kavanagh, Financial Policies, 2009.

NORMALIZED REVENUE - GENERAL FUND



Attachment: Normalized General Fund Revenue (2944 : General Fund Cash Reserve)

Note: Ambulance fees and Special Program Revenues are essentially offset by expenditures

Guiding Your Selection of a Fund Balance Target

Step 1. Determine your total score from the risk factors

26 Your total score from the risk factors (calculated if you entered a score in other sheets)

Step 2. Preliminary Analysis

Compare your score from Step 1 to the guidelines below.

Your Score

Analytical Guidance

8 - 16

You face minimal risk to retain through reserves. Consider a target equal to the GFOA minimum recommended reserve of 16.6% of revenues/expenditures.

17-24

You face a low to moderate level of risk to retain through reserves. Consider adopting a reserve target somewhat higher than the GFOA minimum (e.g. 17-25% of revenues/expenditures). Since risk is low, do not invest excessive analytical effort in determining an exact target amount. Consider a short, informal benchmarking study with peer agencies to provide guidance.

25-31

You face a moderate to high level of risk to retain through reserves. Consider adopting a target amount of reserves significantly higher than the GFOA recommended minimum (e.g., 26 - 35%). Consider a short, informal benchmarking survey as a starting point, but then analyze your most significant risk factors to make sure they are adequately covered by what the survey suggests is reasonable.

32 - 40

You face a high level of risk to retain through reserves. Consider adopting a much higher target than the GFOA minimum (e.g., greater than 35%). Consider performing a more indepth analysis of the risks you face to arrive at target level of reserved that provides sufficient coverage.

Step 3. Consider Impact of Government Size, Budget Practices, & Borrowing Capacity

For each driver pick which description best fits you and enter the appropriate number of points.

2 Government Size

- +2 We are under 50,000 in population
- 0 We are between 50,000 and 300,000 in population
- 4 We are over 300,000 in population

0 Budget Practices

- 3 The budget has a formal contingency beyond what is being considered for this reserve.
- 2 The budget has informal contingencies beyond what is being considered for the reserve.
- 0 The budget is lean and has no contingencies in it.

-2 Borrowing Capacity

- 3 We have excellent external and internal borrowing capacity, including a good rating, little existing debt, and political will to use it.
- 2 We have some external and/or internal borrowing capacity and political will could be mobilized to use it.

0 We have little or no borrowing capacity.

Step 4. Consider Impact of Commitments/Assignments, Outsider Perceptions & Political Support

Place an "X" next to each statement that applies to you.

Commitments and Assignments

☒ We we have commitments or assignments that designate fund balance for uses other than retaining the types of risk described in this analysis. If so, these commitments/assignments should not be included in the total reserve used to reach your target.

Outsider Perceptions

☒ Rating agencies have given us a target level of reserve for getting a good rating. If so, use that target in place of or in addition to a benchmarking survey to provide guidance on starting point for your target.

☐ The public is likely to question reserve levels as too high. If so, be sure to document your analysis findings in the other sheets.

Political Support

☒ The governing board places great weight on the policies of comparable jurisdictions. If so, conduct a benchmarking survey that includes governments the board preceives as relevant.

☒ The board places great weight on rating agency recommendations. If so, tie the reserve target recommendation to rating agency recommendations or standards.

☐ The board places great weight on GFOA recommendations. If so, use this analysis and GFOA's Best Practices to support your recommendation.

Step 5. Putting it All Together

A. Consider your adjusted risk score and re-consult the analytical guidance.

< Your adjusted risk score (risk score modified with results from Step 3)

B. Review results of Step 4.

Review each item you checked from Step 4 and add the advice to your analytical guidance.

C. Proceed with finalizing target

Proceed with setting a final reserve target based on analytical guidance.

Vulnerability to Extreme Events**1. Identify Risks**

What extreme events are you at risk for?

A	Tornado
B	Terrorism
C	Chemical Spill - Train Tracks

2. Assess Risks

What is your vulnerability to each extreme event, given past experience?

A	Storm in 2013 caused \$180K in expenses
B	Little
C	Train derailment and ammonia spill in 1970's - cost unknown

3. Identify other risk mitigation approaches

What options do you have to avoid, reduce, or transfer the risk (i.e., manage it without reserves)

A	Solid Waste Fund could cover a small storm.
B	None
C	None

4. Considering the above, how important for you is it to retain the risks of extreme events through reserves ?

2 < Enter your score here

- 5 **Very important.** We are subject to extreme events of severe potential magnitude which would require a quick and decisive response from our government. There are few alternative risk management approaches.
- 4 **Important.** We are subject to extreme events of severe potential magnitude, but our government does not have an important disaster response role and/or we have other risk management alternatives.
- 3 **Neutral.** We do not face an unusually high or low level of risk from extreme events.
- 2 **Unimportant.** We are subject to one or two types of significant extreme events and we have other risk management options.
- 1 **Very unimportant.** We are subject to very few, if any, potential extreme events of significant potential damage

Revenue Source Stability**1. Identify Risks**

What are your major revenue sources?

A	Sales Tax - \$3.56 M
B	Property Tax - \$3.48M
C	Income Tax - \$2.65M

2. Assess Risks

How stable are your revenue sources?

A	Subject to economic declines
B	Stable - but subject to political will
C	Unstable - subject to direction of State of Illinois

3. Identify other risk mitigation approaches

What options do you have to avoid, reduce, or transfer the risk (i.e., manage it without reserves)

A	None
B	Levy can be increased at will of Board
C	None

4. Considering the above, how important for you is it to retain the risks of revenue instability through reserves ?

4 < Enter your score here

- 5 **Very important.** We rely on just one or two sources of revenue, and they are unstable
- 4 **Important.** We rely on unstable sources for a significant portion of our revenue and/or have particular unstable payers as part of our tax base (e.g., sales tax from an industry with volatile sales)
- 3 **Neutral.** We do not face an unusually high or low level of risk from revenue instability
- 2 **Unimportant.** While some portion of our revenue base has instability, the majority of revenues are pretty stable.
- 1 **Very unimportant.** Our revenues are very stable and diverse.

Expenditure Volatility**1. Identify Risks**

What are sources of potential expenditure spikes?

- | | |
|---|--|
| A | Police Pension Contribution Increasing |
| B | Health Insurance Costs |
| C | Union contracts - particularly if other departments unionize |

2. Assess Risks

What is the potential cost of these spikes?

- | | |
|---|-----------------|
| A | \$400K - \$500K |
| B | max \$100K |
| C | unknown |

3. Identify other risk mitigation approaches

What options do you have to avoid, reduce, or transfer the risk of these potential spikes? (i.e., manage it without reserves)

- | | |
|---|---|
| A | None |
| B | Some - change plan design/employee cost, etc. |
| C | Little - dependent on bargaining |

4. Considering the above, how important for you is it to retain the risks of expenditure spikes through reserves ?

3 < Enter your score here

- 5 **Very important.** There are expenditure spikes with very high potential to open a significant hole in our budget.
- 4 **Important.** We are subject to important potential expenditure spikes, such that we need reserves but we also have other risk mitigation approaches available.
- 3 **Neutral.** We do not face an unusually high or low level of risk from expenditure spikes
- 2 **Unimportant.** There are one or a few potential spikes but the risk of them occurring is low, the impact not great and/or we have other risk management options.
- 1 **Very unimportant.** We have no important risk from expenditure spikes.

Leverage**1. Identify Risks**

What are major sources of leverage you are subject to?

A	Pensions
B	Debt
C	Unfunded facility and capital projects
D	

2. Assess Risks

What are the implications of leverage for the organization's financial flexibility?

A	Police pension contributions expected to grow over the next few years
B	Debt does not affect the General Fund currently
C	General Fund reserves likely needed to fund capital and facility projects
D	

3. Identify other risk mitigation approaches

What options do you have to avoid, reduce, or transfer the risk of leverage? (i.e., manage it without reserves)

A	Increase revenues
B	N/A
C	Increase revenues to pay for projects
D	

4. Considering the above, how important for you is it to retain the risks of leverage through reserves ?

3 < Enter your score here

- 5 **Very important.** We are subject to significant leverage and have no other risk management approach
- 4 **Important.** We are subject to significant leverage and do not have equally significant offsetting risk management approaches.
- 3 **Neutral.** We do not face an unusually high or low level of risk from leverage
- 2 **Unimportant.** We have one or two sources of leverage, but these are largely addressed with other risk management strategies.
- 1 **Very unimportant.** We have no important sources of leverage that aren't already managed with out reserves.

Liquidity**1. Identify Risks**

What are your major sources of potential intra-period cash imbalances?

