MERCER

Human Resource Consulting

April 2004

Idaho National Engineering and Environmental Laboratory Employee Retirement Plan

Valuation Results for Plan Year Ending September 30, 2004

Marsh & McLennan Companies

Agenda

- Current Environment
- Contribution Requirements for FY 2004
- Estimates for 2005 and Beyond

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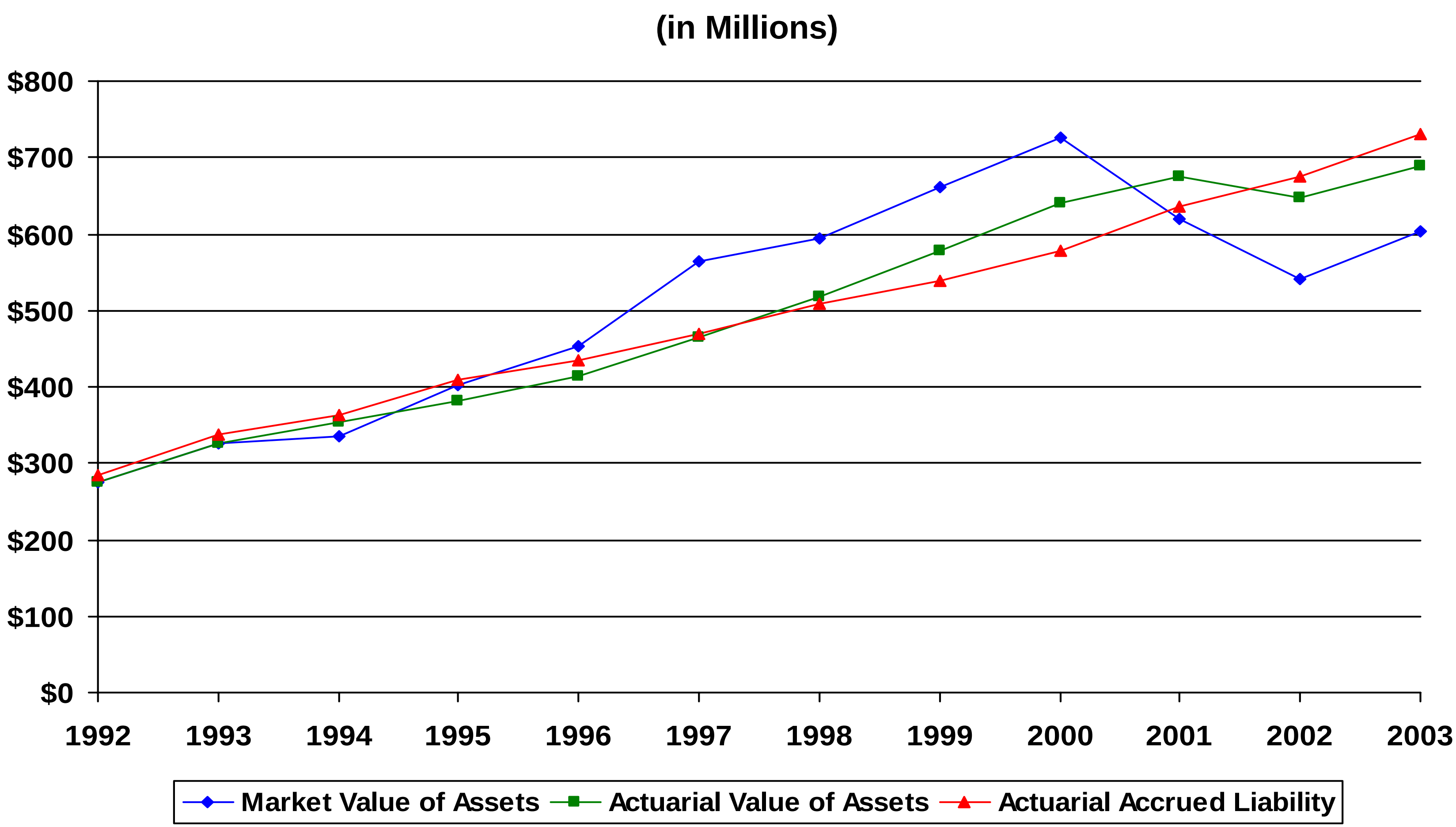
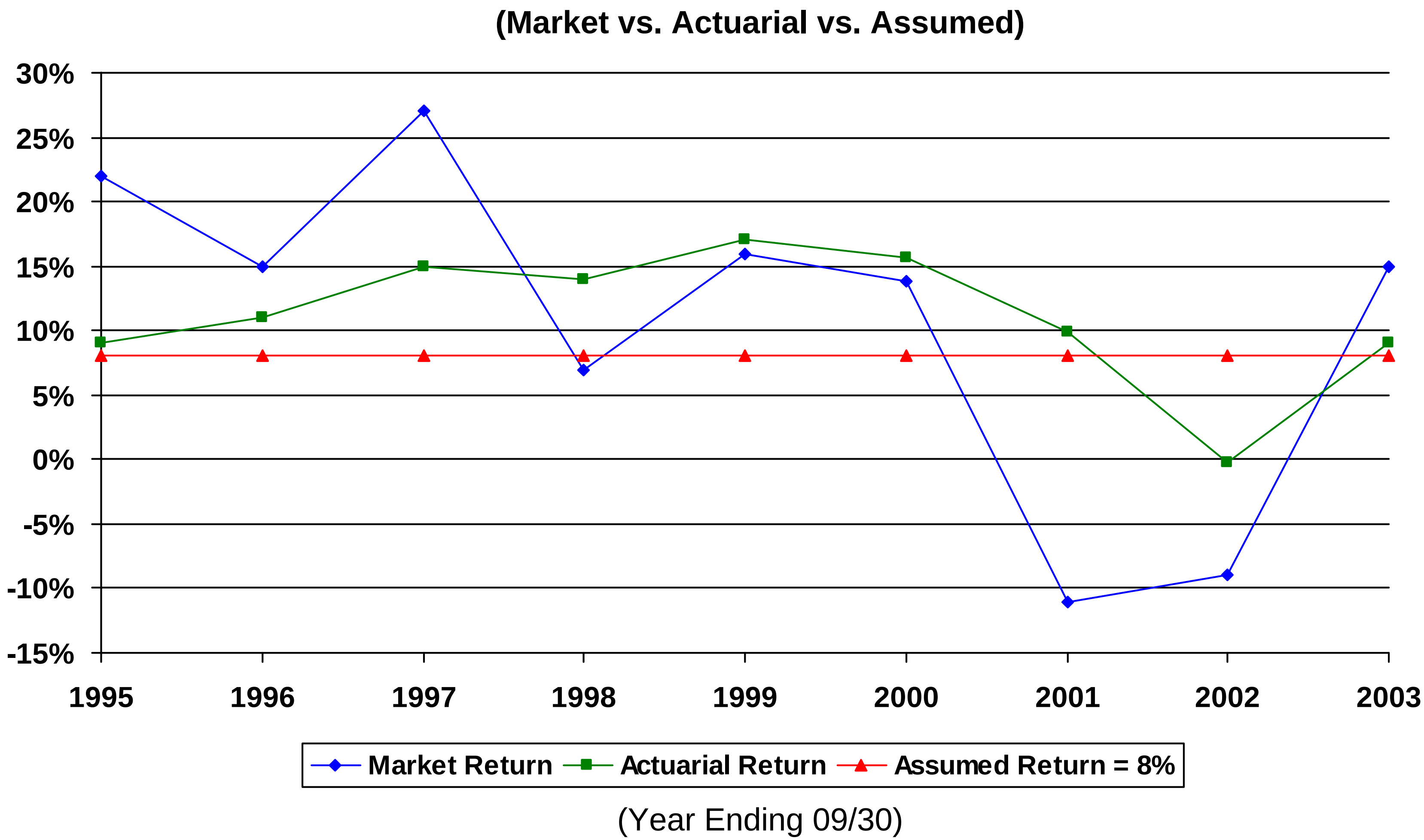
Current Environment

- Equity returns are increasing
  - No Additional Funding Charge – yet
- Interest rates are falling
  - Liabilities and contribution requirements are increasing
- Congress recently passed legislation to temporarily replace the 30-year Treasury rate with a corporate bond rate (2004 and 2005)

Historical Information
Assets & Liabilities



Historical Information
Estimated Returns



What Happened During the Last Few Years?

(in Millions)

Date	Market Value of Assets	Actuarial Accrued Liability	Surplus/ (Deficit)
10/01/2000	$727	$579	$148
10/01/2001	619	636	(17)
10/01/2002	540	676	(136)
10/01/2003	604	730	(126)

Valuation Results as of 10/01/2003

Gains and Losses

Liability Gain/(Loss)	
New Entrants	$ (2.6)M
Other	(7.9)M
Total	$(10.5)M
(1.44% of Liabilities)	

Asset Gain/(Loss)	
Actuarial	$ 6.8 M
Market	37.7 M
(15.0% Asset Return on Market Value vs. 8.0% Assumption)	

Unfunded Liability exists as of 10/1/2003 and is equal to:

	Smoothed Asset Basis*	Market Value Basis
Accrued Liability	$730,051,393	$730,051,393
Plan Assets	688,908,890	603,668,403
Unfunded Liability	$ 41,142,503	$126,382,990

*Smoothed basis used to determine funding requirement.

Contribution Basics

- Is a contribution required?
  - No, if plan is fully funded (assets exceed liabilities)
  - Yes, if plan is not fully funded
- How much is the contribution?
  - Charges (typical)
    - Normal cost
    - Net amortization of unfunded liability
  - Other charges
    - Additional funding charge (if applicable)
  - Sum of these charges is the minimum contribution

Contribution Basics

- How is minimum contribution satisfied?
  - Employer contributions
  - Full funding credit (if applicable)
  - Funding standard account credit balance

Contribution Components for 2004 and 2003

Charges	Plan Year Ending September 30, 2004		September 30, 2003	
		% of Payroll		% of Payroll
Normal cost	$ 15,358,973	4.4%	$ 13,771,271	4.1%
Amortization charges	10,022,081	2.9%	8,230,502	2.5%
Interest to end-of-year	2,030,484	0.6%	1,760,142	0.5%
Additional Funding Charge	0	0.0%	0	0.00%
Minimum contributions (before credits)	$ 27,411,538	7.9%	$ 23,761,915	7.1%

Contribution Components for 2004

Changes from New Plan Provisions	Elimination of Future Employee Contributions	Elimination of Death Benefit Charge	New Guard and Fire Subsidies	Total
Normal Cost	$ 660,466	$ 338,323	$ 125,146	$ 1,123,935
Accrued Liability	122,556	8,642,209	2,253,607	11,018,372
Amortization charges	10,080	710,801	185,354	906,235
Minimum contribution (before credits)	724,190	1,133,054	335,340	2,192,584
% of payroll	0.21%	0.33%	0.10%	0.41%

