

**PLYMOUTH COUNTY  
CONTRIBUTORY RETIREMENT SYSTEM**

Actuarial Valuation Report

January 1, 2010

**TABLE OF CONTENTS**

	<u>Page</u>
<b>REPORT SUMMARY</b>	
Highlights	1
Introduction	2
Actuarial Experience	3
<b>ACTUARIAL COSTS AND LIABILITIES</b>	
Normal Costs	4
Present Value of Actuarial Accrued Liabilities	5
Present Value of Future Benefits	6
<b>FUNDED STATUS AND APPROPRIATIONS</b>	
Market Value of Plan Assets	7
Actuarial Value of Assets	8
Unfunded Actuarial Accrued Liabilities	9
Appropriations	10
Appropriation Forecast	11
GASB Statements No. 25 and No. 27	13
PERAC Annual Statement	14
<b>EXHIBITS</b>	
1 Age/Service Distribution with Salary	16
2 Retiree Distribution	17
3 Disabled Retiree Distribution	18
4 Distribution Forecast	19
5 Summary of Plan Provisions	20
6 Actuarial Methods and Assumptions	27
7 Glossary of Terms	31
<b>CERTIFICATION</b>	33
<b>BREAKOUTS</b>	34

## Report Summary:

<u>Highlights</u>	<u>January 1, 2009</u>	<u>January 1, 2010</u>
<u>Contributions</u>		
Funding Schedule FY 2011	\$54,235,418	\$45,039,921
Funding Schedule FY 2012	56,266,893	46,850,764
<u>Funded Ratios</u>		
GAS No. 25	50.0%	59.5%
<u>Participants</u>		
Actives	6,919	5,987
Retirees and Beneficiaries	2,965	3,042
Vested	0	0
Inactives	1,893	2,052
Disabled	<u>338</u>	<u>347</u>
Total	12,115	11,428
<u>Payroll</u>		
Payroll of Active Members	\$264,541,078	\$227,507,647
Average Payroll	38,234	38,000
<u>Normal Cost</u>		
Employer	8,027,231	7,845,344
Employee	22,035,043	19,114,405
Administrative Expenses	<u>1,850,000</u>	<u>1,600,000</u>
Total	31,912,274	28,559,749
<u>Actuarial Accrued Liabilities</u>		
Actives	607,222,816	539,093,493
Retirees, Beneficiaries, Disabilities and Inactives	<u>543,588,476</u>	<u>593,753,886</u>
Total	1,159,210,636	1,132,847,379
<u>Actuarial Value of Assets</u>	<u>579,877,224</u>	<u>673,709,456</u>
<u>Unfunded Actuarial Accrued Liabilities</u>	\$579,333,412	\$459,137,923

## **Introduction**

This report presents the findings of an actuarial valuation as of January 1, 2010, of Plymouth County Contributory Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2010.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the Plymouth County Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2010.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

### Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last year, total unfunded actuarial accrued liability decreased by 20.8% to \$459,137,923. The decrease is the result of net favorable actuarial experience during the preceding year. The sources of the actuarial (gain)/loss are as follows:

Investment	(71,699,928)
Salary Increases	(14,818,223)
New Participants	4,647,793
Active - Retirements	(491,726)
Active - Terminations	3,531,084
Active - Mortality	614,486
Active - Disabilities	1,211,651
Inactive - Mortality and data adjustments	(2,784,748)
Other including data adjustments and service buybacks	(11,078,852)
Sheriff Transfers	<u>(44,422,621)</u>
Total (gain)/loss	(135,291,084)

## Actuarial Costs and Liabilities:

### Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

**Table I**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Superannuation	\$20,414,538	\$18,900,323
Termination	3,396,753	2,452,022
Death	1,578,215	1,428,795
Disability	4,672,768	4,178,609
Administrative Expenses	<u>1,850,000</u>	<u>1,600,000</u>
Total Normal Cost	31,912,274	28,559,749
% of Pay	12.1%	12.6%
Employee Contributions	22,035,043	19,114,405
% of Pay	8.3%	8.4%
Employer Normal Cost	\$9,877,231	\$9,445,344
% of Pay	3.7%	4.2%

**Present Value of Actuarial Accrued Liabilities**

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactive. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