A	Property taxes only received in June & September (large payments)
B	State revenues have been lagged at times due to state budget issues - up to 3 months
C	

2. Assess Risks

How likely are these risks to occur and what is their potential magnitude?

A	Cash balance decreases Oct - May - Typically by \$1.5 - \$1.8M
B	Three months of state revenues are approx. \$1.8M
C	

3. Identify other risk mitigation approaches

What options do you have to avoid, reduce, or transfer the risk of liquidity? (i.e., manage it without reserves)

A	issue tax anticipation notes - increase costs in general fund
B	issue tax anticipation notes - increase costs in general fund
C	

4. Considering the above, how important for you is it to retain the risks of expenditure spikes through reserves ?

5 < Enter your score here

- 5 **Very important.** We have very important potential intra-period imbalances with few risk management alternatives.
- 4 **Important.** We have important potential intra-period imbalances, but do have some off-setting risk management alternatives.
- 3 **Neutral.** We do not face an unusually high or low level of risk from intra-period cash imbalances.
- 2 **Unimportant.** We have some minor potential intra-period cash imbalances.
- 1 **Very unimportant.** Our cash flows are very stable.



Finance Commission
535 Duane St.
Glen Ellyn, IL 60137

Meeting: 11/03/17 07:00 AM
Department: Finance Commission
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2946)

DOC ID: 2946

Finance Director Christina Coyle will present Information on the Police Pension Actuarial Model

Note: This agenda item is copied from the October meeting, with the exception of adding an attachment which highlights payroll growth for police.

Background

The Finance Commission has been involved over the past several years in reviewing the funding methodology for the Police Pension Fund. At the end of 2014, the Finance Commission has made the following recommendation to the Village Board, which it has affirmed each year thereafter:

The Village of Glen Ellyn Finance Commission Recommends to the Board of Trustees for the Village of Glen Ellyn the following rate of return assumptions for the Village of Glen Ellyn Police Pension Fund:

- 1) 6.00% per annum if the policy of the Police Pension Board is to limit the equity allocation of the portfolio to the current 45%; and
- 2) 6.25% per annum if the policy of the Police Pension Board is changed to allow an equity allocation up to the statutorily allowed 55%.

This recommendation is not intended to communicate an opinion on the allocation limits set by the Police Pension Board. These recommendations are solely a reflection of the Commission's view of probable long-term return experience for the above allocation cases.

The Finance Commission's focus has been on recommending a realistic rate of return as well as to recommend a more aggressive equity allocation by the Police Pension Board. Starting in 2013, even before this recommendation was made, the Village began the process of moving the investment rate of return from its original 7.5% assumption to the current 6.75% assumption. Attached is a summary of the investment return assumption trend. This change in investment return assumptions has not been without consequences for the Village as the required contribution to the Police Pension Fund has almost doubled over the past 8 fiscal periods. The contribution to the Police Pension Fund is now approximately 10% of the General Fund budget.

In 2017, the Police Pension Board engaged a new investment consultant, who has recommended changes to the investment portfolio in line with what was recommended by the Finance Commission. The Fund is currently targeting an approximate 6.5% return.

Issues

In 2017, the Police Pension Board also engaged a new actuary, Foster & Foster. This brings fresh eyes to the Police Pension Fund actuarial model. As such, the actuary from Foster & Foster, Jason Franken, will be in attendance at the Finance Commission meeting on Friday. The purpose of this

meeting is to provide the Commission with some additional information staff has asked them to prepare which is outside of the normal actuary report data. Mr. Franken can also answer any questions the Commission may have. Also, should the Commission have additional questions which cannot be answered at the meeting, we can work with the actuary to obtain that information. Ultimately, the objective is for the Commission to feel better informed about the actuarial model for the Police Pension Fund. Staff has also provided some additional information from the new investment consultant for the Police Pension Fund.

Some information requested of the Police Pension Fund is as follows:

1. What is the new portfolio adopted by the Police Pension Fund?

Attached is an executive summary which outlines sample portfolios which were presented to the Police Pension Board. The Board chose Portfolio E which was recommended by the consultant. The 10 year annualized return was listed as 6.44%. Also included in the attachment is a redlined version of the Police Pension Fund's investment policy, which highlights that the Fund is increasing the equity allocation as recommended by the Finance Commission in the recommendation listed earlier in this memo.

2. Discussion of reasonable investment return assumptions in light of information provided in the actuarial report.

The original actuary report listed on page 34 (see report attached) a real long term expected rate of return. The Commission had questioned why this was different from the 6.75% return that was assumed in the model. The answer is that the information on page 34 is absent an inflation factor. When this inflation factor is added, the long term expected rate of return supports a 6.93% expected rate of return. Please see #1 in the assumptions and methods study provided by Foster & Foster.

3. Provide information on liabilities and contribution requirements at a 6.5% and 6.25% rate of return.

This information is included in #2 of the assumptions and methods study provided by Foster & Foster.

4. Provide some other actuarial model recommendations which may be an alternative model than we are currently using.

This information is included in #3 of the assumptions and methods study provided by Foster & Foster. Specifically this discusses the option of a closed versus an open methodology. The State of Illinois statutes require a minimum actuarial contribution based upon a closed methodology to 2040. However, the IMRF model is transitioning to an open model. The Pension Fund could transition to an open model, so long as if the contribution required by the State was higher than the open model, then the state contribution is what the fund would contribute. In an open model, as shown in the study, the contributions would be more level, but would be at a higher level than our current contributions. It is also

possible to transition gradually to an open model rather than completely change at one point in time.

5. Provide information on the payroll growth assumption.

This information is included in #4 of the assumptions and methods provided by Foster & Foster. Payroll growth is not necessarily tied to salary increases, although it is related. This is an assumption in the model which we have not focused on in the past. The Commission's focus has traditionally been on the salary increase assumption rather than the payroll growth assumption.

2018 Draft Budget

As shown in the attached summary of investment return assumptions and contributions, the 2018 draft budget does not include ratcheting down the investment return assumption another 25 basis points. The stress put on the General Fund by the state of Illinois and the pension fund contribution increasing is more than can be absorbed by our current revenue sources. The General Fund budget is currently at a deficit, and the Village Board will need to decide how to fund the difference, whether through new revenues, increases to existing revenues service cuts, use of reserves, or a combination of these factors. At this point for 2018, any change in the actuarial model which would increase the police pension contribution would need additional dollars through either service cuts or additional revenues. This is a difficult balancing act as the Village continues to work through unfunded facility and capital needs as well as meeting the funding of the Police Pension Fund.

FY16 General Fund Surplus

The Board will discuss the General Fund Surplus at the October 12 board workshop. As a reminder, the Finance Commission recommended that \$400,000 be contributed to the Police Pension Fund and \$148,331 be contributed to the Facilities Maintenance Reserve Fund. The Board had put the decision on hold and aligned the surplus discussion with the Budget discussions. There is also the possibility that additional surplus amounts will be needed to make improvements to the Civic Center in order to accommodate an economic development opportunity. The Village is currently working with College of DuPage on locating a business incubator and their small business development center within the Civic Center.

Staff Request

Ultimately, staff is looking for the Finance Commission to affirm their recommendation on funding the Police Pension Fund so that the Commission's position can be relayed to the Village Board.

Agenda Item (ID # 2946)

Meeting of November 3, 2017

There is a large amount of information included in this agenda item, so if there are additional questions or information needed, the topic could be continued to the next meeting.

ATTACHMENTS:

- Summary of Pension Contributions and Investment Return Rate (PDF)
- Assumptions and Methods Study v2 2017-10-11 (PDF)
- Police Pension Fund Investment Changes (PDF)
- Payroll Growth 2005-2016 (PDF)

Village of Glen Ellyn Police Pension Fund
Summary of Interest Rate Assumptions and Annual Contributions

Fiscal Year	FY12	FY13	FY14	SY14	FY15	FY16	FY17	FY18 BUD
Interest Rate	7.50%	7.25%	7.25%	7.00%	7.00%	6.75%	6.50%	6.50%
Contribution	\$ 1,036,000.00	\$ 969,000.00	\$ 980,000.00	\$ 981,000.00	\$ 1,153,000.00	\$ 1,292,000.00	\$ 1,613,000.00	\$ 1,958,109.00
% Inc in Contrib		-6.5%	1.1%	0.1%	17.5%	12.1%	24.8%	21.4%
Extra Contribution						\$ 400,000.00		
Funded Status	63.7%	67.5%	65.2%	64.0%	55.7%	57.5%	Not Avail.	Not Avail.



