
Plymouth Retirement System

Actuarial Valuation
January 1, 1999

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**PLYMOUTH RETIREMENT SYSTEM
SECTION I**

MANAGEMENT SUMMARY

INTRODUCTION

This report presents the results of the actuarial valuation of the Plymouth Retirement System. The valuation was performed at the request of the Retirement Board as of January 1, 1999 for the purpose of determining the contribution requirement for the fiscal year beginning July 1, 2000.

The valuation was based on member data as of January 1, 1999 supplied by the Retirement Board. Asset information as of January 1, 1999 was provided in financial statements prepared by the Retirement Board. The provisions reflected in the valuation are based on Chapter 32 of the General Laws of the Commonwealth of Massachusetts, related statutes and Chapter 17 of the Acts of 1997.

The recommended contribution amount for Fiscal Year 2001 is \$3,804,549. The contribution amount is based upon a funding schedule using a 28 year fresh start approach. This schedule provides for a smoother contribution pattern compared to amortizing the actuarial gain. In addition, we were able to reduce the amortization percentage. The expected contribution amount prior to the new valuation results, for Fiscal Year 2001, was \$3,829,814.

We are pleased to present the results of this valuation. If the Retirement Board has any questions on the content of this report, we would be glad to respond.

Respectfully submitted,

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PLYMOUTH RETIREMENT SYSTEM
SECTION I (Continued)

HIGHLIGHTS OF JANUARY 1, 1999 VALUATION

Stone Consulting, Inc. previously conducted for the Plymouth Retirement System an actuarial valuation as of January 1, 1997. Those results and the plan assets as of January 1, 1998 were used to develop the prior funding schedule. Those amounts are shown here as a comparison to the January 1, 1999 valuation results.

The comparisons provided are based upon the most recent data gathered and calculated.

	Valuation 1999	Valuation 1997 and Rollup 1998
Assets		<u>1998</u>
• Actuarial Value – January 1,	\$71,200,879	\$59,973,493
• Growth in Actuarial Value	18.7%	
Members*		<u>1997</u>
• Actives	948 (5.2%)	901
• Retired, Disabled and Beneficiaries	369 (7.0%)	345
• Inactives	142 (44.9%)	98
Annualized Payroll of Active Members*		
• Total	\$25,721,075 (16.4%)	\$22,095,828
• Average	27,132 (10.6%)	24,524
* In parentheses is the percentage increase from the prior figures reported.		
Funded Status (Ratio of Assets to AAL)		<u>1998</u>
• January 1,	72%	67%
Unfunded Accrued Liability		
• January 1,	\$27,068,518	\$29,567,220
• Adjusted to July 1, 2000/1999	29,381,788	31,597,749
Normal Cost (Percentage of Payroll)**		<u>1997</u>
• Gross Normal Cost, January 1,	\$3,558,853 (13.8%)	\$3,079,364 (13.7%)
• Expected Employee Contributions	<u>1,996,987 (7.8%)</u>	<u>1,624,217 (7.2%)</u>
• Employer Normal Cost	\$1,561,866 (6.1%)	\$1,455,147 (6.5%)
• Adjusted to July 1, 2000 plus administrative expense.	\$1,910,476	\$1,691,740

**Components may not total due to rounding.

PLYMOUTH RETIREMENT SYSTEM
SECTION I (Continued)

VALUATION METHODOLOGY

Stone Consulting, Inc. used the Entry Age Normal Actuarial Cost Method. In this method the normal cost for each plan participant is determined as the level percent of salary that, if paid annually from the date the participant first became a member of the retirement system, would fully fund by retirement, death, disability or termination, the retirement benefit. This method is consistent with requirements of Chapter 32 of the Massachusetts General Laws and, in fact, is the most commonly used actuarial valuation method among Chapter 32 systems.

FUNDED STATUS

Actuarial Accrued Liability (AAL) is the “price” of benefits attributable to benefits earned in past years. The total AAL is \$98,269,397. This along with an actuarial value of assets of \$71,200,879 produces a funded status of 72%. This compares to a funded status of 67% for the 1998 rollup.

FUNDING

The funding schedules are composed of the normal cost, and the amortization of the actuarial accrued unfunded liability adjusted by the administrative expense assumption and rolled up to the beginning of the Fiscal Year.

Net Employer Normal Cost for Fiscal 2001	\$1,910,476
Amortization	<u>1,894,073</u>
Total Contribution for Fiscal 2001	\$3,804,549

The gross normal cost (GNC) is the “price” of benefits accruing in the current year. The GNC is \$3,558,853. The GNC is offset by estimated employee contributions of \$1,996,987, resulting in a net employer normal cost (NNC) of \$1,561,866. The Retirement Board estimated an administrative expense budget for Fiscal Year 2001 of \$218,000. The NNC cost is adjusted to the beginning of the fiscal year and the administrative expense of \$218,000 is added. This results in the net employer normal cost presented in the above table.

Funding Schedules

The schedule, presented on page 9 uses a “fresh start” approach that provides a smoother and lower rate of change in future appropriations. The gain is amortized over the full 28 years. This schedule uses a lower amortization rate of 3.25% compared to the prior schedule rate of 4.132%. The contribution for Fiscal 2001

PLYMOUTH RETIREMENT SYSTEM
SECTION I (Continued)

under this schedule is \$3,804,549. This contribution is approximately \$25,000 less than the expected contribution prior to this year's valuation.