**Table II**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Actives		
Superannuations	\$530,148,432	\$479,006,216
Termination	15,473,962	10,018,507
Death	18,113,061	16,425,013
Disability	43,487,361	33,643,757
Retirees and Inactives		
Retirees and Beneficiaries	453,978,928	488,720,117
Vested	0	0
Terminated (Refund)	8,399,344	10,360,905
Disabled	<u>89,609,548</u>	<u>94,672,864</u>
Total	<u>\$1,159,210,636</u>	<u>\$1,132,847,379</u>

**Present Value of Future Benefits**

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

**Table III**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Actives		
Superannuation	\$691,632,948	\$627,797,330
Termination	28,340,284	19,604,583
Death	29,792,112	27,017,805
Disability	84,792,612	71,265,307
Retirees and Inactives		
Retirees and Beneficiaries	453,978,928	488,720,117
Vested	0	0
Terminated (Refund)	8,399,344	10,360,905
Disabled	<u>89,609,548</u>	<u>94,672,864</u>
<b>Total</b>	<b>\$1,386,545,776</b>	<b>\$1,339,438,911</b>



## Funded Status and Appropriations:

### Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

**Table IV**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Cash equivalents	\$5,852,735	\$13,743,233
Short term investments	3,239,396	4,676,149
Fixed income securities	109,151,095	119,256,590
Equities	255,470,276	323,900,146
International	14,595,078	22,155,487
Real Estate	67,941,901	45,610,411
Venture Capital	0	0
Other	24,283,147	29,740,068
Accounts receivable	3,773,822	5,224,176
Accounts payable	(1,886,669)	(4,017,292)
Accrued income	<u>810,240</u>	<u>1,135,580</u>
Total Market Value	\$483,231,020	\$561,424,547
Total Actuarial Value	\$579,877,224	\$673,709,456

**Actuarial Value of Assets**

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8.25%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 20%. The calculation of the actuarial value of assets as of January 1, 2010 is presented in Table V.

**Table V**

	<u>January 1, 2010</u>
(1) Market value at January 1, 2009	\$483,231,020
(2) 2009 Contributions	\$71,624,438
(3) 2009 Payments	(\$96,313,577)
(4) Net interest adjustment at 8.25% on (1), (2), and (3) to December 31, 2009	\$39,905,506
(5) Expected market value on January 1, 2010	\$498,447,387
(1) + (2) + (3) + (4)	
(6) Actual market value on January 1, 2010	\$561,424,547
(7) 2009 (Gain) / Loss	(\$62,977,160)
(8) 80% of 2009 (Gain) / Loss	(\$50,381,728)
(9) 2008 (Gain) / Loss	\$277,847,934
(10) 60% of 2008 (Gain) / Loss	\$166,708,760
(11) 2007 (Gain) / Loss	\$10,121,742
(12) 40% of 2007 (Gain) / Loss	\$4,048,697
(13) 2006 (Gain) / Loss	(\$33,505,275)
(14) 20% of 2006 (Gain) / Loss	(\$6,701,055)
(15) Actuarial value on January 1, 2010, (6) + (8) + (10) + (12) + (14) but not less than 80% nor greater than 120% of (6)	\$673,709,456
(16) Ratio of actuarial value to market value	120.00%
(17) Actuarial Value Return for 2008	-16.02%
(18) Actuarial Value Return for 2009	20.88%
(19) Market Value Return for 2008	-31.27%
(20) Market Value Return for 2009	21.27%

**Unfunded Actuarial Accrued Liabilities**

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

**Table VI**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Actuarial Accrued Liability	\$1,159,210,636	\$1,132,847,379
Actuarial Assets	<u>579,877,224</u>	<u>673,709,456</u>
Unfunded Actuarial Accrued Liability	\$579,333,412	\$459,137,923
Funded Status	50.0%	59.5%

**Appropriations**

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2029  
 \$ 453,464,599 over 19 years with 4.5% increasing payments
- Level amortization of the 2002 Early Retirement Incentive June 30, 2019  
 \$ 3,689,706 over 9 years
- Level amortization of the 2003 Early Retirement Incentive June 30, 2020  
 \$ 1,983,618 over 10 years
- Interest adjustment for payments deposited semiannually.

The pension appropriation is shown in Table VII.

