

**Actuarial Report on the** 

Valuation of the Plan

As of June 30, 2006

explore excellence





January 12, 2007

Retirement Board Arizona State Retirement System 3300 North Central Avenue 14<sup>th</sup> Floor Phoenix, Arizona 85012

Dear Retirement Board Members:

#### Actuarial Valuation of the Plan as of June 30, 2006

We certify that the information contained in the attached 2006 actuarial valuation report is accurate and fairly presents the actuarial position of the Arizona State Retirement Plan (the Plan) as of June 30, 2006.

We have made all calculations for this report in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the report's results comply with the requirements of the Arizona Constitution and statutes and, where applicable, the Internal Revenue Code, the Employee Retirement Income Security Act of 1974 (ERISA), and the Statements of the Governmental Accounting Standards Board. The undersigned actuaries are independent. They are both Enrolled Actuaries, members of the American Academy of Actuaries and Fellows of the Society of Actuaries. Both are experienced in performing valuations for large public retirement systems.

#### **Actuarial Valuations**

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition. In addition, the report provides information that ASRS requires in connection with Governmental Accounting Standards Board Statement Numbers 25 and 43 (GASB Nos. 25 and 43), and it summarizes census data.

Valuations are performed annually, as of June 30, the last day of both the Plan year and ASRS' fiscal year.

### **Funding Objectives**

The actuarial valuation calculates the contribution rates payable by members and participating employers. These rates, when applied to payroll, yield contribution amounts sufficient to provide for the normal cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL) over the period specified in the statutes. The rate calculated becomes effective for the next Plan year. For example, the rate calculated in the June 30, 2006, valuation report (9.10% for each member and each employer) is applicable for the fiscal year beginning July 1, 2007.

## Funding Progress

The Legislature adopted a stair-step approach to increasing contribution rates, and set the rate at 6.9% for fiscal 2006 and 8.6% for fiscal 2007. The 2006 valuation calculates a rate of 9.10%, to become effective July 1, 2007. These rates do not include contributions to the LTD program. Actual contributions have matched the calculated contributions in recent years and we assume that members and employers will, except for fiscal 2006 and 2007, continue to contribute the actuarially determined amounts. Contributing these amounts ensures the realization of funding objectives.

Section 38-737 of the Arizona Revised Statutes specifies that the UAAL is to be amortized over a rolling 30-year period.

# Benefit Provisions

This valuation reflects the following changes in Plan provisions:

- 1 Legislature limited the ability of ASRS retirees to rescind their elections after retirement. Specifically, members who have chosen a form with a death benefit can "pop up" once to the single life form, but are then not allowed to "pop down" to a death benefit form.
- 2 State statutes were modified to conform to federal regulations regarding military service purchases, optional forms of retirement benefits, and minimum required distributions.
- 3 The legislature repealed the modified Deferred Retirement Option Plan (DROP).

Section 11 gives details of benefit provisions.

### **Assumptions and Methods**

We performed an experience study for the five-year period ended June 30, 2002, and recommended assumption changes based on the findings. On November 21, 2003, the Board adopted our recommended actuarial assumptions, to be effective June 30, 2003.



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On November 15, 2002, the Board adopted a change in the method of valuing actuarial assets – namely, the Board removed the requirement that actuarial assets be within 20% of market value and prospectively changed the period for recognizing investment gains or losses from five to ten years. Section 9 of this report provides details of the assumptions and methods. The assumptions are internally consistent and are reasonably based on the actual experience of the Plan. These assumptions are in full compliance with GASB Nos. 25 and 43.

#### <u>Data</u>

ASRS staff supplied census data for retired, active, and inactive participants as of June 30, 2006. We have not audited these data, but have examined them for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

## Trend Data and Supporting Schedules

ASRS prepared all trend data schedules in the financial section of ASRS' Comprehensive Annual Financial Report (CAFR). ASRS also prepared all supporting schedules in the actuarial section of the CAFR.

We look forward to discussing this report with you at your convenience.

Sincerely,

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Principal and Consulting Actuary

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# **Executive Summary**

Attached is a table summarizing the key results of the June 30, 2006, actuarial valuation of the Arizona State Retirement Plan (the Plan).

## **Demographic Changes**

The number of active members has increased from 212,202 to 217,676, a 2.6% increase. Valuation payroll has increased 3.5% from \$8.032 billion to \$8.312 billion. The payroll for fiscal year 2007 was calculated by projecting the payroll reported for fiscal year 2006 forward one-half year with the salary scale.

#### **Gains and Losses**

The valuation of the Plan reflects a loss on the investment return on the actuarial value of assets of \$479 million. This loss is not due to the investment experience of fiscal 2006. Rather it is due to delayed recognition of losses that have occurred in earlier years. Investment losses are now recognized in actuarial assets over a ten-year period. The yield rate on actuarial assets for the 2006 fiscal year is 6.03% on the pension assets (401(a)) and 4.26% on the health supplement assets (401(h)), compared to last year's returns of 3.20% and 4.99%, respectively. The actuarially assumed rate of return is 8%. There was also a small loss of \$386 million on the liability experience, mostly due to the demographic experience of non-retired members and to the increased value of contribution refunds for withdrawing members.

#### **Changes in Plan Provisions**

This valuation reflects the following changes in Plan provisions:

- Introduced in the 2006 legislative session, Senate Bill 1167 limits the ability of ASRS retirees to rescind their elections after retirement. Specifically, members who have chosen a form with a death benefit can "pop up" once to the single life form, but are then not allowed to "pop down" to a death benefit form.
- Senate Bill 1168 modified state statutes to conform with federal regulations regarding military service purchases, optional forms of retirement benefits, and minimum required distributions.
- House Bill 2103 changed the term "retirement incentive program" to "termination incentive program" in the statutes that require employers that sponsor such programs to pay for them.
- House Bill 2340 repealed the modified Deferred Retirement Option Plan (DROP).

## **Effect on Contribution Rates and Funded Status**

The contribution rate calculated in this valuation will become effective on July 1, 2007, and remain in effect through June 30, 2008. The investment loss on actuarial assets, and the loss on liability experience have caused the Plan's calculated contribution rate to increase. The net result is that the calculated contribution rate will increase from a rate of 8.70% determined in the 2005 valuation report to a rate of 9.10% in this report. Later sections of this report give a detailed explanation of the change in contribution rates.

The recognition of losses has caused the funded status of the total plan (the ratio of actuarial assets to actuarial accrued liabilities) to decrease from 85.3% as of June 30, 2005, to 83.7% as of June 30, 2006. The unfunded actuarial accrued liability has grown during this period from \$4,106.1 million to \$4,845.1 million.

The calculated contribution rate has increased to a level higher than the Plan's normal cost. If the Plan had no unfunded actuarial accrued liability, the contribution rate would be the normal cost rate, i.e., 6.71%, instead of 9.10%.

#### **Reserve for Permanent Benefit Increases**

Since the actuarial investment return (on the actuarial value of assets) of 6.03% is below 8% for fiscal year 2006, there are no additional "Excess Investment Earnings" to be allocated for Permanent Benefit Increases (PBIs).

## **Outlook for Contribution Rates and Permanent Benefit Increases**

Our forecast shows contribution rates continuing to increase, assuming future experience matches our assumptions, as follows:

Contribution Rate for Each Member and Employer						
Effective Date	Closed Group	Open Group				
2007/2008	9.10%	9.10%				
2008/2009	9.34%	8.93%				
2009/2010	9.53%	8.90%				
2010/2011	9.70%	8.86%				
2011/2012	9.86%	8.81%				
2012/2013	10.01%	8.76%				
2013/2014	9.92%	8.56%				
2014/2015	9.77%	8.42%				
2015/2016	9.70%	8.28%				
2016/2017	9.64%	8.16%				

The closed-group forecast brings total asset and liability amounts forward with 8% interest, and adjusts for cash flows, the value of benefits earned, and unrecognized investment gains and losses. The open-group forecast ages the population, anticipates both inward and outward migration and status changes, and performs closed-group valuations for each fiscal year. It anticipates a 2.5% annual growth rate in the active work force.

Even if annual returns on the market value of Plan assets are 9% per annum, we project no Permanent Benefit Increases until after 2012.

The key results of this valuation, compared to those of last year's valuation, are as follows (dollar amounts, other than averages for individual members, are in millions):

	2005	2006
Demographic Information		
Number of Members		
Actives	212,202	217,676
Inactives	149,768	163,527
Receiving benefits	73,853	78,498
Disabled (LTD)	<u>4,939</u>	<u>5,018</u>
Total	440,762	464,719
Covered projected payroll	\$8,032	\$8,312
Average age for actives	44.7	44.7
Average pay for actives	\$37,853	\$38,185
<ul> <li>Average monthly benefit for retirees and beneficiaries</li> </ul>	\$1,508	\$1,566
Average age for retirees and beneficiaries	69.6	69.6
Financial Information		
Total normal cost rate	13.16%	13.41%
<ul> <li>Unfunded actuarial accrued liability</li> </ul>	\$4,106.1	\$4,845.1
<ul> <li>Funded Status of pension (401(a))</li> </ul>	86.1%	84.3%
<ul> <li>Funded Status of health (401(h))</li> </ul>	70.6%	72.1%
<ul> <li>Funded Status of total plan</li> </ul>	85.3%	83.7%
Calculated contribution rate	8.70%	9.10%
Statutory contribution rate	8.70%	9.10%
<ul> <li>Employee and employer contributions</li> </ul>	\$946.7	\$1,265.2
<ul> <li>Benefit and refunded payments</li> </ul>	\$1,510.7	\$1,652.6
Administrative expenses	\$22.2	\$27.6
Net external cash flow	\$(586.2)	\$(415.0)
● PBI		
Additional liability for July 1 <sup>st</sup> PBI	\$305.5	\$0.0
Percentage increase	2.8%	0.0%
Per year of service factor	\$25.90	\$0.0
PBI reserve before July 1 <sup>st</sup> PBI	\$0.0	\$0.0

	2005	2006
Actuarial gains (losses)		
Assets	\$(1,100)	\$(479)
Liability experience	\$(435)	\$(386)
Legislative and administrative changes	\$(7)	\$(300)
Assumption changes	N/A	N/A
Method change	N/A	N/A
Total	\$(1,542)	\$(565)
GASB 25 disclosure (401(a) pension only)		
Actuarial Accrued Liability (AAL)	\$26,486	\$28,192
Unfunded AAL (Surplus)	\$3,678	\$4,426
Actuarial Value of Assets as % of AAL	86.1%	84.3%
Unfunded AAL (Surplus) as % of payroll	45.8%	53.2%
GASB 43 disclosure (401(h) plan only)		
Actuarial Accrued Liability (AAL)	\$1,456	\$1,505
Unfunded AAL (Surplus)	\$428	\$420
Actuarial Value of Assets as % of AAL	70.6%	72.1%
Unfunded AAL (Surplus) as % of payroll	5.3%	5.0%
Changes in contribution rate:		
ltem	Contribution Rate	Change in Rate
1. 2005 valuation	8.68%	_
2. Delay in contribution rate change	8.64%	04%
3. 2005 / 2006 liability experience	8.92%	+.28%
4. 2005 / 2006 asset experience	9.15%	+.23%
5. Legislative changes	9.15%	+.00%
6. Administrative changes (Payroll Projection)	9.10%	05%
7. Rounding to the nearest 0.05%	9.10%	+.00%

Split of Total Contribution Rate:						
Item	401(a) Account	401(h) Account	Total			
1. Employee Contribution Rates	9.10%	0.00%	9.10%			
2. Employer Contribution Rates	<u>8.05%</u>	<u>1.05%</u>	<u>9.10%</u>			
3. Total Contribution Rates	17.15%	1.05%	18.20%			

# • Asset Amounts, Returns on Assets, and Funded Status

	2005		2006	
Asset Amounts	Market Value	Actuarial Value	Market Value	Actuarial Value
Pension 401(a)	\$21,029	\$22,808	\$22,671	\$23,767
Health 401(h)	\$ 872	\$1,028	\$ 970	\$1,085
Total Plan	\$21,901	\$23,836	\$23,641	\$24,852
Asset Yields	Market Value	Actuarial Value	Market Value	Actuarial Value
Pension 401(a)	8.42%	3.20%	9.83%	6.03%
Health 401(h)	8.42%	4.99%	9.74%	4.26%
Total Plan	8.42%	3.27%	9.82%	5.95%
Liabilities				
Pension 401(a)	\$26,486	\$26,486	\$28,192	\$28,192
Health 401(h)	\$1,456	\$1,456	\$1,505	\$1,505
Total Plan	\$27,943	\$27,943	\$29,697	\$29,697
Funded Status	Market Value	Actuarial Value	Market Value	Actuarial Value
Pension 401(a)	79.4%	86.1%	80.4%	84.3%
Health 401(h)	59.8%	70.6%	64.5%	72.1%
Total Plan	78.4%	85.3%	79.6%	83.7%

### Introduction

The primary purpose of the actuarial valuation is to determine the required member and employer contribution rates in accordance with the actuarial funding policy specified in Section 38-737 of the Arizona Revised Statues, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition. In addition, the report provides information that ASRS requires in connection with Governmental Accounting Standards Board Statement Numbers 25 and 43 (GASB Nos. 25 and 43), and it summarizes census data. The valuation covers both the 401(a) pension plan and the 401(h) health supplement plan.

The actuarial valuation of the Plan as of June 30, 2006, determines the contribution rate for fiscal year 2008. Based on the results of the 2006 Plan valuation, the contribution rate for the fiscal year beginning July 1, 2007 would increase from the 8.60% rate fixed by legislative action to 9.10% of compensation. Legislative action fixed the rates for fiscal 2006 and 2007 at 6.90% and 8.60%, respectively.

#### **Assets**

This section shows the change in the assets during the year, calculates the yield on assets for the Plan, and determines the actuarial value of assets under the asset valuation method that was adopted on November 15, 2002, by Board action.

#### **Market Value of Assets**

The market value of assets represents the fair market value of assets as of June 30, 2005, and June 30, 2006, as reported by ASRS.

### **Actuarial Value of Assets**

The actuarial value of assets method starts with the market value of assets and is modified by the difference between expected investment return and actual investment return. Effective June 30, 2002, 10% of this difference is recognized in the valuation immediately following the year in which it occurs. The remaining 90% is deferred until future valuations, with an additional 10% recognized in each subsequent valuation, until 100% of the difference is recognized in the tenth year. There is no corridor requiring the actuarial value to be within a given percentage of the market value. The Board adopted this actuarial valuation method on November 15, 2002. The phase-in period was five-years and there was a 20% corridor around market values prior to June 30, 2002.

The market value of assets as of June 30, 2006, was \$23,641,112,938 and the actuarial value of assets under this method was \$24,851,522,776, or about 105% of market value as of June 30, 2006. The combined 401(a) and 401(h) deferral amount for the year is -\$1.210 billion. That is, \$1.210 billion of investment losses will be recognized in future valuations.

#### **Asset Returns**

To determine the estimated yield for the year, the traditional insurance company measurement of yield has been used. This equation is:

$$2I/(A + B - I)$$
.

In this equation, I is net investment income for the asset valuation method, A is the beginning of the year asset value, and B is the end of the year asset value. This equation essentially assumes that income, revenue, and expenditures are evenly distributed throughout the year.

During the twelve months ended June 30, 2006, the Plan has an estimated yield of 6.03% on the 401(a) actuarial assets and 4.26% on the 401(h) actuarial assets for the year, compared to the actuarial assumed rate of 8%. The Plan assets had an investment return of 9.83% on the 401(a) market assets and 9.74% on the 401(h) market assets.