Timing of Contributions

The Retirement Board indicated that employer contributions are made at the beginning of the fiscal year. The above schedules were developed based upon this assumption.

**PLYMOUTH RETIREMENT SYSTEM
SECTION I (Continued)**

VALUATION ASSUMPTIONS AND METHODOLOGY

The principal actuarial assumptions used in this valuation are the same as the assumptions used in the previous valuation, except where noted, and are summarized in the following table:

<u>Assumption</u>	<u>January 1, 1999 Valuation</u>
Interest Rate	Same as prior valuation. 8.50%
Salary Increase	Same as prior valuation 5.50%
COLA	3% of \$12,000
COLA Frequency	Granted every year
Mortality	Same as prior valuation. GAM83 table. For members retired under an Accidental Disability (job-related), 40% of deaths are assumed to be from the same cause as the disability.
Overall Disability	<u>Groups 1 and 2</u> 50% ordinary disability 50% accidental disability <u>Group 4</u> 10% ordinary disability 90% accidental disability
Retirement Rates	Changed Group 4 retirement rate. The last retirement age changed from 60 to 65. This was done to reflect a trend toward retirement at later ages among Group 4 members. <u>Groups 1 and 2</u> Ages 55 – 65 <u>Group 4</u> Ages 50 – 65
Administrative Expense	\$218,000 budget estimated for FY 2001 provided by Plymouth Retirement Board.

PLYMOUTH RETIREMENT SYSTEM

MEMBERSHIP DATA

The data was supplied by the Plymouth Retirement Board. The data was checked under broad parameters of reasonableness. With the assistance of the staff of the Plymouth Retirement Board, we were able to develop a database sufficient for valuation purposes.

ASSETS

We were furnished with a copy of the System's annual financial report. The actuarial value of assets was \$71,200,879 as of December 31, 1998. Assets were invested 3% in cash and cash equivalents, 38% in fixed income securities including global fixed income fund(s), 19% in equities, 3% in a master trust, and the remainder (38%) is pooled or commingled. The assets have shifted from 1998 by moving a portion of the investment in equities to a mutual/commingled real estate fund. Note the asset class percentages total 101% due to rounding.

**PLYMOUTH RETIREMENT SYSTEM
SECTION II**

SUMMARY OF JANUARY 1, 1999 VALUATION

	January 1, 1999 Valuation	January 1, 1997 Valuation
Funding		
• Contribution for Fiscal 2001	\$3,804,549	
• Contribution for Fiscal 2001 based on current schedule	\$3,829,814	
Members *		
• <i>Actives</i>		
a. Number	948 (5.2%)	901
b. Annual Compensation	\$25,721,075 (16.4%)	\$22,095,828
c. Average Annual Compensation	\$27,132 (10.6%)	\$24,524
d. Average Attained Age	45.7 (-0.2%)	45.8
e. Average Past Service	10.2 (1.0%)	10.1
• <i>Retired, Disabled and Beneficiaries</i>		
a. Number	369 (7.0%)	345
b. Annual Retirement Allowance excluding State Reimbursed COLA	\$3,930,741 (22.8%)	\$3,200,450
• <i>Inactives</i>		
a. Number	142 (44.9%)	98
Normal Cost		
a. Total Normal Cost as of January 1, 1999	\$3,558,853	\$3,079,364
b. Less Expected Members' Contributions	<u>1,996,987</u>	<u>1,624,217</u>
c. Normal Cost to be funded by the Municipality	\$1,561,866	\$1,455,147
d. Adjustment to July 1, 2000	130,610	121,685
e. Administrative Expense Assumption	<u>218,000</u>	<u>114,908</u>
f. Normal Cost Adjusted to July 1, 2000	\$1,910,476	\$1,691,740

*In parentheses is the percentage increase/decrease from the prior figures reported.

**PLYMOUTH RETIREMENT SYSTEM
HIGHLIGHTS OF JANUARY 1, 1998 VALUATION
(Continued)**

	January 1, 1999 Valuation	January 1, 1997 Valuation
Actuarial Accrued Liability as of January 1, 1999		
a. Active Members	\$60,038,012	\$54,021,034
b. Inactive Members	528,253	337,896
c. Retired Members and Beneficiaries	<u>37,703,132</u>	<u>28,160,239</u>
d. Total	\$98,269,397	\$82,519,169
Unfunded Actuarial Accrued Liability*		January 1, 1998 Rollup
a. Actuarial Accrued Liability as of January 1, 1999	\$98,269,397	\$89,540,713
b. Less Actuarial Value of Assets as of January 1, 1999	<u>71,200,879</u>	<u>59,973,493</u>
c. Unfunded Actuarial Accrued Liability as of Jan. 1, 1999	\$27,068,518	\$29,567,220
d. Adjustment to July 1, 2000	<u>2,313,270</u>	<u>2,030,529</u>
e. Unfunded Actuarial Accrued Liability as of July 1, 2000	\$29,381,788	\$31,597,749

* The January 1, 1997 actuarial accrued liability was rolled up to January 1, 1998 and the January 1, 1998 assets were used. The unfunded actuarial liability was then adjusted to July 1, 1998.

