The Government Finance Officers Association

A Risk-Based Analysis of Restricted Surplus Requirements for Parkland County, Alberta

April 2017

GFOA Restricted Surplus Analysis for Parkland County

Table of Contents

GFOA Restricted Surplus Analysis for Parkland County

Executive Summary

Restricted surpluses are the cornerstone of financial flexibility. They provide a government with options to respond to unexpected issues and afford a buffer against shocks and other forms of risk. Often governments ask how much money they should maintain in restricted surplus. What is an appropriate amount and how much becomes too much? This can be a sensitive question because money held in a restricted surplus is money taken from constituents, and the argument could be made that excessive restricted surplus should be returned to residents in the form of lower taxes/fees or enhanced services.

Parkland County (the "County") has been considering this question and has engaged the Government Finance Officers Association (GFOA) to analyze its restricted surplus based on an assessment of the risks that compel the County to maintain restricted surpluses. This report is intended to inform decision-makers on the policy the County might adopt on how much restricted surplus to maintain.

The GFOA analyzed a variety of distinct risk factors to judge its implications for the County's restricted surplus. Analyzing risks requires estimating highly uncertain events, like natural disasters and economic downturns. To develop an adequate response, GFOA used the "Triple-A" approach: [1]

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 Historical reference cases are a useful baseline.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 Historical reference cases provide a baseline, but that baseline may not be adequate to account for all future possibilities.

GFOA analyzed a variety of salient risks. Among the most consequential were extreme events, such as wildfires, high winds (e.g., tornados), hazardous materials spills, and extreme snow falls. Other important risks included: volatility in the County's revenue portfolio owing to the uncertain reliability of property taxes from local power plants; and liquidity risk from cash flow concerns inherent to when property tax revenues are received during the year versus when the county spends money to support its services.

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

On the next page is a summary of how GFOA's analysis and recommendations impact the County' existing restricted surplus strategy.

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

GFOA Restricted Surplus Analysis for Parkland County

Restricted Surplus to Support Certain Needs for Regular County Services	Balance as of Dec 31, '16	GFOA Recommendation	Explanation
Total of surpluses for lifecycle and other planned needs	17,340,054	17,340,054	Assumes operating contingency of 3% of total budget ($2M)
Future Operating*	5,421,219	2,000,000	

Restricted Surplus to Support Future Uncertain Needs for Regular County Services

Total of surpluses for uncertain needs for regular services	23,730,011	23,730,011	Assumes just risk for revenue stability
Long Term Sustainability	7,405,250	11,400,000	

Working Capital

Working capital and internal loans	7,475,470	0	Other surpluses provide working capital / loan funds

Emergency

Summary of All Emergency Surpluses	7,038,390	$5,000,000 to $7,700,000	Recommended extreme event surplus

Legislated

Summary of all Legislated	5,211,098	5,211,098	Unchanged
Total**	**73,621,491**	**67,381,163**	

**GFOA recommendation represents about 3% to 5% of a $70 operating million budget. This is a long-term recommendation from GFOA. Parkland currently has about $5.4 million in projects that are funded under this restricted surplus category. As the County refines its budgeting process, it should not need to fund so many activities under this restricted surplus and can reduce the size of the restricted surplus.*

***Assumes the most risk averse of GFOA's recommendations*

One of the more significant changes is the reduction of the working capital and internal loans restricted surplus to zero. The rationale is that, although the County does have real need for working capital (in the amount of about $12 million per year), the County retains an amount of cash on hand sufficient to serve as "de facto" working capital. Some refinements to the County's cash management practices could help ensure that this de facto working capital remains sufficient and, thus, eliminate the need for a specialized working capital restricted surplus.

GFOA Restricted Surplus Analysis for Parkland County

Another significant change is increasing the financial sustainability restricted surplus to $14.4 million, up from $7.4 million. This reflects a risk-averse strategy for managing the risk associated with accelerated closure of the coal-fired power plants in the area.

GFOA also recommended a range of restricted surplus to handle emergencies (defined by GFOA as extreme events, not more routine budgetary fluctuations). Depending on County's appetite to take on risk, a restricted surplus between $5 million and $7.7 million should be sufficient.

Restricted surpluses for dealing with more routine budgetary fluctuations are subsumed under the "future operating" restricted surplus. It is recommended that this surplus be set at between 3% to 5% of the total budget.

Taking into account the totality of the recommendations, if one considers just the surpluses that are dedicated to risk mitigation (emergencies, financial sustainability, and future operating), then those restricted surpluses sum to about 34% of a $70 million annual budget. GFOA recommends that governments maintain at least 16.7% of the regular budget as a hedge against risk. Of course, if one also considers that the remaining categories of restricted surplus provide a large pool of de facto working capital, then Parkland would be well over the GFOA standard. The amounts of restricted surplus suggested by our risk analysis is also comparable to what we have found for other smaller to mid-sized local governments who have exposure to multiple kinds of extreme events and other risks.

Finally, GFOA recommends Parkland refine its restricted surplus policy and consider adopting new policies to help support its restricted surplus strategy. These policies include: Countywide asset management, structurally balance budget, and user fees. Details are available in the main body of the report, including sample policy language.

GFOA Restricted Surplus Analysis for Parkland County

Section 1 - Introduction

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

Parkland County has been considering this question recently, especially given its vulnerability to extreme events like wildfires and snow storms and because of revenue instability created by the elimination of local coal plants. The County engaged the GFOA to help produce a recommendation. GFOA is a non-profit association of over 18,000 state and local government finance professionals and elected officials from across North America. A key part of GFOA's mission is to promote best practices in public finance, including restricted surplus policies.

GFOA's approach to restricted surpluses does not suppose "one-size-fits-all." GFOA's "Best Practice" on restricted surpluses recommends, *at a minimum*, that general-purpose governments, regardless of size, maintain restricted surpluses of no less than two months of regular operating revenues or regular operating expenditures (i.e., restricted surplus equal to about 16.6 percent of revenues).[2] However, this 16.6 percent is only intended as a baseline, and it needs to be adjusted according to local conditions. To make the adjustment, GFOA worked with the County to conduct an analysis of the risks influencing the need for restricted surpluses as a hedge against uncertainty and loss.

A "risk" is defined as the probability and magnitude of a loss, disaster, or other undesirable event.[3] The GFOA's framework of risk assessment is based on the risk management cycle: identify risk; assess risk; identify risk mitigation approaches; assess expected risk reduction; and select and implement mitigation methods. The framework focuses primarily on risk retention, or using restricted surpluses, to manage risk. However, the framework also encourages the County to think about how other risk management methods might alleviate the need to hold larger restricted surpluses. In other words, can the County manage its risks in some other way besides holding restricted surpluses? A thorough examination of the risk factors should lead to a customized restricted surpluses target, and improve the County's understanding of its overall risk profile.

As a first step to this project, GFOA conducted a basic review of the risk factors generally influencing the amount of restricted surpluses a municipal government should hold.[4] This review enabled the County and GFOA to classify factors as either primary or secondary risks. Exhibit 1.1 lists how the risk factors were classified.

---

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

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

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

Exhibit 1.1 – Categorization of Risk Factors that Influence Restricted Surplus Levels for Parkland County
Primary Risk Factors
Vulnerability to extreme events and public safety concerns, with emphasis on: • Wildfires • Hazardous materials spills, e.g., train derailment • Illegal dumping • High winds, e.g., tornados • Snowfall
Revenue source stability, particularly: loss revenue from the closure of the local coal plant; linear assessment appeals; and potential instability in intergovernmental grant revenue
Secondary Risk Factors
Dependency of external operations on Parkland County government financing, such as the recreation center, Parkland County Library Board, and other external agreements
Liquidity concerns owing to the timing of property tax revenues
Asset maintenance and capital asset replacement

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

- **The approach to uncertainty.** Risks are, by definition, uncertain events. Section 2 describes the "Triple-A" approach to analyzing and planning for uncertain events. The Triple-A approach was used to analyze the risk factors described in Exhibit 1.1.
- **Primary risk factor analysis.** Section 3 and Section 4 analyzes the risk posed by extreme events and by revenue instability and the restricted surpluses needed to be able to respond effectively.
- **Secondary risk factor analysis.** Section 5 reviews secondary risk factors that have less weighty implications for the County's restricted surplus strategy.
- **Final recommendation.** Section 6 of the report presents the conclusion of the analysis. It addresses a target restricted surplus level for the County and provides other suggestions to support the financial health of the County.

Section 2 - The Approach to Uncertainty

The accomplished forecasting scientist, Spyros Makridakis, suggests a "Triple-A" approach for dealing with highly uncertain phenomena.[5]

1. **Accept.** First we must accept that we are subject to uncertainty. For example, our analysis of Parkland County's snowfall records shows that total snowfall can vary substantially from year to year. For example, total snowfall in 2013 was 3 ½ times greater than in 2007! This variation in total snowfall means there is comparable variation in Parkland's total snow removal budget. 2013's snowfall demonstrates that historically unprecedented conditions have happened before, so we must accept they can happen in the future.
2. **Assess.** Next, we must assess the potential impact of the uncertainty, with history providing a useful reference point. To illustrate, later in this report, we will review past extreme events that Parkland County has experienced.
3. **Augment.** The range of uncertainty we actually face will almost always be greater than what we might initially assessed it to be. Therefore, we must augment our understanding of risk beyond what our historical experiences show us. For example, the County has only experienced one significant wildfire recently. However, the range of potential wildfires that the County might experience is greater than this single wildfire suggests. Makridakis suggests a mathematical rule-of-thumb to guide this augmentation. If you have used relatively little historical data to assess the degree of uncertainty, he suggests doubling your assessed amount of uncertainty. If you have used more historical data, the multiplier need only be 1.5x. Another approach to augmenting our understanding of risk is to use a technique called "probability management".[6] Probability management simulates thousands of potential events (e.g., wildfires) so that we can observe the probability of events of various magnitudes coming to pass.

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

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

[6] The discipline of "Probability Management" was developed by Dr. Sam Savage, author of *The Flaw of Averages*. You can learn more about Probability Management at probabilitymanagement.org.

Section 3 - Analysis of Extreme Event Risk

Parkland County is at risk for a number of natural and man-made extreme events, such as: wildfires; hazardous material spills from train derailments, pipe breaks, or trucking accidents; illegal dumping on County land; severe winds/rains; and extreme snowfall. Thankfully, these events happen infrequently. For example, in the last ten years, the County has only experienced one train derailment (Gainford) and one significant wildfire (Duffield) that required a significant resource outlay from the County in order to respond.[7] However, this means there is not much historical data to help us estimate the exposure to extreme events that Parkland might have in the future (with snowfall being a notable exception). In the following sections, we estimate impacts for each of the five kinds of extreme events (wildfire; hazardous material spills; illegal dumping; high winds; and extreme snowfall). Where appropriate, the report will explain how we compensated for the lack of data on actual extreme events that have occurred within Parkland County.

Four of the extreme events are similar in that they are low-frequency, high-consequence events. These are wildfires, hazardous material spills, illegal dumping, and high winds. Snowfall is a little different in that Parkland County is virtually guaranteed to incur some snow removal costs every year, though the costs can vary dramatically. Because of this important difference, we will first examine our four low-frequency, high-consequence events individually. Then, we will consider them as a group and take into account how reimbursement from the Province (or other parties) impacts the County's restricted surplus strategy. We will then address snowfall separately.

Finally, before beginning the analysis there are two important limitations of the figures we will present that you should be aware of. First, these figures only represent the cost to Parkland County government and do not address costs incurred by the private sector (e.g., damage to private property). While the cost to private citizens and businesses is an important consequence of an extreme event, it is not directly relevant to Parkland's restricted surplus strategy. Second, the numbers represent only what is required to address an extreme event above and beyond the County's normal budget. For example, the County will pay the regular salary of full-time public safety staff regardless of whether there is an extreme event or not. However, in the case of an extreme event, the County might have to pay overtime, bring in contractors to supplement staff, etc. The numbers presented here only reflect these kinds of extraordinary costs.

A. Wildfires

Parkland County has had only one large wildfire (Duffield) in the last ten years.[8] This wildfire placed about $1.75 million of additional costs on Parkland County's budget.[9] According to the Triple-A method, since we have just one data point we should double it to increase our range of expected potential fire damage

[7] The cost of the train derailment was eventually reimbursed by the private firm responsible for the spill.
[8] "Large" as defined by the County's Fire Chief, in relation to other fires the County might experience.
[9] This figure includes contractors, supplies, some internal wage costs, and overtime pay. It excludes equipment charges because, although the extra wear-and-tear might decrease the useful life of the County's equipment in the long-run, it does not create a short-term cash outlay in the way that the previously mentioned costs do.

– this means that Parkland could experience costs as high as $3.5 million to fight a wildfire. A conversation with the County's Fire Chief confirmed that this is a reasonable assumption.

However, to get a more detailed perspective on the nature of the wildfire risks faced by Parkland County, GFOA looked at wildfire cost histories from other regions in Alberta. Though this data was not directly comparable to Parkland County (due to differences in geography, land uses, fuel etc.), it did help establish that there is a linear relationship between the size of fires and the damage (as opposed to an exponential relationship as one might find in earthquakes or hurricanes, for example). It also provided a rough distribution of frequency of large fires versus smaller fires.

We then were able develop a hypothetical distribution of Parkland County wildfire risks, assuming that $3.5 million represents the top of the range of risk that Parkland County is subject to from a single wildfire.[10] From there, we were able to calculate how much Parkland would need to cover any given wildfire at various levels of certainty, as shown to the right, independent of reimbursement from the Province.

Restricted surplus	Likelihood of covering a given wildfire
$2.5 million	90%
$2.8 million	95%
$3.2 million	99%

B. Hazardous Material Spills

Parkland County is at risk from train derailments, pipeline breaks and other man-made extreme events that release hazardous materials, thereby creating a public safety threat. Although the private firm(s) responsible for the spill should ultimately reimburse the County for its costs, it could take up to a year or more for the County to receive payment. Hence, the County needs to be prepared to cover the costs in the meantime (plus there is some small chance that a private firm might not have the proper insurance coverage or otherwise not have the financial capacity to pay).