October 11, 2017

Ms. Christina Coyle, CPA
Finance Director
Village of Glen Ellyn
535 Duane Street
Glen Ellyn, IL 60137

Re: Valuation Assumptions and Methods – Glen Ellyn Police Pension Fund

Dear Ms. Christina Coyle:

We are pleased to present to this study of the valuation assumptions and methods for the Glen Ellyn Police Pension Fund. As requested, we have provided the following:

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.
2. Calculation of liabilities and contribution requirement using a 6.25% interest rate.
3. Discussion and calculation of the contribution requirement using an alternative funding model.
4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The study was performed to discuss various assumptions and methods and illustrate the impact on the contribution requirement. Please note that this study may not be applicable for any other purposes.

This study has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the study, we have relied on personnel, plan design, asset information and the actuarial assumptions and methods reflected and described in the Actuarial Assumptions section of the January 1, 2017 Actuarial Valuation Report.

The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

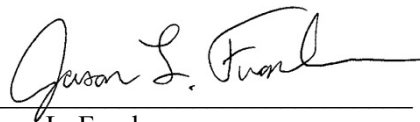
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Glen Ellyn Police Pension Fund, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glen Ellyn. Thus, there is no relationship existing that might affect our capacity to prepare this study.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By:



Jason L. Franken
Enrolled Actuary #17-6888

JLF/lke
Enclosures

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.

As part of the GASB reporting requirements, funds must include a summary of the plan's target asset allocation and expected long-term rates of return for each asset class, as provided by the plan's investment consultant. These rates of return, as reported on page 41 of the January 1, 2017 actuarial valuation report and summarized below, are reported net of inflation. Based on these rates and the target allocation, the long-term rate of return before inflation would be 4.43%. The valuation of assets and liabilities must also incorporate an inflation component. The January 1, 2017 actuarial valuation reflects assumed inflation of 2.50%. The applicable expected long-term rate of return including the inflation component would be 6.93%. Therefore, the current asset allocation and expected returns would support the current 6.75% discount rate.

Asset Class	Target Allocation	Long Term Expected Rate of Return	Weighted Average Returns
Equity Funds	40%	6.50%	2.600%
Corporate Fixed Income	15%	4.50%	0.675%
GSE Bonds	40%	3.00%	1.200%
Money Funds, CD's	<u>5%</u>	-1.00%	-0.050%
Total	100%		
Expected Rate of Return, Net of Inflation	100%		4.43%
Inflation			<u>2.50%</u>
Total Expected Rate of Return			6.93%

2. Calculation of liabilities and contribution requirement at 6.50% and 6.25%.

Exhibits 1 and 2 on the following pages show liabilities and contribution requirements using interest rates of 6.50% and 6.25%. The liabilities are shown in Exhibit 1 and corresponding contribution requirements are shown in Exhibit 2. A change to 6.50% increases liability about 3.6%. This corresponds to a decrease in the funding ratio by 2.1%. A change to 6.25% increases liability approximately 7.5% and decreases the funded ratio by 4.2%. The contribution requirements increases from \$1,817,304 in the current valuation to \$1,958,109 with an interest rate of 6.50% and to \$2,105,900 under the 6.25% scenario (See Scenarios 1 and 2; increases of 7.7% and 15.9%, respectively).

Exhibit 1 – Summary of Accrued Liability at Multiple Interest Rates

		Scenario 1	Scenario 2
	Current		
	Valuation	d=6.50%	d=6.25%
Valuation Date	1/1/2017	1/1/2017	1/1/2017
Interest Rate	6.75%	6.50%	6.25%
Total Annual Payroll	3,500,618	3,500,618	3,500,618
Payroll Under Assumed Ret. Age	3,500,618	3,500,618	3,500,618
Actuarial Value	28,704,932	28,704,932	28,704,932
Market Value	27,402,987	27,402,987	27,402,987
Total Normal Cost	915,826	984,027	1,058,163
Increase in Normal Cost		68,201	142,337
Total Actuarial Accrued Liability	48,188,078	49,939,337	51,793,377
Increase in Liability		1,751,259	3,605,299
Unfunded Actuarial Accrued Liability (UAAL)	19,483,146	21,234,405	23,088,445
Funded Ratio (AVA / AL)	59.6%	57.5%	55.4%

Attachment: Assumptions and Methods Study v2 2017-10-11 (2946 : Police Pension Funding Update)

Exhibit 2 – Summary of Contribution Requirements Under Various Assumptions and Methods

		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Current					
	Valuation	d=6.50%	d=6.25%	15-Year Open Amortization	Payroll Growth = 0%	Payroll Growth = 2%
Valuation Date	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>
Interest Rate	6.75%	6.50%	6.25%	6.75%	6.75%	6.75%
Amortization Years	24	24	24	15	24	24
Payroll Growth Assumption	4.00%	4.00%	4.00%	4.00%	0.00%	2.00%
Pension Cost						
Normal Cost (with interest)	\$977,644	\$1,047,989	\$1,124,298	\$977,644	\$977,644	\$977,644
% of Total Annual Payroll	27.9	29.9	32.1	27.9	27.9	27.9
Administrative Expenses (with interest)	35,509	35,343	35,343	35,509	35,509	35,509
% of Total Annual Payroll	1.0	1.0	1.0	1.0	1.0	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability						
(as of 1/1/2017, with interest)	1,151,062	1,221,688	1,293,170	1,653,942	1,661,610	1,392,510
% of Total Annual Payroll	32.9	34.9	36.9	47.2	47.5	39.8
Total Required Contribution	2,164,215	2,305,020	2,452,811	2,667,095	2,674,763	2,405,663
% of Total Annual Payroll	61.8	65.8	70.0	76.1	76.4	68.7
Expected Member Contributions	346,911	346,911	346,911	346,911	346,911	346,911
% of Total Annual Payroll	9.9	9.9	9.9	9.9	9.9	9.9
Expected Village Contribution	1,817,304	1,958,109	2,105,900	2,320,184	2,327,852	2,058,752
% of Total Annual Payroll	51.9	55.9	60.1	66.2	66.5	58.8
Dollar Change from Current Valuation:		140,805	288,596	502,880	510,548	241,448

3. Discussion and calculation of contribution requirement using alternative funding methodology.

The contribution requirement generally consists of the normal cost, plus an amortization of the unfunded actuarial accrued liability. The funding methodology includes the actuarial funding method used to determine the normal cost and actuarial accrued liability and the assumed amortization period. Currently, the normal cost and actuarial accrued liability for the Glen Ellyn Police Pension Fund reflects the Entry Age Normal cost method. This method creates a level, predictable contribution pattern over a member's career and is the method used by over 90% of public pension funds.

The current valuation reflects the closed amortization period ending in 2040 per Statute. As of January 1, 2017, the fund has 24 years remaining. With a closed amortization, the funding period decreases with each successive valuation. As a result, the contribution requirement increases dramatically, with more volatility as the target funding year is reached.

Alternatively, a 15- year open, or rolling, amortization period would produce a more stable contribution pattern. With an open period, the amortization payment would be determined based on the same number of years each year.

The effect of the amortization period on contribution requirements is shown in Scenario 3 in Exhibit 2. Scenario 3 reflects a 15-year open amortization period. The change from the current methodology increases the required contribution by \$502,880 (27.7%).

Note, because the determination of the contribution requirements reflects a one-year period, the impact is simply the result of changing from a 24-year amortization to a 15-year amortization. The impact of the change from a closed period to an open period will be borne through a more stable contribution pattern and a steady pay-down of the unfunded accrued liability.

The graphs below illustrate the general patterns of amortization payments and unfunded liability using the current amortization method (closed period ending in 2040) and the alternate 15-year open amortization period. The different trend lines represent different payroll growth assumptions. Note, the graphs are for illustrative purposes only and do not represent projections specific to the Glen Ellyn Police plan.