**Table VII**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
Normal cost	\$9,877,231	\$9,445,344
Amortization payment of the accrued liability	37,966,475	32,175,626
Amortization payment of 1992 ERI liability	0	0
Amortization payment of 2002 ERI liability	551,318	551,318
Amortization payment of 2003 ERI liability	<u>276,175</u>	<u>276,175</u>
Total cost	\$48,671,200	\$42,448,463
% of Pay	18.4%	18.7%
Fiscal 2011 cost	\$54,235,418	\$45,039,921
Fiscal 2012 cost	\$56,266,893	\$46,850,764

## **Appropriation Forecast**

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2041 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 19 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents 19.8% of payroll, decreasing to 18.1% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 3.0% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

P:\Actrl\Plymouth\Val10\{Plymouth10\_Val - 8.25%-20%-without active sheriff\_v2.xls}Inputs

**Appropriation Forecast**

Fiscal Year	Employee	Employer	Amortization	Employer	Employer	Funded	
<u>Ending</u>	<u>Payroll*</u>	<u>Contribution</u>	<u>Normal Cost with Interest</u>	<u>Payments with Interest</u>	<u>Total Cost with Interest</u>	<u>Total Cost % of Payroll</u>	<u>Ratio %**</u>
2011	\$227,507,647	\$19,114,405	\$10,021,978	\$35,017,943	\$45,039,921	19.8	59.5
2012	\$237,745,491	\$20,140,844	\$10,296,524	\$36,554,240	\$46,850,764	19.7	61.0
2013	\$248,444,038	\$21,220,956	\$10,575,485	\$38,159,671	\$48,735,156	19.6	62.6
2014	\$259,624,020	\$22,357,493	\$10,858,702	\$39,837,345	\$50,696,047	19.5	64.2
2015	\$271,307,101	\$23,553,345	\$11,145,993	\$41,590,515	\$52,736,508	19.4	65.8
2016	\$283,515,920	\$24,811,550	\$11,437,151	\$43,422,578	\$54,859,729	19.3	67.5
2017	\$296,274,137	\$26,135,299	\$11,731,943	\$45,337,083	\$57,069,026	19.3	69.3
2018	\$309,606,473	\$27,527,941	\$12,030,106	\$47,337,742	\$59,367,848	19.2	71.1
2019	\$323,538,764	\$28,992,997	\$12,331,347	\$49,428,429	\$61,759,776	19.1	73.0
2020	\$338,098,009	\$30,534,164	\$12,635,338	\$51,028,223	\$63,663,561	18.8	75.0
2021	\$353,312,419	\$32,155,326	\$12,941,718	\$53,018,270	\$65,959,988	18.7	77.0
2022	\$369,211,478	\$33,860,560	\$13,250,085	\$55,404,093	\$68,654,178	18.6	79.1
2023	\$385,825,994	\$35,654,150	\$13,559,998	\$57,897,277	\$71,457,275	18.5	81.3
2024	\$403,188,164	\$37,540,597	\$13,870,972	\$60,502,654	\$74,373,626	18.4	83.6
2025	\$421,331,631	\$39,524,623	\$14,182,474	\$63,225,274	\$77,407,748	18.4	86.1
2026	\$440,291,555	\$41,611,193	\$14,493,923	\$66,070,411	\$80,564,334	18.3	88.6
2027	\$460,104,675	\$43,805,516	\$14,804,683	\$69,043,579	\$83,848,262	18.2	91.3
2028	\$480,809,385	\$46,113,066	\$15,114,062	\$72,150,541	\$87,264,603	18.1	94.1
2029	\$502,445,808	\$48,539,589	\$15,421,304	\$75,397,315	\$90,818,619	18.1	97.0
2030	\$525,055,869	\$51,091,120	\$15,725,593	\$0	\$15,725,593	3.0	100.0
2031	\$548,683,383	\$53,773,996	\$16,026,040	\$0	\$16,026,040	2.9	100.0
2032	\$573,374,135	\$56,594,872	\$16,321,682	\$0	\$16,321,682	2.8	100.0
2033	\$599,175,971	\$59,560,734	\$16,611,479	\$0	\$16,611,479	2.8	100.0
2034	\$626,138,890	\$62,678,919	\$16,894,307	\$0	\$16,894,307	2.7	100.0
2035	\$654,315,140	\$65,957,130	\$17,168,951	\$0	\$17,168,951	2.6	100.0
2036	\$683,759,321	\$69,403,456	\$17,434,102	\$0	\$17,434,102	2.5	100.0
2037	\$714,528,491	\$73,026,387	\$17,688,350	\$0	\$17,688,350	2.5	100.0
2038	\$746,682,273	\$76,834,841	\$17,930,175	\$0	\$17,930,175	2.4	100.0
2039	\$780,282,975	\$80,838,177	\$18,157,946	\$0	\$18,157,946	2.3	100.0
2040	\$815,395,709	\$85,046,222	\$18,369,908	\$0	\$18,369,908	2.3	100.0
2041	\$852,088,516	\$89,469,294	\$18,564,177	\$0	\$18,564,177	2.2	100.0
2042	\$890,432,499	\$93,495,412	\$19,399,565	\$0	\$19,399,565	2.2	100.0