The County has only experienced one event, inside of County jurisdiction, of this type in its recent history – the Gainford train derailment. The cost to the County to address this derailment was just under $400,000. However, this particular derailment was not large compared to what is possible. For example, the 2013 Lac-Mégantic rail disaster in Quebec was the deadliest rail accident in Canada since 1867. A 74-car freight train carrying crude oil derailed, resulting in 47 deaths and $7.6 million in clean-up costs for the local municipality.[11] Fortunately, since that time a number of regulations have been passed to improve the safety of transporting hazardous materials. For example, new regulations require the phase out of existing tank cars to be replaced by more crash resistant tank cars[12] and financial resources are being built up to assist with the clean-up of derailments. [13] Regardless, the Lac-Mégantic experience does demonstrate the extreme consequences are possible, even if the Lac- Mégantic experience is not directly analogous to Parkland County.

[10] Because we didn't have enough data to definitively state the distribution of wildfire sizes, we used a "triangular distribution." This distribution likely somewhat overstates the risk faced by Parkland County, but we decided to err on the side of caution.

[11] Taken from Wikipedia entry for Lac- Mégantic rail disaster.

[12] Kim Mackrael. "Canada to 'meet or exceed' US rules on shipment of oil by rail." *The Globe and Mail*. May 1, 2015.

[13] Erik Atkins. "Ottawa Announces Railway Disaster Relief Fund". *The Globe and Mail*. February 20, 2105.

Unfortunately, unlike with wildfires, there is not a systematic record kept of the cost that governments incur to respond to hazardous material spills. Hence, the County staff used their judgment to estimate a range of possible damages from a given hazardous materials spill. They estimated that the damages would be between $25,000 and $3 million. However, researchers have found that that ranges developed using personal judgement are very often too narrow compared to what a statistical method produce – often by a factor of 50%.[14] Interestingly, the County staff had judged a range of damages for wildfires, and the top of the judgement range did prove to be short of what our statistical approach had found – by 50%. Hence, it seems reasonable to assume that the judgmentally set range for hazardous material spills should be increased to $4.5 million.

We then were able develop a hypothetical distribution of Parkland County hazardous material spill risks, assuming that $4.5 million represents the top of the range of risk that Parkland County is subject to from a single spill.[15] We then were able to calculate how much Parkland would need to cover any given spill at various levels of certainty, as shown to the right, independent of reimbursement from the perpetrator of the spill or anyone else.

Restricted surplus	Likelihood of covering a given hazmat spill
$3.1 million	90%
$3.5 million	95%
$4.1 million	99%

C. Illegal Dumping

Parkland County also has a risk of illegal dumping. Though Parkland County has not experienced an illegal dumping that would qualify as an "extreme event", an example of one in another City would be when in February 2017 a tank trailer dumped about 2,000 liters of crude oil into a ditch near a wastewater treatment plant in Lloydminster, Saskatchewan.[16] In this case, the impacts were minimal because the oil flowed into a concrete culvert, but it is illustrative of kind of risk Parkland County is exposed to.

Restricted surplus	Likelihood of covering a dumping event
$0.8 million	90%
$0.9 million	95%
$1.1 million	99%

Like with hazardous material spills, the costs that governments incur to respond to illegal dumping aren't systematically collected. So, again, we used a staff estimated range and then increased the upper end of range, under the assumption that the range is likely too narrow. This gave us a hypothetical maximum risk of $1.2 million. We then developed a hypothetical distribution of Parkland County's potential illegal dumping damages risks from a single incident.[17] From there, we calculated how much Parkland would

[14] Jack Soll and Joshua Klayman (2004), "Overconfidence in Interval Estimates," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 30, pages 299-314.

[15] Because we didn't have enough data to definitively state the distribution of hazardous material spills, we used a "triangular distribution." This distribution likely somewhat overstates the risk faced by Parkland County, but we decided to err on the side of caution.

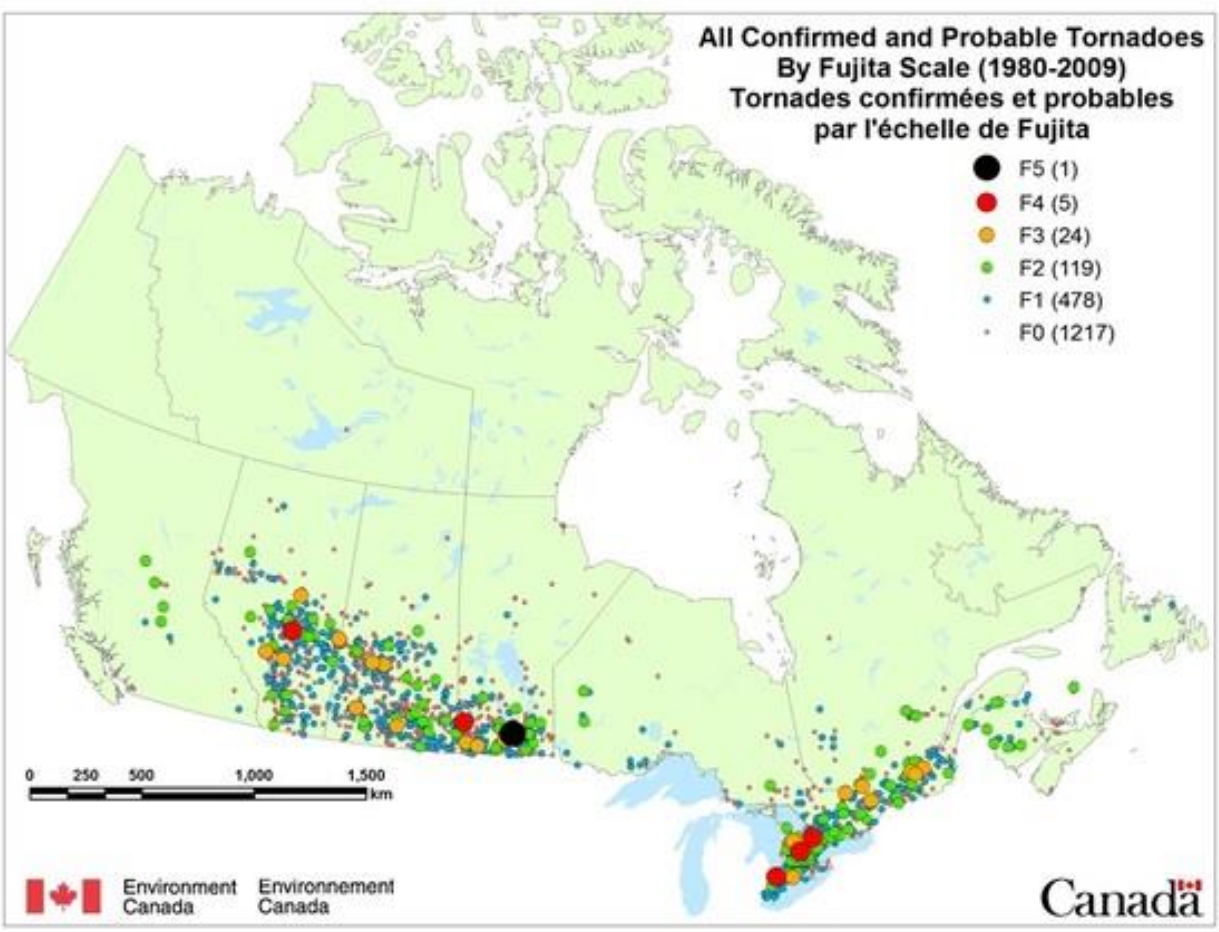
[16] Kevin Menz. "Crude oil illegally dumped near Lloydminster wastewater plant." CTV News Saskatoon. February 15, 2017.

[17] We used because we didn't have enough data to definitively state the distribution of illegal dumping, we used a "triangular distribution." This distribution likely somewhat overstates the risk faced by Parkland County, but we decided to err on the side of caution.

need to cover any given incident at various levels of certainty, as shown to the right, independent of reimbursement from the perpetrator of the event or anyone else.

D. High Winds

Though Parkland County has not experienced a tornado that has caused significant damage in its modern history, damage from extremely high winds is a possibility because Parkland County is located in a region at risk for tornados.[18] In fact, a tornado that struck Edmonton in 1987 resulted in 27 fatalities. The map shown on this page plots confirmed and probable tornadoes from 1980 to 2009.[19] It shows that Parkland County is near to other area that have experienced tornados.



[18] According to research published in the *Journal of Climate*, Parkland is an area of Canada thought to be at moderate risk (just above the midpoint of a scale ranging from no risk to high risk). See: Vincent Y.S. Cheng. "Probability of Tornado Occurrence across Canada." *Journal of Climate*. December 2013.

[19] Sills, D., V. Cheng, P. McCarthy, B. Rousseau, J. Waller, L. Elliott, J. Klaassen and H. Auld, 2012: "Using tornado, lightning and population data to identify tornado prone areas in Canada". Preprints, 26th AMS Conference on Severe Local Storms, Nashville, TN, Amer. Meteorol. Soc., Paper P59

Because we have no recent data of tornado damages in the area, we started by considering the potential loss of tax revenue, should a tornado damage a developed area. The table below contains the tax revenue Parkland receives from a few different categories of land uses. The table contains the total tax revenue of all properties in the indicated land use. If a tornado hit one of these areas, it is unlikely that it would result in a complete loss – this is especially true for power plants (and some other essential structures, like hospitals, etc.) that are specially constructed to withstand tornados. Hence, the risk to the county's tax base is probably relatively small compared to the potential cost of the emergency response and clean up. This is because a tornado needs to occur, then hit a developed area, and then cause enough damage such that the property is removed from the tax rolls – and, in many cases, the size of the reduction to the tax base might be less than the cost of response and clean up.

Land Use	Annual Revenue
An average subdivision	$30,000
Village of Entwistle	$95,000
Acheson	$7,200,000
Trans Alta Linear	$12,700,000
Parkland Village	$424,000

With respect to the restricted surplus amount, it is notable that there are some basic similarities in what an emergency response would look like for fire and high winds. Emergency response personnel would be working during and immediately after the event to ensure the safety of the public and public works would ensure that roads, facilities, utilities, etc. are functioning. Hence, the estimate produced by Parkland County staff bears a resemblance to the estimate for a fire response. Again, we increased the upper end of potential damages estimated by County staff to get a maximum potential damage of $2.25 million. We then were able to develop a hypothetical distribution of Parkland County's potential damages from a high wind incident.[20] From there, we were able to calculate how much Parkland would need to cover any given incident at various levels of certainty, as shown to the right, independent of reimbursement from the Province.

Restricted surplus	Likelihood of covering a given wind event
$1.6 million	90%
$1.8 million	95%
$2.0 million	99%

E. Holistic Analysis of Low-frequency, High-consequence Events

There are some important limitations to the analysis of extreme events described above, which we will resolve in this section. Let's start by reviewing the limitations.

First, the numbers do not reflect any financial assistance that the County might receive from the provincial or federal government or private firms (as in the case of hazardous material spill) to help defray the cost of responding to an extreme event. Provincial/Federal government assistance can be applied for and is granted based on the severity of the event. Presumably, for an event of the severity of that contemplated by the figures in our analysis, some assistance would be provided. Provincial/Federal assistance (e.g., the Disaster Recovery Program and the Municipal Wildfire Assistance Program) is typically sufficient to cover $0.50 to $0.90 for every dollar spent by the County, with the level of assistance dependent on the financial resources available to the provincial/federal government at the time and according to formulas written

[20] Because we didn't have enough data to definitively state the distribution of high winds, we used a "triangular distribution." This distribution likely somewhat overstates the risk faced by Parkland County, but we decided to err on the side of caution.

into the governing legislation.[21] Further the County must spend approximately $750,000 before it can get any reimbursement for wildfires.

In the case of hazardous material spills, the County would typically recover 100% of costs through the responsible party's private insurance company, but if the responsible party does not have the proper insurances, it could be less. For example, when an agricultural spill happens, such as a farmer transporting crop protection chemicals, the coverage could be limited for cleanup and the County would be required to cover costs on public (County) roads.

The second limitation is that the numbers presented in our foregoing analysis do not address time lag between when Parkland County spends the money to respond to an extreme event and when it receives financial assistance. The lag could be as long as two years for assistance from the provincial/federal government and up to a year for reimbursement by private insurers.

The third and final limitation is that it is extremely unlikely that the County would experience multiple extreme events in a single year. This means that we should not simply add together all of the restricted surplus figures suggested in the analysis of the four different extreme events – to do so would greatly overstate the risk that Parkland County is subject to.

Exhibit 3.E.1 – Percent of Extreme Event Cost Reimbursed by Other Entities

	Portion Covered by 3rd Parties		
	High	**Typical**	**Low**
Wildfire	70%	60%	50%
Hazardous Material	100%	90%	70%
Illegal Dumping	90%	75%	50%*
Severe Wind/Rain	70%	60%	50%

*In the most extreme circumstances, the level of reimbursement could plausibly be zero

To begin resolving these issues, Exhibit 3.E.1 describes the levels of financial assistance that the County might reasonably expect for each type of extreme event. For example, the table tells us that the County would typically expect 60% of the cost of wildfire to be defrayed by the province. To illustrate the implications for the County's restricted surplus strategy, first recall that the County would need a restricted surplus of $2.5 million to have 90% confidence it was prepared for wildfires. If the County would be reimbursed 60% of the cost of $2.5 million dollar fire, then it would actually only need to be prepared to ultimately part with $1.45 million of restricted surplus to cover the cost of the wildfire.[22]

Besides the "typical" column, there are "high" and "low" levels of reimbursements. The "typical" column is probably the most realistic outlook. The other two columns are useful for highlighting the extremes that Parkland could experience, but they are just that: extremes. That said, the table does serve to caution us that we can't always count on what has typically happened in the past to also occur in the future.

[21] See, for example: Appendix A to Ministerial Order A:002/12, "Alberta Disaster Assistance Guidelines," produced by Alberta Emergency Management Agency in 2012. Also see Appendix A to Ministerial Order A:001/12, "Alberta Guidelines for Municipal Wildfire Assistance Program," produced by Alberta Emergency Management Agency in 2011.

[22] $1.45M accounts for $750K County would need to spend before being eligible for provincial reimbursement.