The Plan's assets are split between the retirement program (401(a)) and the health premium supplement program (401(h)) as follows:

Item	401(a) Account	401(h) Account	Total
1. Market Value of Assets	\$22,671,365,333	\$969,747,605	\$23,641,112,938
2. Actuarial Value of Assets	\$23,766,572,590	\$1,084,950,186	\$24,851,522,776

Exhibit 3.1a - Change in Assets During the Year (401(a) Only)

	Year Ending June 30, 2005	Year Ending June 30, 2006
1. Market value, beginning of year	\$19,940,524,999	\$21,029,388,861
2. Contributions and receipts during the year		
a. Employee contributions	403,269,191	570,581,044
b. Employer contributions	317,919,116	477,119,869
<ul> <li>c. Member reimbursements of employee contributions</li> </ul>	140,158,838	124,023,872
<ul> <li>d. Member reimbursements of employer contributions</li> </ul>	0	0
e. Other miscellaneous receipts		
f. Total	861,347,145	1,171,724,785
Investment income for the year (net of investment expenses)	1,676,324,824	2,073,186,347
4. Benefit payments		
<ul> <li>Retirement and disability benefits</li> </ul>	(1,360,661,231)	(1,495,179,977)
b. Death benefits	(18,402,496)	(16,944,649)
c. Total	(1,379,063,727)	(1,512,124,626)
5. Refunds of contributions	(42,026,148)	(59,696,449)
6. Employer adjustments	0	0
7. Administrative expenses	(21,373,984)	(26,555,563)
8. Miscellaneous	(3,536,089)	(1,155,568)
9. Other		
a. Transfers from Plan	1,773,298	1,726,971
b. Reimbursements and lump sums	0	0
c. Transfers to PSPRS	(4,581,457)	(5,129,425)
d. Increase System retired reserves	0	0
e. Employer contributions released	0	0
f. Supplemental credits	N/A	N/A
g. Transfers from System	0	0
h. Total	(2,808,159)	(3,402,454)
10. Change in audited assets, beginning of year	0	0
11. Total change in market value	1,088,863,862	1,641,976,472
12. Market value, end of year	\$21,029,388,861	\$22,671,365,333

Exhibit 3.1b - Change in Assets During the Year (401(h) Only)

	Year Ending June 30, 2005	Year Ending June 30, 2006
Market value, beginning of year	\$ 808,048,248	\$ 871,636,743
2. Contributions and receipts during the year		
a. Employee contributions	0	0
b. Employer contributions	85,350,074	93,461,175
<ul> <li>c. Member reimbursements of employee contributions</li> </ul>	0	0
<ul> <li>d. Member reimbursements of employer contributions</li> </ul>	0	0
e. Other miscellaneous receipts	0	0
f. Total	85,350,074	93,461,175
Investment income for the year (net of investment expenses)	68,749,368	86,550,526
4. Benefit payments	(89,602,086)	(80,827,041)
5. Refunds of contributions	0	0
6. Employer adjustments	0	0
7. Administrative expenses	(875,018)	(1,073,798)
8. Miscellaneous	(33,844)	0
9. Other	0	0
10. Change in audited assets, beginning of year	0	0
11. Total change in market value	63,588,494	98,110,862
12. Market value, end of year	\$ 871,636,743	\$ 969,747,605

Exhibit 3.2a - Calculation of Excess Investment Income for Actuarial Value of Assets (401(a) Only)

	Plan Year Ending June 30,			
Item	2003	2004	2005	2006
Market value of assets, beginning of year	17,812,242,996	17,418,714,865	19,940,524,999	21,029,388,861
Contributions during year	371,265,972	786,303,859	861,347,145	1,171,724,785
3. Benefits paid during year	(1,042,295,182)	(1,208,704,786)	(1,379,063,727)	(1,512,124,626)
4. Refunds paid during year	(34,948,463)	(34,006,055)	(42,026,148)	(59,696,449)
5. Administrative expenses, assumed end of year	(20,538,703)	(22,791,105)	(21,373,984)	(26,555,563)
6. Other changes and net transfers	(5,472,629)	(6,846,763)	(6,338,562)	(4,558,022)
7. Net investment income for year	318,922,184	2,985,063,876	1,654,950,840	2,046,630,784
8. Expected net investment income at 8%				
<ul> <li>a. Market value of assets, beginning of year</li> </ul>	1,424,979,440	1,393,497,189	1,595,242,000	1,682,351,109
b. Contributions	14,850,639	31,452,154	34,453,886	46,868,991
c. Benefits	(45,166,125)	(52,377,207)	(59,759,428)	(65,525,400)
d. Refunds	(1,437,939)	(1,360,242)	(1,681,046)	(2,387,858)
e. Administrative expenses	0	0	0	0
f. Other	(218,905)	(273,871)	(253,542)	(182,321)
g. Total	1,393,007,110	1,370,938,023	1,568,001,870	1,661,124,521
9. Excess investment income for year (Item 7 - Item 8.g.)	\$ (1,074,084,926)	\$ 1,614,125,853	\$ 86,948,970	\$ 385,506,263

Exhibit 3.2b - Calculation of Excess Investment Income for Actuarial Value of Assets (401(h) Only)

	Plan Year Ending June 30,						
Item		2003		2004	2005		2006
Market value of assets, beginning of year		768,846,996		698,106,059	808,048,248		871,636,743
2. Contributions during year		4,256,357		79,662,201	85,350,074		93,461,175
3. Benefits paid during year		(84,533,693)		(83,680,261)	(89,602,086)		(80,827,041)
4. Refunds paid during year		0		0	0		0
5. Administrative expenses, assumed end of year		(857,269)		(853,105)	(875,018)		(1,073,798)
6. Other changes and net transfers		0		(92,117)	(33,844)		0
7. Net investment income for year		9,536,398		114,052,367	67,874,350		85,476,728
8. Expected net investment income at 8%							
a. Market value of assets, beginning of year		61,507,760		55,848,485	64,643,860		69,730,939
b. Contributions		170,254		3,186,488	3,414,003		3,738,447
c. Benefits		(3,663,127)		(3,626,145)	(3,882,757)		(3,502,505)
d. Refunds		0		0	0		0
e. Administrative expenses		0		0	0		0
f. Other		0		(3,685)	 (1,354)		(1,354)
g. Total		58,014,887		55,405,143	 64,173,752		69,966,881
9. Excess investment income for year (Item 7 - Item 8.g.)	\$	(48,478,489)	\$	58,647,224	\$ 3,700,598	\$	15,509,847

Exhibit 3.3a - Development of Actuarial Value of Assets (401(a) Only)

Item		Valuation as of June 30, 2005	Valuation as of June 30, 2006
Excess (shortfall) of in current year and previous			
a. Current year		\$ 86,948,970	\$ 385,506,263
b. Current year - 1		1,614,125,853	86,948,970
c. Current year - 2		(1,074,084,926)	1,614,125,853
d. Current year - 3		(3,994,318,422)	(1,074,084,926)
e. Current year - 4			(3,994,318,422)
Deferral of excess (shortfall) of investment income for:			
a. Current year	(90% deferral)	\$ 78,254,073	\$ 346,955,637
b. Current year - 1	(80% deferral)	1,291,300,682	69,559,176
c. Current year - 2	(70% deferral)	(751,859,448)	1,129,888,097
d. Current year - 3	(60% deferral)	(2,396,591,053)	(644,450,956)
e. Current year - 4	(50% deferral)		(1,997,159,211)
f. Total deferred for ye	ear	\$(1,778,895,746)	\$(1,095,207,257)
3. Market value of plan assets, end of year		\$21,029,394,547	\$22,671,365,333
4. Actuarial value of plan (Item 3 - Item 2.e.)	assets, end of year	\$22,808,290,293	\$23,766,572,590

Exhibit 3.3b - Development of Actuarial Value of Assets (401(h) Only)

Iten		aluation as of June 30, 2005		/aluation as of June 30, 2006		
Excess (shortfall) of involution     current year and previous     Table 9b):						
a. Current year		\$	3,700,598	\$	15,509,847	
b. Current year - 1			58,647,224		3,700,598	
c. Current year - 2			(48,478,489)		58,647,224	
d. Current year - 3		(	(288,175,769)	(48,478,488)		
e. Current year - 4			(	(288,175,769)		
Deferral of excess (shortfall) of investment income for:						
a. Current year	(90% deferral)	\$	3,330,538	\$	13,958,862	
b. Current year - 1	(80% deferral)		46,917,779		2,960,478	
c. Current year - 2	(70% deferral)	(33,934,942)		41,053,057		
d. Current year - 3	(60% deferral)	(172,905,462)		(29,087,093)		
e. Current year - 4	(50% deferral)		_		(144,087,885)	
f. Total deferred for ye	ar	\$ (	(156,592,087)	\$	(115,202,581)	
3. Market value of plan assets, end of year			871,636,743	\$	969,747,605	
4. Actuarial value of plan (Item 3 - Item 2.e.)	assets, end of year	\$1	,028,228,830	\$1	,084,950,186	

Exhibit 3.4a - Actual Versus Expected Actuarial Assets (401(a) Only)

Item	Valuation as of June 30, 2005	Valuation as of June 30, 2006
Actuarial assets, beginning of year	\$22,659,396,325	\$22,808,290,293
2. Total contributions during year	861,347,145	1,171,724,785
3. Benefits paid during year	(1,379,063,727)	(1,512,124,626)
4. Refunds paid during year	(42,026,148)	(59,696,449)
5. Expenses (other than investment) for the year	0	0
6. Other changes and net transfers	(6,338,562)	(4,558,022)
7. Assumed net investment income at 8%		
a. Beginning of year assets	1,812,751,706	1,824,663,223
b. Contributions	34,453,886	46,868,991
c. Benefits	(59,759,428)	(65,525,400)
d. Refunds	(1,681,046)	(2,387,858)
e. Expenses	0	0
f. Other	(253,542)	(182,321)
g. Total	\$1,785,511,576	\$1,803,436,635
Expected actuarial assets, end of year     (Sum of Items 1 through 7)	\$23,878,826,609	\$24,207,072,616
9. Actual actuarial assets, end of year	\$22,808,290,293	\$23,766,572,590
10. Asset gain/(loss) for year (Item 9 - Item 8)	\$(1,070,536,316)	\$ (440,500,026)

Exhibit 3.4b - Actual Versus Expected Actuarial Assets (401(h) Only)

Item	Valuation as of June 30, 2005	Valuation as of June 30, 2006
Actuarial assets, beginning of year	\$ 983,508,438	\$1,028,228,830
2. Total contributions during year	85,350,074	93,461,175
3. Benefits paid during year	(89,602,086)	(80,827,041)
4. Refunds paid during year	0	0
5. Expenses (other than investment) for the year	0	0
6. Other changes and net transfers	(33,844)	0
7. Assumed net investment income at 8%		
a. Beginning of year assets	78,680,675	82,258,306
b. Contributions	3,414,003	3,738,447
c. Benefits	(3,882,757)	(3,502,505)
d. Refunds	0	0
e. Expenses	0	0
f. Other	(1,354)	0
g. Total	\$ 78,210,567	\$ 82,494,248
8. Expected actuarial assets, end of year (Sum of Items 1 through 7)	\$1,057,433,149	\$1,123,357,212
9. Actual actuarial assets, end of year	\$1,028,228,830	\$1,084,950,186
10. Asset gain/(loss) for year (Item 9 - Item 8)	\$ (29,204,319)	\$ (38,407,026)

Exhibit 3.5a - Estimate of Yields for the Year (401(a) Only)

	Basis of Assets		
Item	Market Value	Actuarial Value	
Net investment income for the year (including net realized gains and net of investment expenses)	\$ 2,073,186,347	\$ 1,389,492,172	
2. Administrative expenses for the year	\$ 26,555,563	\$ 26,555,563	
3. Net investment income for the asset valuation method (Item 1 - Item 2 = I)	\$ 2,046,630,784	\$ 1,362,936,609	
4. Beginning of year asset value (A)	\$21,029,388,861	\$22,808,290,293	
5. End of year asset value (B)	\$22,671,365,333	\$23,766,572,590	
6. Estimated yield based on 2I / (A + B - I)	9.83%	6.03%	

Exhibit 3.5b - Estimate of Yields for the Year (401(h) Only)

	Basis of Assets			sets
Item		Market Value	Α	ctuarial Value
Net investment income for the year (including net realized gains and net of investment expenses)	\$	86,550,526	\$	45,161,020
2. Administrative expenses for the year	\$	1,073,798	\$	1,073,798
3. Net investment income for the asset valuation method (Item 1 - Item 2 = I)	\$	85,476,728	\$	44,087,222
4. Beginning of year asset value (A)	\$	871,636,743	\$ 1	1,028,228,830
5. End of year asset value (B)	\$	969,747,605	\$ 1	1,084,950,186
6. Estimated yield based on 2I / (A + B - I)		9.74%		4.26%

**Exhibit 3.6 - History of Cash Flow** 

		Expenditures During the Year						
Year Ending June 30,	Contributions for the Year	Benefit Payments	Refunds of Contributions	Administrative Expenses <sup>1</sup>	Total	External Cash Flow for the Year	End of Year Market Value of Assets	External Cash Flow as Percentage of Market
1988	\$ 226,391,986	\$ (184,014,825)	\$ (32,440,739)	\$ (1,858,980)	\$ (218,314,544)	\$ 8,077,442	\$ 6,354,326,735	0.1%
1989	309,456,756	(211,706,362)	(32,763,953)	(2,796,196)	(247,266,511)	62,190,245	7,314,715,626	0.1%
1990	129,780,928	(291,865,604)	(31,871,455)	(3,016,679)	(326,753,738)	(196,972,810)	7,784,051,423	(2.5%)
1991	267,194,502	(313,739,121)	(27,329,212)	(4,889,991)	(345,958,324)	(78,763,822)	8,298,777,637	(0.9%)
1992	265,305,634	(351,219,516)	(24,689,694)	(6,282,138)	(382,191,348)	(116,885,714)	9,375,565,917	(1.2%)
1993	278,158,497	(414,519,290)	(21,419,534)	(5,774,866)	(441,713,690)	(163,555,193)	10,712,781,278	(1.5%)
1994	256,841,228	(445,763,795)	(22,516,743)	(5,222,224)	(473,502,762)	(216,661,534)	10,680,073,807	(2.0%)
1995	326,663,838	(484,729,970)	(24,364,930)	(5,826,425)	(514,921,325)	(188,257,487)	12,356,078,492	(1.5%)
1996 <sup>2</sup>	299,724,778	(510,236,051)	(26,307,534)	(5,345,583)	(541,889,168)	(242,164,390)	13,917,637,400	(1.7%)
1997 <sup>2</sup>	309,394,448	(550,078,719)	(30,838,244)	(6,740,459)	(587,657,422)	(278,262,974)	16,397,938,329	(1.7%)
1998 <sup>2</sup>	321,349,998	(598,804,992)	(29,749,907)	(8,386,901)	(636,941,800)	(315,591,802)	19,389,956,806	(1.6%)
1999 <sup>2</sup>	347,970,526	(652,854,456)	(26,089,213)	(9,932,871)	(688,876,540)	(340,906,014)	21,836,381,722	(1.6%)
2000 <sup>2</sup>	283,772,496	(723,611,965)	(64,976,507)	(10,775,218)	(799,363,690)	(515,591,194)	23,187,551,913	(2.2%)
2001 <sup>2</sup>	367,191,042	(828,545,637)	(91,824,591)	(9,843,046)	(930,213,274)	(563,022,232)	21,872,916,420	(2.6%)
2002 <sup>2</sup>	321,775,573	(986,288,636)	(42,765,105)	(15,375,486)	(1,044,429,227)	(722,653,654)	18,594,856,337	(3.9%)
2003 <sup>2</sup>	375,522,329	(1,126,828,875)	(35,948,463)	(21,395,972)	(1,184,173,310)	(808,650,981)	18,116,820,935	(4.5%)
2004 <sup>2</sup>	865,966,060	(1,292,412,047)	(34,006,055)	(23,644,210)	(1,350,062,312)	(484,076,252)	20,748,573,247	(2.3%)
2005 <sup>2</sup>	946,697,219	(1,468,665,813)	(42,026,148)	(22,249,002)	(1,532,940,963)	(586,243,744)	21,901,025,604	(2.7%)
2006 <sup>2</sup>	1,265,185,960	(1,592,951,667)	(59,696,449)	(27,629,361)	(1,680,277,477)	(415,091,517)	23,641,112,938	(1.8%)

<sup>1</sup> Including LTD management fees prior to 1996 2 401(a) assets and 401(h) assets combined

# **Actuarial Balance Sheet**

The results of the actuarial valuation of the Plan as of June 30, 2005, and June 30, 2006, are summarized in the actuarial balance sheet in Exhibit 4.1. The results for 2006 are based on the benefit provisions of the Plan as of June 30, 2006, as summarized in Section 11, and on the actuarial assumptions and methods shown in Section 9.