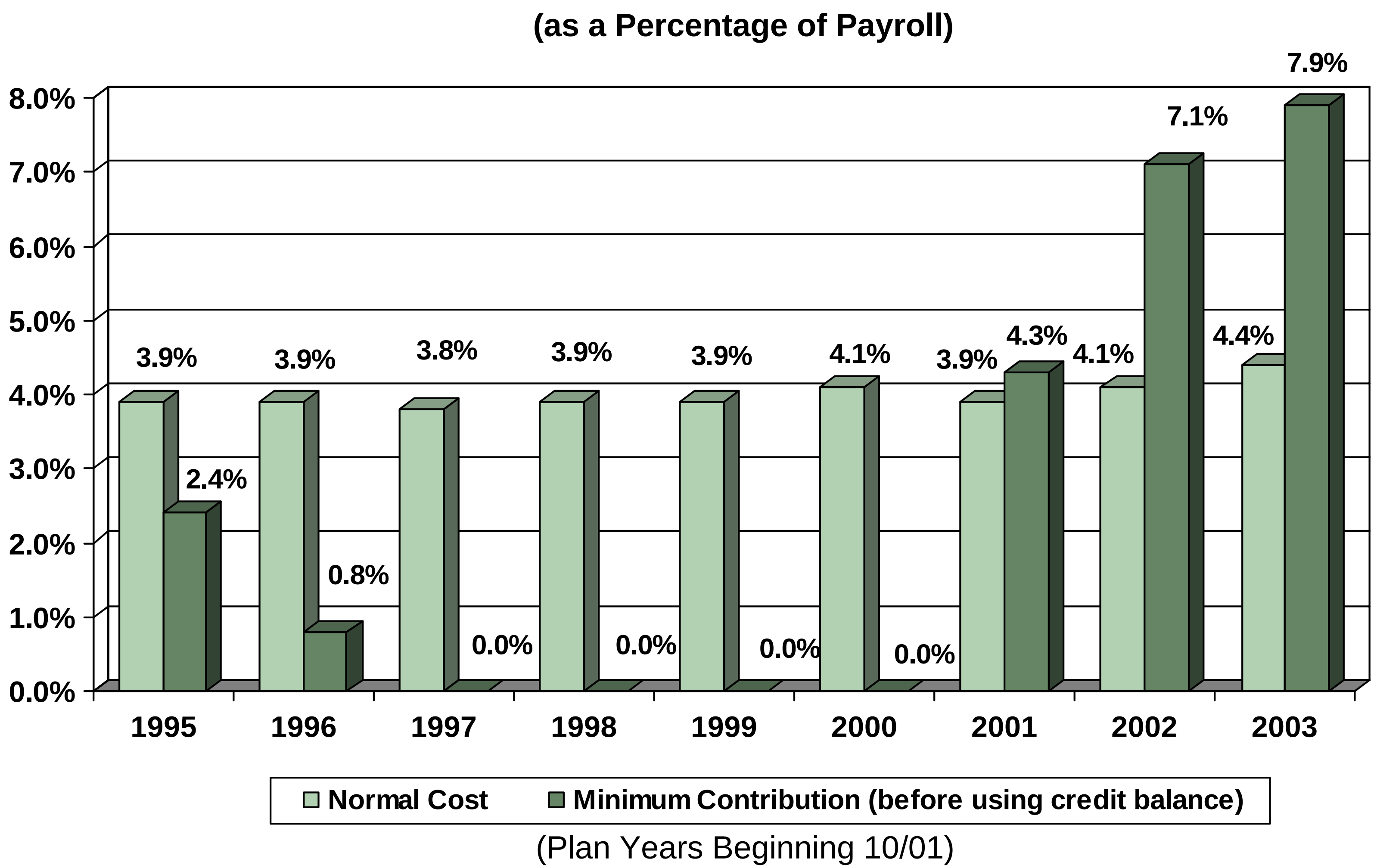
Contribution Components for 2004 and 2003

	Plan Year Ending	
Credits	**September 30, 2004**	**September 30, 2003**
Funding standard account credit balance	$ 6,470,213	$ 10,262,644
Interest to end-of-year	517,617	821,012
Full funding credit	0	0
Total credits	$ 6,987,830	$ 11,083,656
Remaining minimum contribution requirement (charges minus credits, not less than zero)	$ 20,423,708	$ 12,678,259
Actual employer contributions plus interest	?	19,148,472
End of year credit balance		$ 6,470,213

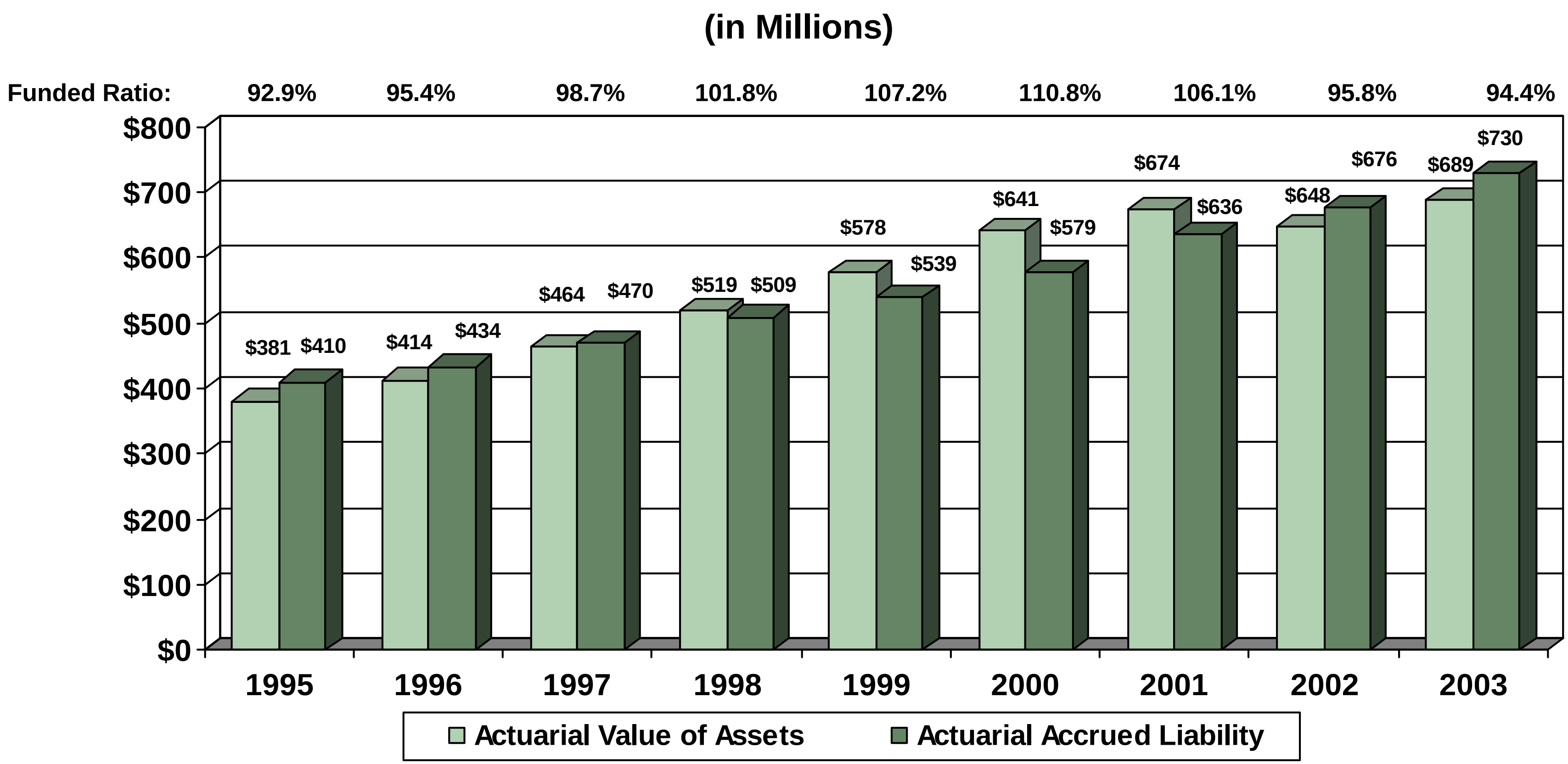
2004 and 2003 Funding Valuation Results

	Plan Year Ending	
Contribution (millions)	**September 30, 2004**	**September 30, 2003**
Minimum contribution (before credit balance)	$ 27.4	$ 23.8
Maximum contribution	75.3	52.9
Actual contribution	?	19.1
Credit balance used to satisfy minimum		4.7
Credit balance at beginning of year		10.3
Interest		0.9
Used to pay contribution requirement		(4.7)
Credit balance at end of year		$ 6.4

Normal Cost and Minimum Contribution



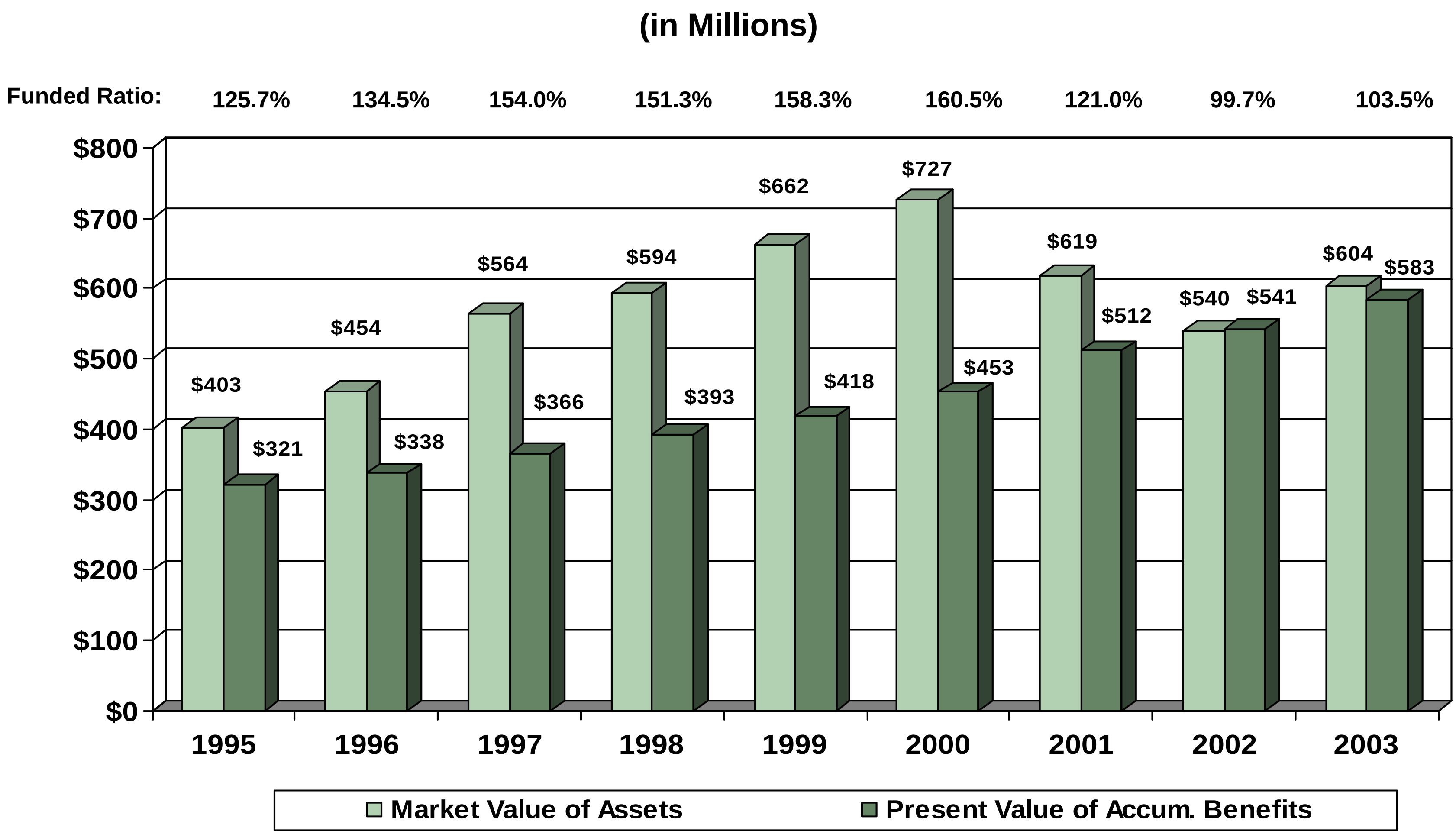
Actuarial Value of Assets vs. Funding Liability