**PLYMOUTH RETIREMENT SYSTEM
FUNDING SCHEDULE
FRESH START**

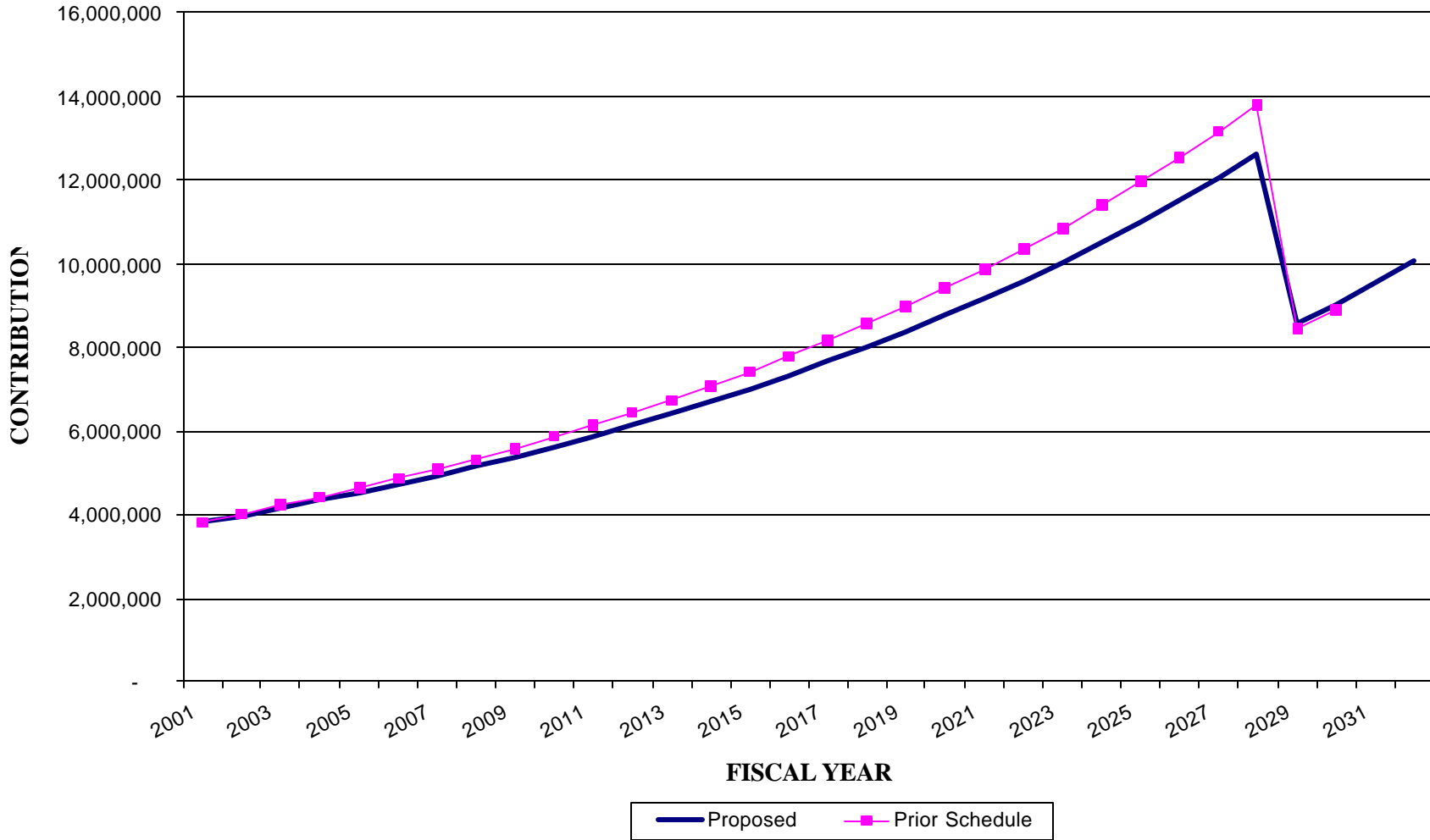
Fiscal Year	Normal Cost	Unfunded Liability	Funding Amortization of UAL	Schedule Contribution
2001	1,910,476	29,381,788	1,894,073	3,804,549
2002	2,015,552	29,824,171	1,955,631	3,971,183
2003	2,126,408	30,237,366	2,019,189	4,145,596
2004	2,243,360	30,616,722	2,084,812	4,328,172
2005	2,366,745	30,957,123	2,152,569	4,519,313
2006	2,496,916	31,252,941	2,222,527	4,719,443
2007	2,634,246	31,497,999	2,294,759	4,929,005
2008	2,779,130	31,685,515	2,369,339	5,148,468
2009	2,931,982	31,808,051	2,446,342	5,378,324
2010	3,093,241	31,857,454	2,525,849	5,619,089
2011	3,263,369	31,824,792	2,607,939	5,871,308
2012	3,442,854	31,700,286	2,692,697	6,135,551
2013	3,632,211	31,473,235	2,780,209	6,412,421
2014	3,831,983	31,131,933	2,870,566	6,702,549
2015	4,042,742	30,663,583	2,963,859	7,006,601
2016	4,265,093	30,054,200	3,060,185	7,325,278
2017	4,499,673	29,288,506	3,159,641	7,659,314
2018	4,747,155	28,349,819	3,262,329	8,009,484
2019	5,008,248	27,219,927	3,368,355	8,376,603
2020	5,283,702	25,878,955	3,477,826	8,761,528
2021	5,574,306	24,305,225	3,590,856	9,165,161
2022	5,880,892	22,475,090	3,707,559	9,588,451
2023	6,204,342	20,362,772	3,828,054	10,032,396
2024	6,545,580	17,940,169	3,952,466	10,498,046
2025	6,905,587	15,176,658	4,080,921	10,986,508
2026	7,285,395	12,038,874	4,213,551	11,498,946
2027	7,686,091	8,490,475	4,350,492	12,036,583
2028	8,108,826	4,491,882	4,491,882	12,600,709
2029	8,554,812	-	-	8,554,812
2030	9,025,326	-	-	9,025,326
2031	9,521,719	-	-	9,521,719
2032	10,045,414	-	-	10,045,414