# **Exhibit 4.1 - Actuarial Balance Sheet**

# **ACTUARIAL ASSETS**

	June	30,
	2005	2006
Present Assets At Actuarial Value:     Reserve for retired members and     Beneficiaries	\$12,831,725,476	\$14,175,090,544
Reserve for disabled members	374,502,413	391,353,515
3. Reserve for other-than-plan retirees	11,200,495	10,303,196
<ul><li>4. Reserve for PBI COLAs</li><li>(a) Reserve for July 1st COLA</li><li>(b) Reserve for future COLAs</li></ul>	305,477,344 0	0 0
<ul><li>5. Employee contributions</li><li>(a) Plan members</li><li>(b) System members</li></ul>	3,717,945,957 N/A	4,168,243,157 N/A
<ul><li>6. Employer contributions</li><li>(a) Plan</li><li>(b) System</li></ul>	3,455,209,735 N/A	3,866,271,823 N/A
<ul><li>7. Other miscellaneous</li><li>(a) ASRS building and land</li><li>(b) Other</li></ul>	0 0	0 0
8. Additional assets	1,204,969,870	1,029,850,703
9. Total present assets	\$21,901,031,290	\$23,641,112,938
Adjustment to book value due to actuarial asset valuation method	1,935,487,833	1,210,409,838
11. Total actuarial value of present assets	\$23,836,519,123	\$24,851,522,776
II <u>Prospective Assets</u> : 12. Unfunded actuarial accrued liability	4,106,082,162	4,845,108,486
13. TOTAL ACTUARIAL ASSETS	\$27,942,601,285	\$29,696,631,262

**Exhibit 4.1 - Actuarial Balance Sheet** 

# **ACTUARIAL LIABILITIES**

	Jun	e 30,
	2005	2006
III Present Value of Benefits Presently Being Paid:		
14. (a) Benefits for retired members and beneficiaries	\$12,316,501,912	\$13,632,850,197
(b) Health insurance premium supplement	515,223,564	542,240,347
15. (a) Benefits for disabled members	345,385,807	362,552,747
(b) Health insurance premium supplement	29,116,606	28,800,768
16. (a) Benefits for other-than-plan participants	3,255,636	2,783,868
(b) Health insurance premium supplement	7,944,859	7,519,328
<ol> <li>Total present value of benefits presently Being paid</li> </ol>	\$13,217,428,384	\$14,576,747,255
IV <u>Present Value of Benefits Payable In the</u> <u>Future to Present Members:</u> 18. Active members		
(a) Service retirement benefits	\$11,605,799,504	\$12,081,068,875
(b) Health insurance premium supplement	904,119,388	925,980,765
(c) Disability retirement benefits	226,127,610	231,056,573
(d) Pre-retirement death benefits	266,206,539	281,283,613
(e) Withdrawal benefits	387,484,834	465,307,150
(f) Total active members	\$13,389,737,875	\$13,984,696,976
19. Inactive members	1,029,957,682	1,135,187,031
20. Total	\$27,637,123,941	\$29,696,631,262
V Other Liabilities And Reserves:		
21. Reserve for other miscellaneous liabilities		
and reserves	0	0
22. Reserve for PBI COLAs	\$305,477,344	\$0
23. TOTAL ACTUARIAL LIABILITIES	\$27,942,601,285	\$29,696,631,262

**Exhibit 4.2 - Relative Size of Unfunded Actuarial Accrued Liability** 

		Relative to A Cover Payro	red	Relative to Act of Present			to Total Actuarial Liabilities	
Year	Unfunded Actuarial Accrued	Covered	Percent of	Present	Percent of	Actuarial	Percent of	
Ending June 30,	Liability in Millions	Payroll in Millions	Covered Payroll	Assets in Millions	Present Assets	Liabilities in Millions	Actuarial Liabilities	
1980	\$ 436	\$ 1,373	31.8%	\$ 1,631	26.7%	\$ 3,400	12.8%	
1981	364	1,567	23.2%	1,982	18.4%	3,946	9.2%	
1982	472	1,734	27.2%	2,255	20.9%	4,547	10.4%	
1983	301	1,841	16.3%	2,777	10.8%	5,009	6.0%	
1984	248	1,906	13.0%	3,174	7.8%	5,351	4.6%	
1985	301	2,120	14.2%	3,654	8.2%	5,874	5.1%	
1986	95	2,361	4.0%	4,538	2.1%	6,718	1.4%	
1987	(129)	2,478	(5.2%)	5,531	(2.3%)	7,636	(1.7%)	
1988	(292)	2,818	(10.3%)	6,000	(4.9%)	8,251	(3.5%)	
1989	(510)	2,994	(17.0%)	6,686	(7.6%)	6,176	(8.3%)	
1990	(552)	3,212	(17.2%)	7,297	(7.6%)	6,745	(8.2%)	
1991	(654)	3,453	(18.9%)	7,822	(8.4%)	7,168	(9.1%)	
1992	(632)	3,616	(17.5%)	8,842	(7.1%)	8,210	(7.7%)	
1993	(849)	3,748	(22.7%)	9,770	(8.7%)	8,921	(9.5%)	
1994	(872)	4,126	(21.1%)	10,540	(8.3%)	9,668	(9.0%)	
1995	(1,217)	4,432	(27.5%)	11,521	(10.6%)	10,304	(11.8%)	
1996	(1,468)	4,632	(31.7%)	12,579	(11.7%)	11,111	(13.2%)	
1997	(1,784)	4,836	(36.9%)	14,169	(12.6%)	12,385	(14.4%)	
1998	(2,530)	5,164	(49.0%)	16,168	(15.6%)	13,638	(18.6%)	
1999	(2,639)	5,488	(48.1%)	18,761	(14.1%)	16,122	(16.4%)	
2000	(3,578)	5,894	(60.7%)	21,127	(16.9%)	17,549	(20.4%)	
2001	(2,587)	6,357	(40.7%)	22,855	(11.3%)	20,269	(12.8%)	
2002	(1,036)	6,989	(14.8%)	23,623	(4.4%)	22,587	(4.6%)	
2003	787	7,297	10.8%	23,517	3.3%	24,304	3.2%	
2004	2,275	7,486	30.4%	23,643	9.6%	25,918	8.8%	
2005	4,106	8,032	51.1%	23,837	17.2%	27,943	14.7%	
2006	4,845	8,312	58.3%	24,852	19.5%	29,697	16.3%	

# **Contribution Rates**

#### **Normal Cost**

Exhibit 5.1 indicates that the normal cost as of June 30, 2006, is 13.41% of pay, compared to 13.16% in the 2005 valuation. This normal cost is developed based on the prescribed Projected Unit Credit (PUC) actuarial valuation method. It includes both employer and member components.

### **Summary of Cost Items**

Exhibit 5.2 compares a number of the key actuarial items for the 2006 valuation with the corresponding items for the 2005 valuation.

#### **Contribution Rates**

The employer and member contribution rates are each determined as one-half of the percent of pay needed to pay the normal cost of the Plan and to amortize the Unfunded Actuarial Accrued Liability (UAAL). For the June 30, 2006, valuation, the normal cost of the Plan is 13.41% and the amortization of the UAAL is 4.79%. So the calculated employer and member rates are equal to:

$$\frac{1}{2}$$
 x (13.41% + 4.79%) = 9.10%.

The contribution rates are then rounded to the nearest 0.05%, i.e., to 9.10% for each employee and employer.

If the UAAL of the Plan were eliminated, the employer and member rates would be:

$$\frac{1}{2}$$
 x (13.41% - 0.00%) = 6.71%.

This difference of 2.39% (i.e., 9.10% - 6.71%) is due totally to the UAAL of the Plan. Thus, the current UAAL of the Plan is equivalent to a 2.39% increase in the employer and member contribution rates determined by the 2006 valuation.

The member and employer contribution rates determined by the 2006 valuation are each 9.10% of compensation. Because of the separation of the health premium supplement into the 401(h) account, we must split the contribution rates into 401(a) and 401(h) portions. We have assumed that all member contributions will be contributed to the 401(a) account. This assumption is made to avoid any possible qualification problems due to refunds of employee contributions. The contribution rates may be allocated as shown below:

ltem	401(a) Account	401(h) Account	Total
1. Member Contribution Rates	9.10%	0.00%	9.10%
2. Employer Contribution Rates	<u>8.05%</u>	<u> 1.05%</u>	9.10%
3. Total Contribution Rates	17.15%	1.05%	18.20%

**Exhibit 5.1 - Analysis of Normal Cost by Component** 

	Normal Cost as % of Pay			
Benefit Component	2005	2006		
Retirement benefits	10.22%	10.21%		
2. Health insurance premium supplement	0.64%	0.63%		
3. Disability benefits (Deferred Retirement)	0.39%	0.38%		
4. Death benefits	0.32%	0.35%		
5. Termination benefits				
a. Refunds	0.40%	0.46%		
b. Vested deferred benefits	1.19%	1.38%		
c. Total	1.59%	1.84%		
6. Total	13.16%	13.41%		

Exhibit 5.2 - Summary of Cost Items

	Valuation as June 30, 20		Valuation as June 30, 20	
	Cost Item	Cost as % of Pay	Cost Item	Cost as % of Pay
Participants     a. Active members	212,202	,	217,676	·
b. Inactive members     c. Retired members	149,768		163,527	
and beneficiaries d. Disabled retirees	73,853 4,939		78,498 5,018	
e. Total	440,762		464,719	
f. Other-than-plan retirees receiving benefit increases from the Plan	765		686	
2. Covered Payroll	\$ 8,032,457,947		\$ 8,311,869,615	
Averages for active members     a. Average age     b. Average years of service     c. Average pay	44.7 8.5 37,853		44.7 8.5 38,185	
4. Normal cost rate	13.16%		13.41%	
<ul> <li>5. Actuarial accrued liability</li> <li>a. Retired members and beneficiaries</li> <li>b. Disabled members</li> <li>c. Benefits for other- than-plan retirees</li> <li>d. Active members</li> <li>e. Inactive members</li> <li>f. Reserve for PBI COLAs</li> <li>g. Total</li> </ul>	\$ 12,831,725,476 374,502,413 11,200,495 13,389,737,875 1,029,957,682 305,477,344 27,942,601,285	347.9%	\$ 14,175,090,544 391,353,515 10,303,196 13,984,696,976 1,135,187,031 0 29,696,631,262	357.3%
Present actuarial assets	\$ 23,836,519,123	296.8%	\$ 24,851,522,776	299.0%
Unfunded actuarial     accrued liability	\$ 4,106,082,162	51.1%	\$ 4,845,108,486	58.3%

Exhibit 5.2 – Summary of Cost Items

	Valuation as of June 30, 2005		Valuation as of June 30, 2006	
	Cost Item	Cost as % of Pay	Cost Item	Cost as % of Pay
Section 38-737     funding period	30 years		30 years	
9. Section 38-737 contribution rate A. 401(a) Account				
a. Employee	8.70%		9.10%	
b. Employer	7.62%		8.05%	
c. Total	16.32%		17.15%	
B. 401(h) Account				
a. Employee	0.00%		0.00%	
b. Employer	1.08%		1.05%	
c. Total	1.08%		1.05%	
C. Total of Combined Accounts				
a. Employee	8.70%		9.10%	
b. Employer	8.70%		9.10%	
c. Total	17.40%		18.20%	
10. Estimated yield on 401(a) actuarial assets	3.20%		6.03%	
Relative size of unfunded actuarial accrued liability				
a. As percentage of actuarial assets	17.2%		19.5%	
b. As percentage of covered payroll	51.1%		58.3%	
c. As percentage of total actuarial accrued liability	14.7%		16.3%	

**Exhibit 5.3 - History of Contribution Rates** 

	Calculate	d Rates	Actual Rates		Total Rate	
Fiscal Year Beginning July 1	Employee	Employer	Employee	Employer	Calculated	Actual
uny :	p.ojoo	p		p.oyo.		7 100001
1980	7.00	6.28	7.00	7.00	13.28	14.00
1981	7.00	6.29	7.00	7.00	13.29	14.00
1982	7.00	5.79	7.00	7.00	12.79	14.00
1983	7.00	6.04	7.00	7.00	13.04	14.00
1984	6.27	6.27	6.27	6.27	12.54	12.54
1985	5.67	5.67	5.67	5.67	11.34	11.34
1986	5.53	5.53	5.53	5.53	11.06	11.06
1987	5.16	5.16	4.00	4.00	10.32	8.00
1988	5.09	5.09	5.09	5.09	10.18	10.18
1989	4.69	4.69	2.00	2.00	9.38	4.00
1990	3.82	3.82	3.82	3.82	7.64	7.64
1991	3.60	3.60	3.60	3.60	7.20	7.20
1992	3.59	3.59	3.59	3.59	7.18	7.18
1993	4.09	4.09	3.14	3.14	8.18	6.28
1994	3.75	3.75	3.75	3.75	7.50	7.50
1995	3.95	3.95	3.36	3.36	7.90	6.72
1996	3.20	3.20	3.20	3.20	6.40	6.40
1997	3.05	3.05	3.05	3.05	6.10	6.10
1998	2.85	2.85	2.85	2.85	5.70	5.70
1999	2.17	2.17	2.17	2.17	4.34	4.34
2000	2.73 <sup>1</sup>	2.73 <sup>1</sup>	2.17	2.17	5.46 <sup>1</sup>	4.34
2001	1.92	1.92	2.00	2.00	3.84	4.00
2002	3.86 <sup>1</sup>	3.86 <sup>1</sup>	2.00	2.00	7.72 <sup>1</sup>	4.00
2003	5.20	5.20	5.20	5.20	10.40	10.40
2004	6.96 <sup>1</sup>	6.96 <sup>1</sup>	5.20	5.20	13.92 <sup>1</sup>	10.40
2005	7.75	7.75	6.90 <sup>2</sup>	$6.90^{2}$	15.50	13.80 <sup>2</sup>
2006	8.70 <sup>1</sup>	8.70 <sup>1</sup>	8.60 <sup>2</sup>	8.60 <sup>2</sup>	17.40 <sup>1</sup>	17.20 <sup>2</sup>
2007	9.10	9.10	9.10	9.10	18.20	18.20

 $<sup>^1</sup>$  Hypothetical rate. The actual contribution rate was set by the prior year valuation.  $^2$  Legislative action has fixed the rates for fiscal 2006 and 2007 at 6.90% and 8.60%, respectively.

#### **Actuarial Gains and Losses**

The purpose of this section is to determine the source of the actuarial gains and losses during the year that have caused the UAAL to increase.

The valuation of the Plan reflects a loss on the investment return on the actuarial value of assets of \$479 million. This loss is not due to the investment experience of fiscal 2006. Rather it is due to delayed recognition of losses that have occurred in earlier years. Investment losses are now recognized in actuarial assets over a ten-year period. The yield rate on actuarial assets for the 2005 fiscal year is 6.03% on the pension assets (401(a)) and 4.26% on the health supplement assets (401(h)), compared to last year's returns of 3.20% and 4.99%, respectively. The actuarially assumed rate of return is 8%. There was also a small loss of \$386 million on the liability experience, mostly due to the demographic experience of non-retired members and to the increased value of contribution refunds for withdrawing members.

