

Connecticut State Teachers' Retirement System

Results of the June 30, 2008 Actuarial Valuations

Based on the November 12, 2008 Draft Report

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GRS

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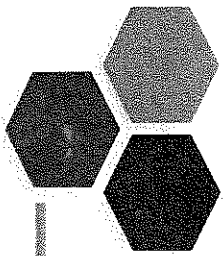
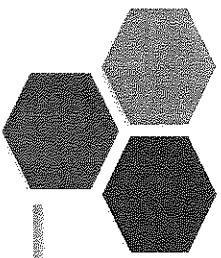


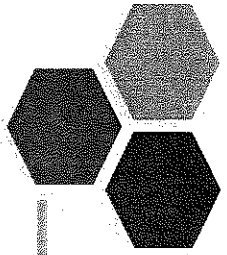
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Purposes of Actuarial Valuations

- ◆ Determine Funding Status
- ◆ Develop Contribution Rates given Funding Policy
- ◆ Provide Accounting and Other Data



Basic Retirement Funding

Equation

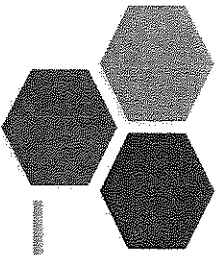
$$C + I = B + E$$

B depends on

- Plan Provisions
- Experience

C depends on

- Short Term: Actuarial Assumptions
Actuarial Cost Method
- Long Term: I, B, E



Selection of Assumptions

What

Economic

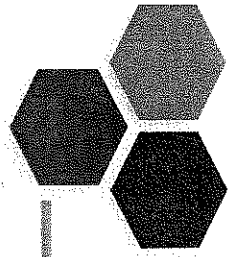
- ◆ Investment Return
- ◆ Payroll Growth Rate
- ◆ Population Growth Rate
(Usually, a constant population size is assumed)

Demographic

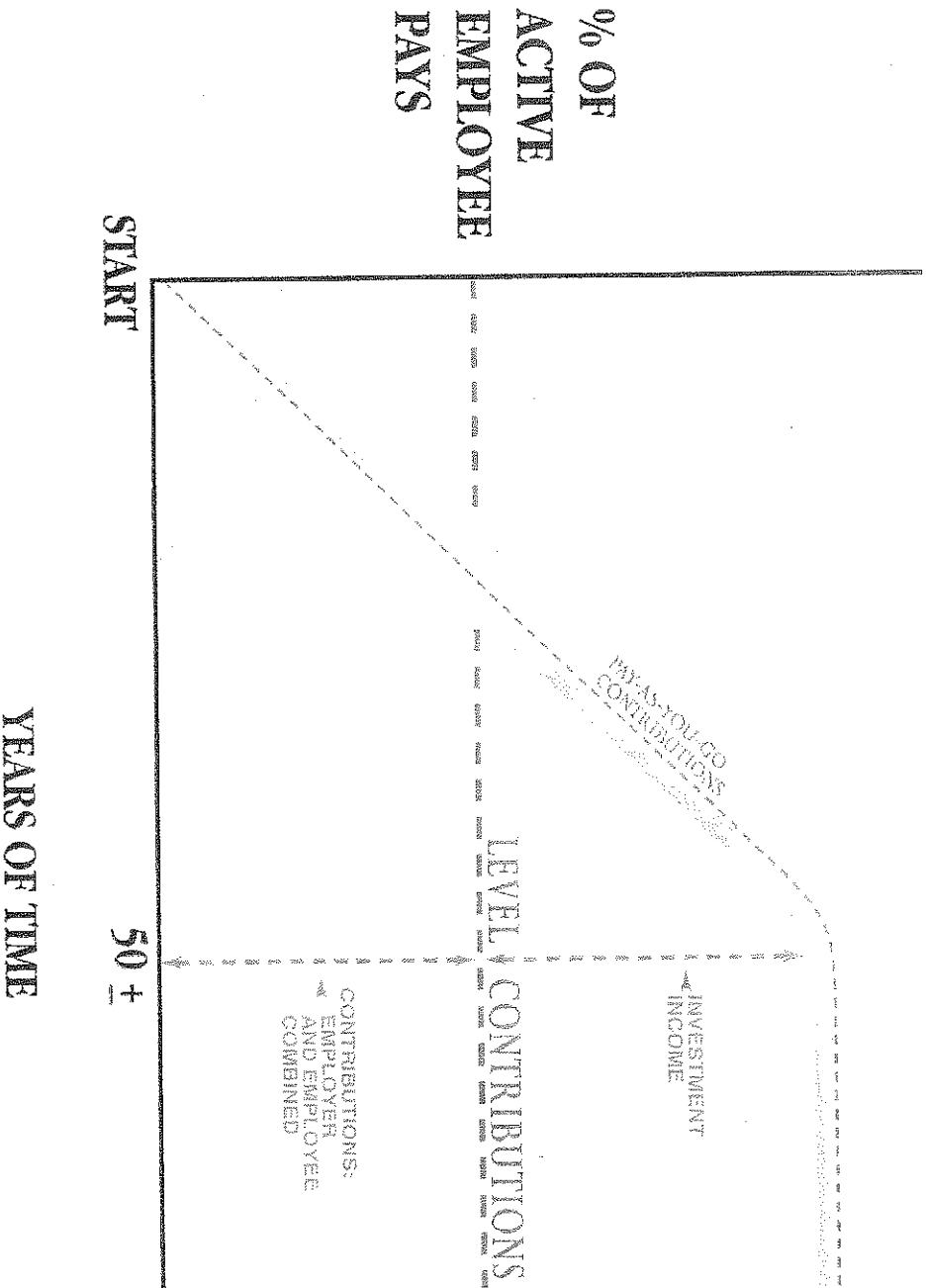
- ◆ Retirement Rates
- ◆ Promotional/Step Pay Increases
- ◆ Disability
- ◆ Turnover
- ◆ Mortality