Next, we must address the time lag between an event and when Parkland receives reimbursement. Continuing our example of the $2.5 million restricted surplus for wildfires, though the net cost of a $2.5 million fire might only be $1 million after reimbursement, the gross cost is still $2.5 million and it might take up to two years to get reimbursed. The need to carry those costs cannot be overlooked.

To pull this information together into a restricted surplus strategy we start by recognizing that it is extremely unlikely that the County would experience multiple extreme events in a single year. In fact, there is only a 1.6% chance that the County would experience exactly two events in a single year and less than a 1% chance of experiencing three or more.[23] Hence, to plan for a single event in a year would provide the County with a very high level of confidence (98.2% confident[24]) that it is covering its risk adequately.

However, we must also remember that reimbursement for extreme events does not happen immediately, so the County should think about its susceptibility to extreme events over a multi-year period. Exhibit 3.E.2 shows the probability of the County experiencing a given number of events over various time horizons. We see that that there is a 5.4% chance of the County experiencing at least two events over a two-year period.

Exhibit 3.E.2 – Probability of Extreme Events over Various Time Horizons

		Time Horizon				
		1 year	**2 Years**	**3 Years**	**4 Years**	**5 Years**
Number of Extreme Events that Occur	**0**	81.9%	67.0%	54.9%	44.9%	36.8%
	1	16.4%	26.8%	32.9%	35.9%	36.8%
	2	1.6%	5.4%	9.9%	14.4%	18.4%
	3	0.1%	0.7%	2.0%	3.8%	6.1%
	4	0.0%	0.1%	0.3%	0.8%	1.5%
	5	0.0%	0.0%	0.0%	0.1%	0.3%

To understand the implication of these figures, imagine that the County had a restricted surplus sufficient to cover a single extreme event. Then one year, an extreme event occurred that required all or most the surplus. It then took up to a year for the County to be reimbursed – the County would essentially remain uncovered for that period. Hence, a restricted surplus sufficient to cover a single extreme event over a two-year period would provide a 93.8% level of confidence. This may be sufficient, but it is a reduction in

[23] The probabilities are arrived at using a "Poisson distribution" which is a specialized probability distribution used to calculate the probability of a given number of events occurring in a fixed interval of time if these events occur with a known average rate and independently of the time since the last event. The Poisson distribution is a more useful approach than simply assuming the average chance of an extreme event each year is 20% (two extreme events in ten years) because the County's risk is made up of multiple independent events. Hence, the probability of an extreme event occurring in a given year is not quite like flipping an unfair coin (one that comes up "extreme event" 20% of the time), because not only might the County experience one event in a given year, it could experience two or more.

[24] Confidence level is 1.0 minus the cumulative probabilities of two or more extreme events.

confidence when compared to a one-year period. If we assumed it took two years to get reimbursed, then confidence drops further, to 87.8% (confidence that no more than one extreme event will occur in three years).

Hence, better restricted surplus strategy might prepare for the possibility of a large extreme event (i.e., hazardous material spill) followed by a period of at least two years with no reimbursement. To cover the County during this two-year period, the restricted surplus might also accommodate the possibility of a wildfire or severe wind (events of potentially less financial consequence). This would give the County 97.7% confidence that it is prepared for the right number of events (no more than 2 over a 3 year period). A more risk averse strategy could look out over 5 years and prepare for up to 3 events, which would give the County a 98.2% chance of preparing for the right number of events.

Now that we have addressed the number of extreme events to prepare for, we can address the amount of money that should be held in restricted surplus in order to be prepared. Earlier in this analysis, we cited the amount of money the County would need to be 90%, 95%, or 99% confident that it would be prepared for any given event of a given type. However, if we simply add these amounts together for two events, we will very likely be overstating the risk Parkland is subject to. That is because the dollars amounts cited for the 90%, 95%, or 99% confidence levels are sufficient to cover the most extreme of a given event type. It is very unlikely that Parkland County would experience two separate events in three years *and* that both of those events would be of the most extreme variety. So, to compensate for this, we developed a new probabilistic distribution that accounts for the total risk posed by both hazardous materials spills and wildfires together.[25] The results are show in Exhibit 3.E.3 under total (new distribution of total risk). The chart also includes simple summation of the original distribution, for comparative purposes. You can see that considering a combined distribution of total risk suggests that a significantly smaller dollar amount is needed to cover the County's risk.

Exhibit 3.E.3 – Combined Total Risk from Hazardous Material Spills and Wildfires, 3-Year Outlook

Likelihood of covering the extreme event	Hazardous Materials	Wildfires	Total (New Distribution of Total Risk)	Total (Simple Sum of Individual Risks)
90%	$3.1 million	$2.5 million	$4.7 million	$5.6 million
95%	$3.5 million	$2.8 million	$5.2 million	$6.3 million
99%	$4.1 million	$3.2 million	$6.1 million	$7.3 million

If the County wished to take the more risk-averse 5-year outlook (instead of the 3 year outlook described in the table above), the figures for a combined distribution of three risks (wildfire, high winds, and hazardous materials would be: $7.1M (99%); $6.1M (95%); and $5.6M (90%). Again, these amounts are

[25] Unlike for the individual categories of extreme events, we did not manually select a specific kind of distribution to use. Rather, simply adding together the distributions we already have increases the centralizing tendency of the distribution (e.g., smaller chance of the most extreme possible outcomes)

substantially less than if we were to take a simple sum of the figures presented earlier for each individual risk.

Let's now briefly review how we have addressed the limitations inherent in our individual analysis of the extreme events.

- Because the County is likely to receive reimbursement for its extreme event costs, but because reimbursement could take up to two years, we have taken a three year view of restricted surpluses. This should provide time for reimbursement to be received, thereby helping to replenish the restricted surplus.
- Because it is highly unlikely that the County would experience multiple extreme events in a single year, we have accounted for the likelihood of multiple extreme events over multiple years. We have also accounted for the total risk posed by multiple types of extreme events.

Hence, the County can consider a range for restricted surpluses, from $4.7 million to $6.1 million, to cover itself against the risk from extreme events at the levels of confidence shown in Exhibit 3.E.3. This would be sufficient for a three-year period. Under the more or less risk-averse strategies presented above, we assume that after a year or two the County would be at least partially reimbursed thereby replenishing the restricted surplus back to a level sufficient to provide protection from future extreme events.

Implied Restricted Surplus Component for Low Probability, High Consequence Extreme Events

- When considering a restricted surplus strategy for extreme events we must take account of the range of potential damages, the probability of extreme events occurring, and the potential for reimbursement by the provincial/federal government or private insurers.
- Considering all of the factors in the previous point a restricted surplus of $7.1 million would represent a ***more*** risk-averse strategy. That accounts for up to three extreme events over a five year period and provides 99% confidence that the amount of restricted surplus would be sufficient to respond to the events.
- A restricted surplus of $4.7 million would be a ***less*** risk averse strategy. It accounts for up to two extreme events over a three year period and 90% confidence in the amount required to pay for responding to the events.
- In either of the more or less risk-averse strategies presented above, we assume that after a year or two the County would be at least partially reimbursed, thereby replenishing the restricted surplus back to a level sufficient to provide protection from future extreme events. The more risk averse strategy presented above would provide the County with more room to maneuver, should some of the less favorable reimbursement scenarios we identified earlier come to pass.

F. Excessive Snowfall

Parkland County's spending on snow removal can vary significantly each year depending on how much snow falls. For example, in 2007 there was 85.6 centimeters (cm) of snow and Parkland spent just over $1 million. Just two years later, there was 178.4 cm and Parkland spent slightly over $1.7 million or about a 70% increase. In 2013, Parkland County experienced a record 308.7 cm, which required the County to spend almost $2.5 million on snow removal. This wide variation in spending means that the County should

be careful about how it manages its budget because an unexpectedly large amount of snowfall could put a lot of pressure on the budget. Restricted surplus has an important role in managing this risk.

To analyze the risk, GFOA gathered annual snowfall data, starting with 1966.[26] First, we used the data to compare annual snowfalls to the County's expense for snow removal starting in 2007. The data reaffirmed that annual snow removal expenditures are highly correlated to total annual snowfall.[27] This means that we should be able to analyze the financial risk for the County based on total annual snowfall. Though other characteristics of annual snowfall, such as when it occurs during the year, might also have an impact on how much is spent, total snowfall should give us enough information to make a reasonable estimate.

Next, we found that the average annual snowfall is 137 cm. We also found that about 90% of the time annual snowfall is between 59 and 214 cm and about 80% of the time it is between 77 and 197 cm. According to our analysis, a hypothetical average annual expenditure for snow removal should come out to around $1.6 million.[28] Because this is an average, the County would have about a 50% chance of spending more than $1.6 million in any given year. This is because there is an equally likely chance that average annual snowfall will be more than 137 cm or less. Like most governments, Parkland County budgets enough to cover snowfalls that are higher than "average" because the County is not comfortable with a coin-flip's chance of being short on its annual budget for snowfall. Typically, Parkland budgets around $2 million. The question then becomes: how large a restricted surplus should the County maintain in order to be prepared for snowfalls that are even larger than the amount Parkland budgets?

One approach would be to hold an amount sufficient to address a snowfall equal to 2013 (309 cm of snow), which would equate to $600,000 restricted surplus.[29] Our analysis indicates that this was such an extreme amount of snow that there is less than a 1% chance of that much snow or more falling in a given year. Consider, for example, that the next largest snowfall was 222 cm in 2003, a difference of 87 cm – the total snowfall for all of 2005 and all of 2007 were both 86 cm! Hence, just the difference between 2013 and the next largest

Why No Triple- A for Snow Removal?

The Triple-A rule that we used to help analyze the other extreme event risks compensates for lack of historical experiences with extreme events. For example, we have one wildfire, one train derailment, and no tornados in Parkland County as historical reference cases. A small number of cases may drastically understate uncertainty. However, when it comes to snow removal we have 49 different observations to draw on. This allows us to use more precise analytical techniques.

[26] Source: Environment Canada, "Historical Data - Edmonton Stony Plain: 1966-2014," modified June 22, 2016, http://climate.weather.gc.ca/historical_data/search_historic_data_e.html.

[27] Using inflation adjusted expenditure data, the correlation coefficient was 0.95 on scale of 1.0 to -1.0. 0.80 is, as a rule of thumb, usually considered a high correlation. Therefore, 0.95 is quite high.

[28] Using historical costs, we estimated the cost for snow removal given a 137 cm annual snowfall. We used a technique called "linear regression." Estimate is expected to have an average error of 5%. This estimate would not account for special circumstances that might occur in any given year. The figure is in 2015 dollars.

[29] $600,000 is the difference between the average annual budget of $2 million & the projected cost to remove 309 cm of snow, which is $2.6 million. $2.6 million is simply the inflation adjusted actual cost of snow removal in 2013.

snowfall was equal to the entire snowfall for other years. Hence, to hold an amount sufficient to cover 309 cm would be risk-averse.

A less risk-averse approach would be to hold an amount sufficient to cover a high percent of likely snowfalls. For example, a restricted surplus of $440,000 would be sufficient to cover about 95% of the snowfalls that the County is likely to experience.[30] Put another way, $440,000 would allow the County to handle a snowfall of up to about 214 cm. A restricted surplus of $275,000 would be sufficient to handle 90% of annual snowfalls (197 cm and below).[31] Of course, as the County's history has proven it is possible that the County could experience more than 197 cm in a given year. Under a less risk-averse approach, the assumption is that there is a very small chance that the County would experience an extreme snowfall, wildfire, high winds, illegal dumping and hazardous material spill in a single year. Hence, if and when the County experiences another very large snowfall, it could use some of the restricted surplus put aside for wildfires, high winds, illegal dumping, or hazardous materials to address the snowfall and then replenish that amount over the subsequent years.

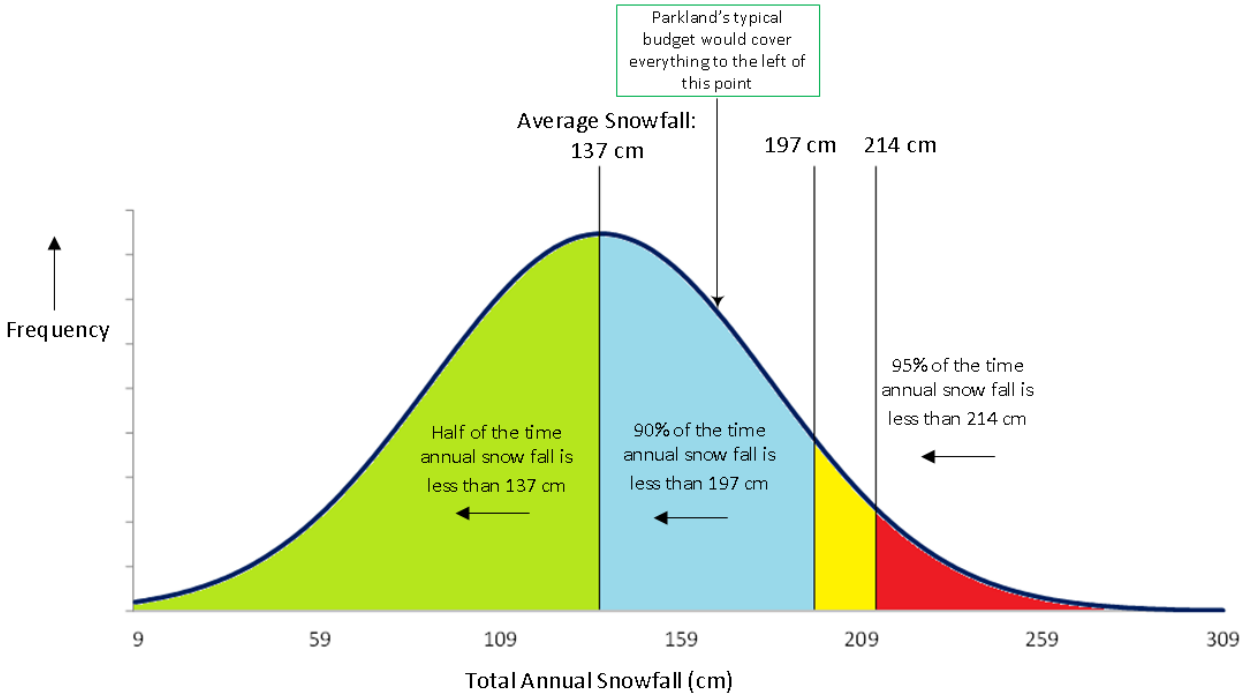
Exhibit 3.F.1 below illustrates the difference between the more and less risk-averse approaches. The diagram shows potential annual snow falls normally distributed or as a "bell curve."[32] A snow fall of 137 cm is in the middle of the curve. This means that annual snowfall around 137 cm will be the most common occurrence. Annual snowfall below 137 cm can easily be handled within the County's annual budget (the green portion). An annual budget of $2 million would cover about 180 cm of annual snowfall and this point is shown on the chart. 90% of the time annual snowfall will be less than 197 cm. If the County adopts a restricted surplus of $275,000, it would be covered for both the green and blue portions of the curve. 95% of the time annual snowfall will be less than 214 cm. If the County adopts a restricted surplus of $440,000, it would be covered for the green, blue, and yellow portions of the curve. Hence, either of the less risk-averse approaches leaves the red area uncovered by a dedicated restricted surplus for snow removal. The 90% or 197 cm restricted surplus would leave both the red and yellow areas of the curve uncovered by a dedicated restricted surplus. If the County takes the more risk-averse $1 million restricted surplus, then it covers the entire curve (all colors).