Exhibit 6.1 - Actuarial Gain or Loss for the Year

	Item	Valuation as of June 30, 2005	Valuation as of June 30, 2006
Α.	Calculation of Total Actuarial Gain or Loss		
	<ol> <li>Unfunded actuarial accrued liability (UAAL), previous year</li> </ol>	\$ 2,275,424,742	\$ 4,106,082,162
	Normal cost for the year	\$ 1,010,224,924	\$ 1,075,456,754
	3. Contributions for the year	\$ (946,697,219)	\$ (1,265,185,960)
	4. Interest at 8%	,	
	a. On UAAL b. On normal cost	182,033,979	328,486,573
	<ul><li>b. On normal cost</li><li>c. On contributions</li></ul>	80,817,994 (37,867,889)	86,036,540 (50,607,438)
	d. Total	\$ 224,984,084	\$ 363,915,675
	5. Expected UAAL (Sum of Items 1 - 4)	\$ 2,563,936,531	\$ 4,280,268,631
	6. Actual UAAL	\$ 4,106,082,162	\$ 4,845,108,486
	7. Gain/(loss) for the year (Item 5 - Item 6)	\$(1,542,145,631)	\$ (564,839,855)
В.	Source of Gains and Losses		
	8. Asset gain/(loss) for the year (Tables 5a and 5b, Item 10)	\$(1,099,740,635)	\$ (478,907,502)
	<ol><li>Asset gain/(loss) as a percentage of actuarial assets</li></ol>	(4.6%)	(1.9%)
	<ul> <li>10. PBI Cola</li> <li>a. Excess Earnings Reserve</li> <li>for Fiscal Year 2005</li> <li>b. Excess Earnings Reserve</li> <li>for Fiscal Year 2006</li> </ul>	\$ 0 \$	\$ 0 \$ 0
	<ol> <li>Total actuarial accrued liability gain/(loss) for the year (Item 7 - Item 8 - Item 10)</li> </ol>	\$ (442,404,996)	\$ (85,932,803)
	12. Analysis of actuarial accrued liability gain/(loss)		
	<ul><li>a. Legislative changes (Rural HIB)</li><li>b. Assumption changes (Payroll projection</li></ul>	\$ (7,628,000)	\$ 0
	reduced) c. Experience liability gain/(loss)	\$ 0	\$ 300,511,125
	<ul> <li>i. Pay increases less/(greater) than expected</li> <li>ii. Non-retired demographic gain/(loss)</li> <li>iii. Post-retirement mortality gain/(loss)</li> <li>iv. Other</li> </ul>	N/A N/A N/A N/A	\$ (119,184,970) (456,641,660) 102,928,332 86,454,370
	v. Total for the year	\$ (434,776,996)	\$ (386,443,928)
	d. Total actuarial accrued liability gain/(loss)	\$ (442,404,996)	\$ (85,932,803)
	13. Experience liability gain/(loss) as percentage of total actuarial liability (Item 12c as % of Item 5h of Exhibit 5.2)	(1.56%)	(1.30%)

**Exhibit 6.2 - Analysis of Change in Contribution Rate** 

Basis	Unfunded Actuarial Accrued Liability (\$ Millions)	Employer/Employee Contribution Rate	Change in Contribution Rate
1. Valuation as of June 30, 2005	4,106	8.68%	_
2. Delay in contribution rate change	4,280	8.64%	(0.04%)
3. 2005 / 2006 liability experience	4,666	8.92%	0.28%
4. 2005 / 2006 asset experience	5,145	9.15%	0.23%
5. 2005 / 2006 legislative change	5,145	9.15%	0.00%
6. 2005 / 2006 administrative change	4,845	9.10%	(0.05%)
7. Rounding to the nearest 0.05%	4,845	9.10%	0.00%

# **Permanent Benefit Increase**

Exhibit 7.1 shows the determination of the PBI for 2006. The determination of the "Excess Investment Earnings" held in reserve for future PBIs is shown in Items 11 thorough 13. As shown in Item 13c, no more assets are available for future PBIs after the granting of the PBI effective July 1, 2006. Since the actuarial investment return (on the actuarial value of assets) of 6.03% is below 8% for fiscal year 2006, there are no additional "Excess Investment Earnings" to be allocated for Permanent Benefit Increases (PBIs).

Exhibit 7.1 – Determination of Permanent Benefit Increase (PBI) COLA

Determina	tion of July 1, 2006 PBI COLA:		
1.	Actuarial Present Value (APV) for all Retirees and Beneficiaries as of June 30, 2005	\$ 12,316	6,501,912
2.	Rate of Return on Actuarial Value of Assets for Fiscal Year Ending June 30, 2005		3.20%
3.	Excess Earnings Available for COLA		
	a. Carry-over From Prior Year		\$ 0
	b. Current Year (Item 1 x [Item 2 - 8%])		0
	c. Total Excess Earnings Available for COLA (Item 3.a + Item 3.b.)		\$ 0
4.	One Percent of APV of all Retirees and Beneficiaries as of June 30, 2005	\$ 123	3,165,019
5.	Preliminary COLA % (Item 3.c / Item 4 x 0.01)		0.0%
6.	Actual COLA % (Item 5, but not greater than 4% and equal to 0% if less than 1%)		0.0%
7.	Target Cost of 2006 COLA (Item 4 x Item 6)	\$	0
8.	APV of \$1 Per Year of Service for Eligible Group	\$	0
9.	Per Year of Service Factor for 2006 COLA	\$	0
10.	Excess Investment Earnings to be Carried Forward to Next Year	\$	0
Determina	tion of Reserves for Future PBI COLAs:		
11.	Actuarial Present Value (APV) for all Retirees and Beneficiaries as of June 30, 2006	\$ 13,632	2,850,197
12.	Rate of Return on Actuarial Value of Assets for Fiscal Year Ending June 30, 2006		6.03%
13.	Excess Earnings Reserves for Future COLAs		
	a. Carry Over From Prior Year (Item 10)	\$	0
	b. Current Year (Item 11 x [Item 12 - 8%, minimum 0])		0
	c. Total Excess Earnings Reserves for Future COLAs	\$	0

### **GASB Disclosure and CAFR Information**

This section focuses on the required GASB disclosures and the required CAFR information.

### **GASB 25 Schedule of Funding Progress**

The Governmental Accounting Standards Board (GASB) issued Statement No. 25 that establishes reporting and disclosures requirements for public sector defined benefit pension plans. The Schedule of Funding Progress shows a historical comparison of the 401(a) Plan's assets and liabilities, using the same actuarial method used for funding the 401(a) Plan.

### **GASB 25 Schedule of Employer Contributions**

The required Schedule of Employer Contributions compares the actual employer contributions to the "Annual Required Contributions" (ARC). The ARC is the employer contribution determined under GASB 25 standards (normal cost and amortization of unfunded actuarial accrued liabilities) using the actuarial funding method used for funding the 401(a) Plan.

Under GASB 25, only the 401(a) portion of the Plan is to be disclosed. Therefore, the values in the tables reflect only the pension portion of the Plan. They exclude the assets and actuarial accrued liabilities associated with the health supplement.

### **GASB 43 Schedule of Funding Progress**

The Governmental Accounting Standards Board (GASB) issued Statement No. 43 that establishes reporting and disclosures requirements for public sector postemployment benefit plans other than pension plans. The Schedule of Funding Progress shows a historical comparison of the 401(h) Plan's assets and liabilities, using the same actuarial method as the one used for funding the 401(h) Plan.

### **GASB 43 Schedule of Employer Contributions**

The required Schedule of Employer Contributions compares the actual employer contributions to the "Annual Required Contributions" (ARC). The ARC is the employer contribution determined under GASB 43 standards (normal cost and amortization of unfunded actuarial accrued liabilities) using the actuarial funding method of the 401(h) Plan.

#### **Retiree and Beneficiary Experience**

The annual CAFR requires the disclosure of historical summary data for retired members.

### **Solvency Test**

The annual CAFR requires the disclosure of a "Solvency Test." This test compares actuarial assets to actuarial accrued liabilities, applying assets to active member contributions first, then to inactive and retired members and then to the remaining active member liabilities.

## Actuarial Certification ARIZONA STATE RETIREMENT PLAN Actuarial Certification Statement

This is to certify that Buck Consultants has prepared an actuarial valuation of the Arizona State Retirement Plan as of June 30, 2006.

Actuarial calculations have been made with respect to a total of 464,719 members – 217,676 active employees, 163,527 inactive members, and 78,498 retired members and beneficiaries, and 5,018 members on long term disability. In addition, there are 686 System retirees receiving ad hoc benefits from Plan assets.

The actuarial calculations establish a total benefit cost of 18.20% of the annual compensation of employees. The total normal cost rate is 13.41% of compensation, and the required amortization payment determined in accordance with Section 38-737 is 4.79% of compensation.

The actuarial cost factors as of June 30, 2006, for the total Plan, are as follows:

I.	Actuarial accrued liabilities				
	A. Liabilities due to member's benefits				
	Active members				
	a. Retirement benefits	\$12,081,068,875			
	<ul> <li>b. Health insurance premium supplement</li> </ul>	925,980,765			
	<ul> <li>Disability deferred retirement benefits</li> </ul>	231,056,573			
	d. Pre-retirement death benefits	281,283,613			
	e. Withdrawal benefits	465,307,150			
	f. Total active members		\$13,984,696,976		
	2. Inactive members		1,135,187,031		
	3. Retired members and beneficiaries		14,175,090,544		
	4. Disabled members (deferred retirement)		391,353,515		
	<ol><li>Benefit increases for other-than-plan participants</li></ol>	_	10,303,196		
	<ol><li>Total present value of benefits</li></ol>			\$29,696,631,262	
	B. Other miscellaneous liabilities and reserves			0	
	C. Reserve for future PBIs			0	
	D. Total actuarial accrued liability				\$29,696,631,262
II.	Actuarial value of assets				24,851,522,776
III.	Unfunded actuarial accrued liability (Item I Item II)				4,845,108,486
IV.	Amortization of unfunded actuarial accrued			000 500 400	
.,	liability (per Section 38-737)			398,500,483	
	Normal cost for the year			1,113,619,050	4 540 440 500
	Total contribution for the year (Item IV + Item V)				1,512,119,533
VII.	Total covered payroll (projected to 2005 / 2006 plan year)				8,311,869,615
VIII.	Total contribution for fiscal year 2008 as a percentage of covered payroll		401(a) Account	401(h) Account	Total
	A. Employee Portion		9.10%	0.00%	9.10%
	B. Employer Portion		<u>8.05%</u>	<u>1.05%</u>	<u>9.10%</u>
	C. Total		17.15%	1.05%	18.20%

The Board adopted a new asset valuation method (described in Section 9B) on November 15, 2002, to be effective for valuations on and after June 30, 2002.

On November 21, 2003, the Board adopted assumptions to be effective for valuations on and after June 30, 2003. These assumptions are as follows:

1. Investment yield - 8% per annum.

### 2. Salary increases

Years of Service	Merit Component	Total Salary Increase
1	5.00%	9.50%
2	4.00	8.50
3	2.50	7.00
4	1.80	6.30
5	1.40	5.90
6	1.25	5.75
7	1.00	5.50
8	0.80	5.30
9	0.75	5.25
10	0.50	5.00
11 to 19	0.25	4.75
20 or more	0.00	4.50

### 3. Rates of disability

Age	Males	Females
00	0.000/	0.070/
20	0.06%	0.07%
30	0.07%	0.10%
40	0.21%	0.21%
50	0.51%	0.49%
60	1.20%	1.09%

### 4. Rates of withdrawal - Sample ages and years of service

		Years of Service				
		Ma	ale Members			
Age	1	2	5	8	10+	
20	36.42%	28.95%	13.64%	7.11%	12.77%	
30	20.55	16.12	9.43	5.14	5.65	
40	16.98	10.11	6.65	4.00	2.27	
50	16.92	9.04	5.02	3.45	1.55	
60	18.24	9.63	3.71	2.61	1.08	

		Years of Service Female Members						
Age	1	2	5	8	10+			
20	30.53%	26.40%	20.77%	13.80%	21.48%			
30	19.37	16.52	10.89	8.11	8.21			
40	16.93	11.74	6.61	4.61	2.39			
50	14.57	9.27	5.22	2.87	1.67			
60	14.32	9.39	4.66	2.37	0.88			

5. Rates of retirement - Sample ages and years of service

		Years of Service					
Age	10-14	20-24	25	30	31+		
50	3.00%	4.00%	7.00%	17.50%	12.50%		
55	3.00	6.00	16.25	17.50	12.50		
60	7.00	23.75	26.75	35.00	30.00		
62	30.00	40.00	43.00	55.00	50.00		
65	30.00	30.00	33.00	35.00	30.00		
66 and above	30.00	30.00	33.00	35.00	30.00		

- 6. Mortality rates 1994 GAM Static, Projected to 2005 with Projection Scale AA, with no setback.
- 7. Mortality rates after disability Post disablement mortality rates are based on experience of other large public sector system and ASRS' own experience.

The asset valuation method is the market value less ten year phase-in of excess (shortfall) investment income. See Section 9B.

The funding method is the projected unit-credit method, as prescribed in Arizona Revised Statutes Section 38.757A..

The actuarial calculations have been performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on the actuarial assumptions adopted by the Board.

ASRS prepared all trend data schedules in the financial section and the supporting schedules in the actuarial section of its Comprehensive Annual Financial Report.

Charles E. Chittenden, FSA, EA, MAAA

Principal and Consulting Actuary

Charles & Chittender

Exhibit 8.1a - Schedule of Funding Progress (401(a) Plan , as required by GASB #25)

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2) / (3)	Annual Covered Payroll	UAAL as % of Payroll (4) / (6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
06/30/1993	\$ 9,770	\$ 8,921	\$ (849)	109.5%	\$ 3,748	(22.7%)
06/30/1994	10,549	9,668	(872)	109.0%	4,126	(21.1%)
06/30/1995	11,521	10,304	(1,217)	111.8%	4,432	(27.5%)
06/30/1996	12,579	11,111	(1,468)	113.2%	4,632	(31.7%)
06/30/1997	13,692	11,694	(1,998)	117.1%	4,836	(41.3%)
06/30/1998	15,577	12,910	(2,667)	120.7%	5,164	(51.7%)
06/30/1999	18,043	15,476	(2,567)	116.6%	5,488	(46.8%)
06/30/2000	20,292	16,854	(3,438)	120.4%	5,894	(58.3%)
06/30/2001	21,888	19,012	(2,876)	115.1%	6,357	(45.2%)
06/30/2002	22,642	21,285	(1,357)	106.4%	6,989	(19.4%)
06/30/2003	22,572	22,935	363	98.4%	7,297	5.0%
06/30/2004	22,659	24,506	1,847	92.5%	7,486	24.7%
06/30/2005	22,808	26,486	3,678	86.1%	8,032	45.8%
06/30/2006	23,767	28,192	4,426	84.3%	8,312	53.2%

Note: Dollar amounts in millions.

Values shown for valuation dates on or after June 30, 1996 are for the 401(a) plans only.

Exhibit 8.1b - Schedule of Employer Contributions (401(a) Plan, as required by GASB #25)

Fiscal Year	Annual Required Contribution	Percentage Contributed
1993	\$ 135,644,868	100.0%
1994	162,452,872	76.8%
1995	158,559,931	100.0%
1996	78,608,439	100.0%
1997	89,756,995	100.0%
1998	78,004,461	100.0%
1999	85,964,481	100.0%
2000	195,810,628	100.0%
2001	209,320,281	100.0%
2002	130,647,669	100.0%
2003	137,622,205	100.0%
2004	297,268,473	100.0%
2005	317,919,116	100.0%
2006	477,119,869	100.0%*

Note: Contribution amounts shown for fiscal year 1996 and after are the contribution amounts for the 401(a) pension plan only.

<sup>\*</sup> Ignoring short-term differences. The legislature set the contribution rate for fiscal 2006 to be lower than the actuarially calculated rate, and the rate for 2007 to be higher than the actuarially calculated rate. Thus, the contribution deficiency for 2006 and excess for 2007 are both short-term differences.

Exhibit 8.2a - Schedule of Funding Progress (401(h) Plan, as required by GASB #43)

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2) / (3)	Annual Covered Payroll	UAAL as % of Payroll (4) / (6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
06/30/2005	\$ 1,028	\$ 1,456	\$ 428	70.6%	\$ 8,032	5.3%
06/30/2006	\$ 1,085	\$ 1,505	\$ 420	72.1%	\$ 8,312	5.1%

Note: Dollar amounts in millions.

## Exhibit 8.2b - Schedule of Employer Contributions (401(h) Plan, as required by GASB #43)

Fiscal Year	Annual Required Contribution	Percentage Contributed
2005	\$ 85,350,074	100.0%
2006	\$ 93,461,175	100.0%*

<sup>\*</sup> Ignoring short-term differences. The legislature set the contribution rate for fiscal 2006 to be lower than the actuarially calculated rate, and the rate for fiscal 2007 to be higher than the actuarially calculated rate. Thus, the contribution deficiency for 2006 and excess for 2007 are both short-term differences.