Amortization of Unfunded Liability as of July 1, 2000

Year	Type	Original Amort. Amount	Percentage Increasing	Original # of Years	Current Amort. Amount	Years Remaining
2001	Fresh Start	1,894,073	3.25%	28	1,894,073	28

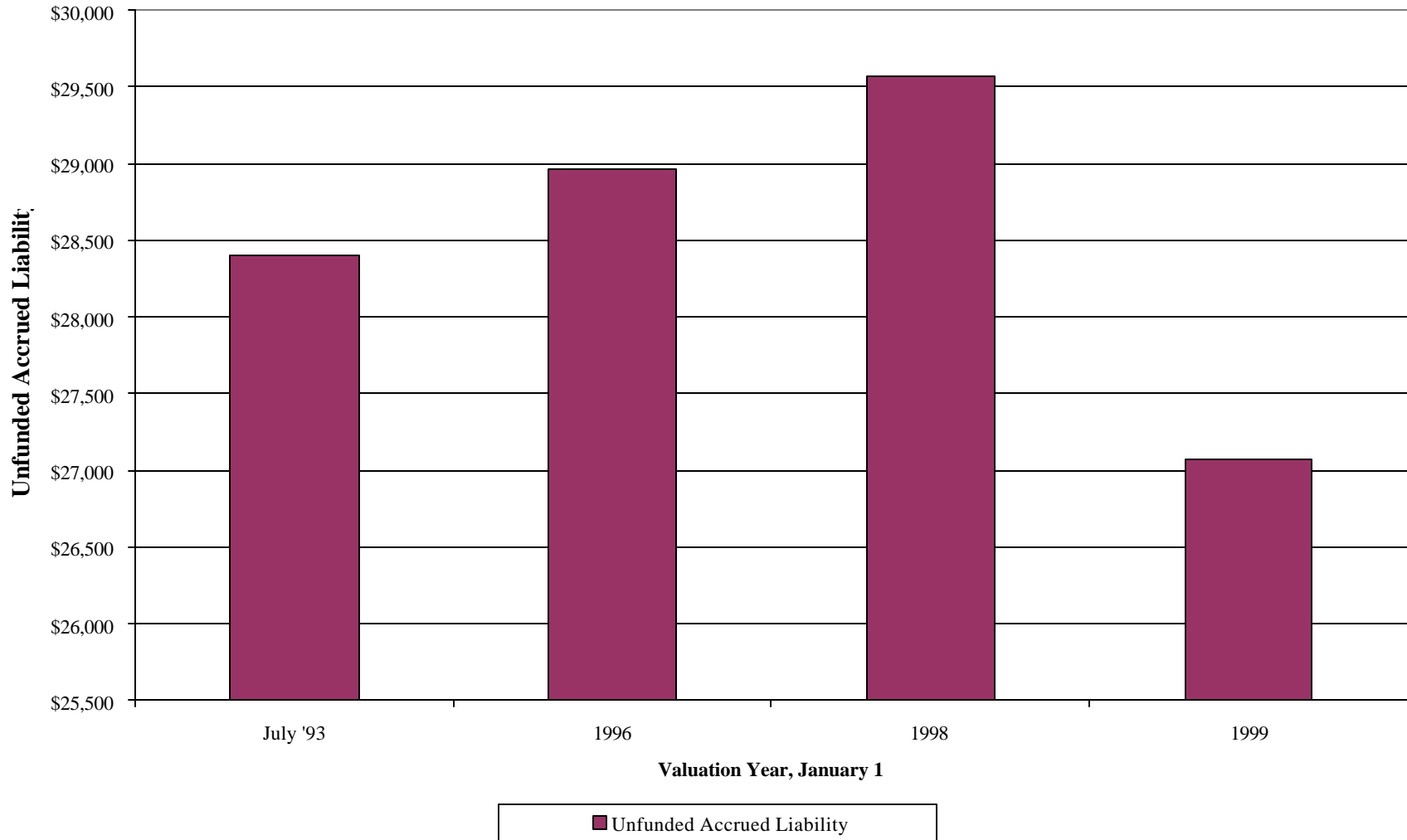
PLYMOUTH RETIREMENT SYSTEM

COMPARISON OF FUNDING SCHEDULES



PLYMOUTH RETIREMENT SYSTEM

UNFUNDED ACCRUED LIABILITY HISTORY



PLYMOUTH RETIREMENT SYSTEM

ADJUSTED MARKET VALUE OF ASSETS

a. Cash and Cash Equivalents	\$ 1,811,247.04
b. Fixed Income Securities (statutory value)	19,570,316.73
c. Equities	13,296,584.70
d. Mutual or Commingled R/E Fund	20,779,217.00
e. Mutual or Commingled Venture Capital	6,410,624.45
f. Treasures Master Trust	1,924,777.07
g. Pooled Global Fixed Income Funds	<u>6,501,068.55</u>
h. Subtotal	\$ 70,293,835.54
i. Interest Due and Accrued	325,483.96
j. Accounts Receivable	549.10
k. Accounts Payable	<u>(221,838.45)</u>
l. Subtotal	\$ 104,194.61
m. Statutory Value of Assets [(h) + (l)]	\$ 70,398,030.15
n. Adjustment to Statutory Value of Fixed Income Securities	<u>802,848.50</u>
o. Adjusted Market Value of Assets as of December 31, 1998	\$ 71,200,878.65

**PLYMOUTH RETIREMENT SYSTEM
SECTION II (CONTINUED)**

DISCLOSURE INFORMATION UNDER GASB STATEMENT 25

Schedules of Funding Progress

(Dollars In Thousands)

Actuarial Valuation Date	Actuarial Value of Assets A	Actuarial Accrued Liability B	Unfunded AAL (UAAL) B-A	Funded Ratio A/B	Covered Payroll C	UAAL as a % of Covered Payroll (B-A)/C
1/1/99	\$71,201	\$98,269	\$27,068	72%	\$25,721	105%
1/1/98	\$59,974	\$89,541	\$29,567	67%	\$23,767	124%