[30] $400,000 is the difference between the average annual budget of $2 million and the projected total cost to remove 214 cm of snow, which is $2.4 million. $2.4 million was derived from historical costs, using a technique called linear regression. Estimate is expected to have an average error of 5%. Because all estimates are subject to some error, GFOA erred on the side of rounding upwards for the figures presented in this section. This would build cushion into the estimates, if the estimates are too low.

[31] $275,000 is the difference between the average annual budget of $2 million and the projected total cost to remove 197 cm of snow, which is $2.275 million. The figures were derived from historical costs, using a technique called linear regression. Estimate is expected to have an average error of 5%.

[32] This does not represent the County's historical experiences. We are assuming that the County's future snowfalls will approximate to a normal distribution. The County's historical experiences suggest that the distribution of snowfall is slightly skewed to the right so is not entirely normal. The differences do not appear so dramatic as to impact our results much.

Exhibit 3.F.1 – Distribution of Annual Snowfalls



Finally, it should be noted that it is, of course, possible that the County could experience snowfall greater than 309 cm, but the almost 50 years of historical data we examined suggests that there is a small chance of this occurring in any given year. In order to remain prepared for the unexpected, the County should maintain flexibility between its restricted surpluses so that it can move resources to deal with any improbable events that do come to pass.

Implied Restricted Surplus Component for Snow Removal

- A risk-averse restricted surplus for snow removal would be $600,000. This essentially prepares the County for a repeat of the record-breaking 2013 snowfall and assumes the County has an annual snow removal budget of about $2 million.
- A less risk-averse restricted surplus would be $275,000. This would be sufficient to address about 90% of the annual snowfalls that the County might experience. The 10% of annual snowfalls that would not be covered should be sufficiently rare that it is unlikely that the County would also experience other extreme events during the same year. As such, the County could likely draw from other restricted surpluses to completely cover snow removal costs.
- The County could also adopt a restricted surplus target anywhere in between the two figures cited above.

Section 4 – Analysis of Revenue Instability Risk

Taxation represents the largest source of Parkland County's revenue. In 2016, this category represented 74% of County revenues. Nearly all taxation revenues come in the form of property taxes. $1 of every $5 of property taxes collected by Parkland County comes from electricity generation facilities. Due to federal and provincial regulations designed to improve the quality of the natural environment, the coal-fired plants will be phased out. Exhibit 4.A.1 lists the plants located within Parkland County and their anticipated last year of operation as well as the approximate annual tax revenue that the County will lose. This change in the legislative environment has introduced new risks into the County's revenue portfolio.

Exhibit 4.A.1: Coal-Fired Plants Located within Parkland County, Estimated Closing Dates, and Their Annual Tax Revenues

Plant	Closing Year	Annual Revenues	Plant	Closing Year	Annual Revenues
Sundance 1	2018	$370,000	Sundance 6	2029	$410,000
Sundance 2	2018	$300,000	Keephills 1	2029	$490,000
Sundance 3	2026	$360,000	Keephills 2	2029	$630,000
Sundance 4	2027	$550,000	Keephills 3*	2030	$7,000,000
Sundance 5	2028	$550,000			

* While its useful life would be through 2061, provincial regulations will require it to close in 2030.

Sources: Parkland County, AB and Alberta Municipal Affairs

A. Risk of Reduced Linear Assessment for Keephills 3 Plant

A clear and present danger to the County's revenue base is Transalta's filing of a linear property assessment appeal with the Municipal Government Board. Transalta is proposing a significant reduction of the linear assessment on their Keephills 3 Plant. Transalta contends that mandated closure of the power plants has given rise to a loss in value qualifying for an acceleration of the depreciation schedule. The effect of Transalta's appeal would be a $5 million annual reduction in Parkland County's tax revenue for the remaining life of the properties (about 14 years). The municipal government board hearing, to decide this matter, will likely take place in November, and, if the findings are in favor of Transalta, the reduction will impact the 2017 fiscal year. The County will need to be prepared to at least partially absorb this loss via its restricted surpluses for the first year, but should the restructure its budget to accommodate the reduced revenue in succeeding years.

B. Risk of Early/Permanent Closure of Plants

Over the long-term, the change in legislative environment may not necessarily be a bad thing for Parkland County's revenue portfolio. This is because there is the possibility that TransAlta, the electricity generator/provider, may build Sundance 7, a gas-power plant, to replace the facilities that are expected to close. TransAlta may also convert some existing plants to gas. These new facilities would likely have higher linear assessment than the existing plants. TransAlta could conceivably build enough new facilities

that the total taxable value of all of the new plants would exceed that of the old plants, according to an analysis produced by Nichols Applied Management, Inc. [33]

However, there is uncertainty as to whether these gas-power plants will be built at all and the extent to which they will replace the linear assessment of the existing plants. Furthermore, there is uncertainty about when, exactly, the old plants will close – they could close earlier than the dates suggested in Exhibit 4.A.1.[34] For example, Parkland County was recently notified that the Sundance 1 and 2 plants would be closing in 2018, which is one year earlier than previously scheduled.

The report by Nichols Applied Management describes the permanent closure of all plants as a plausible scenario that the Parkland County should be prepared for. A restricted surplus would not be a good strategy for dealing with plant closures that happen at a known future date and where there will be known declines in revenue. In these cases, Parkland County should shape its on-going service and spending strategies to accommodate itself to these changes. For example, as Parkland approaches the dates in Exhibit 4.A.1, it should start to plan for economies and efficiencies in its budget to offset the revenue loss.

However, restricted surpluses could be useful helping the County make an orderly transition to a financially sustainable spending structure in instances where plants close ahead of schedule (like Sundance 1 and 2), leaving the County with insufficient time to fully adjust its spending and services to the new revenue base. A risk-averse strategy would be to hold a restricted surplus equal to one year of revenue for each power plant in Exhibit 4.A.1, which would total about $5.9 million to $10.9 million, depending on the resolution of Transalta's appeal (described in sub-section "A", above). This assumes that County would fully adjust to its new, lower revenue base after a single year by reducing expenses.

As plants close on schedule or as TransAlta provides additional information that gives the County greater certainty as to what will happen with the plants, this amount could be adjusted as appropriate.

Beyond restricted surpluses, another financial strategy the County could consider to manage the risks posed by power plant closure is long-term financial planning and scenario analysis. Scenario analysis was invented Royal Dutch Shell in the 1970s, as a response to the increasing political and economic uncertainties facing the oil industry. Because of the successes it enjoyed there, the practice of scenario planning has become widespread in the oil industry and many other fields as well. In essence, scenario analysis presents decision-makers with three or four scenarios that describe markedly different, yet plausible, versions of the future. The intent of scenario analysis is to help decision-makers broaden their thinking about how the future might turn out and, thereby, develop plans and strategies that are more adaptable to conditions that are different from what they expect to occur.

Parkland County could use the scenarios described in the report by Nichols Applied Management as the basis for a series of long-term financial projections of the County's entire budget and then use that as the

[33] References to this report, refer to: "Socio-Economic Impact Study: Parkland County and Region - identification of the Local and Regional impacts of the Provincial Government's Plan to Accelerate the Phase Out of Coal-Fired Electricity Generation in Alberta" April 15, 2017. A consulting report from Nichols Applied Management, Inc.

[34] The news media suggests that TransAlta is moving ahead with its plans to close plants on or ahead of schedule: "TransAlta speeding transition from coal to gas at Edmonton-area power plants: Sundance and Keephills generating units to be converted from coal to gas between 2021 and 2023". CBC News. April 20, 2017

foundation for developing strategies to make the County more adaptable the various socio-economic changes that closures of the power plants would bring. If the County makes itself more adaptable to these changes, it will be less reliant on restricted surpluses to deal with the risks posed by power plant closings.

C. Risk of Schedule D Adjustments

A final issue that has a smaller potential impact is typical "Schedule D adjustments" or "abnormal depreciation." Schedule D adjustments are essentially temporary reductions in property taxes that power plants can apply for when they need to shut down part of their facility, as might be the case when they have to make a major unexpected repair, for example. Schedule D adjustments recognize that the property is not performing up to its full value during the repair, so taxes are adjusted accordingly. The County learns of Schedule D adjustments after the first draft of the budget is complete (late fall). Schedule D's are submitted by property owners, and the County's tax revenues are affected for about one year.

Schedule D activity since 2011 is: 2016: $103,085: 2015: $392,131: 2014: $471,287; 2013: $0; 2012: $0; and 2011: $585,867

These five years of data show that is not unusual for Parkland County to experience some level of Schedule D activity in a given year. Therefore, Parkland's first draft of the budget could be built under the assumption that there will be at least some amount of Schedule D activity. Restricted surplus can be used to stabilize the budget if Schedule D activity is larger than expected in any given year and if Schedule D activity is less than what was planned for the money can be repurposed. For example, we might assume that Parkland will budget for an average level of Schedule D activity each year. With our three data points, this would work out to about $250,000. The County might then hold a restricted surplus sufficient to cover 90% of the remaining possibilities. If we assume a reasonable maximum of Schedule D activity is about $880,000 (arrived at by using the Triple-A rule or 1.5 times our largest data point), then Schedule D activity should be $650,000 or less 90% of the time.[35] If the County budgets for $250,000 of Schedule D activity, then a restricted surplus of $400,000 would provide 90% coverage. If the County wanted 95% coverage it would need a restricted surplus of $480,000.

Implied Restricted surplus Component for Revenue Volatility

- A clear and present danger to the County's revenue base is Transalta's filing of a linear property assessment appeal with the Municipal Government Board. The effect of Transalta's appeal would be a $5 million annual reduction in Parkland County's tax revenue for the remaining life of the properties (about 14 years). The municipal government board hearing, to decide this matter, will likely take place in November, and, if the findings are in favor of Transalta, the reduction will impact the 2017 fiscal year. The County will need to be prepared to at least partially absorb this loss via its restricted surpluses for the first year, but should then restructure its budget to accommodate the reduced revenue in succeeding years.
- Due to the efforts of the provincial government to phase out coal-fire electricity generation, the plants located in Parkland County could close earlier than expected. Restricted surpluses would allow Parkland to make a more orderly adjustment a financially sustainable cost structure. A risk-

[35] Because we only have three data points, we calculated probabilities using a "triangular distribution". The main benefit of such a distribution for this application is that it assumes a higher probability for more extreme outcomes, so provides more conservative (risk-averse) outputs compared to a normal distribution.

averse strategy would be to hold enough restricted surplus to cover early closing of every power plant and to give the County one full year to adjust. This would require restricted surpluses in the amount of $5.9 million to $10.9 million, depending on the resolution of the Transalta appeal.

- Schedule D activity is a persistent risk to Parkland's revenue. The County should assume some level of Schedule D activity in its budget planning - $250,000 would represent an average level of Schedule D activity. Restricted surplus can provide a hedge against higher amounts. A more risk averse strategy would account for 95% of potential Schedule D activity and put aside a restricted surplus of $480,000 (in addition to the $250,000 already accounted for in the annual budget). A less risk averse strategy would provide 90% certainty and a restricted surplus of $400,000.

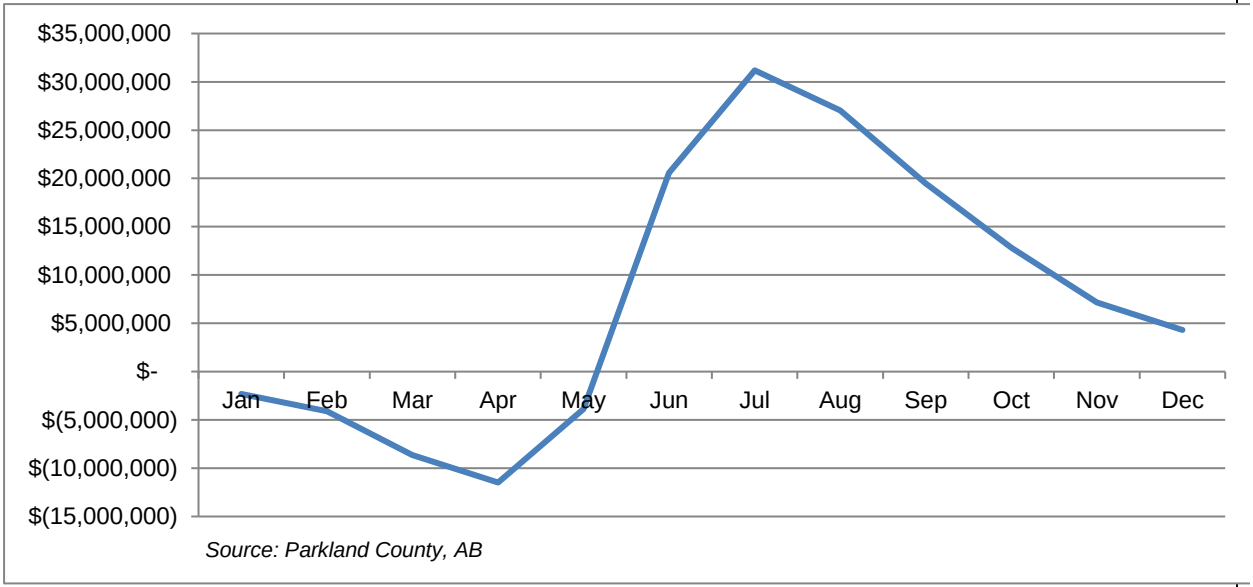
Section 5 - Secondary Risk Factor Analysis

This section overviews risk factors having implications for the County's restricted surplus strategy, but are less complex or of lower magnitude than the primary risk factors.