\*Includes inflation at

4.25%

### **Exhibit 8.3 - Notes to Required Supplementary Information**

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date

Actuarial cost method

Amortization method

Projected Unit Credit

Level dollar, 30 years

Payroll growth rate for amortization

N/A

Asset valuation method

10-year smoothed market

Actuarial assumptions:

Investment rate of return\*

Projected salary increases

4.50% to 9.50%

Cost-of-living adjustments N/A

**Exhibit 8.4 – Components of Normal Cost** 

	2006
Components of the normal cost are as follows:	
Retirement benefits	10.21%
Health insurance premium supplement	0.63%
Survivor benefits	0.35%
Withdrawals	1.84%
Long-term disability benefit	0.38%
Total, normal cost	13.41%
Amortization of the UAAL	4.79%
Required contribution rate for FY 2008	18.20%
Shared by employee and employer	
Required matching contribution rate	<u>9.10%</u>
Rounded contribution rate shared by employee and employer to the nearest 0.05%	<u>9.10%</u>

Exhibit 8.5 – Schedule of Plan Active Member Valuation Data

Valuation As of June 30	Number	Annual Payroll	Annual Average Pay	Increase in Average Pay
2004	205,482	7,485,590,038	36,429	1.0%
2005	212,202	8,032,457,947	37,853	3.9%
2006	217,676	8,311,869,615	38,185	0.9%

### Exhibit 8.6 - Schedule of Plan Retirees Added and Removed from Rolls

### **Schedule of Retiree Data**

	Adde	d to Roll	Removed	d from Rolls	Rolls –	End of Year	Percent	
Valuation As of June 30	Number	Annual* Allowances	Number	Annual* Allowances	Number	Annual Allowances	Increase in Annual Allowances	Average Annual Allowances
2004	5,882	159,779,107	1,733	23,506,435	64,121	1,168,664,755	13.2%	18,226
2005	6,429	129,398,517	1,815	26,570,628	68,735	1,271,492,645	8.8%	18,498
2006	6,522	160,698,938	2,176	29,274,714	73,081	1,402,916,869	10.3%	19,197

### **Schedule of Beneficiary Data**

	Adde	d to Roll	Removed	from Rolls	Rolls –	End of Year	Percent	
Valuation As of June 30	Number	Annual* Allowances	Number	Annual* Allowances	Number	Annual Allowances	Increase in Annual Allowances	Average Annual Allowances
2004	548	9,284,219	463	3,476,244	4,810	61,361,104	10.5%	12,757
2005	576	6,611,195	268	2,901,597	5,118	65,070,702	6.0%	12,714
2006	621	10,168,738	322	3,442,543	5,417	71,796,897	10.3%	13,254

### Schedule of Retiree and Beneficiary Data

	Adde	d to Roll	Removed	d from Rolls	Rolls –	End of Year	Percent	
Valuation As of June 30	Number	Annual* Allowances	Number	Annual* Allowances	Number	Annual Allowances	Increase in Annual Allowances	Average Annual Allowances
2004	6,430	169,063,326	2,196	26,982,679	68,931	1,230,025,859	13.1%	17,844
2005	7,005	136,009,712	2,083	29,472,225	73,853	1,336,563,347	8.7%	18,098
2006	7,143	170,867,676	2,498	32,717,257	78,498	1,474,713,766	10.3%	18,787

<sup>\*</sup> Cost of Living Increases included here

Exhibit 8.7 - Schedule of Unfunded (Over) Accrued Liabilities - Plans 401(a) and 401 (h))

Year Ended June 30	Aggregate Accrued Liabilities Plan	Actuarial Value of Net Plan Assets	Assets as a % of Accrued Liabilities Plan	Unfunded (over) Accrued Liabilities – Plan (UAL)	Active Member Payroll	UAL as a % of Active Member Payroll
2004	25,918,329,505	23,642,904,763	91.2%	2,275,424,742	7,485,590,038	30.4%
2005	27,942,601,285	23,836,519,123	85.3%	4,106,082,162	8,032,457,947	51.1%
2006	29,696,631,262	24,851,522,776	83.7%	4,845,108,486	8,311,869,615	58.3%

Exhibit 8.8 – Solvency Test

	Aggregate Accrued Liabilities for						
	(1) (2) (3)						
Year Ended June 30	Active Member Contributions	Retirees and Beneficiaries	Active Members (Employer Financed Portion)	Net Assets Available for Benefits	Liabilit by N	n of Accr ies Cove let Asse e for Be	ered ts
2004	3,407,611,954	12,421,950,646	10,088,766,905	23,642,904,763	100	100	77.4
2005	3,717,945,957	13,522,905,728	10,701,749,600	23,836,519,123	100	100	61.6
2006	4,168,243,157	14,576,747,255	10,951,640,850	24,851,522,776	100	100	55.8

Exhibit 8.9 – Schedule of Recommended Versus Actual Plan Contributions

Year Ended June 30	Active Member Payroll	Employee Contributions	Employer Retirement Contribution Rate – Actual	Actuary Recommended Contribution
2004	7,486,000,000	377,436,100	5.20%	5.20%
2005	8,032,000,000	403,269,191	5.20%	5.20%
2006	8,312,000,000	570,581,044	6.90%	7.75%

### Exhibit 8.10 – Analysis of Financial Experience for the Plan (millions)

Year Ended June 30	Unfunded Actuarial Liability (UAAL), Prior Year	Normal Cost for the Year	Contributions for the Year	Interest at 8% on UAAL	On Normal Cost	On Contributions	Total	Expected UAAL	Actual UAAL	Gain (Loss) for the Year
2004	786.74	950.78	(865.97)	62.94	76.06	(34.64)	104.36	975.91	2,275.42	(1,299.51)
2005	2,275.42	1,010.22	(946.70)	182.03	80.82	(37.87)	224.98	2,563.94	4,106.08	(1,542.15)
2006	4,106.08	1,075.46	(1265.19)	328.49	86.04	(50.61)	363.92	4,280.27	4,845.11	(564.84)

### **Summary of Actuarial Method and Assumptions**

# Summary of Actuarial Methods and Assumptions (Adopted by Board Action on November 21, 2003) (Effective as of June 30, 2004)

### A. Actuarial Assumptions

1. Investment Yield Rate

8% per annum, compounded annually.

- 2. Mortality
  - a. Pre-retirement

1994 GAM – Static, Projected to 2005 with Projection Scale AA, with no setback. Rates at representative ages are shown below.

Rates of Mo	rtality	(Active)	į
-------------	---------	----------	---

Age	Male Participants	Female Participants
20	0.000411	0.000238
25	0.000592	0.000249
30	0.000758	0.000314
35	0.000805	0.000423
40	0.000981	0.000600
45	0.001366	0.000815
50	0.002112	0.001183
55	0.003583	0.002100
60	0.006679	0.004201
65	0.012447	0.008173
70	0.020095	0.012993

b. Post-retirement

Non-Disabled rates are based on the 1994 GAM – Static, Projected to 2005 with Projection Scale AA with no setback. Disabled rates are based on the experience of other large public sector retirement systems and ASRS' own experience. Rates at representative ages are shown below.

	Non-Disabled Disabled		Non-Disabled	Disabled
Age	Male Partio	cipants	Female Par	ticipants
20	0.000411	0.034940	0.000238	0.026939
25	0.000592	0.038887	0.000249	0.027444
30	0.000758	0.051102	0.000314	0.038302
35	0.000805	0.063544	0.000423	0.053927
40	0.000981	0.058807	0.000600	0.056984
45	0.001366	0.040921	0.000815	0.037586
50	0.002112	0.034742	0.001183	0.025696
55	0.003583	0.031356	0.002100	0.022836
60	0.006679	0.031109	0.004201	0.018029
65	0.012447	0.030861	0.008173	0.013934
70	0.020095	0.033730	0.012993	0.012993

### 3. Disability Rates

### Sample rates are shown below.

	Rates of Decreme	ent due to Disability
Age	Male Participants	Female Participants
20	.000575	.000734
25	.000638	.000804
30	.000730	.001014
35	.001096	.001563
40	.002111	.002111
45	.003358	.003171
50	.005128	.004865
55	.007715	.007022
60	.011992	.010913

### 4. Withdrawal Rates

(for causes other than death, disability, or retirement)

Select and ultimate withdrawal rates are used. Rates at representative ages are shown below.

Rates of Decrement due to Withdrawal

	Years of Service											
Age	0	1	2	3	4	5	6	7	8	9	10+	
Male Employees												
20	.3731	.3642	.2895	.2545	.1508	.1364	.091	.084	.071	.076	.1277	
30	.2267	.2055	.1612	.1547	.0917	.0943	.071	.068	.051	.051	.0565	
40	.1931	.1698	.1011	.1015	.0601	.0665	.055	.054	.040	.038	.0227	
50	.1892	.1692	.0904	.0820	.0458	.0502	.046	.035	.034	.031	.0155	
60	.2219	.1824	.0963	.0848	.0445	.0371	.033	.033	.026	.024	.0108	
70	.2604	.2282	.1320	.1229	.0616	.0549	.036	.031	.022	.020	.0180	
					Fem	ale Emplo	yees					
20	.3116	.3053	.2640	.2596	.2101	.2077	.1680	.1405	.1380	.1285	.2148	
30	.2015	.1937	.1652	.1456	.1094	.1089	.0930	.0813	.0811	.0760	.0821	
40	.1720	.1693	.1174	.0930	.0666	.0661	.0563	.0482	.0461	.0417	.0239	
50	.1698	.1457	.0927	.0722	.0528	.0522	.0426	.0335	.0287	.0227	.0167	
60	.1805	.1432	.0939	.0731	.0508	.0466	.0357	.0275	.0237	.0190	.0088	
70	.1916	.1666	.1199	.0955	.0622	.0508	.0363	.0293	.0311	.0358	.0144	

### 5. Salary Scales

A select and ultimate salary scale made up of a merit component and general salary increase component as follows:

Years of Service	Merit Component	Total Salary Increase*
(1)	(2)	(3)
1	5.00%	9.50%
2	4.00%	8.50%
3	2.50%	7.00%
4	1.80%	6.30%
5	1.40%	5.90%
6	1.25%	5.75%
7	1.00%	5.50%
8	0.80%	5.30%
9	0.75%	5.25%
10	0.50%	5.00%
11 to 19	0.25%	4.75%
20 or more	0.00%	4.50%

<sup>\*</sup> Total salary increase rate = inflation (or growth) rate (4.25%)

<sup>+</sup> productivity increase rate (0.25%)

<sup>+</sup> merit component

### 6. Retirement Age:

Select and ultimate retirement rates are used. Rates at representative ages and years of service are shown below:

		Rates of Decrement Due to Retirement												
		Years of Service												
Age	0-4	5-9	10-14	15-19	20-24	25	26-29	30	31+					
50	0.000	0.020	0.030	0.035	0.0400	0.0700	0.0625	0.175	0.125					
55	0.000	0.020	0.030	0.035	0.0600	0.1625	0.1300	0.175	0.125					
60	0.000	0.040	0.070	0.090	0.2375	0.2675	0.2000	0.350	0.300					
62	0.000	0.050	0.300	0.340	0.4000	0.4300	0.4000	0.550	0.500					
65	0.030	0.100	0.300	0.300	0.3000	0.3300	0.3000	0.350	0.300					
66+	0.030	0.100	0.300	0.300	0.3000	0.3300	0.3000	0.350	0.300					

### 7. Future Retirees Eligible for the Health Insurance Premium Supplement

It is assumed that 75% of future retirees will be eligible to receive the post-retirement health insurance premium supplement and that 60% of those retirees will be eligible for the dependent premium supplement.

### 8. <u>Proportion of Vested Termination Members Who Will Not Withdraw Their Contributions</u>

It is assumed that members who terminate with 5 or more years of service (but prior to eligibility for retirement) will choose to receive the enhanced refund option if the value of the enhanced refund option is greater than the present value of the deferred benefit, otherwise the employees are assumed to elect to receive the deferred benefit. If the employee is assumed to elect the enhanced refund option, then it is also assumed that the employee forfeits the supplement.

Employees who terminate with less than five years of service are assumed to withdraw their employee contributions with interest.

Employees who terminate eligible for early retirement are assumed to commence payments.

### B. Actuarial Value of Assets

The actuarial value of assets is equal to the market value of assets less a ten-year phase-in (five-year phase-in prior to June 30, 2002) of the Excess (Shortfall) between expected investment return and actual income. There is no corridor around market value within which the actuarial value is required to fall.

### C. Actuarial Funding Method

Costs are determined under the projected unit-credit method. The unfunded actuarial accrued liability is funded on a level dollar basis over the period of time described in Section 38-737. For the June 30, 2006 actuarial valuation, the period is 30 years.

### D. Data for Valuation

In preparing the June 30, 2006 actuarial valuation, the actuary has relied on data and assets provided by the staff of the Arizona State Retirement System. While not verifying the data at their source, the actuary has performed tests for consistency and reasonableness.

### **Member Data**

The June 30, 2006 actuarial valuation of the Plan was based on the following data. For comparison, we also show a summary of the June 30, 2005 statistical information.

# Exhibit 10.1 - Distribution of Active Employees by Employee Group and By Average Age, Average Years of Service, and Average Annual Salary

### **ACTIVE PLAN MEMBERS**

		of Active embers	Averaç	ge Age		e Years ervice		e Annual alary
Employee Group	As of June 30, 2005	As of June 30, 2006	As of June 30, 2005	As of June 30, 2006	As of June 30, 2005	As of June 30, 2006	As of June 30, 2005	As of June 30, 2006
State Employees:								
Male	16,983	17,072	46.7	46.6	9.6	9.5	\$ 45,738	\$ 45,623
Female	28,908	29,436	44.8	44.8	8.7	8.8	37,057	37,257
Total	45,891	46,508	45.5	45.4	9.0	9.0	\$ 40,270	\$ 40,328
Teachers:								
Male	16,894	17,587	44.5	44.4	10.2	10.0	\$ 46,767	\$ 47,147
Female	51,543	53,591	43.7	43.5	10.0	9.9	42,227	42,662
Total	68,437	71,178	43.9	43.7	10.1	9.9	\$ 43,348	\$ 43,770
Political Subdivision Employees:								
Male	36,626	37,035	45.7	45.8	7.8	7.9	\$ 39,864	\$ 40,574
Female	61,248	62,955	44.5	44.6	6.9	6.9	28,699	28,880
Total	97,874	99,990	45.0	45.0	7.2	7.3	\$ 32,877	\$ 33,211
All Active Plan Members:								
Male	70,503	71,694	45.7	45.6	8.8	8.8	\$ 42,933	\$ 43,389
Female	141,699	145,982	44.3	44.2	8.4	8.4	35,325	35,629
Total	212,202	217,676	44.7	44.7	8.5	8.5	\$ 37,853	\$ 38,185

Exhibit 10.2 - Summary of Retired Membership

	June 30, 2005	June 30, 2006	Percentage Change During the Period
STATE EMPLOYEES			
Number	18,683	19,646	5.2%
Total Monthly Allowance	\$ 24,701,837	\$ 26,927,569	9.0%
Average Monthly Allowance	\$ 1,322	\$ 1,371	3.7%
Average Age	70.4	70.6	0.3%
Average Years of Service	17.8	18.0	1.1%
TEACHERS			
Number	22,970	24,446	6.4%
Total Monthly Allowance	\$ 49,436,236	\$ 54,276,736	9.8%
Average Monthly Allowance	\$ 2,152	\$ 2,220	3.2%
Average Age	68.0	68.0	0.0%
Average Years of Service	23.6	23.7	0.4%
POLITICAL SUBDIVISION			
Number	32,200	34,406	6.9%
Total Monthly Allowance	\$ 37,242,206	\$ 41,688,510	11.9%
Average Monthly Allowance	\$ 1,157	\$ 1,212	4.8%
Average Age	70.2	70.1	(0.1)%
Average Years of Service	17.0	17.2	1.2%
TOTAL			
Number <sup>1</sup>	73,853	78,498	6.3%
Total Monthly Allowance <sup>2</sup>	\$111,380,280	\$122,892,815	10.3%
Average Monthly Allowance	\$ 1,508	\$ 1,566	3.8%
Average Age	69.6	69.6	0.0%
Average Years of Service	19.3	19.4	0.5%

Excludes Other-than-plan retirees receiving benefit increases from the Plan.
 Allowance includes estimated PBI effective July 1, 2005

Exhibit 10.3 – Summary of Inactive Membership

	June 30, 2005	June 30, 2006	Percentage Change During the Period
STATE EMPLOYEES			
Number	34,454	36,882	7.0%
TEACHERS			
Number	26,121	29,363	12.4%
POLITICAL SUBDIVISION			
Number	89,193	97,282	9.1%
TOTAL			
Number	149,768	163,527	9.2%

Exhibit 10.4a
Distribution of Active Employees by Average Age,
Average Years of Service and Average Salary
State Employees
as of June 30, 2006