1/1/96	\$44,735	\$73,709	\$28,974	61%	\$21,192	137%
7/1/93	\$30,908	\$59,302	\$28,394	52%	\$17,310	164%

Schedules of Contributions from Employers

Year Ended June 30,	Annual Required Contribution	Percentage Contributed*
1999	\$3,487,165	N/A
1998	\$3,079,218	N/A
1997	\$2,887,756	N/A
1996	\$2,751,646	N/A
1995	\$2,906,249	N/A
1994	\$2,687,019	N/A

* To be completed by Plymouth Retirement Board.

Notes to Schedules

Additional information as of the latest actuarial valuation follows:

Valuation date	1/1/99, Includes COLA
Actuarial cost method	Entry Age Normal
Amortization method	Approximate level percent of payroll Closed
Remaining amortization period	28 years
Asset valuation method	Market value adjusted by payables and receivables
Actuarial assumptions:	
Investment Rate of Return	8.50% per year
Projected Salary Increases	5.50% per year

**PLYMOUTH RETIREMENT SYSTEM
PERAC INFORMATION DISCLOSURE**

The most recent actuarial valuation of the System was prepared by Stone Consulting, Inc. as of January 1, 1999

The normal cost for employees on that date was:	\$ 1,996,987	7.8% of payroll
The normal cost for the employer was:	\$ 1,561,866	6.1% of payroll

The actuarial liability for active members was:	\$60,038,012
The actuarial liability for retired members was:*	\$38,231,385
Total actuarial accrued liability:	\$98,269,397
System assets as of that date:	\$71,200,879
Unfunded actuarial accrued liability:	\$27,068,518

The ratio of system's assets to total actuarial liability was: 72.5%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.50% per annum
Rate of Salary Increase:	5.50% per annum