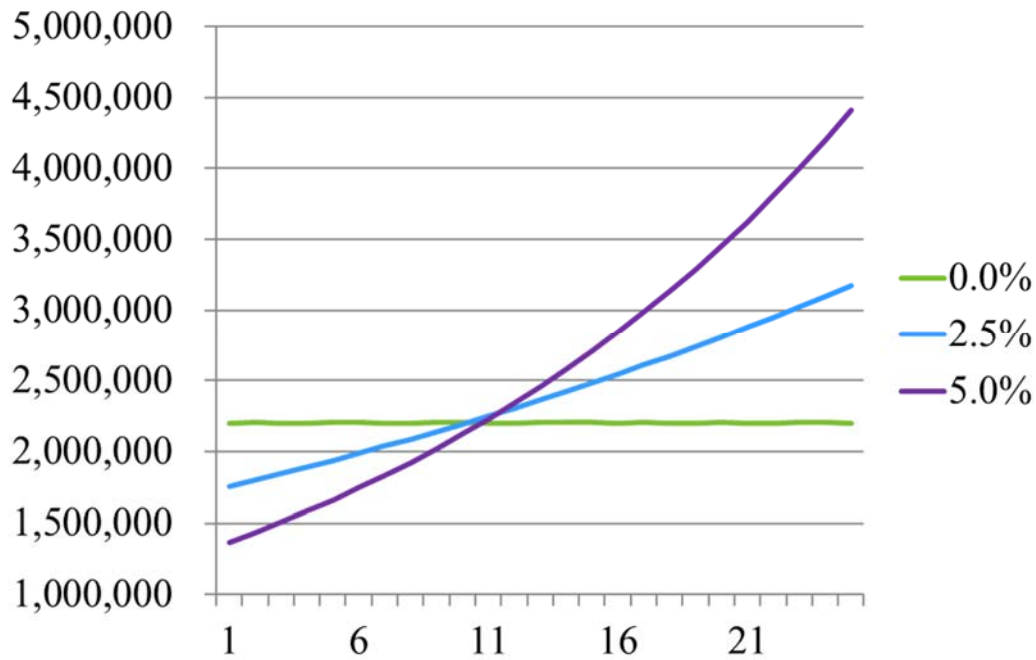
Notes regarding amortization payments (Graphs 1 and 2):

- Graph 1: Closed Amortization
 - The amortization payment amounts increase steadily over a 24-year period for all payroll growth scenarios except 0%.
 - Also note the higher variance of contribution amounts for a 5% payroll growth assumption vs. a 0% payroll growth assumption.
- Graph 2: Open Amortization
 - The amortization payment amounts over the same period decrease for all payroll growth scenarios.
 - For the open amortization, the 0% payroll growth assumption produces amortization payments that vary more significantly over the projected period.

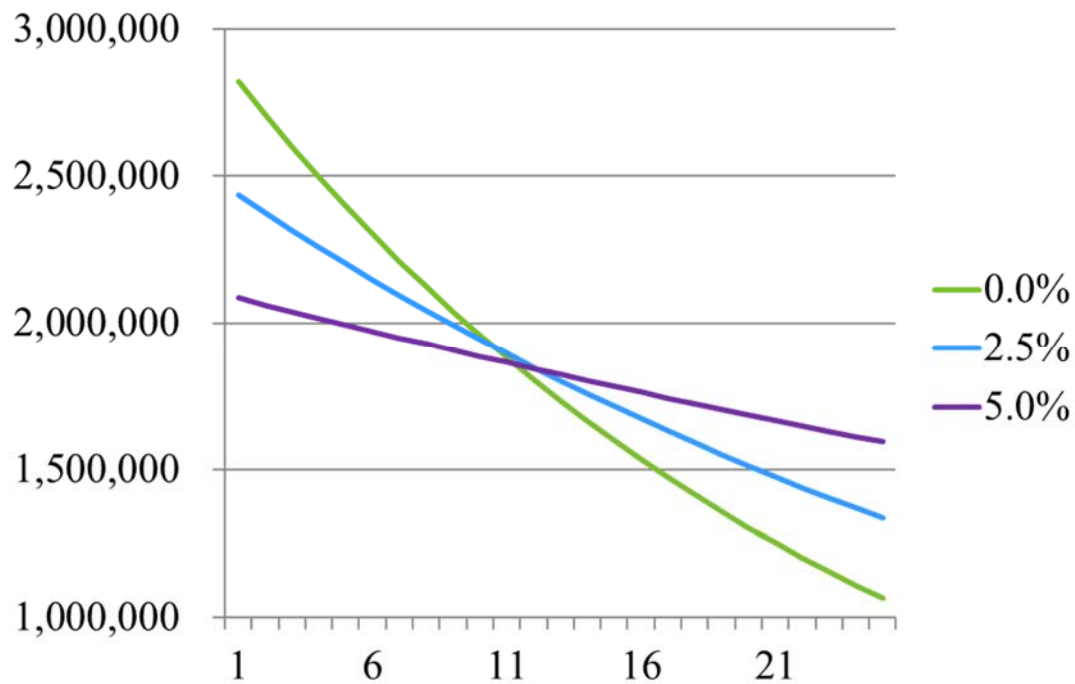
Notes regarding unfunded liabilities (Graphs 3 and 4):

- Graph 3: Closed Amortization - The unfunded liabilities increase for a time before beginning to be paid down when using higher payroll growth assumptions.
- Graph 4: Open Amortization - The unfunded liabilities begin to be paid down immediately under all payroll growth assumptions.

Graph 1: Amortization Payments - 24-Year Closed

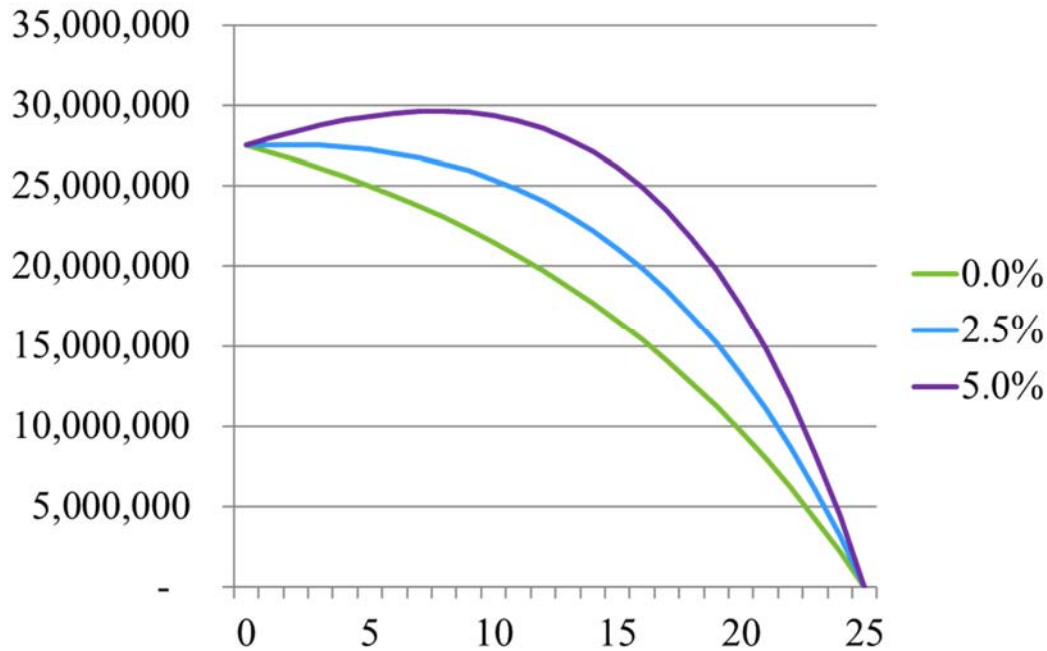


Graph 2: Amortization Payments – 15-Year Open

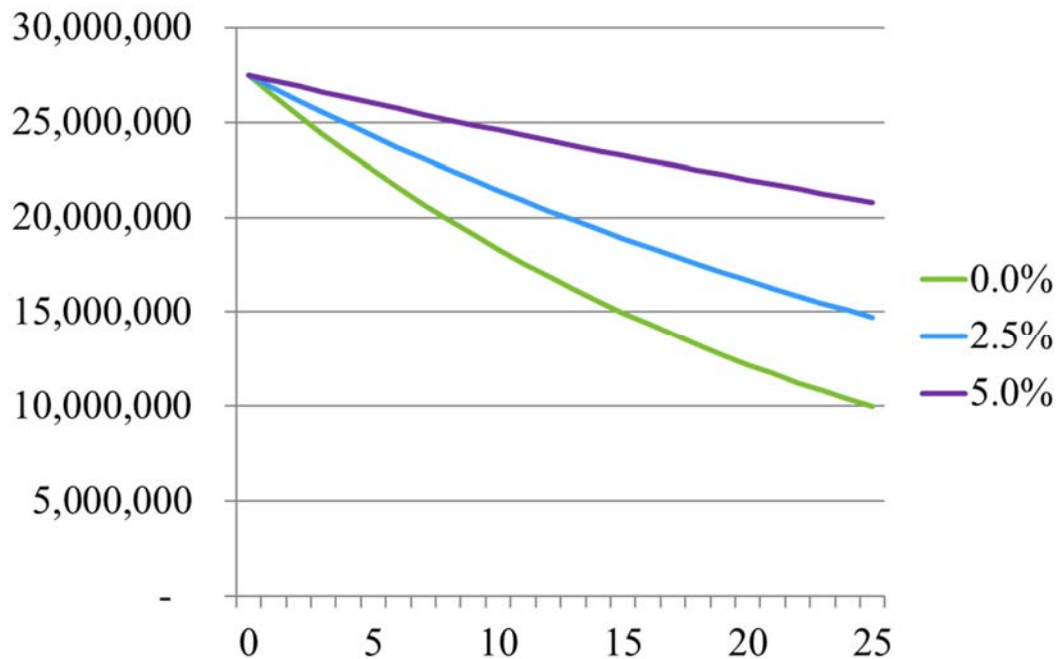


Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

Graph 3: Unfunded Liabilities – 24-Year Closed



Graph 4: Unfunded Liabilities – 15-Year Open



Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The payroll growth assumption reflects a prediction about how the total payroll of the fund will increase. This includes the effects of salary increases as well as any changes in the payroll due to changes in the active population through terminations, retirements and hiring. It is a distinct assumption from the salary scale assumption. The salary scale assumption reflects assumed patterns of salary increases for each individual member currently active in the valuation.