A. Liquidity

The County experiences a timing difference between its cash deposits and its cash disbursements and maintains $5.0 million in working capital in the event that it requires monies and has yet to receive its revenues. Parkland County's major revenue sources are property taxes and government grants. In 2015, these represented approximately $50.6 and $19.6 million, respectively. The County receives these revenues during particular times of the year. For example, Parkland County receives the majority of its property tax revenue in June. The County typically receives its government grant revenues in May and June annually. As such, the County has to monitor its cash flow and the timing differences between its receivables and payables. The graph below shows the County's estimated average rolling net cash flow for all revenues between 2011 and 2015. The figure combines the ending balance from the previous month with that of the current month. For example, January is the start of the year and represents only the ending cash flow surplus (deficit) for January. February represents the ending cash flow balance from January combined with the cash flow balance for February. March represents the ending cash flow balance from February combined with the cash flow balance for March and so on.

Exhibit 5.A.1 – Parkland County's Estimated Average Monthly Rolling Net Cash Flow (2011-15)



Source: Parkland County, AB

Parkland County on average has a cash flow deficit until June when it receives property tax revenue.

Because the timing of receivables and payables vary, a special restricted surplus for working capital may be helpful should the County experience a situation whereby it has a large or unexpected expenditure and has not received its property tax revenues. In looking at the five-year historic rolling monthly average, before the County receives the majority of its cash deposits in June, it has the greatest rolling cash flow deficit in April when the cash flow deficit averages $11.4 million. There are two factors contribute to April's high cash flow deficit. First is the large disbursement for school requisitions that occurs in March (25 percent of annual disbursement of approximately $15 million to $20 million). The large deficit in March is then carried over into April. The second factor in April is when the County commences its capital projects, thus disbursements for salaries, wages, benefits as well as materials, goods, supplies, and utilities experiences a nominal increase.

Exhibit 5.A.2 –County's Estimated Rolling Cash Deficit for April (2011-2015)

Year	Rolling Cash Deficit
2011	($10,300,000)
2012	($10,500,000)
2013	($12,300,000)
2014	($12,100,000)
2015	($12,200,000)
Average	($11,500,000)

In identifying a restricted surplus, we look to April as a reference. April's estimated rolling cash flow deficit has ranged from $10.2 million in 2011 to $12.3 million in 2013. April 2013's estimated rolling cash flow balance was 17% greater than April 2012's. This mirrors total County cash disbursements in 2013, which increased 14% compared to 2012. Changing Council priorities and service level requirements have also added to greater cash disbursements. Additionally, a large storm water project in 2015 required expenditures throughout

the year. Thus, the County recorded greater disbursements of cash annually. However, the County did see growth in cash receipts because this project was funded by debt proceeds.[36]

Looking at the figures in Exhibit 5.A.2, there is not much variation in April's estimated monthly rolling cash deficit aside from 2011 to 2012. Triple-A is best used for situations where there is some unpredictable, random element in play. However, the County's cash flow in April is remarkably consistent and the County has significant influence over its cash flow by virtue of its spending decisions. Thus, we do not apply Triple-A and look to April 2013, the largest monthly rolling cash flow deficit of the 60 months examined, as our reference point to what the County could again experience. Our recommended restricted surplus is $12.3 million. The County's current level of working capital is $5 million. It should be noted that the County may not necessarily need to increase its working capital restricted surplus by $7.3 million in order hold a full $12.3 million just for working capital. Elsewhere in this report, we have analyzed a number of other, much more uncertain risks Parkland is faced with and have recommended restricted surpluses for those. It is highly unlikely that Parkland would exhaust all of its other restricted surpluses in a single year, so it could be possible to use some portion of this for working capital, in addition to a dedicated working capital restricted surplus. We will explore this possibility further in the holistic risk analysis that appears later in this report.

Implied Restricted surplus Component for Liquidity

- **The County needs access to about $12.3 million to ensure that its disbursements can keep pace with its payables before its major revenue source begins to be received in mid-May. The County should have a dedicated restricted surplus for some portion of this, but may not need a restricted surplus equal to the full $12.3 million. This is because it is highly unlikely that Parkland will exhaust its various other restricted surpluses during the course of a year, so can draw on them for working capital.**

B. Leverage

Any form of leverage could reduce the County's financial flexibility, thus increasing the need for restricted surplus to provide some offsetting flexibility. The most common form of leverage for governments is debt. The *Municipal Government Act* defines debt and debt service limits. The debt limit is calculated at 1.5 times the municipality's revenue, excluding transfers for capital purposes and amounts reported as contributed or donated tangible capital assets. The debt service limit is calculated as 0.25 times revenue. As of December 31, 2016, the County's total debt is $19.4 million or 17.1% of its $114.0 million debt limit. The County's total debt service is $2.0 million, or 10.5% of its $19.0 million debt service limit. More recently, the County passed a bylaw for an additional $20.75 million in debt. This means Parkland's current total debt would be closer to $40 million.

The chart below compares Parkland County's debt and debt service to five other peer counties using their 2015 audited financial report[37] (hence, the chart does not include debt authorized since the end of fiscal

[36] County cash receipts recorded annual increases of 13% in 2012, 7% in 2013, 12% in 2014, and 14% in 2015. Cash disbursements recorded annual increases of 5% in 2012, 14% in 2013, 8% in 2014, and 20% in 2015.
[37] 2015 audited reports were the most recently available reports at the time of this analysis.

year 2015). As of the end of fiscal year 2015, in terms of both debt and debt service, Parkland County ranked the third lowest in both measures at 9% and 6%, respectively. Yellowhead County recorded the lowest level for both measures at 3% of its debt limit and 2% of its debt service limit. Brazeau County followed with 6% of debt to its debt limit and 5% of debt service to its debt service limit. Leduc, Strathcona, and Sturgeon Counties all recorded much higher levels of debt to their debt limit, ranging from 31% to 43%. Similarly, their debt service to debt service limit ranged from 19% to 26%. With new debt authorized since the end of fiscal year 2015, Parkland County's debt levels will be more comparable to Sturgeon, Leduc, and Strathcona.

Exhibit 5.B.1– Comparison of Parkland Debt and Debt Service Limit with Peer Counties ($ in millions)*

	Total Debt	Total Debt Limit	% of Debt to Debt Limit	Total Debt Service	Total Debt Service Limit	% of Debt Service to Debt Service Limit
Strathcona County	$156.7	$511.5	31%	$16.3	$85.3	19%
Leduc County	$40.8	$95.6	43%	$3.4	$15.9	21%
Sturgeon County	$30.5	$83.4	37%	$3.7	$13.9	26%
Parkland County	*$10.0*	*$111.8*	*9%*	*$1.2*	*$18.6*	*6%*
Yellowhead County	$2.9	$110.9	3%	$0.3	$18.5	2%
Brazeau County	$2.9	$49.6	6%	$0.4	$8.3	5%
Mean	**$40.6**	**$160.5**	**25%**	**$4.2**	**$26.7**	**16%**
Median	**$20.3**	**$103.3**	**20%**	**$2.3**	**$17.2**	**13%**

*Chart based on 2015 audited financial statements and therefore does not include new debt authorized since the end of fiscal year 2015.

We also reviewed each county's total debt and debt service relative to its population. Doing so identifies the burden placed on citizens by municipal indebtedness. Yellowhead County records the lowest level of debt and debt service per capita at $284 per person and $29 per person, respectively. When debt is analyzed relative to population, as of the end of fiscal year 2015, Parkland County has a lower level of debt ($328 of debt per person and $39 of debt service per person) than Brazeau County ($404 of debt per person and $59 of debt per person). Even when factoring for population, Leduc, Strathcona, and Sturgeon Counties still record fairly high levels of debt and debt service. Leduc County has the most debt at $2,998 per capita and $250 of debt service per capita. As with the chart above, Yellowhead, Parkland, and Brazeau Counties fall below the mean and median of the peer counties for debt and debt service per capita, while Sturgeon, Leduc, and Strathcona Counties fall above. With the new debt, Parkland County's debt per capita will increase significantly, but it is estimated to be less than three of the counties in the chart.

Exhibit 5.B.2 – Comparison of Parkland County's Per Capita Debt and Debt Service Limit with Peer Counties*

GFOA Restricted Surplus Analysis for Parkland County

	2011 Population	Total Debt Per Capita	Total Debt Service Per Capita
Leduc County	13,610	$2,998	$250
Strathcona County	91,495	$1,712	$178
Sturgeon County	19,230	$1,589	$191
Brazeau County	7,201	$404	$59
Parkland County	30,435	$328	$39
Yellowhead County	10,340	$284	$29
Mean	**28,719**	**$1,219**	**$124**
Median	**16,420**	**$996**	**$119**

Source: Each respective counties' 2015 audited financial report and Statistics Canada

*Chart based on 2015 audited financial statements and therefore does not include new debt authorized since the end of fiscal year 2015.

To conclude our discussion on debt, even though Parkland's new bylaw will increase the amount of debt that Parkland carries, it will still be within normal ranges for its peer group. So, while Parkland will have less flexibility to issue new debt than it once did, indebtedness should not be such a constraint as to adversely impact the County's restricted surplus strategy.

Implied Restricted surplus Components for Leverage

- **Even though Parkland's new bylaw will increase the amount of debt that Parkland carries, it will still be within normal ranges for its peer group. So, while Parkland will have less flexibility to issue new debt than it once did, indebtedness should not be such a constraint as to adversely impact the County's restricted surplus strategy.**
- **The debt load of a municipality has a direct correlation to the restricted surplus strategy in that as debt increases, flexibility decreases, risk increases, and restricted surplus needs increase. Should Parkland continue to add debt, Parkland will need to revisit the restricted surplus strategy.**

C. Expenditure Volatility

Lawsuits. The County does not anticipate significant spikes in expenditures. Over the past five years, the County's insurance provider has handled all claims related to lawsuits against Parkland County. Hence, a special restricted surplus for expenditure volatility does not seem necessary, though it is always prudent to keep some restricted surplus on-hand for unexpected events.

Implied Restricted surplus Component for Expenditure Volatility

- **No specific restricted surplus appears necessary for expenditure volatility based on the County's experiences that lawsuit claims have been handled through its insurance provider. However, it may be prudent for the County to restricted surplus a certain amount for unexpected events.**

D. Other Claims on the County's Restricted Surplus

Subsidies and Transfers. As part of a strategy of improving the quality of life for residents, the County has provided subsidies and a transfer to the Tri-Leisure Centre. In the past, the County made two operating subsidies in the amounts of $40,000 and $88,000 over and above the regular annual funding contributions. The County could continue transfers to sustain the Centre's operations, but fees are still an important part of the Centre's revenue structure. As such, GFOA recommends the County work with its partners to encourage the Tri-Leisure Centre to implement a user fee policy to determine whether fees are in line with actual cost of service, conduct periodic review of the fees, and update the fees as needed. This would help ensure that the Centre does not become over-reliant on transfers and, thereby, place more risk on Parkland County.

In 2012, the Tri-Leisure Centre received a transfer in the amount of $357,000 to replace its air condition unit. While unexpected emergencies may arise that will draw on the County's surplus, Parkland County should consider adopting a policy on asset management to ensure appropriate amounts are set aside for future needs. As of 2016, the County's restricted surplus includes nearly $68,000 in capital replacement funding for the Tri-Leisure Centre.

Restricted Surplus. At the beginning of 2017, the County's surplus was $73.6 million. However, there are claims to the surplus and the County expects approximately $36.1 million will be drawn for those specific needs. With restricted surplus being used for capital assets and facilities, the County may consider developing a comprehensive strategic plan on its capital needs to identify how the use of the surplus is supporting the County's vision. The County might adopt a policy to help guide and standardize its asset management as described in the section on capital repairs and replacement.

Implied Restricted surplus Component for Claims on the County's Restricted Surplus

No restricted surplus is required for other claims on the County's restricted surpluss. The County may consider adopting a policy on asset management to ensure appropriate amounts are set aside for future needs. It may also consider adopting a robust user fee policy for the County and recommending one to the recreation centre, including a periodic review of fees to determine if they are aligned with service cost. Fee changes would help ensure that county fees offset county services where possible and could help mitigate operating subsidies, such as those to the recreation centre.

Section 6 - Recommendations

This section provides GFOA's recommendations to Parkland County based on the analysis presented in this report. Subsection "A" reviews the risk factors analyzed independently in Section 3 and Section 4, and considers them in light of Parkland's existing restricted surplus strategy. Subsection "A" also addresses the primary purpose of this report: to recommend a restricted surplus target for Parkland County. Subsection "B" discusses formal policies the County could adopt to support the County's restricted surplus strategy.

A. Review of Risk Factors and Recommendation

The previous sections overviewed the various risk factors that Parkland County faces and then gave examples of the size of restricted surpluses that Parkland County might maintain at various levels of risk appetite. The purpose of this section is to pull together the risks we have reviewed into a more comprehensive consideration of Parkland County's restricted surplus strategy.

Parkland County already has a highly developed restricted surplus strategy, so we will show how the findings of this report might suggest changes to this strategy. Parkland County has 32 individual restricted surplus accounts. However, it will be much easier if we consider the accounts in separate categories.

Legislated/Contractual Restricted Surplus

Three surpluses are required by law, so we will not contemplate any changes to them: municipal park, parks – Entwistle, and development charges. The total of these three is about $5.2 million.