* Includes inactives

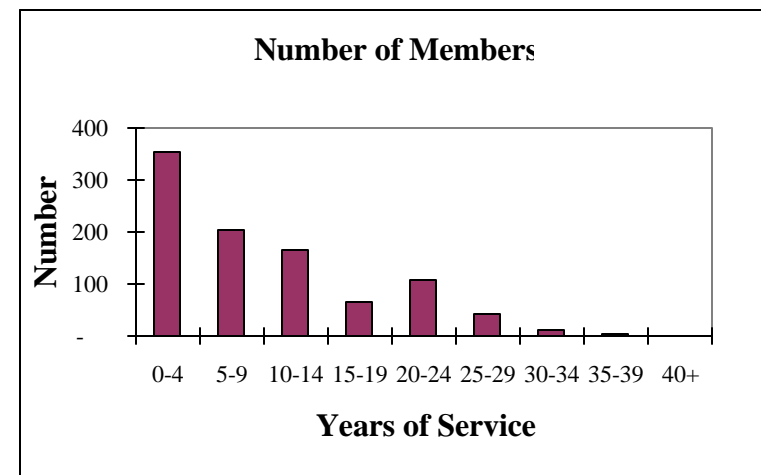
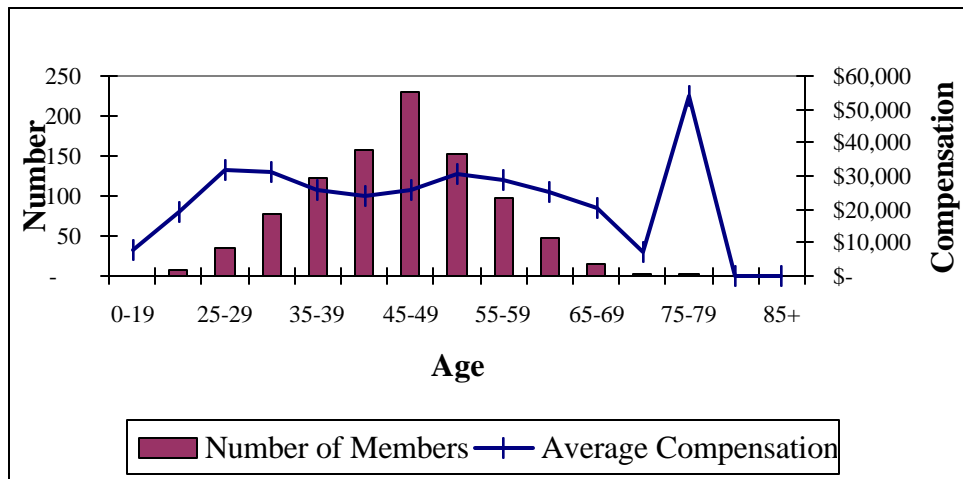
**SCHEDULE OF FUNDING PROGRESS
(Dollars in \$000's)**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1/1/99	\$71,201	\$98,269	\$27,068.0	72%	\$25,721	105.2%
1/1/98	\$59,974	\$89,541	\$29,567.0	67%	\$23,767	124.4%
1/1/96	\$44,735	\$73,709	\$28,974.0	61%	\$21,192	136.7%
7/1/93	\$30,908	\$59,302	\$28,394.0	52%	\$17,310	164.0%

PLYMOUTH RETIREMENT SYSTEM

Plymouth Retirement System Distribution of Plan Members as of January 1, 1999 Active Members

AGE	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 + Years	Total	Total Compensation	Average Compensation
0-19	1	-	-	-	-	-	-	-	-	1	\$ 7,749	\$ 7,749
20-24	7	-	-	-	-	-	-	-	-	7	134,251	19,179
25-29	34	2	-	-	-	-	-	-	-	36	1,143,907	31,775
30-34	50	14	14	-	-	-	-	-	-	78	2,418,150	31,002
35-39	67	20	34	2	-	-	-	-	-	123	3,163,160	25,717
40-44	73	32	27	15	9	2	-	-	-	158	3,832,363	24,255
45-49	71	58	35	13	43	8	1	-	-	229	5,899,776	25,763
50-54	27	39	25	9	34	15	4	-	-	153	4,709,781	30,783
55-59	10	21	18	14	18	12	3	1	-	97	2,790,750	28,771
60-64	8	14	8	10	4	1	2	1	-	48	1,214,727	25,307
65-69	5	1	4	1	1	2	-	-	-	14	284,038	20,288
70-74	-	2	-	-	-	-	-	-	-	2	14,762	7,381
75-79	-	-	-	-	-	2	-	-	-	2	107,660	53,830
80-84	-	-	-	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	353	203	165	64	109	42	10	2	-	948	\$ 25,721,075	\$ 27,132



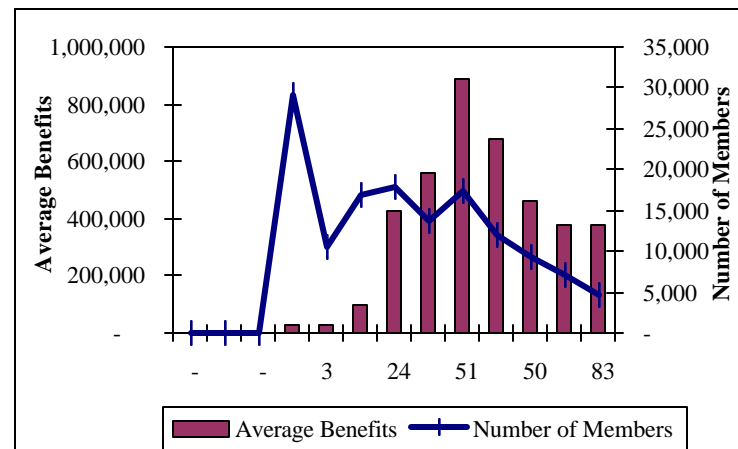
PLYMOUTH RETIREMENT SYSTEM

Plymouth Retirement System Distribution of Plan Members as of January 1, 1999 Retired Members

<u>Disabled Member</u>			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	29,195	29,195
40-44	1	16,244	16,244
45-49	4	21,384	85,537
50-54	16	22,339	357,425
55-59	13	19,507	253,597
60-64	14	22,632	316,849
65-69	6	14,706	88,236
70-74	3	10,731	32,193
75-79	1	11,824	11,824
80+	2	9,761	19,522
TOTAL	61	\$ 19,846	\$ 1,210,622