The payroll growth assumption is used in the calculation of the amortization payment.

The valuation currently reflects a payroll growth assumption of 4.00%. Scenarios 4 and 5 of Exhibit 2 show contribution requirements using a 0.00% and 2.00%, respectively. Changing from a 4.00% payroll growth assumption to a 0.00% assumption would increase the January 1, 2017 contribution requirement \$510,548 (28.1%). Whereas changing from a 4.00% payroll growth assumption to a 2.00% assumption would increase the January 1, 2017 contribution requirement \$241,448 (13.3%).

Additional observations regarding how the amortization payment and unfunded liabilities would generally change over time under various payroll growth assumptions can be seen in Graphs 1 through 4 on the previous pages:

- 24-Year Closed Amortization Period
 - The amortization amount with a 0.0% payroll growth assumption is a level dollar amount over the course of the projection.
 - The amortization amounts with a non-zero payroll growth assumption start out smaller than under the 0.0% assumption and increase over time. The higher the assumption, the more the payment will increase overtime.
 - The higher the payroll growth assumption the longer it takes to begin paying down the unfunded liability.
- 15-Year Open Amortization Period
 - The higher 5.0% payroll growth assumption produces the more stable amortization payment and decreases slightly over time. However, it also provides for a slower paying down of the unfunded liability.
 - The 0.0% payroll growth assumption produces higher initial amortization payments that decrease steadily over time. With the higher initial payments, the unfunded liability gets paid down faster and results in a lower unfunded liability at the end of the projection period.

Executive Summary

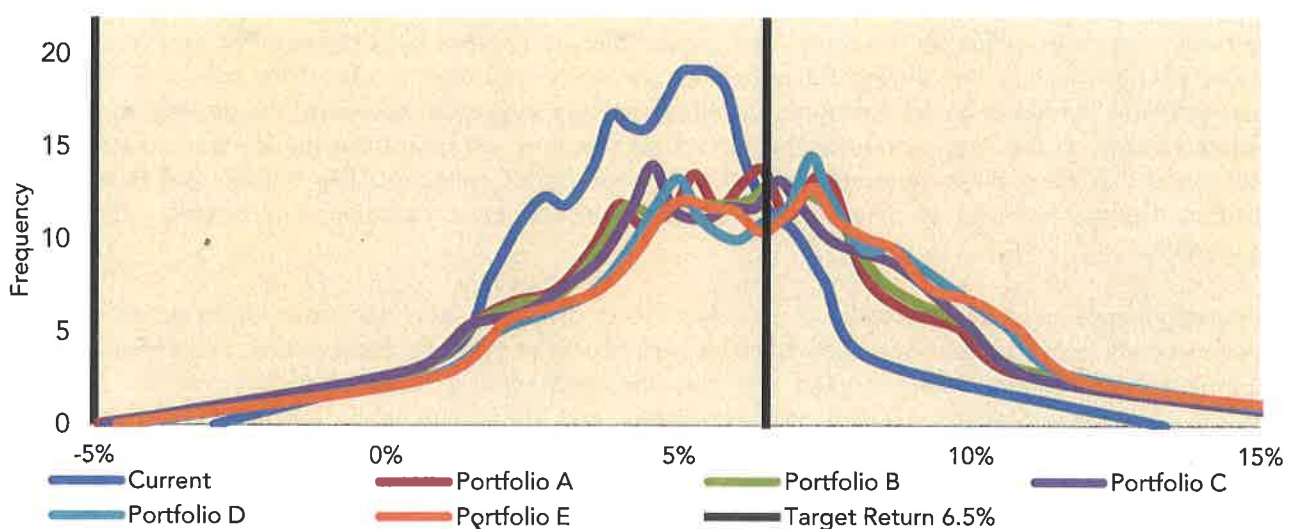
Portfolio Options

Asset Class	Current	Portfolio A	Portfolio B	Portfolio C	Portfolio D	Portfolio
Int Govt/Credit	0.0%	50.0%	50.0%	50.0%	40.0%	35.0%
Int Govt	41.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Short Govt	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Opportunistic Credit	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Fixed Income	67.5%	50.0%	50.0%	50.0%	40.0%	35.0%
Broad U.S. Equity (All Cap Core)	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
US Large-Cap Core	6.0%	15.0%	12.0%	9.0%	9.0%	9.0%
US Large-Cap Value	3.0%	15.0%	12.0%	9.0%	9.0%	9.0%
US Large-Cap Growth	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
US Mid-Cap Growth	9.5%	10.0%	8.0%	6.0%	6.0%	6.0%
US Small-Cap Value	0.0%	10.0%	8.0%	6.0%	6.0%	6.0%
Total U.S. Equity	32.5%	50.0%	40.0%	30.0%	30.0%	30.0%
Developed Large-Cap	0.0%	0.0%	5.0%	10.0%	10.0%	10.0%
Non-US Small-Cap	0.0%	0.0%	2.5%	5.0%	5.0%	5.0%
Emerging Market	0.0%	0.0%	2.5%	5.0%	5.0%	5.0%
Total Non-U.S. Equity	0.0%	0.0%	10.0%	20.0%	20.0%	20.0%
GTAA	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
Total Hedge Funds	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
Real Estate - Core	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%
Total Real Assets	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%

Summary of Portfolio Characteristics

	Current	Portfolio A	Portfolio B	Portfolio C	Portfolio D	Portfolio E
Avg. Annualized 10 Yr. Return	4.66%	5.58%	5.72%	5.83%	6.35%	6.44%
Avg. Annualized 10 Yr. Volatility	6.95%	9.88%	9.70%	9.78%	9.84%	9.79%
Avg. Return/Avg. Volatility	0.67	0.57	0.59	0.60	0.65	0.66

Distribution of Average Annualized 10 Year Returns



Attachment: Police Pension Fund Investment Changes (2946 : Police Pension Funding Update)

Village of Glen Ellyn

535 Duane Street, Glen Ellyn, Illinois

GLEN ELLYN POLICE PENSION FUND INVESTMENT POLICY

I. Authority to manage the Village of Glen Ellyn's Police Pension Fund is derived from the Illinois Pension Code (40 ILCS 5/1-101 et seq. and 5/1A-101 et seq.) and other laws as may be applicable to investments under Article 3 of the Illinois Pension Code (40 ILCS 5/3-101 et seq.) and as such statutes may be amended hereafter. The plan is created for the plan participants and beneficiaries for the exclusive purpose of providing retirement and other benefits to plan participants and beneficiaries.

II. **Policy:**

The fundamental goal of the Glen Ellyn Police Pension Fund is to provide retirement benefits to plan participants. The Pension Fund Board of Trustees (Board) will invest fund assets solely in the interest of fund participants and beneficiaries for the exclusive purpose of providing retirement and other benefits to plan participants and beneficiaries. This investment policy applies to the assets of the Glen Ellyn Police Pension Fund.

III. **Prudence:**

The Board shall prudently oversee the plan assets for the sole benefit of the Fund's beneficiaries. Investments shall be made with care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person acting in like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. That standard of prudence to be used shall be the prudent expert standard. Pension Fund Trustees acting in accordance with the investment policy and exercising due diligence shall be relieved of personal responsibility for an individual security's credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and appropriate action is taken to control adverse developments.

IV. **Investment Philosophy:**

The Board believes that fund assets should be managed in a fashion that reflects the fund's unique assets and liabilities, incorporated accepted investment theory and empirical evidence. Specifically, the Board has adopted the following principles:

- A. Asset allocation is the key determinant of return and, therefore, commitments to asset allocation targets will be maintained through a disciplined rebalancing program.
- B. Diversification, both by and within asset classes, is the primary risk control element.
- C. Passive and active management are suitable investment strategies, with passive management especially suitable in highly efficient markets.
- D. Frequent trading is precluded as an acceptable investment strategy.