(Plan Years Beginning 10/01)

Note: Interest rate for all years is 8.0%

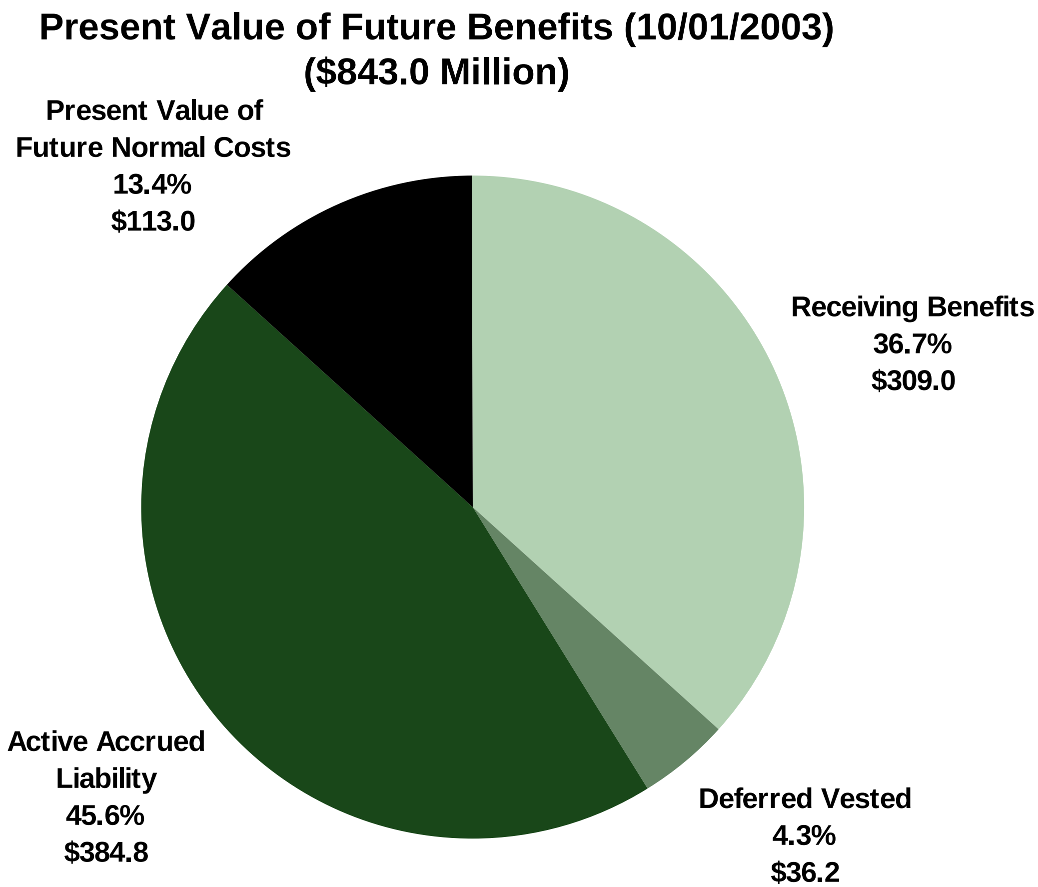
Present Value of Accumulated Benefits vs. Assets



(Plan Years Beginning 10/01)

Note: Interest rate for all years is 8.0%

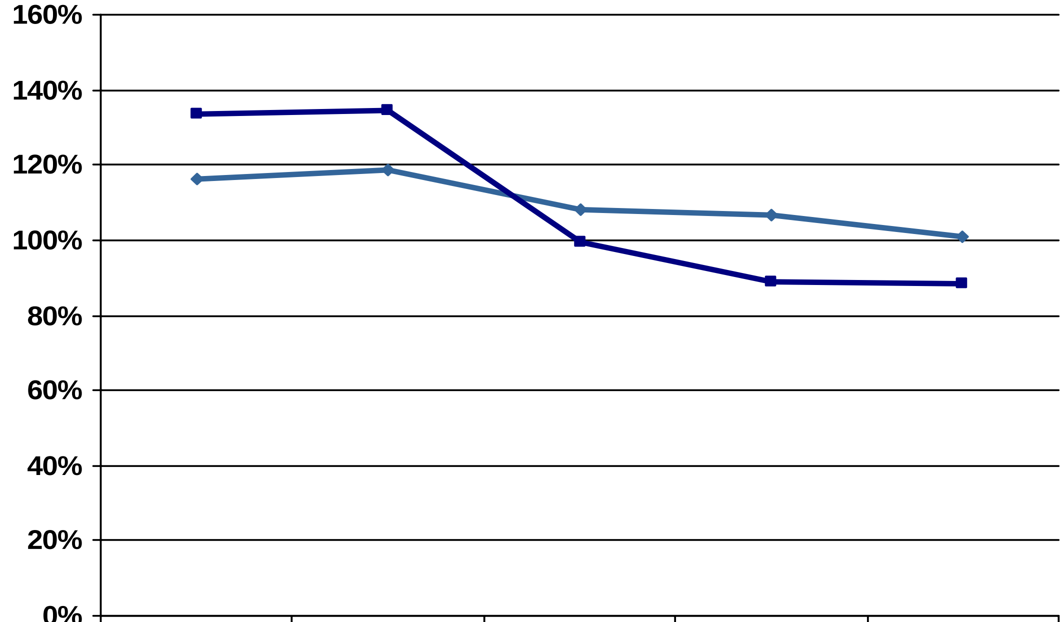
Distribution of Liabilities



Current Liability Measures

- Gateway Current Liability
  - Used to determine if “Additional Funding Charge” is required
    - Additional Funding Charge is extra contribution requirement imposed for underfunded plans
    - Charge imposed if either:
      - (1) Funded percentage is less than 80%, or
      - (2) Funded percentage is less than 90% and was also not more than 90% in two consecutive years in the last three years

Current Liability Funded Ratios



	1999	2000	2001	2002	2003
Gateway (Smoothed assets)	**116.4%**	**118.6%**	**108.3%**	**106.8%**	**100.7%**
Gateway (Market assets)	**133.4%**	**134.6%**	**99.4%**	**89.0%**	**88.2%**
Required Gateway Interest	**6.29%**	**6.24%**	**6.05%**	**6.72%**	**6.35%**

Ratio using smoothed assets is the measure used to determine if an additional funding charge is required.

Estimates for 2005 and Beyond

- Funding over the next 5 years could be substantial. Why?
  - Low interest rates and recent plan changes increased liabilities
  - Previous years' asset losses have created an unfunded liability, despite recent gains
  - Unfunded liability must be paid off over a relatively short time period of approximately 6 years
  - Amortization payments to pay-off the unfunded liability are substantial
  - Risk of additional funding charge in later years (risk is reduced now that 30-year Treasury replaced with higher corporate bond rate)

Estimates for 2005 and Beyond

- Projection process and assumptions
  - Active population held constant over projection period
  - New entrant profiles similar to those hired during last 2 years
  - No change in plan provisions
  - Different economic scenarios allow key components to vary
    - Corporate bond rates – Impacts current liability calculations
    - Inflation – Impacts salary increases
    - Asset returns

Estimates for 2005 and Beyond

- Funding Discount Rate - Lower Rates increase liabilities
- Funding Relief – Congress has decided on a temporary replacement of 30 year Treasury rate
  - Passage of funding relief will result in higher Current Liability Rates, potentially decreasing Minimum Required Contributions

Description of Economic Scenarios

Inflation →

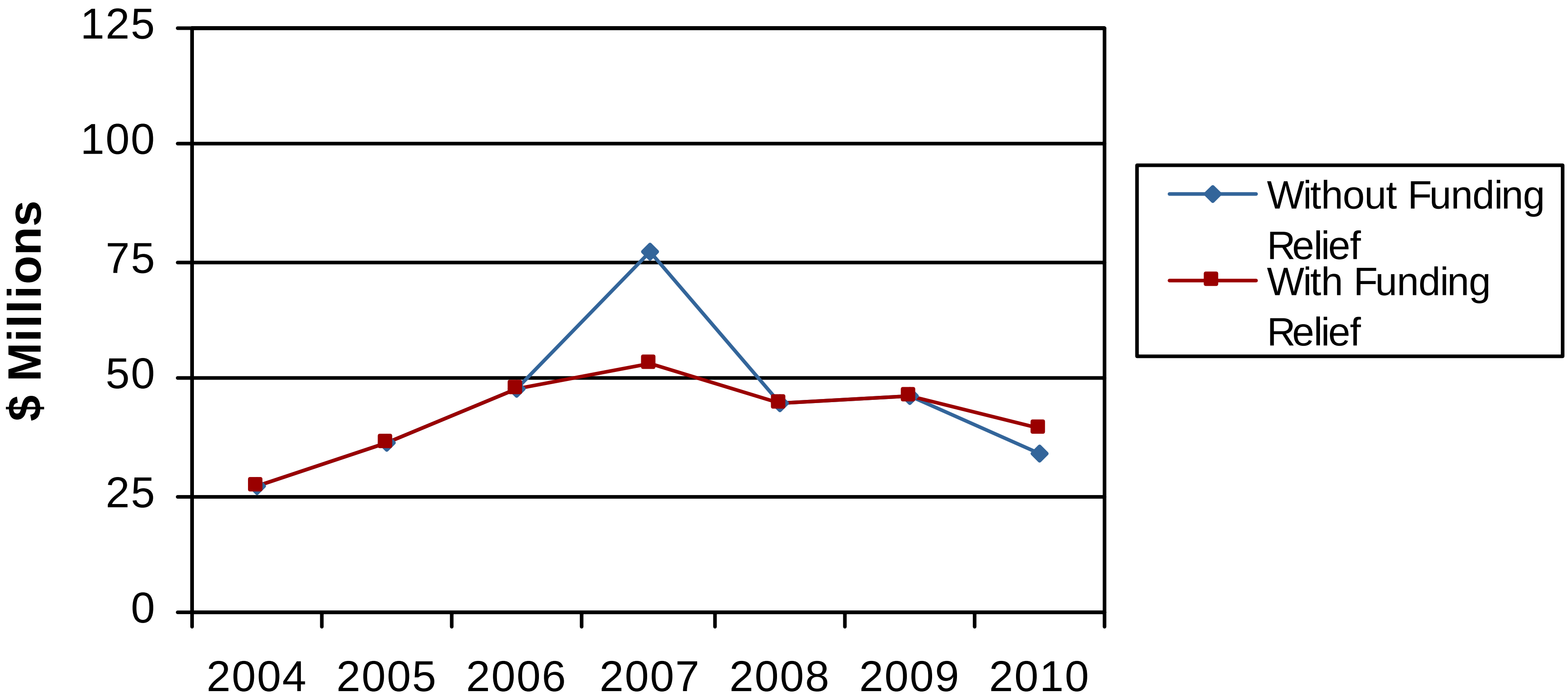
Economic Growth ↓	Low	Moderate	High
Low	Deflation + Recession Japan 1990s		Stagflation US 1970s
Moderate			
High	Ideal Growth US 1990s	Base Case	Inflationary Growth US 1960s