<u>Retired Members and Beneficiaries</u>			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	-	-	-
40-44	2	7,493	14,986
45-49	2	7,792	15,584
50-54	8	9,047	72,379
55-59	28	10,893	304,996
60-64	37	15,359	568,280
65-69	51	11,575	590,341
70-74	47	9,096	427,534
75-79	53	6,929	367,254
80+	81	4,429	358,763
TOTAL	309	\$ 8,803	\$ 2,720,118

<u>Total</u>			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	29,195	29,195
40-44	3	10,410	31,230
45-49	6	16,854	101,121
50-54	24	17,909	429,804
55-59	41	13,624	558,593
60-64	51	17,355	885,130
65-69	57	11,905	678,578
70-74	50	9,195	459,727
75-79	54	7,020	379,078
80+	83	4,558	378,285
TOTAL	370	10,624	\$ 3,930,740



PLYMOUTH RETIREMENT SYSTEM

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods

1. Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method has been used in this valuation. Under this method, the normal cost is the amount calculated as the level percentage of compensation necessary to fully fund the prospective benefits from each member's entry age to retirement age.

The actuarial accrued liability represents the theoretical accumulation of all prior years' normal costs for the plan members as if the program had always been in effect. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over plan assets.
2. Asset Valuation Method

Market value adjusted by payables and receivables.
3. Fiscal Year Adjustment

The actuarial results are adjusted by the valuation interest rate and salary scale to the beginning of Fiscal Year 2001. The unfunded actuarial accrued liability is rolled forward with normal cost and further adjusted by anticipated contributions and interest.

Actuarial Assumptions

1. Investment Return

8.50% per year net of investment expenses.
2. Salary Increases

5.50% per year.
3. Withdrawal Prior to Retirement

The rates shown at the following sample ages illustrate the withdrawal assumption:

<i>Age</i>	<u>Rate of Withdrawal</u>	
	<i>Group 1 and 2</i>	<i>Group 4</i>
25	18.07%	1.90%
30	11.10	1.65
35	6.44	1.25
40	4.62	0.56
45	3.64	0.04
50	2.93	0.00
55	0.00	0.00

PLYMOUTH RETIREMENT SYSTEM

ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

4. Disability Prior to Retirement The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability:

<i>Age</i>	<u>Rate of Disability</u>	
	<i>Group 1 and 2</i>	<i>Group 4</i>
25	.04%	.12%
30	.06	.23
35	.08	.46
40	.12	.87
45	.18	1.29
50	.31	1.50
55	.50	1.50
60	.61	1.50

Disability is assumed to be 50% ordinary and 50% accidental for Group 1 and 2 and 10% ordinary and 90% accidental for Group 4.

**PLYMOUTH RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS
(Continued)**

5. Rates of Retirement

The rates shown at the following ages illustrate the assumption regarding the incidence of retirement, once the member has achieved 10 years of service:

<i>Age</i>	Rates of Retirement <i>Group 1 and 2</i>	<i>Group 4</i>
50	N/A	5%
51	N/A	2
52	N/A	2
53	N/A	2
54	N/A	2
55	10%	30
56	3	5
57	3	5
58	3	5
59	5	5
60	5	20
61	5	10
62	10	20
63	10	10
64	10	10
65	100	100
66	100	100
67	100	100
68	100	100
69	100	100
70	100	100

6. Mortality

The 1983 Group Annuity Mortality Table.

7. Disabled Life Mortality

Mortality rates from the 1985 Pension Disability Table developed by The Wyatt Company based on OASDI 1977-80 termination experience. Female rates are the same as those for males. Mortality for accidental disability is assumed to be 40% from the same cause as the disability.

8. Regular Interest Rate Credited to Annuity Savings Account

4% per year.

PLYMOUTH RETIREMENT SYSTEM

ACTUARIAL METHODS AND ASSUMPTIONS

(Continued)

- | | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9. Family Composition | Members assumed married with 2 dependent children – one male and one female both age 15; age difference between member and spouse assumed to be 3 years (the male being the older). |
| 10. Cost-of-Living Increases | A 3% COLA on the first \$12,000 of a member's retirement allowance is assumed to be granted every year starting Fiscal 1999. |
| 11. Administrative Expenses | Estimated budgeted amount of \$218,000 for the fiscal year excluding investment management fees and custodial fee is added to the normal cost. |
| 12. Step Increases | Step increases are assumed to be part of the salary increase assumption. |
| 13. Credited Service | Service between date of hire and date of membership is assumed to be purchased by all members. |
| 14. Contribution Timing | Contributions are assumed to be made at the beginning of the fiscal year (July 1). |
| 15. Valuation Date | January 1, 1999. |

PLYMOUTH RETIREMENT SYSTEM SUMMARY OF PRINCIPAL PROVISIONS

1. Participant Participation is mandatory for all full-time employees whose employment commences before age 65. There are three classes of members in the retirement system:

Group 1: general employees

Group 2: employees in specified hazardous occupations (e.g., electricians)

Group 4: police and firefighters

2. Member Contributions Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5% of Pay
1975 – 1983	7% of Pay
1984 - June 30, 1996	8% of Pay
After June 30, 1996	9% of Pay

Members hired after 1978 contribute an additional 2% of pay over \$30,000.