V. Goals and Objectives:

The goals and objectives of the Glen Ellyn Police Pension Fund are as follows:

- A. To preserve the actuarial soundness of the plan in order to meet benefit obligations.
- B. To achieve long-term (one or two market cycles) rates of return consistent with the actuarial earnings rate.
- C. To prudently manage the inherent investment risks that are related to the achievement of investment goals.

VI. Asset Allocation:

Priority: The asset allocation decision is generally regarded as the most important decision to be made in the investment management process. To further the long-term goals and objectives set out in Section IV, the following asset allocation guidelines are established:

Asset Allocation Range			
Asset Class		Target	Maximum
U.S. Equities		30% - 50%	50%
Large Cap		65%	
Mid Cap		25%	
Small Cap		10%	
Non-U.S. Equities		0% - 10%	10%
U.S. Bonds		50%	
Cash Equivalents		5%	30%
Other			
Total		100%	

ASSET CLASS	TARGET	MINIMUM	MAXIMUM
-	-	-	-
Certificates of Deposit	0.0%	0.0%	7.0%
Intermediate Govt./Credit Fixed Income	35.0%	35.0%	45.0%
Total Fixed Income	35.0%	35.0%	45.0%
-	-	-	-
Large-Cap Value Equity	9.0%	5.0%	13.0%
Large-Cap Core Equity	9.0%	5.0%	13.0%
Mid-Cap Growth Equity	6.0%	3.0%	9.0%
Small-Cap Value Equity	6.0%	3.0%	9.0%
Total U.S. Equity	30.0%	25.0%	35.0%
-	-	-	-
Non-U.S. Large-Cap Equity	10.0%	5.0%	15.0%
Non-U.S. Small-Cap Equity	5.0%	2.0%	8.0%
Emerging Markets Equity	5.0%	2.0%	8.0%
Total International Equity	20.0%	15.0%	25.0%
-	-	-	-
Private Core Real Estate	10.0%	5.0%	15.0% 10.06
Total Real Estate	10.0%	5.0%	15.0% 10.00
-	-	-	-
Global Tactical	5.0%	0.0%	10.0%
Total Alternative Investments	5.0%	0.0%	10.0%
-	-	-	-
Total Cash	0%	0%	10%
-	-	-	-
TOTAL	100%	-	-

Rebalancing Policy: The primary purpose of rebalancing is to ensure that the Fund adheres to its strategic asset allocation, which is the Fund's explicit statement of its investment approach. Secondly, historical analysis of portfolio returns when rebalancing is used indicates that rebalancing reduces volatility and may add modest value, in comparison to a similar portfolio that is not rebalanced.

Rebalancing will be carried out in a cost-effective manner. The fund will rebalance as follows:

A: If feasible, cash, as well as indexed investment strategies, will be used to maintain target allocations.

B: When capital distributions are required, income from dividends and interest payments will be used to re-establish target allocations.

C: Securities will be liquidated from the over-funded asset classes until the target allocations are met.

The Glen Ellyn Police Pension Fund Board will review the portfolio annually for rebalancing and no more frequently than quarterly.

VII. **Target Rate of Return**

The Board has adopted a 6.5% target rate of return for the Glen Ellyn Police Pension Fund. In order to achieve that return, the Board maintains the following long-term nominal return targets for the following asset classes (with an inflation expectation of 2.25%): the following target rates of return (after inflation):

Intermediate Govt./Credit Fixed Income = 2.5%

U.S. Large-Cap Value Equity = 7.3%

U.S. Large-Cap Core Equity = 7.1%

U.S. Mid-Cap Growth Equity = 7.5%

U.S. Small-Cap Value Equity = 8.2%

Non-U.S. Large-Cap Equity = 7.4%

Non-U.S. Small-Cap Equity = 8.1%

Emerging Markets Equity = 8.2%

Private Core Real Estate = 7.7%

Global Tactical = 4.1%

Equities: 6.75%

Fixed Income: 3.0%

VIII. **Authorized and Suitable Investments:**

The fund may invest in any type of security allowed for within Illinois Pension Code (40 ILCS 5/1-113.2; 40 ILCS 5/1-113.3; 40 ILCS 5/1-113.4; and 40 ILCS 5/1-113.4a), as they may be amendment from time to time:

- 1) Interest bearing direct obligations of the United States of America.
- 2) Interest bearing obligations to the extent that they are fully guaranteed or insured as to payment of principle and interest by the United States of America.
- 3) Interest bearing bonds, notes, debentures, or other similar obligations of agencies of the United States of America. For the purposes of this Section, "agencies of the United States of America" includes: (i) the Federal National Mortgage Association; (ii) federal land banks, federal intermediate credit banks, federal farm credit banks, and any other entity authorized to issue direct debt obligations of the United States of America under

Amended: July 9, 2014

the Farm Credit Acts of 1971 or amendments to that Act; (iii) federal home loan banks and the Federal Home Loan Mortgage Corporation; and (iv) any agency created by Act of Congress that is authorized to issue direct debt obligations of the United States of America.

4) Interest bearing savings accounts or certificates of deposit, issued by federally chartered banks or savings and loan associations, to the extent that the deposits are insured by agencies or instrumentalities of the federal government.

5) Interest bearing savings accounts or certificates of deposit, issued by State of Illinois chartered banks or savings and loan associations, to the extent that the deposits are insured by agencies or instrumentalities of the federal government.

6) Investments in credit unions, to the extent that the investments are insured by agencies or instrumentalities of the federal government.

- 7) Interest bearing bonds of the State of Illinois.
- 8) Pooled interest bearing accounts managed by the Illinois Public Treasurer's Investment Pool (Illinois Funds) in accordance with the Deposit of State Moneys Act and interest bearing funds or pooled accounts managed, operated, and administered by banks, subsidiaries of banks, or subsidiaries of bank holding companies in accordance with the laws of the State of Illinois.
- 9) Interest bearing bonds or tax anticipation warrants of any county, township, or municipal corporation of the State of Illinois;
- 10) Direct obligations of the State of Israel, subject to the conditions and limitations of item (5.1) of Section 1-113.
- 11) Money market mutual funds managed by investment companies that are registered under the federal Investment Company Act of 1940 and the Illinois Securities Law of 1953 and are diversified, open ended management investment companies; provided that the portfolio of the money market mutual fund is limited to the following: (i) bonds, notes certificates of indebtedness, treasury bills, or other securities that are guaranteed by the full faith and credit of the United States of America as to principal and interest; (ii) bonds, notes debentures, or other similar obligations of the United States of America or its agencies; and (iii) short term obligations of corporations organized in the United States with assets exceeding \$400,000,000, provided that (A) the obligations mature no later than 180 days from the date of purchase, (B) at the time of purchase, the obligations are rated by at least 2 standard national rating services at one of their 3 highest classifications, and (C) the obligations held by the mutual fund do not exceed 10% of the corporation's outstanding obligations.
- 12) General accounts of life insurance companies authorized to transact business in Illinois.
- 13) Any combination of the following, not to exceed ~~65~~55% of the pension fund's net assets: (1) separate accounts that are managed by life insurance companies authorized to transact business in Illinois and are comprised of diversified portfolios consisting of common or preferred stocks, bonds, or money market instruments; (2) separate accounts that are managed by insurance companies authorized to transact business in Illinois, and are comprised of real estate or loans upon real estate secured by first or second mortgages and (3) Mutual Funds that meet the following requirements: (i) the mutual fund is managed by an investment company and registered under the Federal Investment Company Act of 1940 and registered under the Illinois Securities Law of 1953; (ii) the mutual fund has been in operation for at least 5 years; (iii) the mutual fund has total net assets of \$250 million or more, and; (iv) the mutual fund is comprised of a diversified portfolio of common or preferred stocks, bonds, or money market instruments. (4) through an investment adviser, invest a portion of the assets in

common and preferred stocks authorized for investments of trust funds under the laws of the State of Illinois. The stocks must meet all of the following requirements: (a) The common stocks are listed on a national securities exchange or board of trade (as defined in the Federal Securities Exchange Act of 1934 and set forth in Section 3.G of the Illinois Securities Law of 1953) or quoted in the National Association of Securities Dealers Automated Quotation System National Market System (NASDAQN MS), (b) The securities are of a corporation created or existing under the laws of the United States or any state, district, or territory thereof and the corporation has been in existence at least 5 years, (c) The corporation has not been in arrears on payment of dividends on its preferred stock during the preceding 5 years, (d) the market value of stock in any one corporation does not exceed 5 % of the cash and invested assets of the pension fund, and the investments in the stock of any one corporation do not exceed 5% of the total outstanding stock of that corporation, (e) the straight preferred stocks or convertible preferred stocks are issued or guaranteed by a corporation whose common stock qualifies for investment by the board, (f) the issuer of the stocks has been subject to the requirements of Section 12 of the federal Securities Exchange Act of 1934 and has been current with the filing requirements of Sections 13 and 14 of that Act during the preceding 3 years.