Restricted Surplus to Support Future Specified Needs for Regular County Services

There are 13 accounts for supporting future needs, where most of these are for equipment or services where Parkland County staff is certain about the size of the need, having calculated the cost of supporting those needs. This includes, for example, facility maintenance costs and replacement of various pieces of equipment for fire services, communications, office equipment, etc. (see Exhibit 6.A.1 later in this report for an overview of all the categories and the restricted surpluses that comprise the categories). Putting money aside for these costs can be an important tool for introducing stability to annual budgeting and keeping the quality of services high.

One opportunity that Parkland has to lower restricted surpluses is the "future operating" restricted surplus, which carries over unspent funding from prior year budgets. As of December 31, 2016 this surplus was about $5.4 million. Discussion with County staff indicates that the County has already identified the need to lower this amount considerably, primarily by taking steps to ensure that the budgets that Parkland County adopts set attainable goals for what the County will be able to accomplish during the year. Though County departments may be carrying over too much now, the County should beware of the pendulum swinging to the other extreme, which is where departments adopt a use-it-or-lose it attitude towards their budget. This can result in departments spending more near the end of the year on goods or services that they might not otherwise purchase in an effort to use their budget, lest they lose it. This is a suboptimal use of County resources. Hence, the County must promote lean and efficient budgeting, but without giving departments the wrong incentives. Below are techniques can help strike this balance:

- Adopt a policy on year-end-carryovers that includes unambiguous rules about how carryovers will be treated and that gives departments a role in collaborative decision-making about how carryovers will be used. The policy should define a definite period after which the carryovers will expire, should direct that carryovers are put towards sustainable expenditures, and should provide for collaborative decision-making so that there is commitment among the departments to honoring and maintaining the spirit and letter of the policy. Appendix 3 has an example of such a policy.

- Maintain a centralized contingency account so that departments do not feel the need to build excess "cushion" into their budget to cover risks to their operations. Without such a safety net, all departments will, understandably, build cushion into their budget. However, just like we have seen with the other risks Parkland County faces, it is unlikely that all of the departments will need the full amount of the cushion every year. This means, that in aggregate, a lot of excess cushion can build up. Parkland County has demonstrated the discipline required to maintain specialized surpluses, so it should easily be able to maintain a small contingency equal to 3% or 5% of its annual budget.[38] The current "future operating" surplus could serve this purpose. Hence, this restricted surplus would include funds to carry forward projects from one fiscal year to the next (when necessary) as well as funds from projects that have been cancelled. It would serve as a "safety net" for unanticipated needs that arise during the year (but that don't rise to the status of "extreme event", which we will cover on the next page). This contingency should not exceed 3% to 5% of the annual operating budget, so excess funds should be directed to alternative uses.

- Unfortunately, cushion in budgets does not appear under a line item called "cushion." It can become part of many different line items over time. To find where the cushion is, Parkland County can perform a trend analysis of line items to see which ones are consistently over-budgeted and then work with the departments to develop an allocation that meets both the County's operational and financial needs. Another, more intensive, option is to perform "zero line item" budgeting.[39] In effect, at the beginning of budget season, each department is asked to re-build their budget from the ground up, using a base of zero and without respect to past history. This forces departments to take into account the precise labor and materials they will need to perform their work. Because it is an intensive approach to budgeting, the County would probably only want to do this method for a single year.

Slack in the Elections Budget

One US County found that its Clerk's office often had large surpluses in its elections line item. Upon further investigation, they found that the Clerk was budgeting the full cost of a national election every year so that they would not be caught short when the national election did occur. The budget office then worked with the Clerk's office to eliminate the risk that the elections budget would be caught short and eliminated the large annual surpluses.

[38] Three to five percent is a common amount used for stabilizing normal budgetary fluctuations within a year.
[39] You can read more about this form of budgeting in: "Zero-Base Budgeting: Modern Experiences and Current Perspectives", a free research report available at www.gfoa.org.

Finally, it should be noted that the County's existing restricted surplus of about $5.4 million is intended to fund a number of projects that the Council has already approved. The County will need to transition to a lower restricted surplus over time, by using refined budgeting techniques, such as those described above.

Restricted Surplus to Support Future Unspecified Needs for Regular County Services

There are 11 accounts for supporting maintenance and renewal of other County services, beyond those covered above (see Exhibit 6.A.1). The difference is that those in this category are not yet supported by detailed plans or analysis that specify the amount of restricted surpluses that the County will likely need to meet its future needs. Hence, the County should proceed with developing the plans and analysis that will allow more certainty around the size of the restricted surplus required. It might be advisable to prioritize planning and analysis for the areas with the largest surpluses. For example, as of December 31, 2016, there was an $8.1 million surplus for waste management and $2.9 million for Recreation Facilities. Recently, Parkland developed a plan to support the upkeep and replacement of its water and wastewater capacity. This provides guidance on how to use the $5.1 million restricted surplus for water and wastewater.

A large surplus in this category that merits special attention is the long-term sustainability surplus, at $7.4 million. According to the authorization for this surplus, the purpose of this surplus is to protect the County from "future depreciation of power plants and related assets", which is a significant source of tax revenue to the County. We saw earlier, that there are a number of risks of this type. An immediate risk is Transalta's proposed reduction in the linear assessment, which could result in $5 million annual loss in revenue. The first year of this loss would have to be at least partially absorbed by restricted surpluses. Another risk is the potential for early closure of the power plants. A risk-averse strategy would be to hold a surplus equal to one year of revenue for each plant, for a total of $5.9 million to $10.9 million, depending on whether Transalta's aforementioned appeal is successful. Finally, $480,000 would prepare the County for unusually large schedule D adjustments (assuming the County also builds its base budget assuming some minor level of schedule D activity).

"There is no going back…we are going to low-carbon future"
Dr. Ernest Moniz, US Energy Secretary, 2013 – 2017
Interview with Fareed Zakaria, CNN, March 19, 2017

Dr. Moniz's sentiment is shared in Canada. For example, the 2017-2020 Alberta Fiscal Plan allocates $5.4 billion into Climate Leadership Funding. This fund will be used to lower emissions and diversify the economy into renewable energy. The goal is to phase out coal generation by 2030 and triple renewable energy to 30% by 2030 among other things.

These risks total up to $11.4 million, which includes $5 million for a successful appeal, $5.8 million for early closure (which would increase to $10.8 if the appeal is unsuccessful), and $480,000 for schedule D activity. This amount exceeds the size of the County's existing restricted surplus. However, it seems unlikely that the County would need to access the full amount for early plant closure in its entirety in the near-term future. This because the plants are very unlikely to all close at the same time. Also, Parkland will adjust its spending within a year after a plant closure, so should not be continually drawing on its restricted surplus to compensate for a closure. Hence, the County could build towards this amount over the next few years if it has difficulty meeting this amount right away.

Restricted Surpluses for Emergency

This category comprises three surpluses: disaster; contingency; and winter maintenance. For covering the risk associated with extreme events, our analysis suggests a $7.7 million would be a more risk averse choice, while $5.0 million would be a less risk averse choice (though both should provide at least 90% certainty of being able to cover Parkland's costs for responding to extreme events). By way of comparison, Parkland's existing restricted surplus in this category add up to over $7.0 million. However, the authorization for the "contingency" category does contemplate uses beyond responding to extreme events, including more routine unexpected occurrences. We have accounted for this in our recommendation for the "future operating restricted" surplus. Please note that it is important that this restricted surplus be left undedicated so that Parkland can be maximally responsive to extreme events.

Restricted Surpluses for Working Capital

Our analysis shows that Parkland County needs about $12.3 million in surplus to account for the gap between its receivables and payables that occurs each year. Currently, the County has $5 million in a dedicated restricted surplus for this purpose – *however* – as a practical matter, discussions with County staff tell us Parkland County's cash balances rarely, if ever, get much below $60 million. This means that the various other restricted surpluses that the County maintains serve as de facto working capital.

In addition to working capital, Parkland County authorizes a restricted surplus for internal financing. Together with working capital, we have a total of $7.5 million. Even with GFOA's other recommendations to adjust Parkland's restricted surplus strategy, Parkland will have enough funds on hand to provide working capital and some reasonable amount of internal loans. This is because GFOA's total restricted surplus recommendation (see Exhibit 6.A.2). is only somewhat less than the amount Parkland County currently holds, so it would seem unlikely that actual cash balances would drop so much as to endanger Parkland's continued cash flow.

Internal financing requires a little more consideration because these are loans from one part of the County to the other. An internal financing policy could help ensure that the terms of the loans remain within consistent and predictable bounds, thereby making it easier to manage the total cash balances of the County while also continuing to enjoy the benefits of an internal loan program. Appendix 4 provides an example of such a policy.

Finally, Parkland County should consider refining its monthly cash flow model to provide a more robust look at how planned uses of its various restricted surpluses might impact the County's ability to use the surpluses as de facto working capital. Such a model would use historical patterns in cash inflows and outflows, as well as planned future expenditures (including uses of restricted surpluses) to forecast cash levels. This would give Parkland greater insight into its future cash balances and assurances that it won't run short of cash. One can read more about cash flow modeling in "Tactical Financial Management: Cash Flow and Budgetary Variance Analysis," available for free at the GFOA website.[40]

[40] Shayne C. Kavanagh and Christopher J. Swanson. "Tactical Financial Management: Cash Flow and Budgetary Variance Analysis". *Government Finance Review.* October 2009.

GFOA Restricted Surplus Analysis for Parkland County

Putting it All Together

Exhibit 6.A.1 on the next page overviews all of Parkland County's restricted surpluses and GFOA's recommendations with respect to those surpluses. Note that this table does not account for any dedications the County has made – it shows for the total amount of the surplus.

Exhibit 6.A.2 on the page after that summarizes what the difference might look like between Parkland's existing restricted surplus strategy and a revised one based on GFOA's recommendations. You will see that the total amount of restricted surpluses required by the County under GFOA's recommendation is slightly less than what is maintained now. Below are some important assumptions made in this exhibit:

- The future operating surplus is maintained at about 3% to 5% of the total budget. Policies like those recommended earlier help keep it roughly around 3% to 5%.
- The long-term sustainability surplus reflects a risk-averse strategy for revenue instability from power plants.
- Working capital and internal loan funds are provided by the other surpluses. It is assumed that Parkland County follows the other GFOA recommendations to use the other surpluses as de facto working capital and loan funding in a safe and sustainable fashion.
- Emergency surpluses are as described the analysis of extreme events, earlier in this report.

Finally, Exhibit 6.A.3 shows the GFOA recommendations and existing dedications of restricted surpluses. A "dedication" means that some amount of the restricted surplus has been allocated towards a particular purpose. An amount that is dedicated is not available for other purposes. For example, the "Restricted Surplus to Support Certain Needs for Regular County Services" are entirely dedicated because there are specific plans describing the intended uses of those surpluses. The overwhelming majority of the "Emergency" restricted surpluses are not dedicated, because the funds should remain available to respond to an extreme event when one does occur. This chart shows that the County should have sufficient working capital available, even without a designated working capital restricted surplus. It is highly unlikely that the County will need to tie up all of its remaining surplus for the portion of the year that comes before property tax receipts. Furthermore, all existing dedications are not necessarily scheduled to be spent in the near-term future, so could be used as working capital in the meantime. Additional notes about this chart are on the same page as the chart.

Managing Risks beyond Restricted Surplus: A Line of Credit

As the 2013 snowfall proves, extreme events can occur that exceed all prior experiences. Further, it is possible that some future risk develops that we can't foresee today. Accordingly, none of GFOA's restricted surplus recommendations can provide 100% confidence that Parkland County will be covered for all possible contingencies. To provide an extra layer of financial preparation, the County has a $3.5M line of credit with Servus Credit Union in order to provide quick access to cash in case of a situation so extreme that restricted surpluses aren't enough.

GFOA Restricted Surplus Analysis for Parkland County

Exhibit 6.A.1 –Existing Restricted Surpluses and GFOA Recommendations

Restricted Surplus to Support Certain Needs for Regular County Services	Balance as of Dec 31, '16	GFOA Recommendation
Benefit Premium Stabilization	125,871	As these surpluses are supported by plans and analysis that show the need for these resources, these surpluses can be maintained in their current states
Equipment Lifecycle	4,382,771	
Facility Maintenance	1,909,730	
Fire Services Lifecycle	865,386	
Granular Aggregates	734,415	
Local Improvement	373,253	
Office Lifecycle	1,416,166	
Protective Services Lifecycle	1,194,821	
Rural Communications Network Lifecycle	331,639	
Survey Instruments Lifecycle	96,223	
Water & Waste Water	5,094,464	
Future Capital	815,314	
Future Operating	5,421,219	Use GFOA recommendations to reduce over time
Subtotal	**22,761,273**	

Restricted Surplus to Support Future Uncertain Needs for Regular County Services

County Facilities	5,998,798	Parkland should develop plans to specify the amounts needed to satisfy the purposes of these surpluses.
Entwistle Community Development	374,999	
Environmental	862,259	
Future Transportation	2,171,768	
Information Technology	203,847	GFOA recommends the "long term sustainability" surplus be used to mitigate risk of revenue instability from power plant closure. GFOA's analysis shows a risk averse strategy would be to hold a restricted surplus of $14.4 million.
Municipal Operations	1,880,544	
Overland Drainage	506,690	
Recreation Facilities	2,875,642	
Waste Management	8,050,463	
Hamlet Sustainability	805,000	
Long Term Sustainability	*7,405,250*	
Subtotal	**31,135,260**	

Working Capital

Internal Financing	2,475,470	Use other surpluses as de facto working capital / loan funds. GFOA has recommendations to do this safely.
Working Capital	5,000,000	
Subtotal	**7,475,470**	

Emergency

Disaster	1,463,316	GFOA recommends $5.0 million to $7.7 million to cover risk from extreme events. The exact amount will depend on the County's risk appetite.
Contingency	4,775,074	
Winter Maintenance	800,000	
Subtotal	**7,038,390**	

Legislated/Contracted

Municipal Park	5,018,146	Required by law / contractual agreement
Parks - Entwistle	1,966	
Development Charges	190,985	
Subtotal	**5,211,098**	
GRAND TOTAL	**$73,621,491**	

GFOA Restricted Surplus Analysis for Parkland County

Exhibit 6.A.2 – Summary of Impact of Restricted Surplus Recommendations

Restricted Surplus to Support Certain Needs for Regular County Services	Balance as of Dec 31, '16	GFOA Recommendation	Explanation
Total of surpluses for lifecycle and other planned needs	17,340,054	17,340,054	Assumes operating contingency of 3% of total budget ($2M)
Future Operating*	5,421,219	2,000,000	
Restricted Surplus to Support Future Uncertain Needs for Regular County Services			
Total of surpluses for uncertain needs for regular services	23,730,011	23,730,011	Assumes just risk for revenue stability
Long Term Sustainability**	7,405,250	11,400,000	
Working Capital			
Working capital and internal loans***	7,475,470	0	Other surpluses provide working capital / loan funds
Emergency			
Summary of All Emergency Surpluses****	7,038,390	$5,000,000 to $7,700,000	Recommended extreme event surplus
Legislated			
Summary of all Legislated	5,211,098	5,211,098	Unchanged
Total	**73,621,491**	**67,381,163**	

Additional notes about Exhibit 6.A.3

*GFOA recommends that future operating surplus be reduced over time, by using more refined budgeting techniques. Parkland currently has about $5.4 million in projects that are funded under this restricted surplus category, so there are current dedications in excess of the GFOA recommendation. As these projects are completed and budgets refined, the amount of the surpluses and dedications will drop.