\* Calendar basis

\*\* Beginning of Fiscal Year

P:\Actrl\Plymouth\Val10\[Plymouth10\_Val - 8.25%-20%-without active sheriff\_v2.xls]Inputs

**GASB Statements No. 25 and No. 27**

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to \$0. The required disclosure information is shown in Table VIII.

**Table VIII**

	<u>January 1, 2009</u>	<u>January 1, 2010</u>
(1) Actuarial Accrued Liability	\$1,159,210,636	\$1,132,847,379
(2) Actuarial Value of Assets	<u>579,877,224</u>	<u>673,709,456</u>
(3) Unfunded Actuarial Accrued Liability	579,333,412	459,137,923
(4) Funded Ratio (2)/(1)	50.0%	59.5%
(5) Covered Payroll	\$264,541,078	\$227,507,647
(6) UAAL as a percentage of payroll: (3)/(5)	219.0%	201.8%
(7) Annual Required Contribution (ARC)	\$42,708,712	\$45,039,921
(8) Net Pension Obligation	\$0	\$0

P:\Actrl\Plymouth\Val10\Plymouth10\_Val - 8.25%-20%-without active sheriff\_v2.xls\Inputs

**PERAC Annual Statement  
APPENDIX PAGE 3  
ACTUARIAL VALUATION AND ASSUMPTIONS**

The most recent actuarial valuation of the System was prepared by Buck Consultants as of January 1, 2010.

The normal cost for employees on that date was:	\$19,114,405	8.4% of pay
The normal cost for the employer was:	7,845,344	3.4% of pay
The actuarial liability for active members was:		\$539,093,493
The actuarial liability for retired and inactive members was:		593,753,886
Total actuarial accrued liability:		1,132,847,379
System assets as of that date:		673,709,456
Unfunded actuarial accrued liability:		\$459,137,923

The ratio of system's assets to total actuarial liability was 59.5%

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

Investment Return:	8.3%
Rate of Salary Increase:	4.5%

**SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a percent of Covered Payroll
	(a)	(b)	(b-a)	(a/b)	(c)	(b-a)/c
01/01/10	\$673,709,456	\$1,132,847,379	\$459,137,923	59.5%	\$227,507,647	201.8%
01/01/09	579,877,224	1,159,210,636	579,333,412	50.0%	264,541,078	219.0%
01/01/08	683,819,938	1,056,020,215	372,200,277	64.8%	252,682,832	147.3%
01/01/07	606,629,089	987,840,418	381,211,329	61.4%	244,574,136	155.9%
01/01/06	558,533,863	918,851,707	360,317,844	60.8%	226,262,731	159.2%
01/01/04	520,104,805	802,158,453	282,053,648	64.8%	208,312,002	135.4%
01/01/02	466,325,660	733,198,204	266,872,544	63.6%	205,039,686	130.2%
01/01/00	450,210,619	611,204,058	160,993,439	73.7%	178,010,731	90.4%
01/01/98	316,253,566	492,303,777	176,050,211	64.2%	148,264,981	118.7%