Who Selects

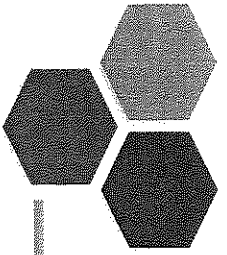
- ◆ Board, Actuary, Other Advisors
- ◆ Mostly Actuary



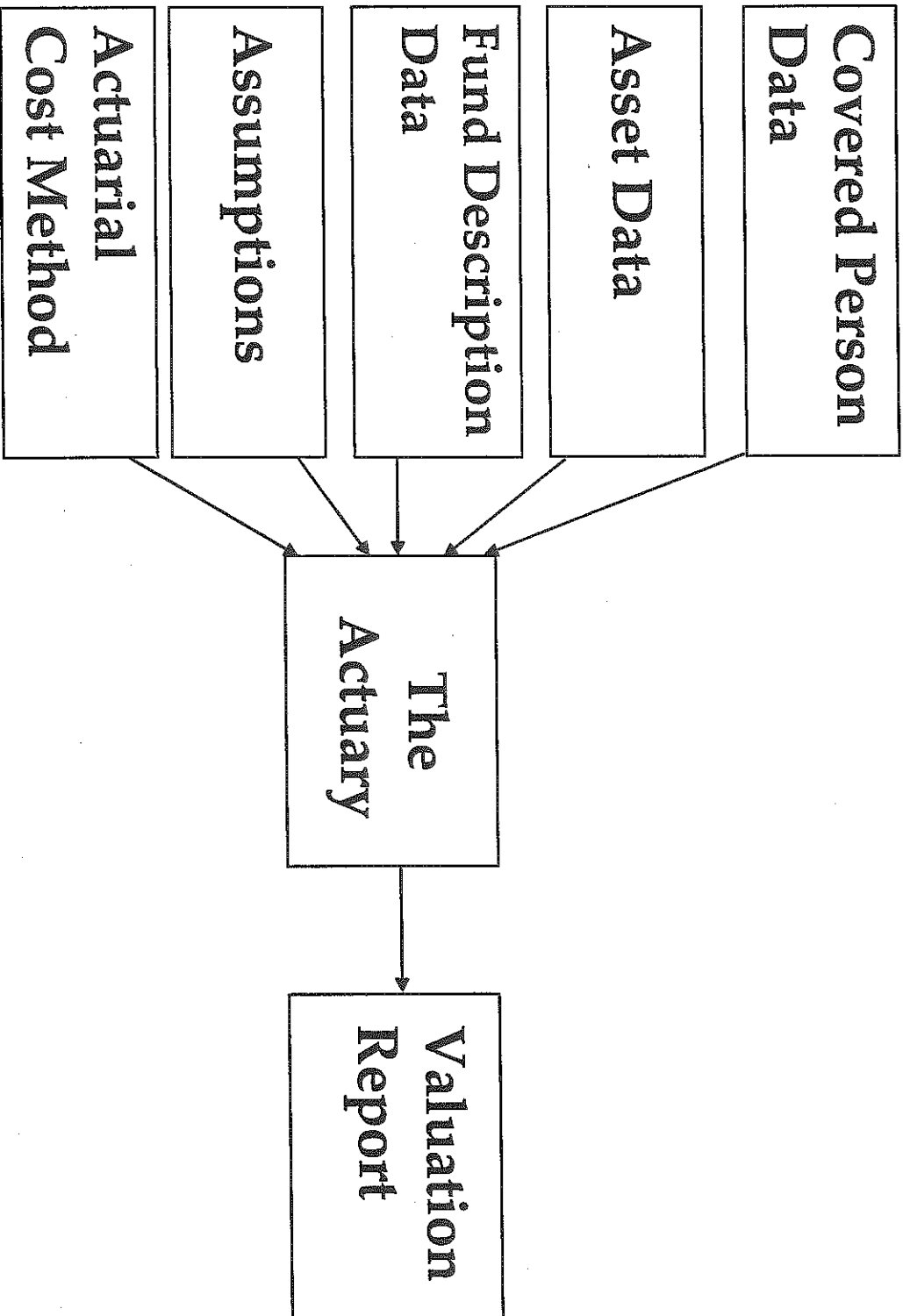
The Long Term Solution to the Equation

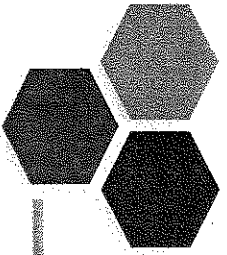


In CTRS, Benefit Payments are currently running at about \$1.3 billion per year while contribution income is on the order of \$800 million.



Valuation Process

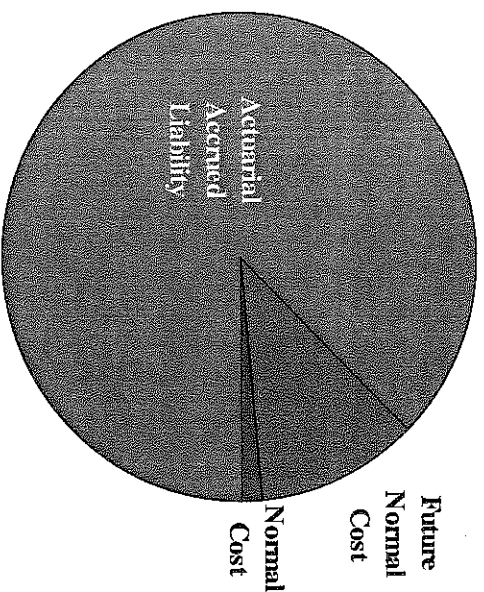


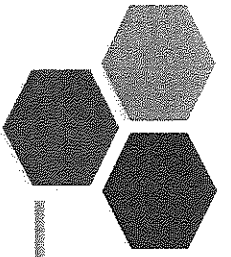


Actuarial Cost Method

- ◆ Present value of future benefits - present value of all future benefits (PVFB) payable to current participants (Active, retired, terminated vested)
- ◆ Actuarial accrued liability - portion of PVFB allocated to prior years
- ◆ Normal cost - portion of PVFB allocated to current year
- ◆ Future normal costs - portion of PVFB allocated to future years