3. Pay
- a. Pay Gross regular compensation excluding bonuses, overtime, severance pay, unused sick pay, and other similar compensation.
- b. Average Pay The average of pay during the 3 consecutive years that produce the highest average or, if greater, during the last three years (whether or not consecutive) preceding retirement.
4. Credited Service Period during which an employee contributes to the retirement system plus certain periods of military service and “purchased” service.

**PLYMOUTH RETIREMENT SYSTEM
SUMMARY OF PRINCIPAL PROVISIONS
(Continued)**

5. Service Retirement

a. Eligibility Attainment of age 55 or completion of 20 years of credited service if hired prior to 1978 or a member of Group 4; otherwise, attainment of age 55 and completion of 10 years of credited service.

b. Retirement Allowance Determined as the product of the member's benefit percentage, average pay and credited service, where the benefit percentage is shown below (maximum allowance of 80% of average pay):

Benefit Percentage	Group 1	Group 2	Group 4
2.5%	65+	60+	55+
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	N/A	49
1.8	58	N/A	48
1.7	57	N/A	47
1.6	56	N/A	46
1.5	55	N/A	45

In addition, veterans receive an additional \$15 per year for each year of credited service up to 20 years

6. Deferred Vested Retirement

a. Eligibility Completion of 10 years of credited service (for elected and appointed members, 6 years in the event of involuntary termination).

PLYMOUTH RETIREMENT SYSTEM

SUMMARY OF PRINCIPAL PROVISIONS

(Continued)

- b. Retirement Allowance
- Determined in the same manner as 5b. with the benefit payable at age 55, unless deferred until later at the member's option.
- If member is under age 55, member contributions with interest may be withdrawn. Members hired before 1984 receive full interest on contributions that are withdrawn; otherwise, one half the credited interest is provided for members who withdraw after 5 but before 10 years of credited service and no interest is provided for withdrawals before 5 years of credited service.
7. Ordinary Disability Retirement
- a. Eligibility
- Non-job related disability after completion of 10 years of credited service.
- b. Retirement Allowance
- Determined in the same manner as 5b. with the benefit payable immediately. Veterans receive 50% of pay (during final year) plus an annuity based on accumulated member contributions with interest.
8. Accidental Disability Retirement
- a. Eligibility
- Disabled as a result of an accident in the performance of duties. No age or service requirement.
- b. Retirement Allowance
- 72% of pay plus an annuity based on accumulated member contributions with interest. Also, a dependent's allowance of \$486.72 (indexed) per year for each child. Total allowance not to exceed 100% of pay (75% for members hired after 1987).
9. Non-Occupational Death
- a. Eligibility
- Dies while in active service, but not due to occupational injury. 2 years of service.

PLYMOUTH RETIREMENT SYSTEM
SUMMARY OF PRINCIPAL PROVISIONS
(Continued)

- b. Retirement Allowance Benefit as if Option C had been elected (see below).
Minimum monthly benefits provided as follows: spouse
- \$250, first child - \$120, each additional child - \$90.
10. Occupational Death
- a. Eligibility Dies as a result of an occupational injury.
- b. Benefit Amount Same as 8b.
11. Cost-of-Living Increases A 3% increase applied to the first \$12,000 of annual
benefit. Funded by the Municipality from Fiscal Year
1999. Cost-of-living increases from Fiscal Year 1982
through Fiscal 1998 were funded by the
Commonwealth.
12. Optional Forms of Payment
- a. Option A Allowance payable monthly for the life of the member.
- b. Option B Allowance payable monthly for the life of the member
with a guarantee of remaining member contributions
with interest.
- c. Option C Allowance payable monthly for the life of the member
with 66-2/3% continuing to the member's beneficiary
upon the member's death. For allowances payable on
or after January 12, 1998, if the beneficiary
predeceases the member, the allowance amount "pops
up" to the non-reduced amount.

PLYMOUTH RETIREMENT SYSTEM
SECTION II (Continued)

GLOSSARY OF TERMS

1. Present Value of Benefits Represents the dollar value today of all benefits expected to be earned by current members if all actuarial assumptions are exactly realized.

2. Actuarial Cost Method The procedure that is used to allocate the present value of benefits between the liability that is attributable to past service (Actuarial Accrued Liability) and that attributable to future service.

3. Actuarial Assumptions Estimates are made as to the occurrence of certain events that determine the level of benefits to be paid and how long they will be provided. The more important actuarial assumptions include the investment return on assets, salary increases and the rates of turnover, disability, retirement and mortality.

4. Actuarial Accrued Liability The portion of the Present Value of Benefits that is attributable to past service.

5. Normal Cost The portion of the Present Value of Benefits that is attributable to benefits to be earned in the coming year.

6. Actuarial Assets Market value of assets of the funds, adjusted by payables and receivables, set aside through employer and member contributions to provide for benefits.

7. Unfunded Actuarial Accrued Liability That portion of the Actuarial Accrued Liability not covered by System Assets.

8. PERAC Public Employee Retirement Administration Commission, a division of the State government which has regulatory authority over the administration of the retirement system.

9. PRIT Pension Reserves Investment Trust Fund is the state controlled and administered fund for the investment of assets for members of the retirement system.

PLYMOUTH RETIREMENT SYSTEM

GLOSSARY OF TERMS (Continued)

10. GASB Government Accounting Standards Board (issues guidance for disclosure of retirement system liabilities).