			Y	EARS OF	SERVICE				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	TOTAL
Below 19	170	0	0	0	0	0	0	0	170
	18,315	0	0	0	0	0	0	0	18,315
20-24	1,642	104	0	0	0	0	0	0	1,746
	25,271	31,266	0	0	0	0	0	0	25,628
25-29	3,037	886	29	0	0	0	0	0	3,952
	30,667	34,652	36,933	0	0	0	0	0	31,606
30-34	2,365	1,540	375	20	0	0	0	0	4,300
	33,381	38,347	39,226	41,384	0	0	0	0	35,706
35-39	2,144	1,614	966	304	16	0	0	0	5,044
	35,036	40,122	43,417	43,832	38,544	0	0	0	38,810
40-44	1,988	1,529	1,087	856	310	34	0	0	5,804
	35,018	39,101	44,032	48,567	47,739	43,921	0	0	40,512
45-49	1,992	1,694	1,208	1,152	717	325	21	0	7,109
	35,855	39,398	42,223	47,942	49,994	49,852	46,315	0	41,837
50-54	1,789	1,567	1,233	1,244	865	613	166	9	7,486
	37,420	39,465	43,024	47,306	52,087	56,692	57,068	45,203	44,132
55-59	1,428	1,228	1,122	1,148	800	471	256	68	6,521
	37,609	40,482	42,930	45,685	48,987	57,917	65,601	63,596	44,720
60-64	576	716	570	616	386	206	148	75	3,293
	37,922	40,943	43,728	45,260	49,080	57,036	66,721	69,196	45,467
65-69	140	192	171	152	73	42	34	30	834
	42,525	38,706	40,783	44,339	44,906	56,103	73,507	95,719	45,688
70 & Over	47	50	49	50	13	10	11	19	249
	40,795	36,160	43,957	41,184	46,646	44,531	59,095	80,062	44,825
TOTAL	17,318 33,677	11,120 39,065	6,810 42,857	5,542 46,721	3,180 49,791	1,701 55,425	636 63,308	201 71,213	46,508 40,328

Exhibit 10.4b
Distribution of Active Employees by Average Age,
Average Years of Service and Average Salary
Teachers
as of June 30, 2006

			Y	EARS OF	SERVICE				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	TOTAL
Below 19	41	0	0	0	0	0	0	0	41
	12,052	0	0	0	0	0	0	0	12,052
20-24	2,444	48	0	0	0	0	0	0	2,492
	32,501	24,312	0	0	0	0	0	0	32,343
25-29	6,202	2,003	15	0	0	0	0	0	8,220
	36,472	40,473	35,136	0	0	0	0	0	37,445
30-34	3,470	4,026	878	5	0	0	0	0	8,379
	36,176	43,236	47,368	36,420	0	0	0	0	40,741
35-39	2,614	2,900	2,516	515	9	0	0	0	8,554
	34,855	42,379	49,769	52,559	45,056	0	0	0	42,869
40-44	2,318	2,319	1,820	1,669	566	19	0	0	8,711
	33,358	39,690	47,377	54,433	56,385	45,469	0	0	43,533
45-49	2,176	2,260	1,927	1,649	1,668	714	19	0	10,413
	32,711	38,870	45,610	51,524	58,489	60,569	55,836	0	45,496
50-54	1,860	1,959	1,960	1,924	1,602	1,650	443	5	11,403
	33,859	40,645	45,625	49,953	56,326	63,324	68,542	64,177	48,543
55-59	1,460	1,432	1,446	1,652	1,428	846	509	96	8,869
	34,700	42,327	46,233	50,736	55,423	60,034	66,790	76,027	48,841
60-64	591	626	553	606	415	264	114	83	3,252
	31,097	40,162	44,870	49,436	52,649	54,927	64,383	67,710	45,388
65-69	182	164	77	81	55	38	16	15	628
	25,377	37,216	46,776	46,294	49,329	52,772	68,977	65,356	39,611
70 & Over	77	48	30	12	21	11	5	12	216
	19,186	30,075	33,426	40,302	30,693	33,468	41,068	62,787	29,532
TOTAL	23,435	17,785	11,222	8,113	5,764	3,542	1,106	211	71,178
	34,537	41,159	46,974	51,421	56,292	61,055	66,971	70,963	43,770

Exhibit 10.4c
Distribution of Active Employees by Average Age,
Average Years of Service and Average Salary
Political Subdivision Employees
as of June 30, 2006

	YEARS OF SERVICE										
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	TOTAL		
Below 19	854	0	0	0	0	0	0	0	854		
	11,784	0	0	0	0	0	0	0	11,784		
20-24	4,560	322	0	0	0	0	0	0	4,882		
	18,525	24,969	0	0	0	0	0	0	18,950		
25-29	5,446	1,822	88	0	0	0	0	0	7,356		
	26,423	31,503	36,014	0	0	0	0	0	27,796		
30-34	5,314	2,938	659	39	0	0	0	0	8,950		
	26,908	37,363	39,080	42,287	0	0	0	0	31,303		
35-39	5,700	3,354	1,498	539	60	0	0	0	11,151		
	25,194	36,749	44,460	45,001	48,337	0	0	0	32,340		
40-44	6,015	3,944	1,902	1,235	500	72	0	0	13,668		
	24,354	33,315	43,015	51,586	52,545	49,813	0	0	33,163		
45-49	5,867	4,359	2,409	1,717	1,094	486	49	0	15,981		
	25,101	33,770	40,396	50,030	56,420	54,921	56,098	0	35,595		
50-54	4,759	3,793	2,442	1,888	1,344	706	259	7	15,198		
	26,275	34,552	39,670	46,830	54,643	59,431	57,459	54,783	37,640		
55-59	3,972	3,036	2,004	1,738	1,145	565	269	56	12,785		
	26,072	34,328	40,310	46,507	53,503	58,995	68,937	75,494	38,072		
60-64	1,973	1,574	925	775	480	310	121	59	6,217		
	22,157	32,129	39,071	44,315	51,883	53,336	67,746	77,751	35,225		
65-69	857	549	273	148	92	49	34	23	2,025		
	17,670	26,858	31,870	41,130	48,148	46,696	47,919	66,397	26,938		
70 & Over	380	305	129	58	33	13	0	5	923		
	14,378	20,011	22,407	30,160	40,173	45,066	0	75,642	20,040		
TOTAL	45,697	25,996	12,329	8,137	4,748	2,201	732	150	99,990		
	24,328	33,996	40,558	47,553	53,971	56,782	62,843	74,025	33,211		

Exhibit 10.4d
Distribution of Active Employees by Average Age,
Average Years of Service and Average Salary
Total Active Employees
as of June 30, 2006

			Y	EARS OF	SERVICE				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	TOTAL
Below 19	1,065	0	0	0	0	0	0	0	1,065
	12,837	0	0	0	0	0	0	0	12,837
20-24	8,646	474	0	0	0	0	0	0	9,120
	23,757	26,284	0	0	0	0	0	0	23,888
25-29	14,685	4,711	132	0	0	0	0	0	19,528
	31,545	35,909	36,116	0	0	0	0	0	32,629
30-34	11,149	8,504	1,912	64	0	0	0	0	21,629
	31,166	40,322	42,914	41,547	0	0	0	0	35,835
35-39	10,458	7,868	4,980	1,358	85	0	0	0	24,749
	29,626	39,516	46,940	47,605	46,146	0	0	0	37,297
40-44	10,321	7,792	4,809	3,760	1,376	125	0	0	28,183
	28,430	36,347	44,896	52,163	53,042	47,550	0	0	37,881
45-49	10,035	8,313	5,544	4,518	3,479	1,525	89	0	33,503
	28,886	36,303	42,607	50,043	56,088	56,485	53,734	0	39,997
50-54	8,408	7,319	5,635	5,056	3,811	2,969	868	21	34,087
	30,324	37,234	42,475	48,136	54,770	61,029	63,041	52,914	42,713
55-59	6,860	5,696	4,572	4,538	3,373	1,882	1,034	220	28,175
	30,310	37,666	42,826	47,839	53,245	59,192	67,055	72,049	43,001
60-64	3,140	2,916	2,048	1,997	1,281	780	383	217	12,762
	26,731	36,018	41,933	46,160	51,287	54,851	66,349	70,953	40,457
65-69	1,179	905	521	381	220	129	84	68	3,487
	21,811	31,249	36,998	43,508	47,368	51,549	62,287	79,103	33,705
70 & Over	504	403	208	120	67	34	16	36	1,388
	17,576	23,213	29,073	35,767	38,458	41,156	53,461	73,689	25,963
TOTAL	86,450	54,901	30,361	21,792	13,692	7,444	2,474	562	217,676
	28,968	37,343	43,445	48,782	53,977	58,505	64,808	71,870	38,185

Exhibit 10.5a
Distribution of Retired Employees by Average Age,
Average Years of Service and Average Monthly Annuity
State Employees
as of June 30, 2006

	YEARS OF SERVICE											
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	TOTAL	
Under 55	3	83	116	470	0	0	0	0	0	0	672	
Gridor 55	71	318	383	1,929	0	0	0	0	0	0	1,455	
55-59	4	206	286	1,145	324	0	0	0	0	0	1,965	
	458	263	559	2,277	2,514	0	0	0	0	0	1,851	
60-64	7	441	598	520	1,463	210	0	0	0	0	3,239	
	175	333	644	940	2,184	2,746	0	0	0	0	1,480	
65-69	120	621	924	731	651	899	89	0	0	0	4,035	
	137	354	696	1,057	1,562	2,650	3,367	0	0	0	1,326	
70-74	146	659	816	635	527	362	313	15	0	0	3,473	
	136	386	727	1,100	1,663	2,374	3,343	3,580	0	0	1,267	
75-79	114	562	646	497	348	274	181	80	2	0	2,704	
	150	388	806	1,202	1,751	2,471	2,865	3,770	6,640	0	1,284	
80-84	55	377	512	415	322	183	122	45	7	0	2,038	
	174	406	815	1,246	1,647	2,276	2,879	3,186	4,166	0	1,260	
85-89	32	223	245	255	145	97	65	25	11	1	1,099	
	171	415	869	1,175	1,580	2,068	2,333	2,360	3,996	3,832	1,182	
90-94	13	77	103	74	40	29	14	10	3	0	363	
	209	418	842	1,128	1,453	1,803	1,747	2,462	2,240	0	1,023	
95 & Over	0	18	13	12	4	7	2	1	1	0	58	
_	0	402	849	1,229	1,270	1,445	1,431	2,401	1,950	0	956	
TOTAL	494	3,267	4,259	4,754	3,824	2,061	786	176	24	1	19,646	
	151	369	722	1,470	1,918	2,511	3,047	3,322	3,961	3,832	1,371	

Exhibit 10.5b
Distribution of Retired Employees by Average Age,
Average Years of Service and Average Monthly Annuity
Teachers
as of June 30, 2006

	YEARS OF SERVICE										
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	TOTAL
Under 55	1	42	69	1,094	0	0	0	0	0	0	1,206
Oridor oo	73	178	399	2,871	0	0	0	0	0	0	2,633
55-59	0	164	226	3,086	1,037	0	0	0	0	0	4,513
	0	280	604	2,936	2,959	0	0	0	0	0	2,728
60-64	3	266	423	451	3,430	512	0	0	0	0	5,085
	162	336	754	1,149	2,782	3,085	0	0	0	0	2,369
65-69	118	312	475	527	901	1,814	180	0	0	0	4,327
	122	380	830	1,297	1,969	3,003	3,354	0	0	0	2,088
70-74	86	234	419	442	701	784	788	23	0	0	3,477
	133	427	876	1,413	2,018	2,623	3,310	3,883	0	0	2,091
75-79	56	189	292	416	587	678	412	128	2	0	2,760
	137	419	929	1,392	1,882	2,471	2,963	3,654	4,013	0	1,962
80-84	22	96	170	315	415	398	200	66	16	0	1,698
	167	422	886	1,334	1,742	2,184	2,689	3,154	4,069	0	1,778
85-89	8	53	117	194	242	181	85	39	12	0	931
	174	427	877	1,227	1,557	1,908	2,219	2,578	2,591	0	1,511
90-94	3	25	46	72	81	39	37	27	9	1	340
	220	422	875	1,141	1,432	1,665	1,925	2,098	2,238	2,677	1,368
95 & Over	1	12	17	31	18	14	6	4	6	0	109
	248	381	862	1,094	1,352	1,570	1,686	1,936	2,095	0	1,194
-											
TOTAL	298	1,393	2,254	6,628	7,412	4,420	1,708	287	45	1	24,446
	134	372	809	2,321	2,448	2,729	3,068	3,241	3,043	2,677	2,220

Exhibit 10.5c
Distribution of Retired Employees by Average Age,
Average Years of Service and Average Monthly Annuity
Political Subdivision Employees
as of June 30, 2006

				Y	EARS O	F SERVI	CE				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	TOTAL
Under 55	4	133	169	880	0	0	0	0	0	0	1,186
	129	164	377	2,255	0	0	0	0	0	0	1,746
55-59	2	363	429	2,031	626	0	0	0	0	0	3,451
	135	243	496	2,250	2,440	0	0	0	0	0	1,854
60-64	3	809	1,052	878	2,849	357	0	0	0	0	5,948
	110	285	562	886	2,105	2,470	0	0	0	0	1,426
65-69	347	1,310	1,579	1,389	1,496	1,295	106	0	0	0	7,522
	106	286	639	1,013	1,470	2,480	2,944	0	0	0	1,137
70-74	344	1,223	1,505	1,236	1,024	564	317	11	0	0	6,224
	106	315	685	1,058	1,506	2,121	3,019	3,517	0	0	1,043
75-79	220	1,041	1,223	933	694	371	149	56	0	0	4,687
	116	322	712	1,100	1,501	2,085	2,784	3,201	0	0	996
80-84	123	713	907	633	449	213	91	43	5	0	3,177
	121	345	755	1,082	1,420	1,933	2,387	2,627	5,285	0	956
85-89	34	369	447	342	228	98	37	12	5	0	1,572
	134	360	748	1,064	1,344	1,675	1,991	2,483	3,110	0	907
90-94	18	150	135	120	66	35	16	5	1	0	546
	216	375	772	1,068	1,322	1,555	1,871	1,883	1,679	0	870
95 & Over	2	18	27	21	12	5	5	2	1	0	93
	250	363	838	1,074	1,342	1,428	1,517	1,746	1,951	0	951
TOTAL	1,097	6,129	7,473	8,463	7,444	2,938	721	129	12	0	34,406
	113	306	659	1,450	1,794	2,281	2,791	2,896	3,800	0	1,212

Exhibit 10.5d
Distribution of Retired Employees by Average Age,
Average Years of Service and Average Monthly Annuity
All Groups
as of June 30, 2006

				Y	EARS OF	SERVIC	E				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	TOTAL
Under 55	8	258	354	2,444	0	0	0	0	0	0	3,064
	100	216	383	2,468	0	0	0	0	0	0	2,031
55-59	6	733	941	6,262	1,987	0	0	0	0	0	9,929
	350	257	541	2,593	2,723	0	0	0	0	0	2,251
60-64	13	1,516	2,073	1,849	7,742	1,079	0	0	0	0	14,272
	157	308	625	965	2,420	2,816	0	0	0	0	1,774
65-69	585	2,243	2,978	2,647	3,048	4,008	375	0	0	0	15,884
	116	318	687	1,082	1,637	2,755	3,241	0	0	0	1,444
70-74	576	2,116	2,740	2,313	2,252	1,710	1,418	49	0	0	13,174
	118	350	727	1,138	1,702	2,404	3,252	3,708	0	0	1,379
75-79	390	1,792	2,161	1,846	1,629	1,323	742	264	4	0	10,151
	129	353	769	1,193	1,692	2,363	2,903	3,593	5,326	0	1,335
80-84	200	1,186	1,589	1,363	1,186	794	413	154	28	0	6,913
	141	371	788	1,190	1,594	2,138	2,678	3,016	4,310	0	1,247
85-89	74	645	809	791	615	376	187	76	28	1	3,602
	154	384	803	1,140	1,484	1,888	2,213	2,492	3,236	3,832	1,147
90-94	34	252	284	266	187	103	67	42	13	1	1,249
	214	393	814	1,104	1,398	1,667	1,875	2,159	2,196	2,677	1,050
95 & Over	3	48	57	64	34	26	13	7	8	0	260
	249	382	848	1,113	1,339	1,509	1,582	1,948	2,059	0	1,054
TOTAL	1,889	10,789	13,986	19,845	18,680	9,419	3,215	592	81	2	78,498
	126	334	702	1,746	2,079	2,541	3,001	3,190	3,427	3,255	1,566