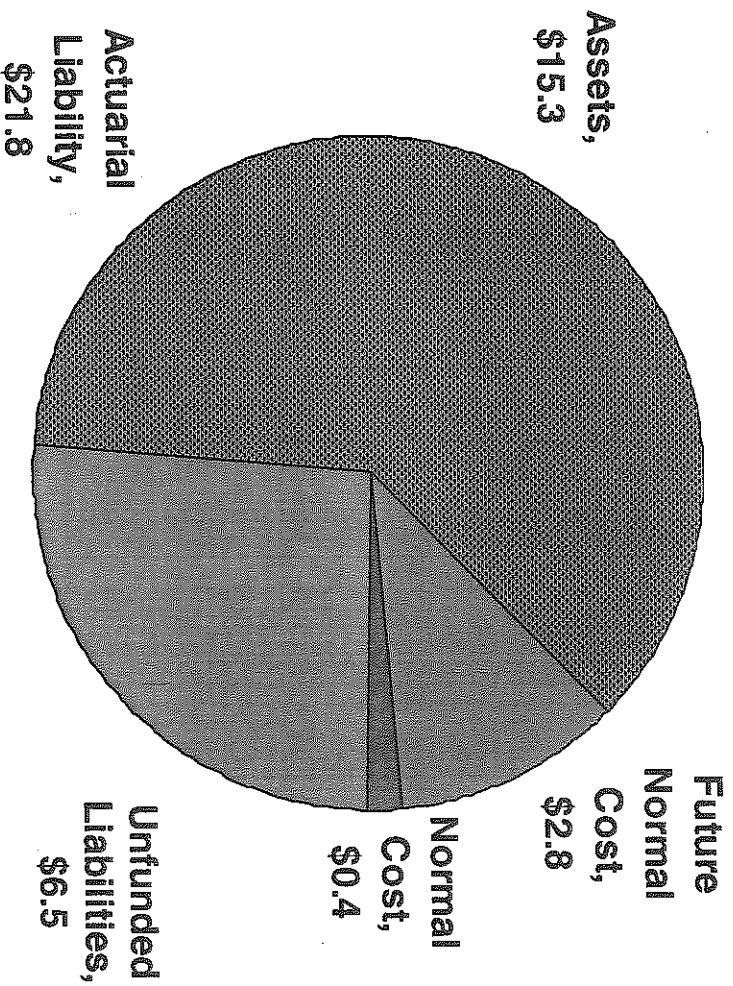
Present Value of Future Benefits



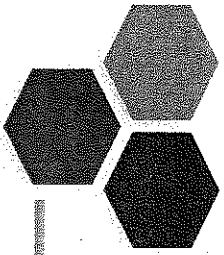


Funding for \$25 Billion Worth of Benefit Promises

(\$ Billions)

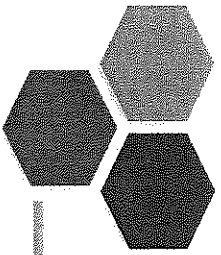


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Causes of Unfunded Liability

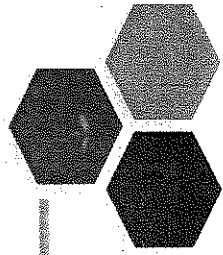
- ◆ Granting initial benefits or granting benefit increases for service already rendered.
- ◆ Actual experience which is less favorable than assumed. Examples:
 - ▶ higher salary increases
 - ▶ earlier retirement date(s)
 - ▶ lower rates of investment earnings
 - ▶ lower rates of non-death terminations
- ◆ Not contributing the actuarially recommended contribution