14) Corporate bonds managed through an investment advisor must meet all of the following requirements:

(1) The bonds must be rated as investment grade by one of the 2 largest rating services at the time of purchase.

(2) If subsequently downgraded below investment grade, the bonds must be liquidated from the portfolio by the managers within 90 days after being downgraded.

IX. Safekeeping and Custody

Securities will be held by one third party custodian designated by the treasurer and evidenced by safekeeping receipts. The treasurer shall be authorized to instruct security transactions and cash flow activity on behalf of the Glen Ellyn Police Pension Fund Board.

X. Performance Benchmarks

Fixed Income

~~The fixed income assets shall be invested in one of two distinct strategies:~~

- ~~(1) Actively managed utilizing a professional money manager and/or~~
- ~~(2) Internally, utilizing a passive strategy that is managed per the policies and procedures established by the Board.~~

~~The objective of the Board for the fixed income segment of the portfolio, over a market cycle, shall be to meet or exceed the returns of the Barclays US Treasury Bond Index.~~

Equities

The goal of each investment manager, mutual fund, and/or separate account over the investment horizon shall be:

- (1) For U.S. equity portfolios, in aggregate, to meet or exceed the Russell 3000 Index. For International equity portfolios, in aggregate, to meet or exceed the MSCI All Country World ex USA Investable Market Index.
- (2)(1) Display an overall level of risk in the portfolio which is consistent with the risk associated with the benchmark(s) above. Risk will be measured by the standard deviation of quarterly returns.

As a primary return target, the Glen Ellyn Police Pension Fund's asset allocation has been optimized to meet the 6.5% rate set forth by the Pension Board over full market cycles. The Board is cognizant that natural market volatility over shorter term measurement periods can cause the Fund's return to fluctuate around this absolute return target. As such, a customized blended benchmark has been established as a secondary and relative return target. This benchmark is constructed as a passive implementation of the Fund's target asset allocation. Further detail surrounding the underlying benchmarks used in the construction of this benchmark can be found in Addendum A

XI. Investment Manager Performance Review and Evaluation

Performance reports generated by the Investment Consultant shall be compiled at least quarterly and communicated to the Trustees for review. The investment performance of total portfolios as well as asset class composite and individual managers components will be measured against commonly accepted performance benchmarks. Consideration shall be given to the investment objectives, goals and guidelines as set forth in this statement of investment policy. The Trustees intend to evaluate the portfolio over at least a three to five year period, but reserve the right to terminate a manager for any reason, including the following:

- A. Investment performance which is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification for poor results.
- B. Failure to adhere to any aspect of this statement of investment policy, including communication and presorting requirements.
- C. Significant qualitative changes to the investment management organization(s).

Investment managers shall be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

The following terminology has been developed to facilitate efficient communication between the investment managers, investment consultant, and the Board. Each term signifies a particular status with the Fund and any conditions that may require improvement. In each case, communication is made only after consultation with the Board and staff.

<u>STATUS</u>	<u>DESCRIPTION</u>
A. <u>"In Compliance"</u>	<u>The investment manager is acting in accordance with the Investment Policy Statement.</u>
B. <u>"Alert"</u>	<u>The investment manager is notified of a problem in performance (usually related to a benchmark or volatility measure), a change in investment characteristics, an alteration in management style or key investment professionals, and/or any other irregularities.</u>
C. <u>"On Notice"</u>	<u>The investment manager is notified of continued concern with one or more Alert issues. Failure to improve upon stated issues within a specific time frame justifies termination.</u>
D. <u>"Termination"</u>	<u>The Board has decided to terminate the investment manager. The investment manager is notified and transition plans are in place.</u>

XII. Reporting:

An investment report shall be regularly provided to the Police Pension Board. The report will include the following:

- A. A listing of individual securities held at the end of the reporting period.
- B. ~~Listing of investments by maturity date.~~
- C. The percentage of the total portfolio which each type of investment represents.
- D. The percentage of the total portfolio which each institution is holding.
- E. ~~The percentage of the total portfolio broken down by defined maturity period.~~
- F. Principal and type of investment by fund.

Addendum ADefining the Investment Professionals and Benchmark Indexes

<u>ASSET CLASS</u>	<u>INVESTMENT MANAGER</u>	<u>BENCHMARK INDEX</u>
-		
<u>CD Portfolio</u>	<u>Various</u>	<u>91 Day T-Bill</u>
<u>Int. Govt./Credit Fixed Income</u>	<u>Great Lakes Advisors</u>	<u>Bloomberg BarCap Int. Govt./Credit</u>
-		
<u>U.S. Large-Cap Value Equity</u>	<u>Vanguard</u>	<u>Russell 1000 Value</u>
<u>U.S. Large-Cap Core Equity</u>	<u>Vanguard</u>	<u>S&P 500</u>
<u>U.S. Mid-Cap Growth Equity</u>	<u>Vanguard</u>	<u>CRSP US Mid Growth</u>
<u>U.S. Small-Cap Value Equity</u>	<u>TBD</u>	<u>Russell 2000 Value</u>
-		
<u>Non-U.S. Large-Cap Equity</u>	<u>Vanguard</u>	<u>FTSE Developed ex US All-Cap</u>
<u>Non-U.S. Small-Cap Equity</u>	<u>TBD</u>	<u>MSCI EAFE Small Cap</u>
<u>Emerging Markets Equity</u>	<u>TBD</u>	<u>MSCI Emerging Markets</u>
-		
<u>Global Tactical</u>	<u>TBD</u>	<u>Bloomberg BarCap Int. Govt./Credit</u>
-		
<u>Private Core Real Estate</u>	<u>Principal</u>	<u>NFI-ODC</u>

<u>INVESTMENT PROFESSIONAL</u>	<u>SERVICE PROVIDER</u>
<u>Custodian</u>	<u>U.S. Bank</u>
<u>Investment Consultant</u>	<u>Marquette Associates</u>

F.G.

Attachment: Police Pension Fund Investment Changes (2946 : Police Pension Funding Update)

Glen Ellyn Police
Payroll Growth - Pensionable Codes Only

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Pensionable Payroll												
from MUNIS	\$ 1,723,157.84	\$ 2,053,449.87	\$ 2,256,127.62	\$ 2,447,630.27	\$ 2,680,551.58	\$ 2,687,238.46	\$ 2,762,565.91	\$ 2,837,008.65	\$ 3,016,208.17	\$ 3,235,312.36	\$ 3,354,017.48	\$ 3,484,844.99
\$ Change		\$ 330,292.03	\$ 202,677.75	\$ 191,502.65	\$ 232,921.31	\$ 6,686.88	\$ 75,327.45	\$ 74,442.74	\$ 179,199.52	\$ 219,104.19	\$ 118,705.12	\$ 130,827.51
% Change		19.2%	9.9%	8.5%	9.5%	0.2%	2.8%	2.7%	6.3%	7.3%	3.7%	3.9%
Average %	6.7218%											
Salary Reported to												
Department of												
Insurance	\$ 2,189,325	\$ 2,381,413	\$ 2,536,831	\$ 2,781,335	\$ 2,832,398	\$ 2,963,418	N/A	\$ 3,038,485	\$ 3,330,413	\$ 3,372,158	\$ 3,521,045	\$ 3,548,022
\$ Change		\$ 192,088.00	\$ 155,418.00	\$ 244,504.00	\$ 51,063.00	\$ 131,020.00	N/A	N/A	\$ 291,928.00	\$ 41,745.00	\$ 148,887.00	\$ 26,977.00
% Change		8.8%	6.5%	9.6%	1.8%	4.6%	N/A	N/A	9.6%	1.3%	4.4%	0.8%
Average %	4.49%											

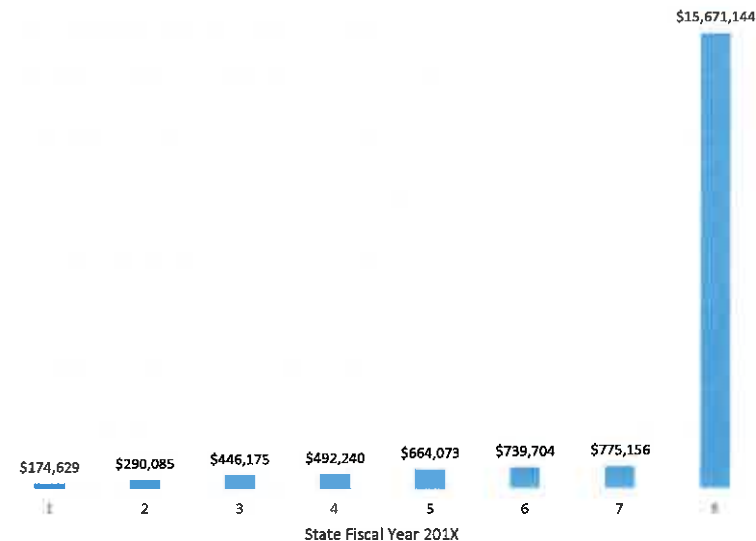
*Differences arise between these two metrics as the information from MUNIS is what has actually been paid out. The Department of Insurance only asks for salary of the officers employed as of the reporting date.

