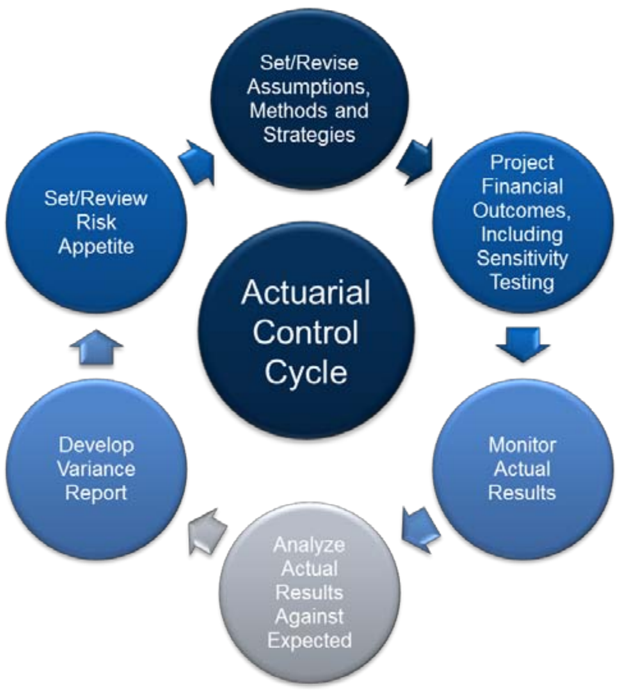
Appendix A – Actuarial Control Cycle



Appendix B – Prototype Report

SIPF Public Pension Plan Research Project
Sponsor Prototype Report Overview

Attached is a rough draft of the desired sponsor prototype report for consideration by the researcher(s) engaged by the SOA on this project. It has been put together by the SIPF Pension Sub-Committee as a starting point for the dialogue with the researcher(s). It is hoped that the researcher(s) can add substantially to the tightening and efficacy of this document.

We expect that the researcher(s) will help to tighten/shape this prototype report. We also expect that as the data is accumulated and analyzed, the report will be further modified to reflect that level of learning.

As described in the request for proposal, the majority of the SIPF Pension Sub-Committee is composed of actuaries working outside of the public pension plan area. A key element of their concern is that the actuarial control cycles frequently used in communication/disclosure/ management of other actuarial liabilities and valuations (e.g., embedded values, economic reserves, etc.) is missing in the management and communications on public pension plans. It is hoped that the research project can bring some of this discipline into the public pension plan governance process.

Exhibit 1
PUBLIC PENSION PLAN ANALYSIS
SPONSOR REPORT PROTOTYPE

Public Pension Analysis – Sponsor Report

As a part of our professional responsibility, XYZ Actuarial has performed the necessary calculations based on the specifications of the prototype report. In developing this report, XYZ studied the design, financials and governance of the pension plan. Detailed information regarding each of these criteria are illustrated below.

Comment [SC1]: Note to researcher(s): We envision that the Plan's actuary would prepare this report.

PLAN DESIGN

A pension plan's design ultimately drives the level of plan benefits, which directly impacts its costs. The **Benefit Formula** of this plan produces a retirement benefit, with a **Target Replacement Ratio** that ranges from 60% at lower income levels to 30% at higher income levels. **Cost of Living Adjustments** have been granted on an ad hoc basis in the past, but none have been granted since 2002. In 2006, the **Definition of Retirement Benefits** was changed to exclude overtime in excess of 10 hours per week and any unused vacation paid at retirement. This reduced the spiking of pension benefits at retirement and improved financial health of the plan. **Benefit Enhancements** are not typically granted and there are no **Employee Contributions**. The plan is **Integrated** with Social Security.

Comment [SC2]: Note to researcher(s): This statement likely will need refinement for larger public employer plans which can be multiple-employer, multiple-Tier, multiple-Plan pension plans.

FINANCIAL CONDITION

As noted earlier, the level of plan benefits drives the cost of the Plan. Financing that cost is accomplished through the payment of contributions (employer and participant) and through earning investment income. With respect to employer contributions, an overall Funding Policy has been established to provide for how much and when employer contributions are to be made to the Plan. That Funding Policy is accomplished through the use of actuarial assumptions and methods as described hereafter.

The **Funding Method** (also known as an **Actuarial Cost Method**) assigns the cost of the plan to each year. We looked at this assignment from three perspectives, accounting standpoint, the funding standpoint and the economic standpoint. See Exhibit 2 for a summary of the plan's funding status with respect to benefits that have been earned to date (accrued) and projected to be earned in the future (future). The funding method chosen by your plan, the *Name of Plan's Funding Method*, (relative to other funding methods), allows for much of the pension funding burden to be shifted to future generations. Further, due to the low turnover in the workforce relative to the funding assumptions, it is expected that projected benefits will continue to outstrip their expectations.