Determining Contributions

- ◆ Under actuarial funding, the basic funding objective is to avoid transfer of the cost of benefit obligations between generations of taxpayers. This objective is implemented by contributions sufficient to:
 - ▶ pay for costs allocated to the current year on account of service rendered by participants in the current year (Normal Cost)
 - ▶ pay for Unfunded Actuarial Accrued Liability as specified in Chapter 167a, Section 10-183z of the Connecticut General Statutes:
 - 40-year closed amortization as of June 30, 1991
 - Subsequent changes in UAAL amortized over 30 years
 - Equivalent single amortization period is 29.2 years as of June 30, 2008

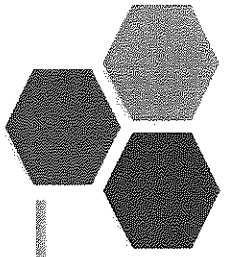
Please see page B-2 of the report for additional detail



Census Information - Retirees

	Valuation Date June 30	
	2006	2008
Number of Retirees	26,695	28,787
Total Benefits	\$ 1,010,782,904	\$ 1,231,069,350
Average Benefit	\$ 37,864	\$ 42,765
Inactive Members		
Vested	1,341	1,394
Non-Vested	9,391	10,597

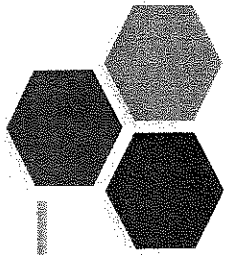
Please see page C-3 of the report for additional detail



Census Information - Actives

	<u>Valuation Date June 30</u>	
	<u>2006</u>	<u>2008</u>
Number of Actives	51,015	51,738
Total Payroll	\$ 3,137,684,279	\$ 3,399,305,134
Average Pay	\$ 61,505	\$ 65,702
Average Age	45.0 years	44.8 years
Average Service	13.6 years	13.3 years

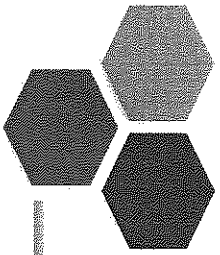
Please see page C-1 of the report for additional detail



Asset Experience in Depth

IN Millions

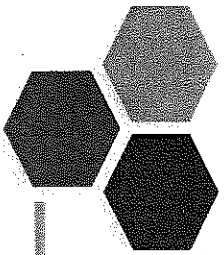
Fiscal year	2007	2008
Funding Value Beginning of Year	\$11,781.4	\$12,762.2
+ Contributions	651.2	2,752.6
- Benefit Payments	1,160.1	1,283.3
+ Assumed Return	979.8	1,097.6
= Expected Funding Value	12,252.3	15,329.1
+ Gain or (loss)	509.9	(58.1)
Funding Value End of Year	12,762.2	15,271.0
Market Value	13,744.8 ^{7.5%}	14,551.5 ^{-4.8%}
Difference	982.6	(719.5)



Loss Recognition Schedule

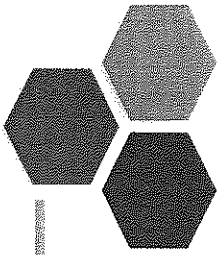
Fiscal Year	Amount
2009	(100.9)
2010	(178.6)
2011	(440.0)
Total	(719.5)

Future recognition of existing losses is likely to exert upward pressure on contribution rates going forward. This is in addition to any effects from the post June 30, 2008 markets. Of course one or two good years could mitigate the above effect.



Summary of Legislative Changes

- ◆ Public Act 07-186 – Effective July 1, 2007
 - ▶ \$2 billion of GO bond proceeds to reduce unfunded liability
 - ▶ Guaranteed annual COLA for post 9/1/92 retirees
 - Eliminated CLARA and credits assets to TRF
 - Eliminated provision linking COLA to the CLARA balance
 - *Changed* Reduced COLA for post 7/1/07 hires
 - ▶ ARC automatically appropriated while GO bonds outstanding
 - ▶ Actuarial assumption of 2% for future COLAs for post 9/1/92 retirees. Actual COLA may be more or less.