Exhibit 10.5e
Distribution of Retired Employees by Average Age,
Average Years of Service and Average Monthly Annuity
Retirement Benefits Awarded Under the Plan During Year Ended
June 30, 2006

					YEARS	OF SER	/ICE				
CURRENT AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	TOTAL
Under 55	2	84	102	916	0	0	0	0	0	0	1,104
	72	163	386	2,607	0	0	0	0	0	0	2,211
55-59	1	177	188	1,350	306	0	0	0	0	0	2,022
	43	284	609	2,453	2,465	0	0	0	0	0	2,092
60-64	5	307	419	461	909	55	0	0	0	0	2,156
	190	320	643	1,006	2,159	2,701	0	0	0	0	1,365
65-69	187	283	237	169	136	183	11	0	0	0	1,206
	101	297	632	954	1,376	2,568	4,221	0	0	0	927
70-74	72	86	76	50	35	18	21	1	0	0	359
	73	227	524	957	1,399	2,030	3,174	2,628	0	0	744
75-79	9	52	25	23	16	18	10	8	0	0	161
	110	210	533	836	1,207	1,742	1,850	3,674	0	0	888
80-84	6	18	17	22	18	7	7	1	1	0	97
	53	257	788	999	1,240	1,892	2,073	1,899	2,882	0	981
85-89	2	4	6	4	5	4	1	1	0	0	27
	69	434	564	506	841	2,042	3,210	1,927	0	0	918
90-94	0	2	2	1	3	0	1	2	0	0	11
	0	512	439	1,075	1,409	0	966	1,994	0	0	1,105
95 & Over	0	0	0	0	0	0	0	0	0	0	0
_	0	0	0	0	0	0	0	0	0	0	0
TOTAL	284	1,013	1,072	2,996	1,428	285	51	13	1	0	7,143
	94	280	601	2,142	2,103	2,484	2,947	3,064	2,882	0	1,578

Exhibit 10.6 Employees in Active Service as of June 30, 2006, by Annual Salary

Annual Salary	Number of Employees	Percent of All Employees
Less than \$10,000	11,976	5.5%
\$10,000 - \$14,999	15,593	7.2%
\$15,000 - \$19,999	14,466	6.7%
\$20,000 - \$24,999	17,178	7.9%
\$25,000 - \$29,999	20,035	9.2%
\$30,000 - \$34,999	21,531	9.9%
\$35,000 - \$39,999	25,745	11.8%
\$40,000 - \$44,999	23,132	10.6%
\$45,000 - \$49,999	17,614	8.1%
\$50,000 - \$54,999	13,262	6.1%
\$55,000 - \$59,999	9,646	4.4%
\$60,000 and over	27,498	12.6%
Total	217,676	100.0%

Exhibit 10.7
Retirement Benefits in Force on June 30, 2006, by Monthly Amount

Monthly Amount	Number of Retirees	Percentage of All Retirees
Under \$300	7,956	10.1%
\$300 - \$499	7,649	9.7%
\$500 - \$999	17,132	21.8%
\$1,000 - \$1,499	13,005	16.6%
\$1,500 - \$1,999	8,805	11.2%
\$2,000 - \$2,499	7,198	9.2%
\$2,500 - \$2,999	6,177	7.9%
\$3,000 and over	10,576	13.5%
Total	78,498*	100.0%

<sup>\*</sup> Excludes 100 System beneficiaries receiving COLA benefit from the Plan.

Exhibit 10.8 - Number of Retirees by Benefit Options

	Optional Form of benefit									
Amount of Monthly Benefit	1	2	3	4	5	6	7	Total		
\$1 - \$299	5,031	294	351	546	1,397	122	215	7,956		
\$300 - \$499	4,368	386	551	457	1,432	171	284	7,649		
\$500 - \$999	9,524	877	1,406	970	2,772	612	971	17,132		
\$1000 - \$1499	6,500	760	1,238	599	2,308	666	934	13,005		
\$1500 - \$1999	4,073	469	695	441	1,739	589	799	8,805		
\$2000 and over	11,120	879	1,275	1,380	5,081	1,846	2,370	23,951		
Total	40,616	3,665	5,516	4,393	14,729	4,006	5,573	78,498		

### Optional form

1	Life annuity
2	Life annuity - 5 years certain and life
3	Life annuity - 10 years certain and life
4	Life annuity - 15 years certain and life
5	Joint annuity - 100% to contingent survivor
6	Joint annuity - 66 2/3% to contingent survivor
7	Joint annuity - 50% to contingent survivor

Exhibit 10.9 **Growth of Covered Payroll and Active Participants** 

	Active M	embers	Covered	l Payroll	Average	Salary
Year Ending June 30,	Number	Percent Increase	Amount in \$ Millions	Percent Increase	Amount	Percent Increase
1980	101,666	1.6%	\$ 1,373	9.7%	\$ 13,503	7.9%
1981	103,222	1.5%	1,567	14.1%	15,189	12.5%
1982	103,841	0.6%	1,734	10.7%	16,701	10.0%
1983	103,174	(0.6%)	1,841	6.2%	17,846	6.9%
1984	103,889	0.7%	1,906	3.5%	18,345	2.8%
1985	107,695	3.7%	2,120	11.2%	19,684	7.3%
1986	114,456	6.3%	2,361	11.4%	20,632	4.8%
1987	117,426	2.6%	2,478	5.0%	21,100	2.3%
1988	119,073	1.4%	2,818	13.7%	23,664	12.2%
1989	124,436	4.5%	2,994	6.2%	24,057	1.7%
1990	129,701	4.2%	3,212	7.3%	24,762	2.9%
1991	134,751	3.9%	3,453	7.5%	25,625	3.5%
1992	139,633	3.6%	3,616	4.7%	25,896	1.1%
1993	144,477	3.5%	3,748	3.7%	25,943	0.2%
1994	154,901	7.2%	4,126 <sup>1</sup>	3.2% <sup>2</sup>	26,635	2.7%
1995	155,444	0.4%	4,432	7.4%	28,513	7.1%
1996	159,572	2.7%	4,632	4.5%	29,029	1.8%
1997	164,390	3.0%	4,836	4.4%	29,420	1.3%
1998	170,864	3.9%	5,164	6.8%	30,224	2.7%
1999	176,368	3.2%	5,488	6.3%	31,116	3.0%
2000	183,924	4.3%	5,894	7.4%	32,045	3.0%
2001	191,252	4.0%	6,357	7.9%	33,237	3.7%
2002	198,870	4.0%	6,989	9.9%	35,145	5.7%
2003	202,398	1.8%	7,297	4.4%	36,052	2.6%
2004	205,482	1.5%	7,486	2.6%	36,429	1.0%
2005	212,202	3.3%	8,032	7.3%	37,853	3.9%
2006	217,676	2.6%	8,312	3.5%	38,185	0.9%

 $<sup>^1</sup>$  Covered payroll amount has been changed to show anticipated payroll for the fiscal year following the valuation date.  $^2$  Compared to previous year's amount described in  $^1$ 

Exhibit 10.10
Growth of Retired Participants

1	Ne	ew Retirees	New Disabled Members on LTD Program		A	II Retirees		abled Members LTD Program
Year Ending June 30,	Number	Average Monthly Benefit	Number	Average Monthly Benefit	Number	Average Monthly Benefit	Number	Average Monthly Benefit
1984	4,743	\$ 684	_	_	23,166	\$ 410	_	_
1985	802	304	_	_	23,686	447	_	_
1986	1,952	541	_	_	25,213	469	_	_
1987	1,677	707	_	_	26,577	505	_	_
1988	1,938	792	_	_	28,575	535	_	_
1989	3,405	1,105	_	_	31,396	603	_	_
1990	2,117	859	346	\$ 986	33,385	659	346	\$ 986
1991	2,209	825	215	941	34,907	687	699	957
1992	2,303	861	517	958	36,490	703	1,104	973
1993	3,954	1,173	519	865	39,684	812	1,455	919
1994	2,280	934	503	860	41,044	852	1,780	892
1995	3,223	1,008	617	951	43,378	878	2,130	878
1996	3,845	1,121	704	928	45,975	920	2,507	929
1997	3,578	1,097	599	1,036	49,743	945	2,746	954
1998	3,353	1,062	669	1,150	51,917	982	3,063	983
1999	4,380	1,326	819	1,141	55,104	1,024	3,680	1,023
2000	4,822	1,490	547	1,425	58,038	1,125	3,595	1,070
2001	4,224	1,465	632	1,455	58,920	1,211	3,904	1,151
2002	3,954	1,677	626	1,281	60,346	1,371	4,485	1,077
2003	5,955	1,578	1,001	1,106	64,697	1,401	4,561	1,027
2004	6,430	1,565	865	1,388	68,931	1,487	4,684	1,091
2005	7,005	1,597	926	1,426	73,853	1,508	4,939	1,107
2006	7,143	1,578	840	1,589	78,498	1,566	5,018	1,068

Exhibit 10.11
Arizona State Retirement System Data Reconciliation

	Active Participants	Deferred Vested	Retirees & Beneficiaries	Total
Total at June 30, 2005	212,202	149,768	73,853	435,823
Vested Terminations	(19,328)	19,328		0
Nonvested Terminations & Refund	(4,480)	(3,762)		(8,242)
Transfer Out	(89)	(111)		(200)
Disabled	(657)	(195)		(852)
Retirements & New Beneficiary	(5,401)	(774)	7,143	968
Deaths (with & without Ben)	(196)	(237)	(2,101)	(2,534)
Benefit Termination			(99)	(99)
Data Adjustments		16	(298)	(282)
Pickup		236		236
New Entrants Terminated with Account Balance		4,896		4,896
Rehires	5,638	(5,638)		0
New Entrants	29,987			29,987
Net Change	5,474	13,759	4,645	23,878
Total at June 30, 2006	217,676	163,527	78,498	459,701

# Summary of the Benefit Provisions of the Retirement Plan as of June 30, 2006

The Arizona State Retirement Plan makes provision for the retirement, disability, and death and survivor benefits to all employees of the State, instrumentalities of the State and certain political subdivisions. The major provisions of the Plan may be summarized as follows:

#### A. RETIREMENT BENEFITS

#### 1. Normal Retirement Date (the earliest of the following):

- (a) an employee's sixty-fifth birthday,
- (b) an employee's sixty-second birthday and completion of at least ten years of credited service, or
- (c) the first day immediately following the day that the sum of the employee's age and his years of total credited service equals eighty.

## 2. Monthly Life Annuity

The product of a benefit multiplier (as determined below) and the participant's best 36-month average compensation (in last 120 months) multiplied by his or her years of total credited service. Members who commenced membership prior to 1984 can use a 60-month average and include additional types of compensation, if doing so produces a larger result.

Years of Credited Service	Benefit Multiplier				
Less than 20	2.10%				
20.0 to 24.99	2.15%				
25.0 to 29.99	2.20%				
30 or more	2.30%				

Note: Members hired after the effective date of the adoption of the graded multiplier have a maximum benefit equal to 80% of their 36-month final average earnings.

### 3. Normal Retirement Benefits

The sum of the monthly life annuity and any prior service benefits to which the employee was entitled under the System.

#### 4. Early Retirement

Age 50 with 5 or more years of credited service.

### 5. Early Retirement Benefits

If not eligible for normal retirement and at least age 50 with 5 years of total credited service, normal retirement benefit earned to the date of retirement, reduced according to the following table:

AGE	$\Delta T$	DA <sup>-</sup>	ΓF	OF	RF.	TIRE	ME	NT
$\Delta G_{\perp}$	$\neg$	-		OI.	11	$\cup$	╌╻╻	111

Years of Service	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
5-10	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	88%	91%	94%	97%	100%
10-19	44%	49%	54%	59%	64%	69%	74%	79%	84%	89%	94%	97%	100%	100%	100%	100%
20+	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%	100%

Provided, however, that if the employee meets the Rule of 77 (but not the Rule of 80), the reduction will be 3% for each unit below 80.

#### 6. Normal Form of Benefit

Straight life annuity with cash refund feature payable monthly with benefits commencing on the day following the date of termination of employment.

#### 7. Optional Forms:

- (a) joint and contingent annuity (with Pop-up) with either 100%, 66-2/3% or 50% of the reduced retirement income payable for the life of the contingent annuitant upon the death of the retiring participant,
- (b) period certain and life annuity (with Pop-up) with five, ten, or fifteen years of payments guaranteed, or
- (c) a social security leveling option combined with any of the other forms of payment.

#### 8. Minimum Benefit

The minimum monthly benefit payable to a retired member who is at least age 75 and who has 20 or more years of service is \$600.

### B. DISABILITY BENEFITS (for disability after June 30, 1988)

#### 1. Long Term Disability

Monthly benefit equal to two-thirds of monthly compensation, reduced by any social security disability or workers' compensation benefits, payable commencing six months after date of disability until the earlier of:

- (a) date of cessation of total disability, or
- (b) normal retirement date.

This benefit is paid by a separate LTD plan.

# 2. <u>Disability Payments if Participant Remains Disabled Through Normal Retirement Date</u>

Monthly benefit participant would have received if service had continued to normal retirement date assuming the participant's salary remained at the level it was at his or her date of disability, also provided that the amount of total credited service is limited to 30 years unless he or she had more than 30 years at date of disability.

- 3. The minimum monthly benefit payable to a disabled participant is \$50.00.
- C. DISABILITY BENEFITS (for disability before July 1, 1988)

### 1. Eligibility

Age 50 with 5 years of service.

#### 2. Benefit Amount

A life annuity that can be provided by the employee's contribution account. Disability payments after normal or early retirement eligibility are reduced by the actuarial value of the disability payments made up to the date of normal or early retirement eligibility.

#### D. PRE-RETIREMENT DEATH BENEFITS

### 1. Eligibility

Applicable if death occurs prior to retirement.

#### 2. Benefit

Any one of the following, at the option of the beneficiary:

- (a) a lump sum equal to the sum of (i) and (ii):
  - (i) two times participant's contributions to the plan, with interest, and
  - (ii) the amount of the participant's employee and employer accounts, along with supplemental credits, if any, transferred from the System to the Plan, with interest
- (b) if (a) is greater than \$5,000, the beneficiary may elect to receive a monthly income for five or ten years certain and life thereafter which is actuarially equivalent to the amount in (a).

# 3. <u>Death of an Active Participant After 15 Years of Credited Service or After Eligibility for Early Retirement</u>

Beneficiary receives a benefit in the form of a survivor annuity equal to the benefit that would have been payable to the beneficiary if the participant had retired on the date of his or her death and elected to receive an annuity payable in the form of joint and 100% survivor with the beneficiary named as the joint pensioner.

#### E. VESTING OF BENEFITS

### 1. Vesting

A participant is fully vested in his or her accrued benefit.

## 2. Benefits Upon Vesting

A fully vested participant is entitled to either:

- (a) the enhanced refund option, or
- (b) the retirement benefit payable at normal retirement earned to the date of participant's termination.

The enhanced refund option allows employees who terminate prior to eligibility for retirement to receive a refund of their employee contributions with interest. In addition, if an employee has at least five years of service, he or she is also entitled to a share of the employer contributions with interest. The share is 25% for employees with five years of service and increases 15% for each additional year of service up to a maximum of 100% for ten or more years of service. The Board reduced the interest rate to be credited on refund of contributions from 8% to 4%, effective June 30, 2005.

#### F. RETIREE HEALTH INSURANCE PREMIUM SUPPLEMENT

#### 1. Eligibility

Retirement or disability after 5 years of credited service and covered by an employer-sponsored group insurance program for which the retired or disabled member must pay part of the cost. Employees who elect the enhanced refund option are not eligible for this benefit.

### 2. Benefit

The benefit is payable only with respect to allowable health insurance premiums for which the participant is responsible. The maximum benefits for participants with 10 or more years of service are:

- (a) with respect to premiums paid for retirees with member only coverage:
  - \$150 per month if the retiree is under age 65

- \$100 per month if the retiree is 65 or over
- (b) with respect to premiums paid for retirees with family coverage:
  - \$260 per month if the member's dependents are under age 65
  - \$170 per month if the member dependent is 65 or over
  - \$215 per month if the member is over age 65 and the dependent is under age 65
  - \$215 per month if the member is under age 65 and the dependent is over age 65

For employees with five to nine years of service the benefits are the same dollar amounts as above multiplied by a vesting fraction equal to 10% for each completed year of service (i.e., 50% to 90%).