Comment [SC3]: Note to Researcher(s): the name of the actual funding method used by the Plan would be inserted here.

Comment [SC4]: Note to researcher(s): This type of comment will be limited to instances where there are experience studies to support the assumptions.

Another important element in financial health is the set of assumptions with respect to economics, demographics and the funding period. **Economic Assumptions** with respect to return on assets and salary increases are provided in Exhibit 3. Exhibit 3 also contains a summary of key assumptions compared to actual experience. **Demographic Assumptions** are based on characteristics of covered employees of the plan; these are also provided in Exhibit 3 along with a comparison of assumptions against emerging experience. The trustees of the plan have committed to funding current benefits within the average working lifetime of its participants; however this goal for the **Funding Period** has not always been met.

The **funding status** of a plan (i.e., the percentage of accrued benefits that have been funded) is meant to illustrate its overall financial health. As previously acknowledged, the funding status of a plan is dependent on the potential variability of contributions and liabilities due to changes in key assumptions, funding methods, actual contributions, etc. This plan's funding status is 87%, based on plan assumptions and the actuarial cost method chosen to measure the actuarial accrued liability. The use of alternative economic assumptions and alternative funding methods will result in different funding statuses. Please see Exhibit 4 for a table that illustrates how changes in key assumptions and methods will change the liability and actuarial required contribution for the plan.

The final financial area is the source of contributions. Employees contribute, on average, 7% of annual contributions to the plan. The remaining 93% are funded from the state of Anystate, USA. Although the Anystate laws mandate that tax revenues be apportioned for contributions, failure to properly fund them today will force future taxpayers to pay for today's benefits. As the plan's funding status has never risen above 90%, this implies that future taxpayers are bearing the burden of the additional 10% needed to fully fund liabilities.

GOVERNANCE

The credibility of the plan sponsor is evident in the governance of the plan. Like many plans, sponsor could benefit from increased **disclosure**. However, sponsor has been very cooperative in providing us the information for this report. As the plan's actuaries report that contributions have **consistently** ranged within the funding strategy and any **benefit changes have been fully analyzed prior to adoption**. The plan does not include cost of living adjustments, so there are no issues there.

Comment [SC5]: Note to researcher(s): Comments like this would need to reflect actual governance structure of a particular plan.

PUBLIC PENSION PLAN ANALYSIS
SPONSOR REPORT

1. Your Plan Funding of its Promises as outlined in Exhibit 5:
   - Funding of accrued promises to date[1] …………………………………….. ____________
   - Funding of future benefits for current participants ……………….. ____________

[1]Note: "Accrued to date" is dependent on the actuarial cost method in use.

2. Your Plan's Experience Relative to its Funding (Actuarial Valuation) Assumptions:

Key Assumption	Last Year			Last 10 Years*	
	Actual	Assumed		Actual	Assumed
Investment Return					
Actuarial Required Cost (ARC)					
Wage Inflation					
TBD					
TBD					

*Cumulative Result. Note for the ARC, the actual contributions for the last 10 years are compared to the sum of the ARCs for the last 10 years

3. Sensitivity of Results to Alternative Methods (All assumptions as in current plan valuation):

Alternative Funding Method	Accrued Benefits - Existing Participants	Future Benefits - Existing Participants	All Benefits - Existing Participants	Actuarial Required Contribution - Current Year	Funded Status
Current Method					
Method 1					
Method 2					

4. Sensitivity of Results to Key Assumptions:

Comment [SC6]: Note to researcher(s): The only assumption subject to sensitivity testing at this point is the Actuarial Interest Rate. To the extent that changes in other assumptions have a material impact on liabilities, annual required contributions or funded status, they could be added.

Actuarial Interest Rate (AIR) Sensitivity	Accrued Benefits - Existing Participants	Future Benefits - Existing Participants	All Benefits - Existing Participants	Actuarial Required Contribution - Current Year	Funded Status
Increased by 1%					
Decreased by 1%					
Increased by 2 std deviation event					
Decreased by 2 std deviation event					
Equals Risk Neutral Rate					
TBD					

Exhibit 2 – Funded Status – Current Assumptions and Method

Exhibit 3 – Economic and Demographic Assumptions and Experience

Exhibit 4 – Impact of Alternative Assumptions and Methods on Liability, Funding Status and Actuarial Required Contribution

Exhibit 5 – Summary of Plan Benefits, Assumptions and Method

Comment [SC7]: Note to Researcher(s): These exhibits would be completed and included to the extent they contain useful information not provided elsewhere.