**The long-term sustainability surplus can be used to guard against risk of revenue instability owing to the phase out of coal-fired power plants. The existing dedication of $5 million is for an internal loan. Should Parkland need to access this funding to absorb revenue losses from the power plants, then the loan could be carried by some other portion of Parkland's remaining surpluses.

***GFOA recommends that the working capital restricted surplus be eliminated as Parkland carries enough resources to provide de facto working capital. The formal amount of restricted surplus could be shifted to long-term sustainability category.

****Emergency restricted surplus assumes the more risk averse of GFOA's recommendations

Using the Recommended Ranges of Restricted Surplus

The reader has likely noticed that some of the GFOA recommendations are provided as a range of figures to represent less and more risk-averse strategies. GFOA cannot advise exactly where within the ranges the County should choose because that is a matter of the preferences of the County's policy-makers. However, we do offer guidance in the following paragraphs to help make the decision.

Risk dependency. Risk interdependency refers to the extent to which the occurrence of one risk event might cause another risk event to occur. For example, a hazardous material spill is not going to cause a heavy snowfall, so these two risks are "independent" of each other. An example of risks where there might be greater dependency could be high winds and revenue volatility. For instance, a tornado might cause enough damage to power plants that a Schedule D adjustment might be required. Fortunately for Parkland County, there does not appear to be high degree of dependency among its risks. This is good because a high degree of dependency would mean that if Parkland were to experience one risk then it would be increasingly likely to experience the others (in other words, if it were to rain, then it would pour).

Extreme event strategy. The largest range is the range for emergencies (extreme events). You may recall that the less risk-averse strategy prepared for up to 2 extreme events over a three-year period at 90% confidence in the amount of dollars required. The more risk-averse strategy prepares for up to three events over five years at 99% confidence in the amount of dollars required. One important consideration is that there is low interdependency between extreme events and other risks. While an extreme event, like a tornado, could impair the County's tax base, the majority of the extreme events the County could experience would not have a significant impact on the County's tax base or revenue volatility. Hence, there is not a strong case for holding the more risk-averse amount based on interdependency concerns. Adopting strategies that rely on holding less than the full "more risk averse" amount, based on low risk interdependency and/or using alternative risk financing methods, could be sufficient to protect the health, safety, and welfare of the citizens of Parkland.

Comparison to standards. If one considers just the surpluses that are dedicated to risk mitigation (emergencies, financial sustainability, and future operating), then those restricted surplus sum to about 34% of a $70 million annual operating budget. GFOA recommends that governments maintain at least 16.7% of the regular budget. This puts Parkland well over the GFOA standard. The amounts of restricted surplus suggested by our risk analysis is also comparable to what we have found for other smaller to mid-sized local governments who have exposure to multiple kinds of extreme events and other significant risks.

In conclusion, to determine a final restricted surplus target, GFOA recommends that Parkland's elected officials and staff have a conversation about their risk appetite. A low risk appetite (high risk aversion) suggests Parkland pick figures that are at the higher end of the ranges we are presented. If the County has a higher risk appetite (low risk aversion), it would adopt a figure at the lower end. Parkland could also adopt a target between these two poles. In short, there is no one "correct" answer, as the final target is a product of the Parkland's willingness to assume risk.

Other Factors

Other considerations in selecting a restricted surplus target include:

- **Size**. Smaller governments generally have more vulnerability to risk because they have a less diverse tax base and less diverse resources to draw upon than a much larger government. This suggests a restricted surplus at the higher end of the range suggested by GFOA.
- **Debt**. Parkland does not have a great deal of debt. This means that debt could be used to access capital, if required. This also means that perhaps cash restricted surplus are less important than they might otherwise be.

B. Financial Policies to Support the Restricted Surpluses

Financial policies are "rules of the game" for financial management. Financial policies are an important part of a restricted surplus strategy because they define acceptable and unacceptable courses of action for using restricted surpluses. Parkland County already has a Council Policy on Restricted Surplus (C-F105). Below are recommendations to further strengthen the policy.

- ✓ **Address extreme events directly in the policy statement.** The policy statement only references "contingencies" which are unforeseeable future expenses. For users of the policy who are not completely comfortable with the language of finance, it would be helpful to mention some of the specific risks that the County is subject to (e.g., wildfires, hazardous material spills, etc.) and that restricted surpluses are necessary for the County to respond quickly and decisively to such events without compromising its future financial health. This can help users of the policy better understand why restricted surpluses exist.
- ✓ **Define the prohibited uses of restricted surplus.** If a government uses restricted surpluses to fund un-planned, on-going annual operating expenditures, it can quickly find itself in an unsustainable situation. A policy could prohibit such uses, except in extraordinary circumstances (e.g., a financial crisis) and when such use is guided by a plan to bring the County back into long-term structural balance.
- ✓ **Reconcile restricted surplus authorizations to the restricted surplus targets suggested by the analysis provided by this report.** The County has a number of restricted surplus authorizations, some of which overlap with the risk areas that we analyzed. The County should review these authorizations and revise them in light of our analysis. The authorizations that seem to present the most overlap are: "contingency," "disaster," "winter maintenance," and "working capital." We suggest that these might be reduced to two: "extreme events" and "working capital." (though GFOA recommended dissolving this last one)
- ✓ **Better distinguish between authorizations that are for risk mitigation versus those that are for purchasing assets.** A number of the restricted surplus authorizations are essentially sinking funds that provide the County with the financial capacity to build/maintain its stock of community assets. This is a healthy practice and ensures that Parkland will protect the investment it has already made in valuable assets and that it can continue to support the economic viability and quality of life in the County by building new assets. It might help policy makers to be able to more easily distinguish between restricted surpluses that are needed to guard against risk versus those that are tools to help the County finance its capital asset management strategy.
- ✓ **Develop policy on allowable uses for excess restricted surplus.** On occasion, Parkland County might find itself with excess restricted surpluses. A policy should describe allowable uses for these excess amounts. Generally, a policy would discourage uses that would increase Parkland's on-

going operating costs and encourage uses that are either temporary expenditures (e.g., buy a new asset) or that reduce future costs (e.g., pay off a debt).

Another policy that could support the County's existing restricted surplus strategy is a comprehensive asset management strategy. Discussions with the County staff indicate that the County has made good progress in strengthening its asset management practices for its various classes of assets. A comprehensive asset management policy could accomplish the following to support the restricted surplus strategy:

- ✓ **Establish a common language on the asset classes that Parkland County manages.** Establishing broad categories of assets that Parkland manages is a starting point for helping policymakers exercise good governance. For example, the following categories are used in Parkland County's financial statements: roads and bridges, water and waste water, fleet, facilities, and storm water.[41] These categories could form the basis for a common language in a Countywide policy.
- ✓ **Establish the intent to fund maintenance to reach a given level of service for each asset category.** Once the asset categories are defined, the County can define the desired level of service for the asset classes then, in the policy, establish the intent to fund asset management strategies sufficient to reach those service levels.
- ✓ **Align restricted surplus authorizations to the asset categories.** The County could revise its restricted surplus authorizations to align them with the asset categories (this could also be done in conjunction with our earlier recommendation to consolidate accounts). This would help align restricted surpluses with the broader asset management funding strategy.

An asset management policy is an established GFOA "Best Practice" for local government financial management.[42] Capital assets are essential to a community's economic viability and quality of life. In 2016 Parkland County held $461 million worth of capital assets, which is an amount equal to about 6 to 7 times greater than the County's annual revenue. Clearly, the County government has had a substantial investment in its capital assets. However, those assets must be maintained in order to sustain the benefit they produce for the community. An asset management policy helps a local government make manageable sustained investments in infrastructure consistently over time, rather than requiring large and burdensome expenditures on a less regular, less predictable schedule. A template for an asset management policy is attached as Appendix 1 to this document.

Another policy to support a restricted surplus strategy is a structurally balanced budget policy. The conventional definition of a "balanced budget" is one where all revenue sources equal all expenditures. However, if the sources rely on one-time, non-recurring sources (e.g., restricted surpluses) to fund recurring expenditures, then a government could find itself in financial trouble after the non-recurring revenues have been exhausted. A structurally balanced budget policy requires that a budget not use non-recurring revenue to fund recurring expenditures. This helps to ensure that restricted surpluses are not put towards unsustainable purposes. A template for this policy is available in Appendix 2.

[41] See Note 1 in the County's financial statements.
[42] See: "GFOA Best Practice: Asset Maintenance and Replacement". www.gfoa.org

A final policy is a user fee policy. The most critical feature of a user fee policy is to define the acceptable level of subsidization of specific kinds of services by general tax monies. For example, many types of recreation services directly benefit the individual citizen who uses them, with little additional "spillover" benefit to the rest of the community. This feature usually characterizes services that receive a limited amount of general tax subsidy. Another important feature of a user fee policy is to define how often fees should be updated to reflect changes in the cost of providing the service. The GFOA publication *Financial Policies* provides more detailed guidance all of the aspects of a user fee policy and you can find a policy template in Appendix 5.

Appendix 1 – Asset Management Policy

Adoption Date: TBD
Last Revision Date: TBD
Owner Department: TBD

Introduction

Capital assets have a major impact on a government's ability to deliver services and the quality of the services delivered. The purpose of this policy is to provide guidelines to help the Government make informed capital asset investment and management decisions.

Capital Improvement Plan (CIP) Scope

Each year Government staff shall develop a five-year long-range capital improvement plan that describes and prioritizes the major capital projects that the Government intends to undertake during the next five years.

A. **Definition of a capital project.** For the purposes of the CIP the definition of a capital project is a project with a useful life of at least one year[43] and a cost of at least [Insert minimum value of asset to be included in the CIP[44]]
B. **Link to needs assessments.** All projects in the CIP, with minor and occasional exceptions, should be based on needs assessments conducted to determine the benefit of the asset relative to its potential cost.

Roles in the CIP Process

Finance, is responsible for coordinating the CIP process and compiling the CIP document. Other key roles include:

A. **Review of Capital Project Proposals.** Finance will coordinate a capital project review process within the annual budget calendar.
B. **Capital Financing.** Finance will develop a capital financing strategy to support the CIP.
C. **Approval of the CIP.** The council shall review and approve the final CIP.

CIP Project Identification

Each year Government staff will propose projects for potential inclusion in the CIP, using a process developed by Finance, Corporate Planning, and Senior Ledership. At minimum, this procedure shall provide for the following:

A. **Long-term operating and maintenance costs.** A proposal will identify the cost to operate and maintain the asset over the lifecycle of the asset.
B. **Anticipated source of funding.** A proposal shall describe where the funding to acquire the asset and to operate and maintain the asset is expected to come from.

---

[43] Capital assets have a multi-year lifespan. Assets with shorter lives would be more appropriately addressed in an operating budget

[44] An appropriate range is generally between $30,000 and $200,000. A smaller minimum would result in more projects being subject to the scrutiny of the CIP process. A government must weigh the value of such scrutiny applied to more projects (as would be the case with a lower limit) versus focusing scrutiny on a smaller number of high impact projects (as would be the case with a higher limit).

C. **Proposed timing of the project.** A proposal will identify the proposed schedule for planning, bidding, design, land acquisition, construction, and other relevant milestones in acquiring the asset.

CIP Project Selection

Finance will develop a procedure to assess and evaluate project proposals. The principles and practices that should be reflected in the selection process include:

A. **Long-term forecasts.** Long-term forecasts should be prepared to better understand the resources available for capital spending and to assess operational impacts and eventual replacement costs.
B. **Impact on other projects.** Projects should not be considered in isolation. One project's impact on others should be recognized and costs shared between projects where appropriate.
C. **Allow for funding of preliminary activities.** A policy should recognize that, for some projects, it may be wise to undertake only preliminary engineering/planning before committing to funding the whole project. However, even these expenditures can be considerable, so projects should be evaluated and prioritized appropriately.
D. **Full consideration of operating and maintenance costs.** The County should first ensure it has adequate resources to operate and maintain an asset before allocating resources to build the new asset.
E. **Full lifecycle costing.** Analysis of the cost of a proposed project should encompass the entire life of the asset, from planning and acquisition to disposal.
F. **Predictable project timing and scope.** Schedule and scope estimates should be practical and achievable within the requested financial and human resources.

Balanced CIP

The CIP Plan is a balanced [5[45]]-year plan. This means that for the entire five-year period, revenues will be equal to projected expenditures in the CIP. It is possible that the plan will have more expenditures than revenues in any single year of the Plan (with the exception of the first year of the plan which is intended to become an appropriation plan for the Government). However, over the life of the five-year plan all expenditures will be provided for with identified revenues. Staff may record, on an appended document, projects that are deemed important but cannot fit into a balanced CIP. The Executive Committee may choose to examine the unfunded projects and defund an existing project in favor of another.

CIP Funding Strategy.

The Government may elect to use debt financing to acquire an asset, or pay-as-you-go (i.e., cash financing). Guidelines are provided below to guide the Government in making the best choice between debt and pay-as-you-go financing.