Funding Projections
Base Case

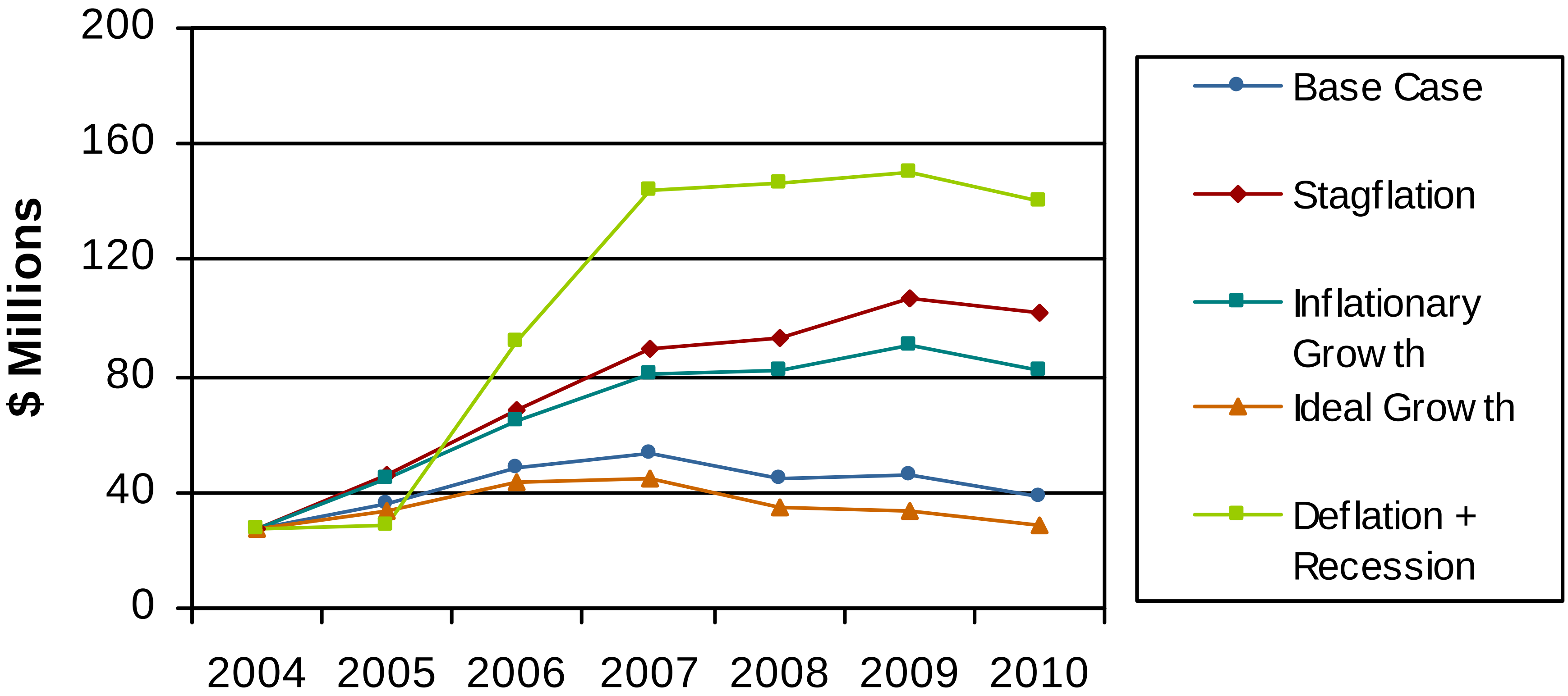
- Projected Assets and Liabilities
  - Funding Relief passed (assumed to continue beyond 2005)
  - Funding Rate remains at 8%
  - Total Asset Returns of 8%
  - Moderate Inflation of 2.5%
- Projected Minimum Required Contributions
  - Current Credit Balance is preserved
  - Funding Rate remains at 8%
- Compare the effects of possible future economic scenarios

Funding Projections

Effect of Funding Relief on Minimum Required Contribution (Base Case)



Funding Projections
8%, Funding Relief Approved



Projected Returns on Assets

Projection Horizon (years)

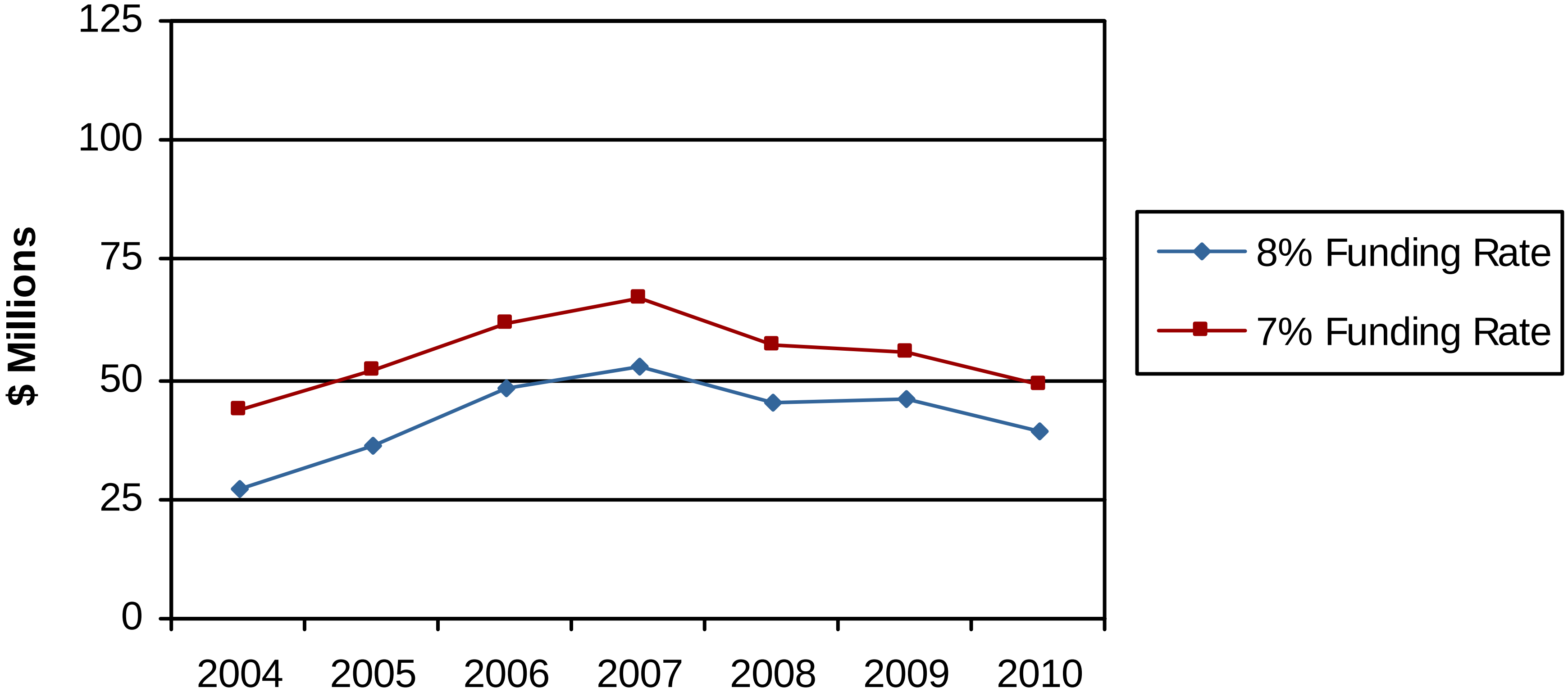
Percentiles		20	30
	25%	4.96%	5.28%
	30%	5.35%	5.60%
	35%	5.71%	5.90%
	40%	6.06%	6.18%
	45%	6.39%	6.45%
	50%	6.72%	6.72%
	55%	7.05%	6.99%
	60%	7.39%	7.26%
	65%	7.73%	7.55%
	70%	8.10%	7.84%
	75%	8.49%	8.17%

- Based on October 1, 2003 allocation of assets
- Decreased returns suggest considering a lower interest rate