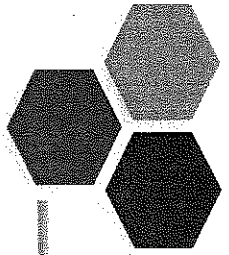


CLARA Summary

		<u>Eligible</u> <u>Pensioners</u>	<u>Rate of</u> <u>Return</u>
1. CLARA Balance, June 30, 2006	\$ 1,591,025,496		
Actuarial Liability for July 1, 2006 COLA = 4.1%	(242,359,569)	14,859	
Applicable Investment Return for FY 2006	0		11.08%
Actuarial Liability for January 1, 2007 COLA = 3.3%	(20,353,437)	1,924	
2. CLARA Balance, June 30, 2007	1,328,312,490		
Applicable Investment Return for FY 2007	705,265,259		17.47%
3. CLARA Balance, July 1, 2007	2,033,577,749		
Transfer to System Assets	(2,033,577,749)		
4. CLARA Balance June 30, 2008	\$0		

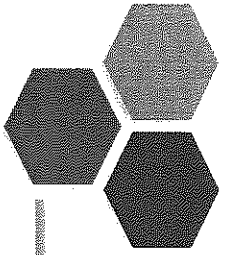
Effective July 1, P.A. 07-186 repealed 10-183(g)(l), eliminating the CLARA. Assumed future cost-of-living adjustments for members retiring on or after September 1, 1992 are included in the actuarial accrued liabilities. CLARA assets were rolled into the system assets.

Please see page B-10 of the report for additional detail



Reconciliation of Results

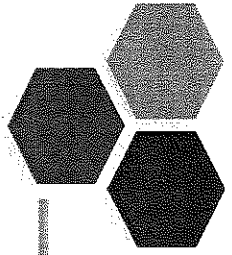
	Amounts in \$ Millions				Contribution Rate
	Accrued Liability	Assets	Unfunded Liability		
June 30, 2006	\$ 18,703.8	\$ 11,781.3	\$ 6,922.5	15.28%	
Impact of GO Bonds	-	2,000.0	(2,000.0)	-3.84%	
Impact of P. A. 07-186	1,150.5	-	1,150.5	3.43%	
CLARA Experience	705.3	-	705.3	1.33%	
Asset Experience	-	494.3	(494.3)	-0.96%	
All Other Effects	1,241.4	995.4	246.1	-0.03%	
June 30, 2008	21,801.0	15,271.0	6,530.0	15.21%	



Funded Ratio

Actuarial Valuation Date	Funded Ratio
6/30/1994	68.1%
6/30/1996	69.1
6/30/1998	70.4
6/30/2000	81.4
6/30/2002	75.9
6/30/2004	65.3
6/30/2006	59.5
6/30/2008	70.0

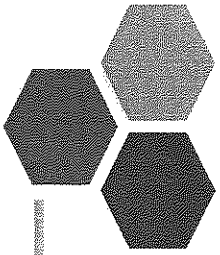
The funded ratio is the ratio of the funding value of assets to the actuarial accrued liabilities. If market value were the basis for the measurement, the funded ratio at June 30, 2008 would be 66.8%.



Expected Employer Contributions

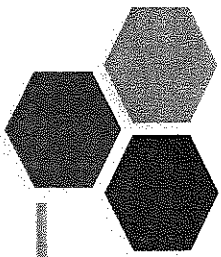
	State Contribution for Fiscal Year		
	2009	2010	2011
Millions of Dollars	\$539.3	\$559.2	\$581.6
Percent of Payroll	15.28%	15.21%	15.21%