A. Factors which favor pay-as-you-go financing include circumstances where:
    1. The project can be adequately funded from available current revenues and restricted surpluses
    2. The project can be completed in an acceptable timeframe given the available revenues

[45] 5 years has evolved into a de facto standard among many local governments, but it is often advisable to look beyond five years particularly in cases of large, multi-year projects or where debt service is used extensively to fund capital.

3. Additional debt levels could adversely affect the Government's debt limit and or make debt servicing unaffordable

B. Factors which favor long-term debt financing include circumstances where:
1. Revenues available for debt issues are considered sufficient and reliable
2. Market conditions present favorable interest rates
3. A project is mandated by provincial or federal government and current revenues or restricted surplus are insufficient to pay project costs
4. A project is immediately required to meet or relieve capacity needs and existing un-programmed cash restricted surpluses are insufficient to pay project costs
5. The life of the project or asset financed is five years or longer
6. The capital project or asset lends itself to debt financing rather than pay-as-you-go funding based on the expected useful life of the project and based on the Government's ability to pay debt service. i.e. asset life is greater than or equal to debt term
7. User pay debt

Capital Budget

Each year the Financial Planning and Treasury Management Officer and the Budget Manager will develop a capital budget which will be the spending plan for capital. The first year of the adopted capital improvement plan will be an important input into the capital budget for the fiscal year.

Capital Project Management

Good management of capital projects is essential to create the best value for taxpayers through capital spending. The following policies shall be observed in order to help ensure the best project management possible.

A. Project manager. Every CIP project will have a project manager who will prepare the project proposal, develop a project budget and cash flow forecast prior to project approval and commencement, ensure that required phases are completed on schedule, authorize all project expenditures, monitor project cash flows, ensure that all regulations and laws are observed, and periodically report project status.

B. Regular progress reviews. Regular capital project and program reviews are to be conducted to monitor existing project performance. Each project manager must actively manage each project and will provide regular reports on the physical and financial status of each project to the Senior Leadership.

C. Limits on amendments. For an appropriated capital project, the total cost of the project, including all change orders, shall not exceed the amount of the originally budgeted amount. All amendments shall be reviewed and evaluated in accordance with purchasing policy….[insert appropriate positions[46]]. Each project manager must manage capital projects within certain time and cost constraints. If an amendment is necessary, proper documentation explaining why should be presented in accordance with purchasing policy for final approval.

[46] Typically will include a capital planning subject matter expert as well as an authoritative financial and operations manager

Establishment of an Asset Inventory

Asset Management staff shall develop a comprehensive asset inventory that projects equipment replacement and maintenance needs for the next [X[47]] years and will update this projection each year. The asset inventory will describe the current condition of the Government's assets compared to established standards for asset condition, account for the complete cost to maintain assets up to standard condition over their lifecycle, and account for risks associated with assets that are below condition standards. Departments shall have responsibility for inventorying and assessing the assets within their purview, and ensuring that it reconciles with the County's asset management system and with the Department of Finance's capital asset records.

Prioritization of Asset Maintenance and Replacement

It is the policy of the Government to maintain its assets at a level that protects capital investment and minimizes future maintenance and replacement costs. Based on an asset inventory, County asset management staff, with assistance from departmental experts, shall develop and recommend to the Council a prioritized asset maintenance spending plan for each year.

Funding of Asset Maintenance

It is the Government's policy to ensure that adequate resources are allocated to prestricted surplus the Government's existing assets to the best of its ability before targeting resources to build new facilities or acquire additional assets that also have operating and maintenance obligations. This policy addresses the need to protect the Government's historical investment in capital assets. It helps the Government to avoid embarking on an asset enhancement program, which when coupled with the existing asset requirements, the Government cannot afford to adequately maintain.

[47] 5 years has evolved into a de facto standard among many local governments, but it is often advisable to look beyond five years particularly in cases of large, multi-year projects or where debt service is used extensively to fund capital.

Appendix 2 – Structurally Balanced Budget Policy

Adoption Date: TBD
Last Revision Date: TBD
Owner Department: TBD

Introduction

The [Province requires that the Government adopt a balanced budget[48]], where all revenue sources equal all expenditures. However, a budget that is balanced by the Province's definition may not necessarily be sustainable because on-going expenditures could be supported by temporary or highly volatile revenues. The Government would experience financial distress when these temporary or volatile revenues were no longer sufficient to cover on-going expenditures. This policy supports the on-going financial sustainability of the Government by advancing a more sustainable definition of a balanced budget – the structurally balanced budget.

Definitions

This section defines key terms related to a structurally balanced budget:

Recurring revenues are the portion of the Government's revenues that can reasonably be expected to continue year to year, with some degree of predictability. Property taxes are an example of recurring revenue. Conversely, a ***non-recurring revenue*** cannot be reasonably expected to continue from year to year. A grant with a term of one year is a good example of a non-recurring revenue.

Some revenue sources may have both non-recurring and recurring components. These sources require the Government to exercise judgment in determining how much of the source is truly recurring. For instance, a Government regularly receives shared revenue from the Province, but at least part of the total revenues varies according to the deliberations of the Provincial officials each year. In this case, it may be prudent to regard unusually high revenue yields as a non-recurring revenue under the assumption that such revenues are unlikely to continue, making it imprudent to use them for recurring expenditures.

Recurring expenditures appear in the budget each year. Salaries, benefits, materials and services, debt service, and asset maintenance/replacement costs are common examples of recurring expenditures. In general, recurring expenditures should be those that the Government expects to fund every year in order to maintain current/status quo service levels. ***Non-recurring expenditures*** comprise special projects such as capital improvements, asset acquisition, and other costs that the Government incurs infrequently. In general, the Government has a greater degree of flexibility to defer non-recurring expenditures than recurring ones.

Restricted Surpluses are the portion of fund balance that is set aside as a hedge against risk. The Government has defined a minimum amount of funds it will hold in restricted surplus. This serves as a

[48] The introduction assumes that the Province has legislative requirements for governments to adopt a balanced budget that is similar to what is described in this paragraph. The wording can be adjusted, as needed, to reflect the precise legal requirements

"bottom line measure" to help determine the extent to which the Government's structural balance policy is being met – if restricted surpluses are maintained at their desired levels, it is an indication that the Government is maintaining a structurally balanced budget. If restricted surpluses are declining, it may indicate an imbalance in the budget (e.g., if restricted surpluses are being used to fund on-going expenditures).

Structurally Balanced Budget [Goal[49]]

The Government shall endeavor to adopt a structurally balanced budget. Generally, this means that recurring expenditures should be covered by recurring revenues and that non-recurring revenues should be used to fund non-recurring expenditures. On occasion, the recurring revenues may cover the non-recurring expenditures when revenues increase due to property values or provincial/federal funding.

The Government's finance staff shall develop a budget presentation that shows the Government's progress in achieving a structurally balanced budget.

Structurally Balanced Budget [Directives[50]]

While it is the Government's intent to provide the council and staff with flexibility on how to pursue and achieve a structurally balanced budget, there are some points which the Government should observe very closely when developing a budget.

- **Employee compensation and non-recurring revenues**. Except in extreme circumstances, non-recurring revenues and especially restricted surpluses should not be used to fund employee compensation. One such exception might be a severe economic downturn where non-recurring revenues are temporarily used to ease the transition to an expenditure structure that is in line with new economic realities. Even this should only be done in the context of a plan to return to structure balance and replenish any restricted surpluses that had been used.
- **Operating and maintenance costs of capital assets purchased with non-recurring revenues**. While capital assets are often a good thing to fund with non-recurring revenues, the Government shall be observant of the long-term operating and maintenance costs of such purposes, lest it create new on-going expenditures that it can't maintain.
- **Replacement of short-lived assets and non-recurring revenues**. The Government shall give preference to using non-recurring revenues to replace assets that have outlived their useful lives over purchasing entirely new assets, where the replacement of the obsolete or expired assets is critical to the maintenance of the Government's core priorities and programs. A replacement schedule for such assets is a good indicator of when to budget for these items.

[49] Using the term "goal" provides some flexibility, recognizing that achieving structurally balanced budget is an on-going task. "Policy" could be substituted, which would create more accountability at the expense of flexibility.
[50] You can add, delete, or modify this list as is appropriate to your individual circumstances.

Appendix 3 – Year End Carry Over Policy

Adoption Date: TBD
Last Revision Date: TBD
Owner Department: TBD

Introduction

In order to make the best use of the County's limited resources, this policy describes how resources that are budgeted but not spent at the end of the year will be handled.

Carryover

If, at the end of the fiscal year, funding remains and the project/program is not complete, the County may allow a carryover into the next fiscal year if the County's financial condition supports this action. In any event, the manager of funds that have been carried over shall direct the funds towards one-time expenditures in order to maintain on-going structural balance in the budget. In cases where there is a compelling reason to use the funds elsewhere, the Chief Administrative Officer restricted surpluses the right to rescind spending authority and redirect the funds.

Strategic Use of Surplus Funds

Where monies were budgeted but not spent and the project/program is not complete, it is the policy of the County to make the best use of those funds. The County will first assess if it is meeting its minimum restricted surplus requirements as per the County's policy. The Finance Department will recommend to the Executive Committee where any surplus funds and determine how those funds can be used to the greatest advantage of the County. The County Executive Committee should also observe the County's structural budgetary balance policy when making its determination.

Appendix 4- Internal Loan Policy

Adoption Date: TBD
Last Revision Date: TBD
Owner Department: TBD

Interfund Loans

A. **Definition of Interfund Loans and Transfers.**
   a. Interfund Transfers, are funds that are permanently moved from one Restricted Surplus to another. There is no requirement to repay the funds.
   b. Interfund Loans are made for temporary cash flow reasons, and are not intended to result in a permanent transfer of funds. Funds must be repaid over time.

B. **Criteria for Making Transfers.** Restricted Surplus balances are reviewed periodically by Parkland County administration. The resulting recommendations may include interfund transfers. All interfund transfers must be approved by Council.

C. **Criteria for Making Loans.** The CFO is authorized to approve interfund loans for cash flow purposes whenever the cash shortfall is expected to be resolved within a fiscal year. Any other interfund loans require case-by-case approval by the Council. For a loan to be approved by the Council, the borrowing must not adversely impact the County's long-term financial condition, and the specific source and terms of repayment must be identified.

D. **Interest Rates and Terms.**
   a. When the borrowing is required for internal operations,
      i. and the borrowing is from a non-interest bearing restricted surplus, no interest charges will be applied.
      ii. And the borrowing is from an interest bearing restricted surplus, interest will be charged at the rate that would otherwise have been allocated to those funds.

b. When the borrowing is required for a revenue generating opportunity or a profit center, the borrower shall be charged an interest rate that is consistent with prevailing rates for similar financing from private lenders, with the exact rate set by the CFO. For long-term loans, a repayment schedule shall be developed. The repayment schedule must not exceed the life of the underlying asset or the term for which the lending fund has ability accommodate.

Appendix 5 – User Fee Policy

Adoption Date: TBD

Last Revision Date: TBD

Owner Department: TBD

User Fee Policy

The County charges a range of fees for providing specific services. The amount of the fee is usually related to the cost of the service provided. The purpose of this policy is to ensure fair and cost-effective application of use fees.

Guiding Principles for Changes to Fees

Creation of new fees or changes to existing fees will be guided by the following principles.

1. **Benefits Principle:** Those who receive benefits from a particular County-provided good or service should pay for that good or service according to the level or value of the benefit received. Conversely, if the entire community benefits from a service, then general taxes are likely an appropriate funding mechanism. In some cases, a service will have both individual and community-wide benefits. In these cases, the service might be partially funded by general taxes and partly through fees. [For example charges for ambulance services help offset costs of making those services available[51]].

2. **Cost Recovery Principle:** Where data is available to do so and to the fullest extent possible, the total cost of providing a good or service, including operating expenses, administrative costs, and capital expenses (including depreciation) should be the starting point when calculating the appropriate user fee.

3. **Management of demand principle.** Fees have a role in managing the level of demand for a service or even discouraging use of a service. At the same time, in some cases, it might be appropriate to subsidize a fee for disadvantaged segments of the community or the community at large if a user fee is discouraging them from using a service where use of that service has additional community-wide benefits. In these cases Council might direct that a fee be subsidized or waived, as may be appropriate.

Cost Recovery Objectives

A primary role of user fees is to recover at least a portion of cost of providing a service. County staff shall develop and recommend to the Council cost recovery goals for services that assess user fees.

Factors that suggest higher cost recovery goals shall include:

1. **Cost-benefit nexus.** There is a strong nexus between the amount paid and benefit received by the customer.

[51] Can be replaced with different example, as needed

2. **Similar to private sector service.** The service in question is similar to those offered by the private sector.

3. **Limiting demand is a goal.** User fees have an important role in limiting demand for the service.

4. **The service is regulatory.** The service is regulatory and those being regulated cause the municipality to incur costs.

Factors suggesting lower cost recovery goals are:

1. **Community-wide benefit.** The service creates significant benefit for the community as a whole, not just the immediate user.

2. **Difficult collection.** Collecting the fee is not cost-effective.

3. **Emergency service.** The service in question is emergency in nature and not planned by the user.

4. **Creates the wrong incentives.** For example, a regulatory fee that is too high may create incentives to disregard the regulation.

Utility rates shall be set at levels sufficient to cover operating expenses, meet debt obligations, provide funding for needed capital improvements and acquisitions, and provide adequate levels of working capital. The County shall strive to eliminate all forms of subsidization to County-owned utilities.

Review Process

Fees will be reviewed and updated on an ongoing basis by the department responsible for administering the fee in order to ensure that fees keep pace with changes in the cost of providing a service as well as changes in methods or levels of service delivery. A comprehensive analysis of a service's costs, the level of service provided, the means by which it is provided, and the fees charged should be made at least every [five years[52]] by the administering department, including a recommendation to the Council for any changes to the fee structure. In the interim, each year the Finance Department and the department that administers the fee in question shall recommend to the Council any adjustments to fees that may be necessary to keep up with known cost increases or that may be needed for the service to meet its cost recovery goals.

[52] Time frame could be somewhat shorter or longer