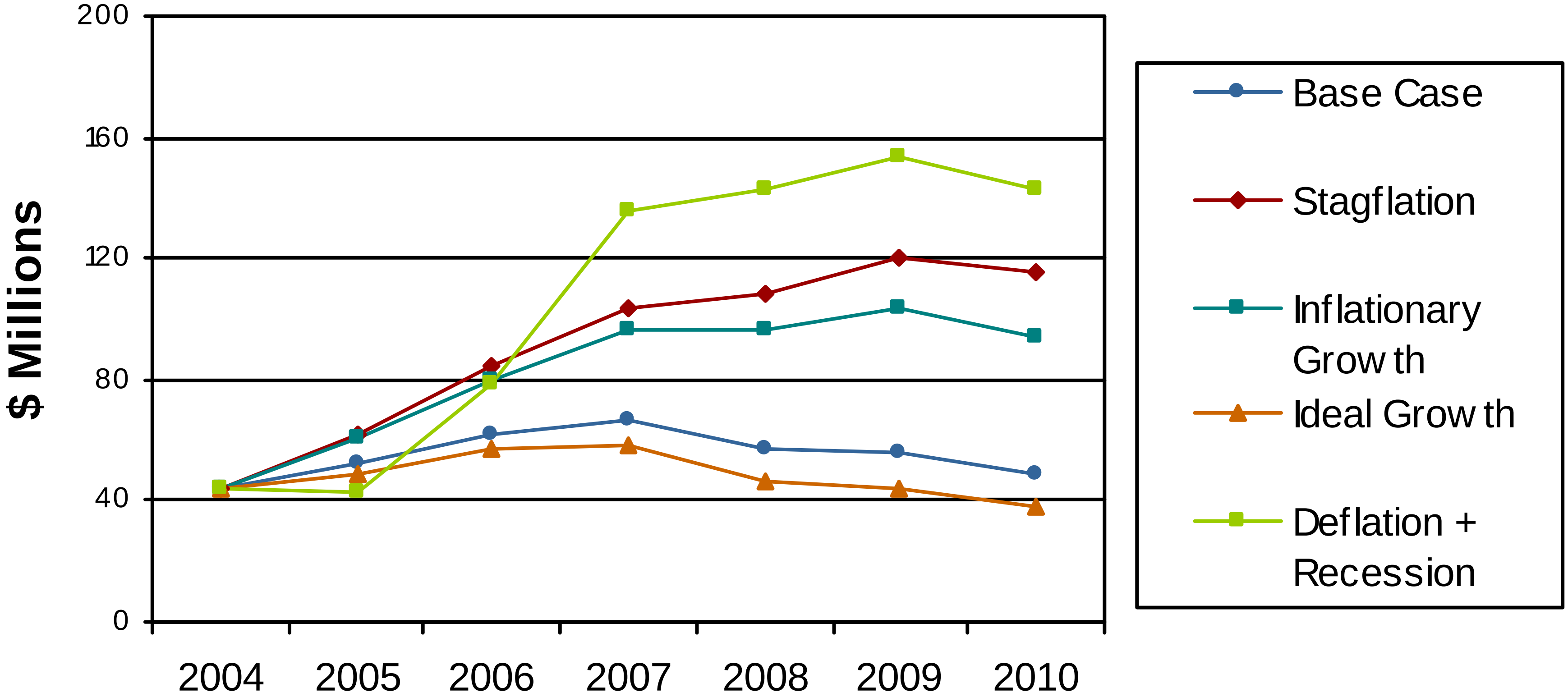
Funding Projections

- Decreasing the Funding Rate from 8% to 7% increases Accrued Liabilities, leading to a higher Minimum Required Contribution before using Credit Balance
- Consider the effect of this change on the Base Case Scenario
- Compare the effects of possible economic scenarios

Funding Projections
Base Case



Funding Projections
7%, Funding Relief Approved



Summary

- Contributions over the next five years may be significant
  - Driven by falling interest rates and recognition of asset losses
  - Additional funding charges possible under some scenarios
  - The range of possible contribution requirements (in millions of dollars) for the next five years are as follows:

	2004	2005	2006	2007	2008
8% Funding Rate	27	29 – 46	43 – 138	45 – 125	34 – 135
7% Funding Rate	44	43 – 62	57 – 143	58 – 153	46 – 125

Summary

- What to do
  - Preserve credit balance for use in year when further preservation is not possible
  - Consider contributing more, sooner
  - Changing funding method might lower costs (may just shift costs to future periods)
  - Re-evaluate investment policy, consider changing investments

Certification

This report is based on information developed as part of the October 1, 2003, actuarial valuation of the Idaho National Engineering and Environmental Laboratory Employee Retirement Plan. All data, assets, assumptions and plan provisions used in this report are the same as the valuation report, unless specifically noted otherwise.

We are available to answer any questions on the material contained in this report, or to provide explanations or further details as may be appropriate.

I, Donald E. Fuerst, FSA, am an Enrolled Actuary and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Donald E. Fuerst 4/12/2004

Donald E. Fuerst, FSA, EA Date
Enrolled Actuary No. 02-92

I, Lee D. Gold, ASA, am an Enrolled Actuary and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Lee D. Gold 4/12/2004

Lee D. Gold, ASA, EA Date
Enrolled Actuary No. 02-5519

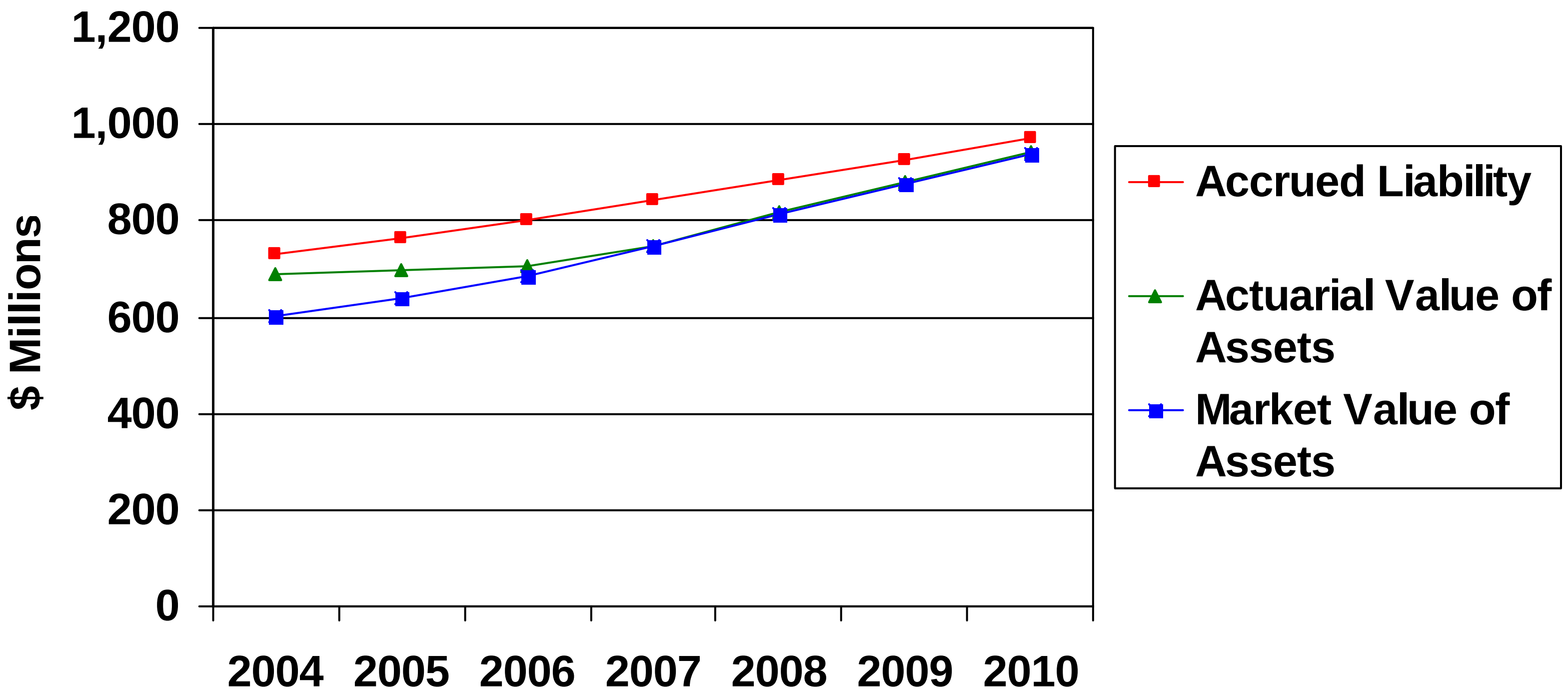
Appendix

Assumptions & Methods – Funding

Actuarial Assumptions	
Interest:	8.0%
Salary increase:	Graded scale based on age (7.1% at age 20 to 3.8% at age 60)
Mortality:	1994 group annuity-static
Retirement age:	Graded rates at ages 55 through 70
Other demographic assumptions on marital status, separation rates, etc.	

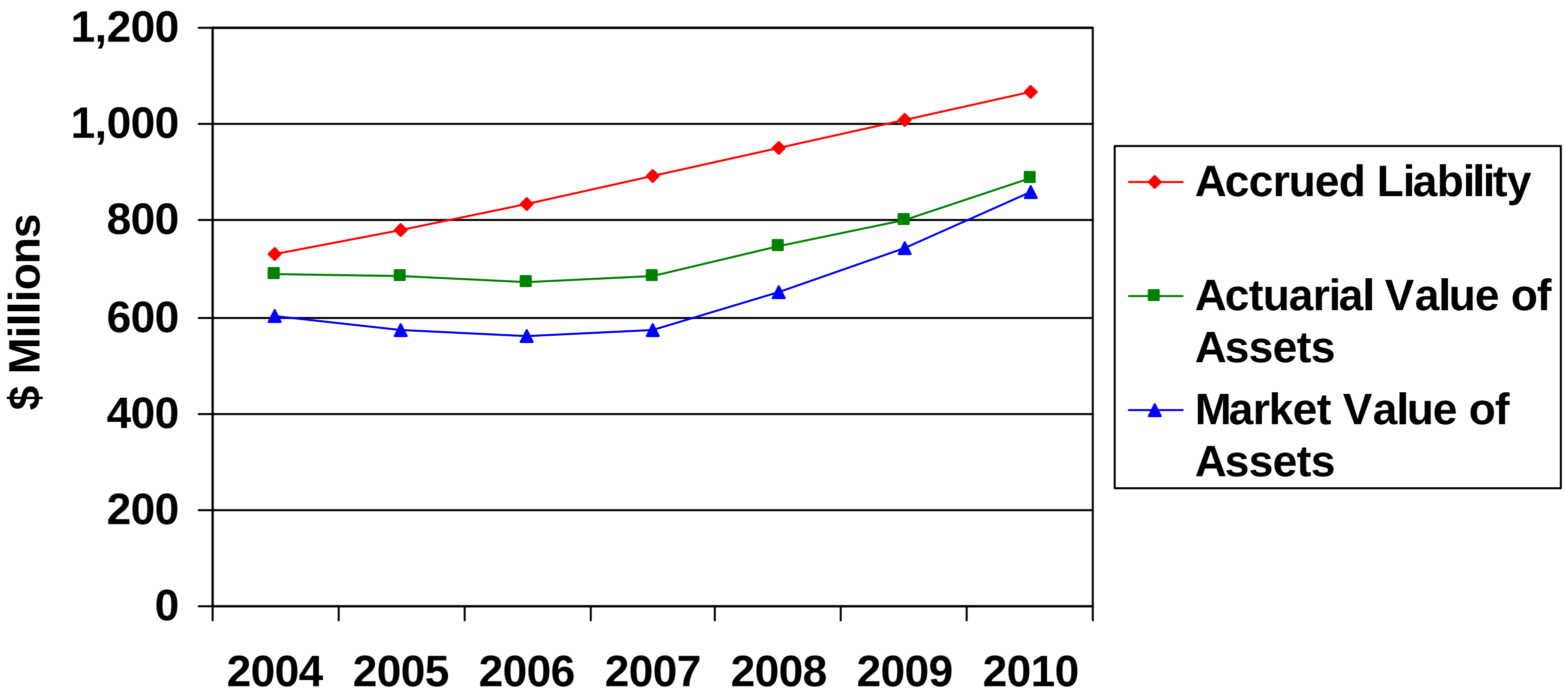
Actuarial Methods	
Liabilities:	Individual entry age normal
Assets:	Smoothing technique which spreads gains and losses over five years