Please see page 1 of the report for additional detail



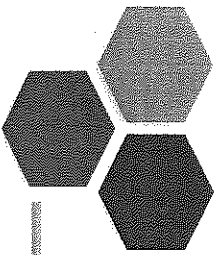
In Summary

- ◆ **Funded Ratio increased due to:**
 - ▶ Contribution of \$2 billion in GO proceeds in addition to ARC
 - ▶ Gain on actuarial value of assets
- ◆ **State expected to make a full contribution while GO bonds are outstanding**
- ◆ **Significant downturns in the investment markets may increase future contribution rates and decrease funded ratio**



Background on GASB 43/45

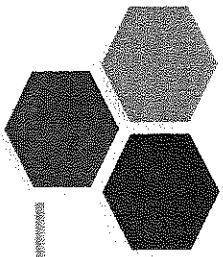
- ◆ **Other Postemployment Benefits Other Than Pensions (OPEB)**
 - ▶ Includes benefits provided separately or through a defined benefit pension plan
 - Medical, prescription, dental, vision, hearing
 - ▶ Includes benefits provided outside a defined benefit pension plan
 - Life insurance, disability, long-term care, etc.
- ◆ **GASB 43/45 are accounting standards for OPEB**
 - ▶ Similar to GASB 25/27 for pensions
 - ▶ Similar to private sector OPEB standard FAS 106



Background on GASB 43/45

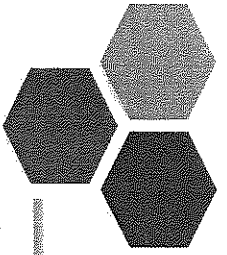
◆ Employer Accounting Cost

- ▶ Annual OPEB Cost
 - Annual Required Contribution (ARC) plus
 - Normal Cost plus
 - Amortization of Unfunded Actuarial Accrued Liability
 - Interest on Net OPEB Obligation plus
 - Adjustment to Net OPEB Obligation
- ▶ Net OPEB Obligation
 - Accumulated value of
 - Annual OPEB Cost less Actual Employer Contribution



CTRS Retiree Healthcare Coverage

- ◆ Benefits are offered to:
 - ▶ Service retirees
 - ▶ Disability retirees
 - ▶ Surviving spouses
- ◆ Retiree Healthcare Benefits:
 - ▶ Subsidy
 - ▶ Enroll in CTRS-sponsored Medicare Supplement Plan

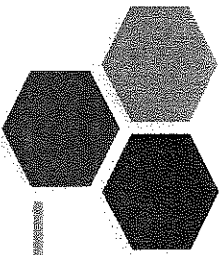


CTRS Retiree Healthcare Coverage

► Subsidy

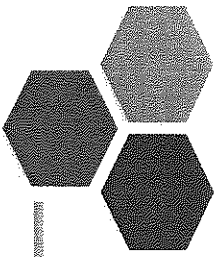
- Participating in former employers healthcare plan
- Eligible to receive before and after Medicare eligibility
- \$110/month to offset cost of employee and spouse coverage
- Subsidy amount set by statute

Don't assume the \$110 subsidy will grow in the future



CTRS Retiree Healthcare Coverage

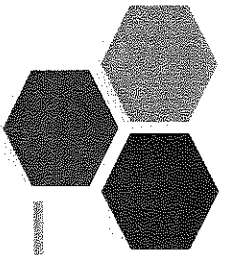
- ▶ CTRS-sponsored Medicare Supplement Plan
 - Must be enrolled in Medicare A and B
 - Basic coverage includes Medicare supplement and prescription coverage
 - Cost of basic coverage shared equally between:
 - Active member contributions through Health Insurance Fund
 - Retirees
 - State
 - Retiree share of 2008 monthly premium is \$90
 - Retirees pay full cost of dental and vision coverage



Retiree Healthcare Valuation Results

(\$ in Millions)

Valuation Date	6/30/2006	6/30/2008
For Fiscal Years Ending	<u>2007/2008</u>	<u>2009/2010</u>
Normal Cost	\$ 31.0	\$ 32.0
Amortization of UAAL	\$ 80.7	\$ 84.6
Annual Required Contribution	\$ 111.7	\$ 116.7
(% of Covered Payroll)	3.6%	3.4%



Questions?