5-YEAR FACM CIP FORECAST				5 Year Facilities Capital Improvement Budget (2018 - 2022)							
	2017										
	Budget	Year-End Est. Actual	Under/(Over) Budget	CY 18	CY 19	CY 20	CY 21	CY 22	TOTAL		
Revenues											
Investment Income	\$ 2,500.00	\$ 4,200.00	\$ 1,700.00	\$ 4,200.00	\$ 2,000.00	\$ 2,060.00	\$ 2,121.80	\$ 2,185.45	\$ 12,567.25		
Contribution - General Fund	\$ 150,000.00	\$ 150,000.00	\$ -	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 1,000,000.00		
Add'l Contribution - General Fund	\$ -	\$ 548,331.00	\$ 548,331.00								
Contribution - Water & Sewer Fund	\$ 50,000.00	\$ 50,000.00	\$ -	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 250,000.00		
Contribution - Sewer	\$ 50,000.00	\$ 50,000.00	\$ -	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 250,000.00		
TOTAL REVENUES	\$ 252,500.00	\$ 802,531.00	\$ 550,031.00	\$ 304,200.00	\$ 302,000.00	\$ 302,060.00	\$ 302,121.80	\$ 302,185.45	\$ 1,512,567.25		
Expenditures											
Civic Center	\$ 611,000.00	\$ 220,248.00	\$ 390,752.00	\$ 866,500.00	\$ 727,500.00	\$ 157,500.00	\$ 95,500.00	\$ 47,500.00	\$ 1,894,500.00		
Fire Stations (#1 & #2) - costs moved to Fire Serv Fund in 2018	\$ 178,900.00	\$ 152,820.00	\$ 26,080.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Reno Center-PW	\$ 99,400.00	\$ 107,064.00	\$ (7,664.00)	\$ 85,000.00	\$ 40,000.00	\$ 85,000.00	\$ 62,000.00	\$ 8,000.00	\$ 280,000.00		
Police Station	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 20,000.00		
Stacy's Museum and History Center	\$ 49,000.00	\$ 34,000.00	\$ 15,000.00	\$ 10,000.00	\$ 28,000.00	\$ 25,000.00	\$ 20,000.00	\$ 17,500.00	\$ 100,500.00		
Churchill Woods	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 25,000.00	\$ -	\$ -	\$ -	\$ 100,000.00		
TOTAL EXPENDITURES	\$ 938,300.00	\$ 514,132.00	\$ 424,168.00	\$ 1,036,500.00	\$ 825,500.00	\$ 272,500.00	\$ 182,500.00	\$ 78,000.00	\$ 2,395,000.00		
INCREASE (DECREASE) IN FUND BALANCE	\$ (685,800.00)	\$ 288,399.00	\$ 125,863.00	\$ (732,300.00)	\$ (523,500.00)	\$ 29,560.00	\$ 119,621.80	\$ 224,185.45	\$ (882,432.75)		
FUND BALANCE - BEGINNING OF YEAR		\$ 923,709.00		\$ 1,212,108.00	\$ 479,808.00	\$ (43,692.00)	\$ (14,132.00)	\$ 105,489.80			
FUND BALANCE - END OF YEAR		\$ 1,212,108.00		\$ 479,808.00	\$ (43,692.00)	\$ (14,132.00)	\$ 105,489.80	\$ 329,675.25			

State Budget Impact - History of Cuts to DMMC Member Municipalities

Municipality	2011	2012	2013	2014	2015	2016	2017	2018 (est.)
Addison	\$4,619	\$7,709	\$11,886	\$13,119	\$17,717	\$19,741	\$20,690	\$535,776
Aurora	\$87,422	\$145,894	\$224,944	\$248,273	\$335,299	\$373,602	\$391,557	\$3,003,834
Bartlett	\$871	\$1,454	\$2,242	\$2,474	\$3,340	\$3,722	\$3,901	\$397,417
Bensenville	\$3,356	\$5,601	\$8,636	\$9,532	\$12,873	\$14,343	\$15,032	\$262,856
Bloomington	\$377	\$629	\$970	\$1,070	\$1,445	\$1,610	\$1,688	\$275,902
Bolingbrook	\$2,667	\$4,450	\$6,861	\$7,573	\$10,228	\$11,396	\$11,944	\$1,036,067
Burr Ridge	\$726	\$1,212	\$1,868	\$2,062	\$2,784	\$3,103	\$3,252	\$112,332
Carol Stream	\$2,407	\$4,017	\$6,193	\$6,835	\$9,231	\$10,286	\$10,780	\$487,482
Clarendon Hills	\$359	\$600	\$925	\$1,021	\$1,379	\$1,536	\$1,610	\$82,767
Downers Grove	\$9,935	\$16,580	\$25,564	\$28,215	\$38,105	\$42,458	\$44,498	\$706,311
Elmhurst	\$12,010	\$20,043	\$30,903	\$34,108	\$46,063	\$51,325	\$53,792	\$649,783
Glen Ellyn	\$3,055	\$5,098	\$7,860	\$8,675	\$11,715	\$13,054	\$13,681	\$327,671
Glendale Heights	\$758	\$1,266	\$1,951	\$2,154	\$2,909	\$3,241	\$3,397	\$432,728
Hanover Park	\$1,803	\$3,010	\$4,641	\$5,122	\$6,915	\$7,704	\$8,074	\$454,709
Hinsdale	\$5,030	\$8,394	\$12,942	\$14,284	\$19,291	\$21,494	\$22,527	\$231,639
Itasca	\$2,671	\$4,458	\$6,873	\$7,586	\$10,245	\$11,415	\$11,964	\$130,075
Lemont	\$674	\$1,125	\$1,735	\$1,914	\$2,585	\$2,880	\$3,018	\$157,074
Lisle	\$526	\$878	\$1,354	\$1,494	\$2,018	\$2,249	\$2,357	\$217,097
Lombard	\$4,120	\$6,876	\$10,601	\$11,701	\$15,802	\$17,607	\$18,453	\$629,702
Naperville	\$8,791	\$14,670	\$22,619	\$24,965	\$33,716	\$37,568	\$39,373	\$1,595,990
Oak Brook	\$5,403	\$9,017	\$13,903	\$15,345	\$20,724	\$23,092	\$24,202	\$236,410
Roselle	\$532	\$887	\$1,368	\$1,510	\$2,039	\$2,272	\$2,382	\$219,948
Schaumburg	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,121,432
Villa Park	\$2,740	\$4,572	\$7,050	\$7,781	\$10,508	\$11,709	\$12,272	\$263,769
Warrenville	\$738	\$1,232	\$1,900	\$2,097	\$2,832	\$3,156	\$3,307	\$164,587
Wayne	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,021
West Chicago	\$3,946	\$6,585	\$10,153	\$11,206	\$15,134	\$16,863	\$17,673	\$324,530
Westmont	\$1,502	\$2,507	\$3,865	\$4,266	\$5,761	\$6,419	\$6,727	\$246,347
Wheaton	\$4,269	\$7,125	\$10,985	\$12,124	\$16,374	\$18,245	\$19,122	\$611,398
Willowbrook	\$30	\$50	\$77	\$85	\$115	\$128	\$134	\$81,120
Winfield	\$187	\$313	\$482	\$532	\$718	\$800	\$839	\$93,249
Wood Dale	\$564	\$941	\$1,451	\$1,602	\$2,163	\$2,410	\$2,526	\$183,055
Woodridge	\$529	\$882	\$1,361	\$1,502	\$2,028	\$2,260	\$2,368	\$375,066

Total Annual Diversion: DMMC Municipalities



CPPRT = Corporate Personal Property Replacement Tax
 LGDF = Local Government Distributive Fund
 ST = Locally Imposed Sales Tax

DMMC Total	\$174,629	\$290,085	\$446,175	\$492,240	\$664,073	\$739,704	\$775,156	\$15,671,144
Source of Reduction	CPPRT	CPPRT	CPPRT	CPPRT	CPPRT	CPPRT	CPPRT	CPPRT, LGDF, ST