Description of Economic Scenarios
Base Case



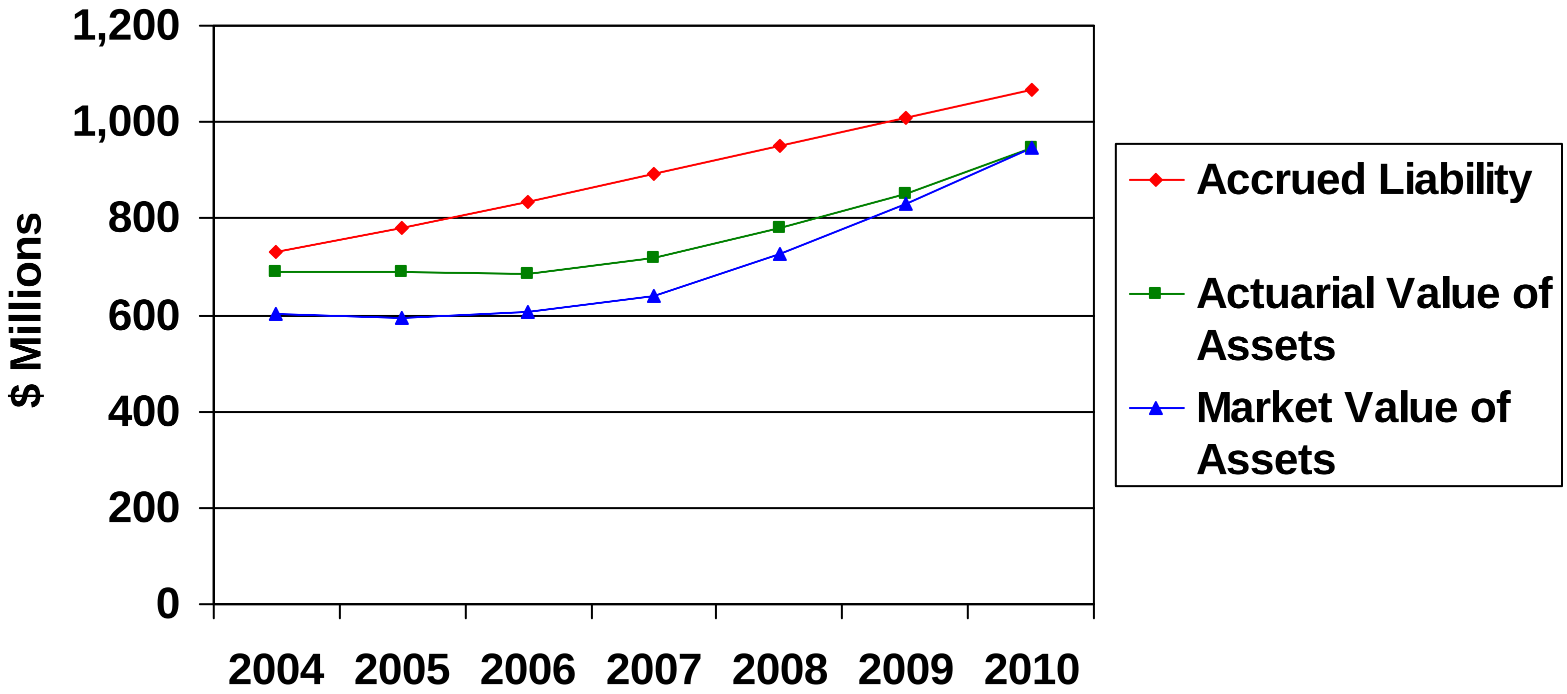
	2004	2005	2006	2007	2008	2009	2010
Inflation	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Portfolio Return	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
30 Year Treasury	5.14%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%

Description of Economic Scenarios
Stagflation



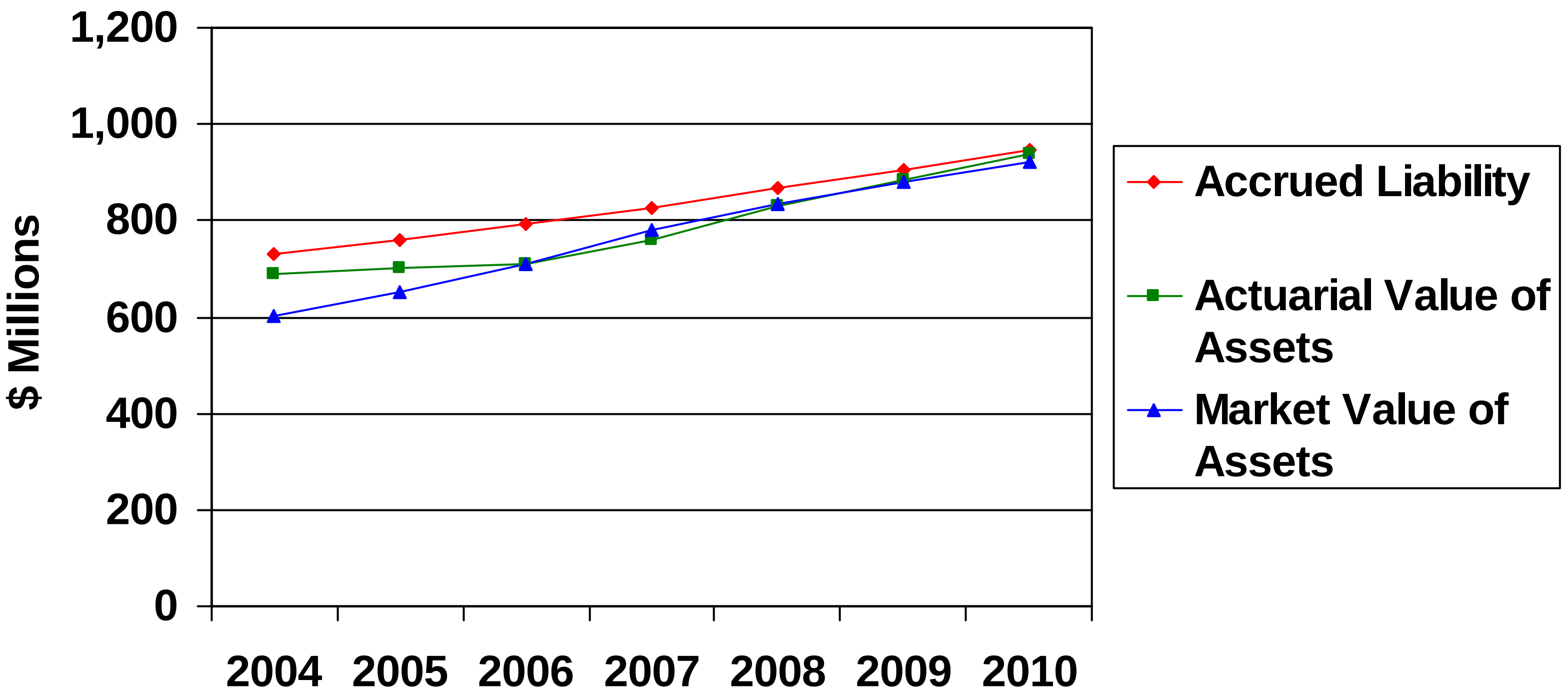
	2004	2005	2006	2007	2008	2009	2010
Inflation	3.33%	4.17%	5.00%	5.00%	5.00%	5.00%	5.00%
Portfolio Return	(3.76%)	(3.29%)	(3.06%)	7.66%	7.66%	7.66%	7.66%
30 Year Treasury	5.72%	6.36%	7.00%	7.00%	7.00%	7.00%	7.00%

Description of Economic Scenarios
Inflationary Growth



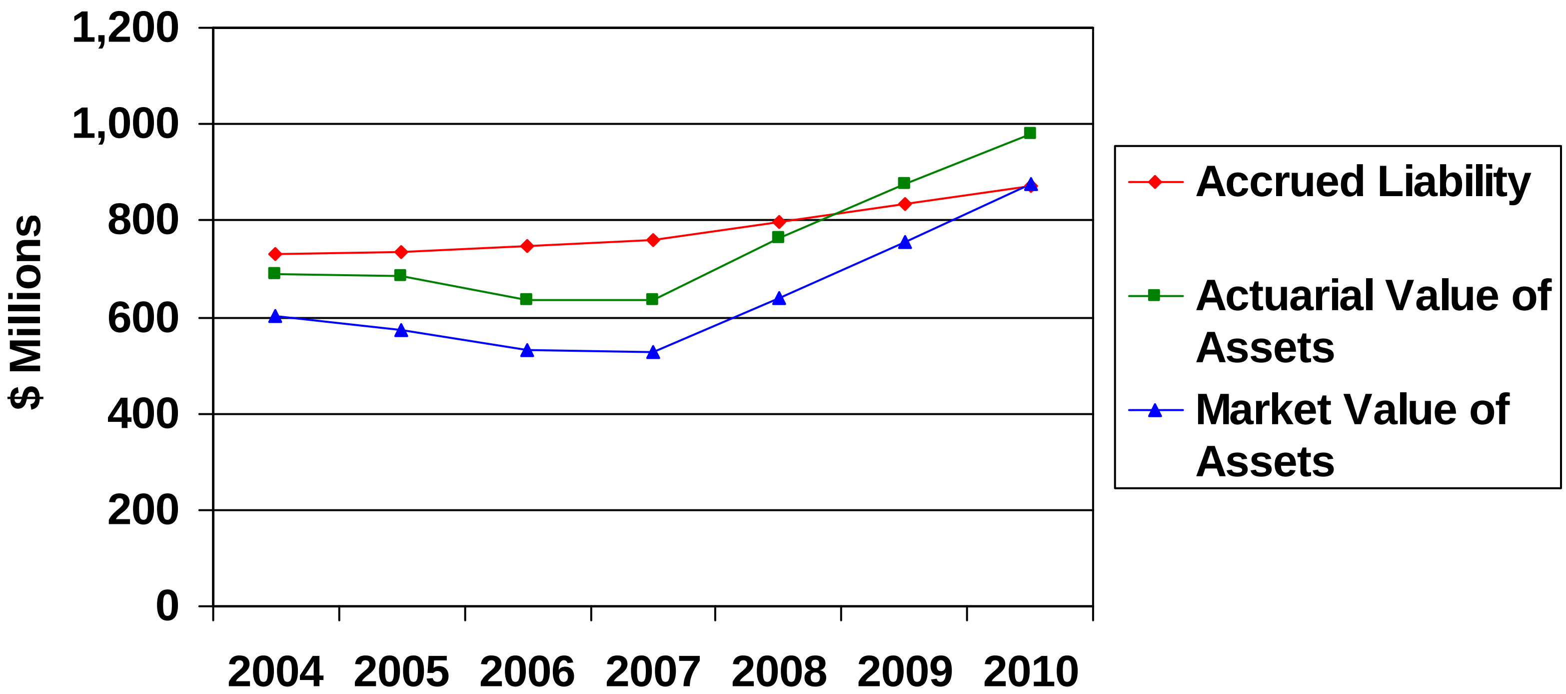
	2004	2005	2006	2007	2008	2009	2010
Inflation	3.33%	4.17%	5.00%	5.00%	5.00%	5.00%	5.00%
Portfolio Return	0.25%	1.01%	1.71%	9.80%	9.80%	9.80%	9.80%
30 Year Treasury	5.75%	6.43%	7.10%	7.10%	7.10%	7.10%	7.10%