See Section W for a discussion of the temporary benefit payable to retirees in "Rural" coverage areas.

# G. AUTOMATIC COST OF LIVING ADJUSTMENT BASED ON EXCESS INVESTMENT EARNINGS

## Permanent Benefit Increase (PBI)

Retirees who have been retired one year and LTD members are eligible for a COLA up to a maximum of a 4% increase. The COLA is paid from a reserve of "Excess Investment Earnings." If there are no "Excess Investment Earnings" in reserve then no COLA is paid.

#### Permanent Benefit Increase Enhancement

Provides retired members with at least ten years of service who have been retired five or more years an additional benefit. For each complete 5-year period the member has been retired an incremental benefit is paid if monies to pay the benefit are available. This benefit is funded by an interest credit of 8.0% of the reserve for future PBIs.

#### H. EMPLOYEE AND EMPLOYER CONTRIBUTIONS

The contribution rate for the fiscal year beginning on July 1<sup>st</sup> is based on the results of the most recent actuarial valuation as of the last day of the preceding plan year. Participants' contribution rate is equal to the required employer contribution rate. Legislative action pegged the contribution rate for fiscal 2006 and 2007 at 6.90% and 8.60%, respectively. For the fiscal year beginning July 1, 2007, the required contribution rate will be 9.10%, based on the 2006 actuarial valuation.

# I. LEGISLATED PLAN CHANGES ENACTED BY THE 1989 LEGISLATURE OF THE STATE OF ARIZONA

### 1. Projected United Credit (PUC) Funding Method

Beginning with the June 30, 1989, actuarial valuation, the total employee and employer contributions payable beginning July 1, 1990, shall be determined using the Projected Unit-Credit (PUC) funding method.

#### 2. \$12,000 Minimum Average Compensation for Current Retirees

Recalculation of the retirement benefit for all plan members retired before June 30, 1989, who had 10 years of credited service using a minimum average compensation of one thousand dollars per month.

### 3. 2.0% Ad Hoc COLAs

- Effective July 1, 1989, all members retired on or before June 30, 1988, shall receive a 2.0% permanent benefit increase to their December 31, 1988, base benefit.
- Effective July 1, 1990, all members retired on ore before June 30, 1989, shall receive a 2.0% permanent benefit increase to their June 30, 1990, base benefit.

#### 4. Early Retirement Window

During the period of May 15, 1989, through November 14, 1989, a member who is eligible for either Normal Retirement or Early Retirement with age plus credited service at least equal to 80, may retire and receive a benefit calculated using a 2.2% multiplier instead of the 2.0% multiplier in effect at that time.

#### 5. 3.0% Tax Equity Allowance

Retroactive to the later of January 1, 1989, or the date payments commence, each member retiring on or before September 14, 1989, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0% in his or her January 1, 1989, base benefit.

# J. LEGISLATED PLAN CHANGES ENACTED BY THE 1990 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Rule of 82

Effective May 1, 1990, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 85 to 82. Also, the early retirement reduction factor for employees with 77 or more points but less than 82 points shall be 3% for each point or fraction thereof less than 82.

### 2. 3.0% Tax Equity Allowance

Each member who retires between September 15, 1989, and September 14, 1990, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0% in his or her base benefit, retroactive to the date of retirement.

### 3. Graded Vesting for Health Insurance Premium Supplement

The Health Insurance Premium Supplement is extended to those qualifying members with between five and nine years of service. The member will be eligible to receive 10% of the benefit for each completed year of service (i.e., 50% to 90%).

# K. LEGISLATED PLAN CHANGES ENACTED BY THE 1991 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. 3.0% Tax Equity Allowance

Each member who retires between September 15, 1990, and September 14, 1991, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0% in his or her base benefit, retroactive to the date of retirement.

### 2. Recalculation of Retiree Benefits Using 2.0% Benefit Multiplier

Each retired member with at least 10 years of service who retired prior to June 30, 1985 shall have his or her benefit recomputed. The recomputed benefit shall be equal to 2% times final average earnings times credited service plus an additional \$2 for each year of service. The retired member will receive the larger of the recalculated benefit or his/her current benefit. This increase is effective October 1, 1991.

#### 3. 2.3% Ad Hoc Increase

Effective July 1, 1991, all members retired on or before June 30, 1990, shall receive a 2.3% permanent benefit increase in their June 30, 1991, base benefit.

#### 4. Rule of 80

Effective July 1, 1992, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 82 to 80. (For continuation purposes this legislation is not reflected until the 1993/94 fiscal year).

#### 5. Pop-up Option

A pop-up option is added for retiring members who first participate in the Plan on or after December 31, 1991.

# L. LEGISLATED PLAN CHANGES ENACTED BY THE 1992 LEGISLATURE OF THE STATE OF ARIZONA

### 1. 3.0% Tax Equity Allowance

Each member who retires between September 15, 1991, and September 14, 1992, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0% in his or her base benefit, retroactive to the date of retirement.

#### 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 on December 31, 1992, and who had at least ten years of service upon retirement from the plan ten years of service upon retirement from the plan shall be eligible for a minimum benefit. If the eligible retiree had at least ten years of service but less than fifteen years, his minimum benefit is \$350 a month. If the eligible retiree had at least fifteen years of service but less than twenty, his minimum benefit is \$500. If the eligible retiree had at least twenty years of service his minimum benefit is \$600. The minimum benefit shall be compared to the retiree's current benefit (including all ad hoc increases).

### 3. 5% Ad Hoc Increase

Effective November 1, 1992, all members retired on or before October 31, 1992, shall receive a 5% permanent benefit increase in their October 31, 1992, benefit.

## 4. Forfeited Service Repurchase

Any present active member who has previously forfeited service has until December 31, 1994, to repurchase the forfeited service by paying the Plan the employee and employer contributions (accumulated with interest) that would have been contributed during the member's period of forfeited service.

#### 5. Repurchase of Service Due to Reduction in Force

Any present active member who was terminated prior to December 31, 1992, as a result of a required reduction in force may purchase the credited service for the following period of unemployment if the member had five or more years of service at the time of termination and resumed employment with a participating employer within two years of termination. The cost of the repurchase is the total of the employee and employer contribution (accumulated with interest) that would have been contributed during the member's period of unemployment.

#### 6. Change in Section 38-781.05 Funding Method

Section 38-781.05 of the plan was amended so that the funding period for the Plan would continue to be the period between valuation and June 30, 2003, as long as the Plan has a negative Unfunded Actuarial Accrued Liability. If the Plan were to have a positive UAAL, then the old funding mechanism would apply.

# M. LEGISLATED PLAN CHANGES ENACTED BY THE 1993 LEGISLATURE OF THE STATE OF ARIZONA

- 1. No benefit changes were passed by the 1993 Legislature. However, the Legislature passed legislation to reduce the required contribution rate of 4.09% down to 3.14%.
- N. LEGISLATED PLAN CHANGES ENACTED BY THE 1994 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Minimum LTD Benefit

Each member on long-term disability will receive a minimum monthly benefit of \$50.

#### 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 and who had 20 or more years of service at retirement will receive a minimum monthly benefit of \$600.

### 3. Pop-up Benefit

Members who retired prior to January 1, 1992, and who elected a Joint and Survivor option shall receive a "Pop-up" in their retirement income if their beneficiary predeceases them.

### 4. Excess Investment Earnings COLA

Retirees at least age 55 who have been retired at least one year and members on long-term disability are eligible to receive a cost-of-living adjustment equal to one-half the increase in CPI for the prior calendar year. The COLA will be paid from a reserve of Excess Investment Earnings. If there are no Excess Investment Earnings in reserve, no COLA will be granted.

#### 5. Change in Section 38-737 Funding Period

Section 38-737 was amended to change the funding period of the Plan to a rolling 30-year period. The change is to be phased-in over the next nineteen years. If the Plan ceases to have a surplus, the funding period would immediately go to 30-years.

# O. LEGISLATED PLAN CHANGES ENACTED BY THE 1995 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Change in Maximum Increase Provided by Excess Investment Earnings COLA

The maximum COLA payable from Excess Investment Earnings was increased from 50% to 100% of the increase in the CPI.

#### 2. Removal of LTD Benefit from the Plan

The Legislature established a new LTD program and removed the LTD benefit from the Plan. Liabilities for current LTD recipients will be transferred to the new LTD program effective October 1, 1995.

## 3. Creation of Separate Account for the Health Premium Supplement

The Health Premium Supplement benefit is to be separated into a 401(h) account. The assets and liabilities associated with the Health Premium Supplement will be accounted for separately.

- P. LEGISLATED PLAN CHANGES ENACTED BY THE 1996 LEGISLATURE OF THE STATE OF ARIZONA
  - 1. No material changes.
- Q. LEGISLATED PLAN CHANGES ENACTED BY THE 1997 LEGISLATURE OF THE STATE OF ARIZONA
  - 1. Creation of family Health Supplement. Allows unused portion of the Health Supplement of a member or dependent to be used to pay the other recipient's health insurance premium.
  - 2. The calculation methodology for the Excess Investment Earnings COLA was modified.
  - 3. The contribution rate will be determined on a biennial cycle beginning with the 2000 fiscal year.
- R. LEGISLATED PLAN CHANGES ENACTED BY THE 1998 LEGISLATURE OF THE STATE OF ARIZONA
  - 1. No material changes.
- S. LEGISLATED PLAN CHANGES ENACTED BY THE 1999 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Enhanced Refund Option

Employees who terminate prior to eligibility for retirement may elect to receive a refund of their employee contributions with interest. If the employee has at least five years of service, the employee is also entitled to a share of the employer contributions with interest. The share is 50% with five years of service and increases 10% for each additional year of service to a maximum of 100% for ten or more years of service.

#### 2. Benefit Multiplier Increased to 2.1%

The benefit multiplier increased from 2.0% to 2.1% effective July 1, 2000.

#### 3. 5% Ad Hoc Increase

A 5% retiree ad hoc increase for retirees and beneficiaries effective July 1, 2000.

#### 4. Increase in Maximum Service While on LTD

Increase in the maximum amount of service that may be accrued while on LTD from 25 to 30.

#### 5. Changes in Permanent Benefit Increase COLA

- a. The maximum aggregate COLA was increased from 3% to 4%.
- b. The threshold for determining "Excess Earnings" was lowered from 9% to 8%.
- c. The limitation of the COLA to the increase in the CPI was removed.

# T. LEGISLATED PLAN CHANGES ENACTED BY THE 2000 LEGISLATURE OF THE STATE OF ARIZONA

1. The age restriction on the Permanent Benefit Increase was eliminated.

# U. LEGISLATED PLAN CHANGES ENACTED BY THE 2001 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Health Insurance Premium Benefit Increase

Increases the health insurance premium benefit for eligible members as follows:

- Benefit for Medicare eligible member with member only coverage increased from \$65 to \$100
- Benefit for non-Medicare eligible member with member only coverage increased from \$95 to \$150
- Benefit for family coverage where member and dependent are non-Medicare eligible increased from \$175 to \$260
- Benefit for family coverage where member and dependent are Medicare eligible increased from \$115 to \$170
- Benefit for family coverage where member is Medicare eligible and dependent is non-Medicare eligible increased from \$145 to \$215
- Benefit for family coverage where member is non-Medicare eligible and dependent is Medicare eligible increased from \$145 to \$215

### 2. Graded Multiplier

Provides a graded multiplier in the retirement benefit formula, increasing with years of service according to the following:

-	0.00 to 19.99 Years of Service	2.10%
-	20.00 to 24.99 Years of Service	2.15%
-	25.00 to 29.99 Years of Service	2.20%
-	30.00 or More Years of Service	2.30%

#### 3. Employer Option Service Purchase Incentive

Permits an employer to offer a member who is eligible to retire under the Rule of 80 a contract to work and additional three years of employment. No contributions are made to ASRS during the contract. If the employee completes the contract, then they receive an additional three years of service with the option to purchase three more years of service.

## 4. Permanent Benefit Increase Enhancement

Provides that interest at a rate of 8% be credited on the funds held in reserve for the permanent benefit increase (PBI). This interest will then be used to fund an additional increase for retirees who have at least 10 years of service and who have been retired at least five years. The increase is incremental for each five years of retirement.

## 5. Temporary Rural Health Insurance Premium Benefit

In addition to the premium benefit paid to ASRS retired and disabled members, the Legislature granted a temporary benefit for retired and disabled members who live in areas of the state not served by a managed care program (HMO) and who have 10 years of credited service in the following amounts:

- Benefit for Medicare eligible member with member only coverage of \$170 per month
- Benefit for non-Medicare eligible member with member only coverage of \$300 per month
- Benefit for Medicare eligible members with Medicare eligible dependent with family coverage of \$350 per month
- Benefit for non-Medicare eligible members with non-Medicare eligible dependent with family coverage of \$600 per month
- Benefit for Medicare eligible members with non-Medicare eligible dependent with family coverage of \$470 per month
- Benefit for non-Medicare eligible members with Medicare eligible dependent with family coverage of \$470 per month

## 6. Partial Lump Sum Option

Allows a retiring member to receive a portion of his benefit in a lump sum payment. The lump sum is limited to a maximum of 36 monthly payments. The member's monthly annuity is actuarially reduced to reflect the lump sum payment.

#### 7. Maximum Benefit

Members who are hired after the date the graded multiplier became law have a maximum benefit equal to 80% of the member's 36-month final average earnings.

- V. LEGISLATED PLAN CHANGES ENACTED BY THE 2002 LEGISLATURE OF THE STATE OF ARIZONA
  - 1. No material changes.
- W. LEGISLATED PLAN CHANGES ENACTED BY THE 2003 LEGISLATURE OF THE STATE OF ARIZONA

### 1. Temporary Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Subsidy for the next two years, from July 1, 2003, to June 30, 2005. The benefit is provided to retired and disabled members who live in areas of the state not served by a Health Maintenance Organization (HMO) and who have 10 years of credited service. The Rural Health Insurance Subsidy now requires "minimum out-of-pocket" payments ranging from \$100 to \$425 per month, depending on the plan and coverage selected.

		Coverage dicare Parts & B	Insurance Coverage With Medicare Parts A & B*			
	Single	Family	Single	Family		
Required Minimum Out-of-Pocket Payment	\$125	\$425	\$100	\$200		
Rural Health Insurance Subsidy (Maximums)	Up to \$300	Up to \$600	Up to \$170	Up to \$350		

• Combination plans that include Medicare eligible and non-Medicare eligible retiree and dependent coverage require a \$400 monthly out-of-pocket payment.

# X. LEGISLATED PLAN CHANGES ENACTED BY THE 2004 LEGISLATURE OF THE STATE OF ARIZONA

### 1. Service Purchase Program

The Arizona Legislature revised the method of calculating the cost of service purchases, so that future purchases would be made at true actuarial present value.

#### 2. Early Retirement Incentive Programs

The Arizona Legislature provided that employers that participate in ASRS and offer early retirement incentives to their employees must notify ASRS of the incentives. ASRS will determine the cost of the incentives and the employers will pay the cost.

# Y. LEGISLATED PLAN CHANGES ENACTED BY THE 2005 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Temporary Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Subsidy for the next two years, from July 1, 2005, to June 30, 2007. The benefit is provided to Medicare-eligible retirees and disabled members who live in Arizona counties with no Health Maintenance Organization (HMO) service area and who have 10 years of credited service.

#### 2. Contribution Rates

The legislature pegged the contribution rates for fiscal 2006 and 2007 at 6.90% and 8.60%, respectively. After fiscal 2007, contribution rates are to be determined annually.

# Z. LEGISLATED PLAN CHANGES ENACTED BY THE 2006 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Elections After Retirement

Legislature limited the ability of ASRS retirees to rescind their elections after retirement. Specifically, members who have chosen a form with a death benefit can "pop up" once to the single life form, but are then not allowed to "pop down" to a death benefit form.

#### 2. Conformance with Certain Federal Regulations

State statutes were modified to conform to federal regulations regarding military service purchases, optional forms of retirement benefits, and minimum required distributions.

## 3. Repeal of Deferred Retirement Option Plan

The legislature repealed the modified Deferred Retirement Option Plan (DROP).