Description of Economic Scenarios
Ideal Growth



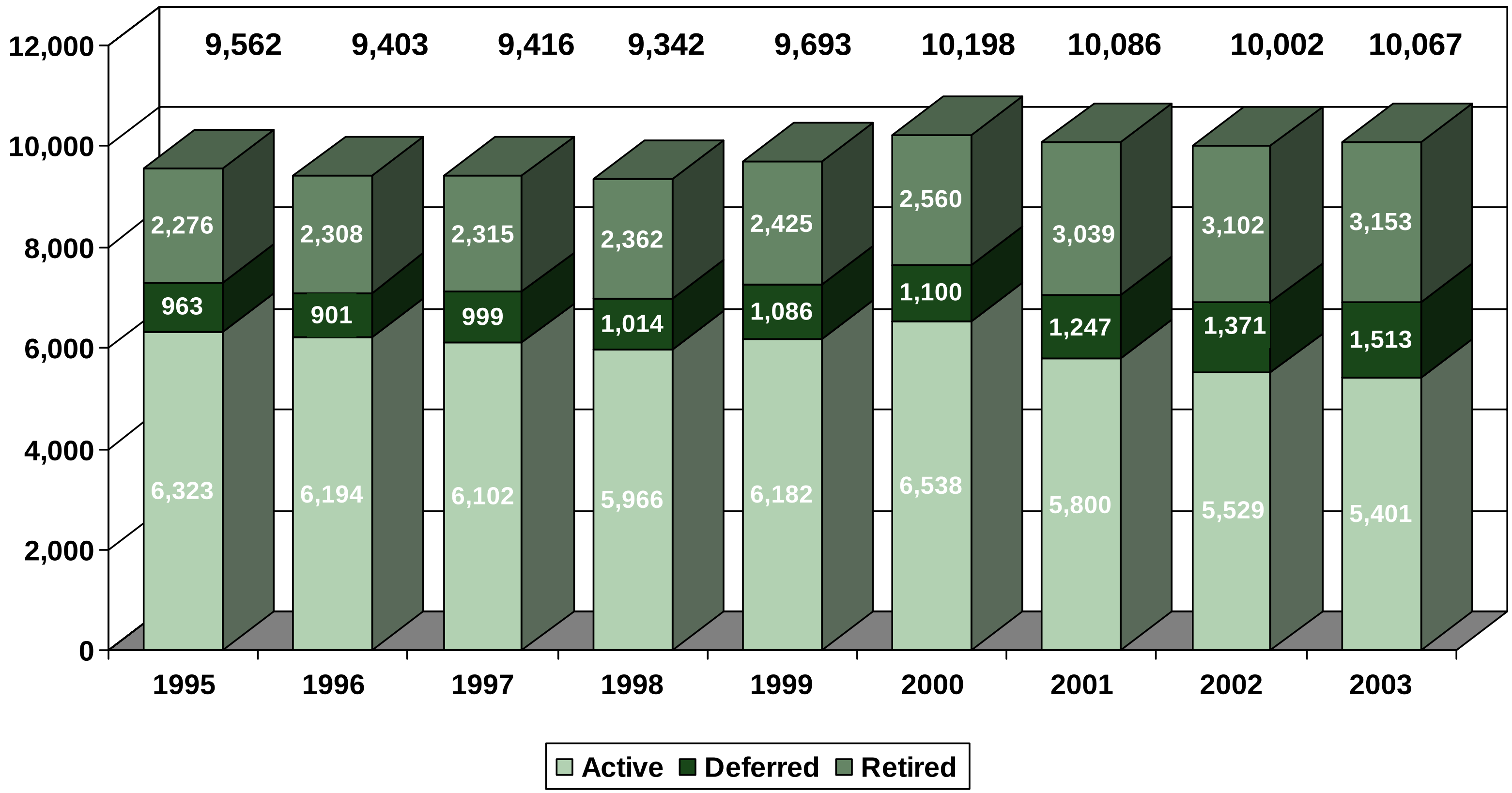
	2004	2005	2006	2007	2008	2009	2010
Inflation	2.27%	2.03%	1.80%	1.80%	1.80%	1.80%	1.80%
Portfolio Return	10.18%	10.10%	10.03%	6.80%	6.80%	6.80%	6.80%
30 Year Treasury	4.89%	4.69%	4.50%	4.50%	4.50%	4.50%	4.50%

Description of Economic Scenarios
Deflation + Recession



	2004	2005	2006	2007	2008	2009	2010
Inflation	1.00%	(0.50%)	(2.00%)	0.00%	0.50%	0.50%	0.50%
Portfolio Return	(3.08%)	(6.54%)	(10.48%)	2.08%	3.00%	3.00%	3.00%
30 Year Treasury	4.22%	3.36%	2.50%	2.50%	2.50%	2.50%	2.50%

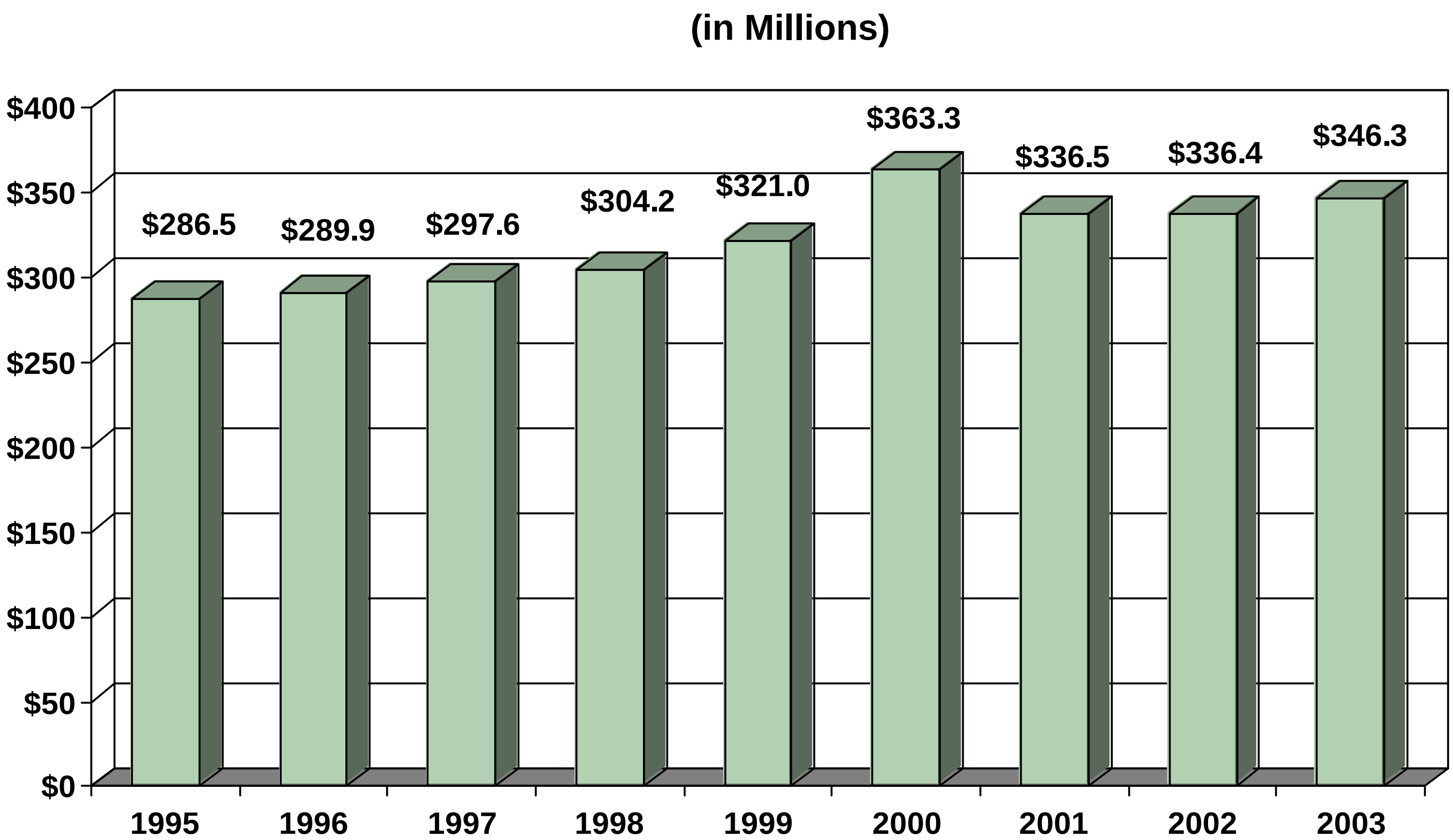
Number of Participants



Comments:

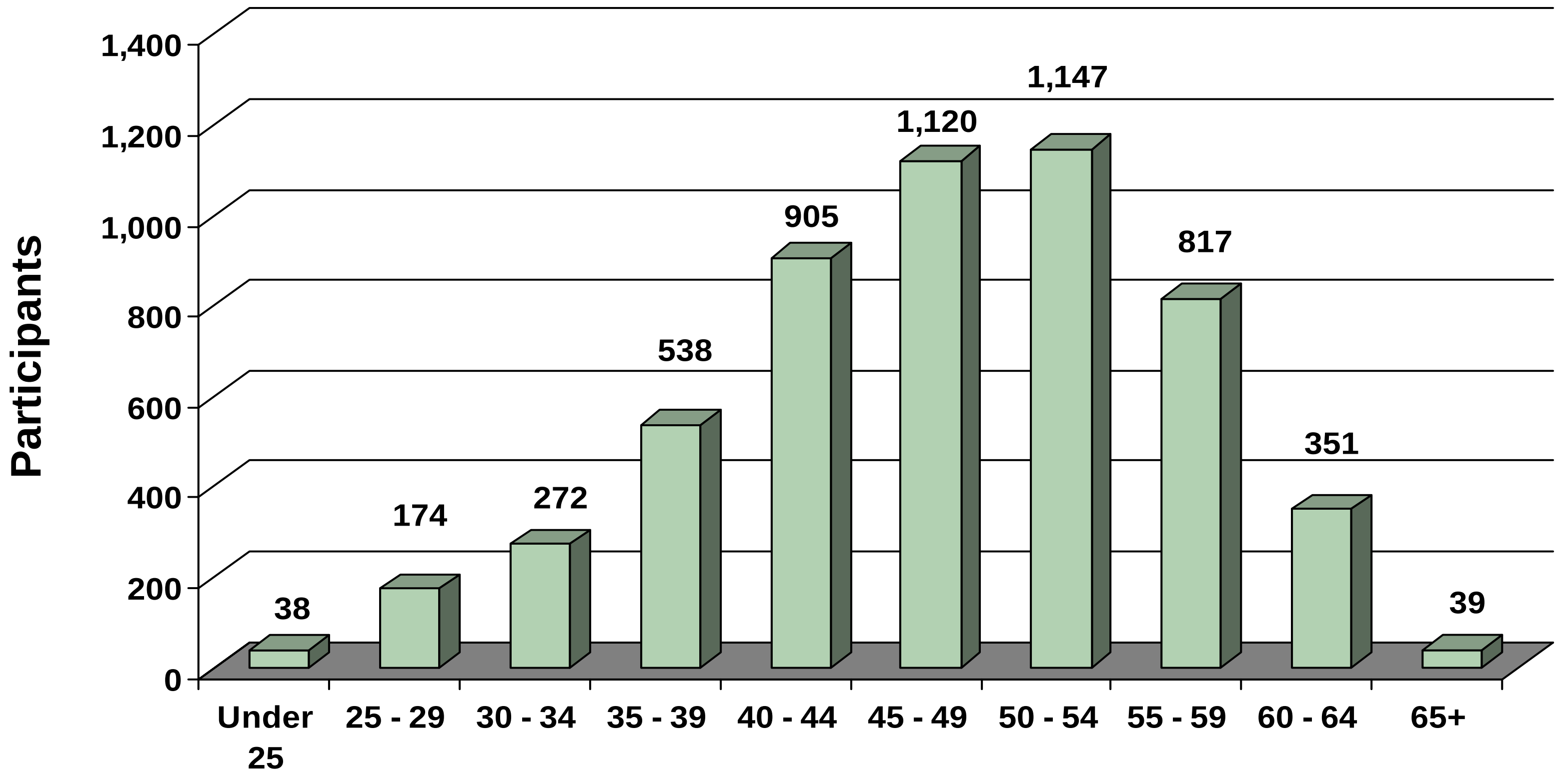
- Early Retirement Incentive Program occurred in late 1994/early 1995; 604 employees retired under this window.
- Early Retirement Incentive Program occurred in mid 2001; 438 employees retired under this window.

Annual Total Compensation of Participants



	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average Compensation	$45,308	$46,807	$48,776	$50,992	$51,920	$55,564	$58,018	$60,838	$64,161

Active Participants' Age Distribution



Note:

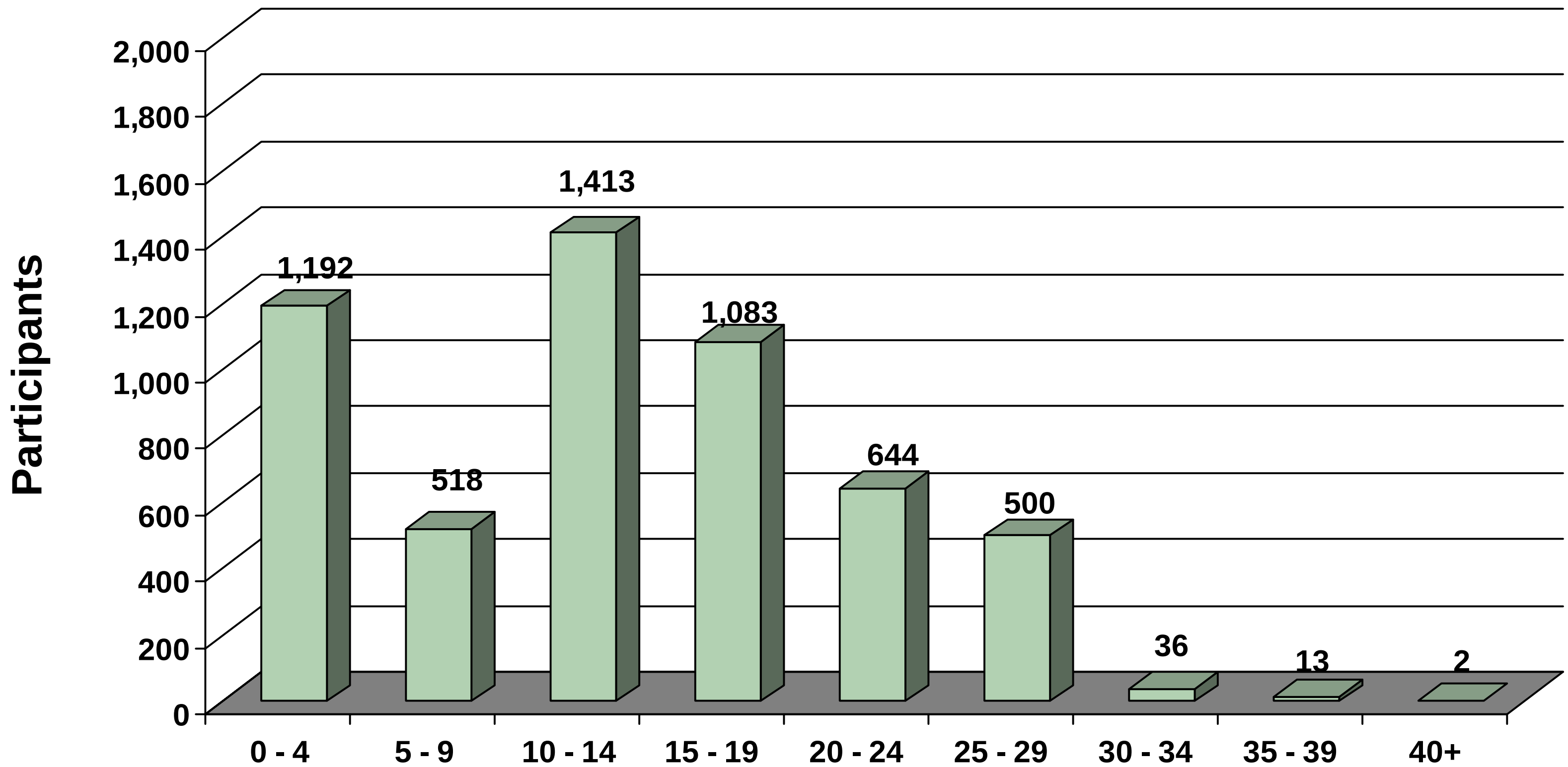
Total Active Participants: 5,401

Average Age: 47.3

History of Average Age

1999	45.5
2000	45.7
2001	45.7
2002	46.7
2003	47.3

Participants' Credited Service Distribution



Note:

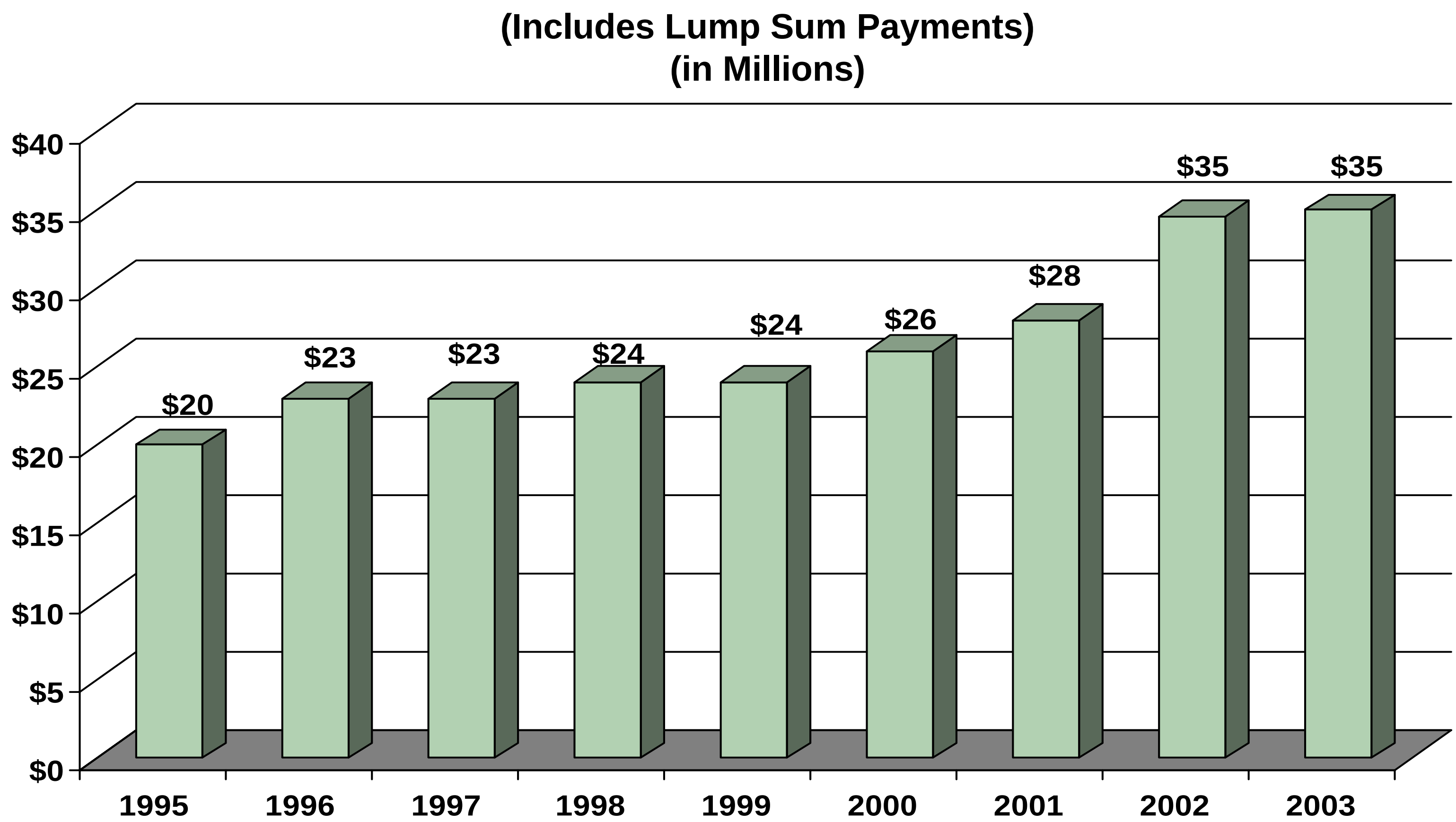
Total Active Participants: 5,401

Average Credited Service: 13.3

History of Average Credited Service

1999	11.6
2000	11.4
2001	11.8
2002	12.8
2003	13.3

Annual Benefit Payments



Comments:

- Benefit payments for each plan year ending on September 30th of the indicated year.