Attach Copy of Current Approved Funding Schedule



## **EXHIBITS**

P:\Actrl\Plymouth\Val10\salACT1.xls\Actives

Age/Service Distribution with Salary as of January 1, 2010

Attained Age	Average Salary	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	3	0	0	0	0	0	0	0	0	0	3
	13,672	0	0	0	0	0	0	0	0	0	13,672
20-24	90	0	0	0	0	0	0	0	0	0	90
	25,136	0	0	0	0	0	0	0	0	0	25,136
25-29	298	43	3	0	0	0	0	0	0	0	344
	28,108	42,647	31,615	0	0	0	0	0	0	0	29,956
30-34	101	105	41	0	0	0	0	0	0	0	247
	37,811	49,035	55,949	0	0	0	0	0	0	0	45,593
35-39	188	131	129	39	0	0	0	0	0	0	487
	26,436	45,980	57,509	56,931	0	0	0	0	0	0	42,366
40-44	298	194	146	85	64	3	0	0	0	0	790
	21,200	35,585	49,464	61,536	63,393	67,726	0	0	0	0	37,891
45-49	329	307	193	95	109	41	3	0	0	0	1,077
	21,607	28,029	38,448	49,140	62,124	70,657	87,394	0	0	0	35,035
50-54	235	288	265	117	119	76	43	4	0	0	1,147
	23,454	28,094	29,862	35,867	55,045	69,400	66,675	76,924	0	0	35,495
55-59	124	174	210	164	132	63	38	35	2	0	942
	25,803	30,215	30,734	34,419	44,602	58,528	74,760	69,436	39,359	0	37,665
60-64	64	100	103	95	100	54	39	19	11	0	585
	25,372	30,920	38,236	35,307	40,034	43,039	52,531	64,784	58,904	0	38,057
65-69	22	43	25	25	39	23	12	3	2	0	194
	17,023	27,366	29,158	28,850	34,146	34,991	47,967	60,981	41,955	0	30,827
70+	6	13	11	15	12	9	10	3	2	0	81
	24,479	23,357	20,637	25,779	26,564	35,988	29,437	34,582	23,907	0	26,578
Total Employees	1,758	1,398	1,126	635	575	269	145	64	17	0	5,987
Average Salary	24,887	33,215	38,820	41,610	50,296	57,675	61,302	66,492	50,493	0	36,540

Retiree Distribution as of January 1, 2010

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	2	0	2	12,962	0	12,962
40-44	3	2	5	35,446	34,814	70,260
45-49	17	5	22	327,316	42,833	370,148
50-54	27	14	41	840,163	144,999	985,162
55-59	114	73	187	4,268,870	769,501	5,038,370
60-64	236	211	447	8,243,959	2,673,252	10,917,211
65-69	300	350	650	8,861,233	4,996,518	13,857,751
70-74	229	286	515	5,067,834	4,056,019	9,123,853
75-79	191	258	449	3,436,673	3,082,135	6,518,808
80-84	133	206	339	2,092,940	2,043,573	4,136,513
85-89	92	157	249	1,035,469	1,160,267	2,195,736
90-94	36	60	96	337,882	455,351	793,233
95-99	21	19	40	254,443	172,531	426,974
Total	1,401	1,641	3,042	34,815,190	19,631,791	54,446,982
Average (Age/Payment)	71.3	73.6	72.5	24,850	11,963	17,898
Frequency Percent	46.1%	53.9%	100.0%	63.9%	36.1%	100.0%

P:\Actrl\Plymouth\Val10\salDIS1.xls\disabled

Disabled Retiree Distribution as of January 1, 2010

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	4	0	4	110,365	0	110,365
40-44	8	2	10	232,879	63,346	296,226
45-49	15	6	21	455,521	185,513	641,033
50-54	26	6	32	944,982	121,297	1,066,280
55-59	40	8	48	1,139,763	101,861	1,241,624
60-64	69	5	74	2,124,117	104,008	2,228,126
65-69	52	11	63	1,452,177	262,226	1,714,403
70-74	42	2	44	1,060,242	22,523	1,082,765
75-79	24	1	25	583,178	5,139	588,317
80-84	14	3	17	246,673	44,293	290,966
85-89	9	0	9	180,572	0	180,572
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
<b>Total</b>	<b>303</b>	<b>44</b>	<b>347</b>	<b>8,530,470</b>	<b>910,205</b>	<b>9,440,675</b>
<b>Average (Age/Payment)</b>	<b>64.5</b>	<b>60.7</b>	<b>64.0</b>	<b>28,153</b>	<b>20,686</b>	<b>27,207</b>
<b>Frequency Percent</b>	<b>87.3%</b>	<b>12.7%</b>	<b>100.0%</b>	<b>90.4%</b>	<b>9.6%</b>	<b>100.0%</b>

### EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2010	\$69,713,486	\$19,114,405	\$45,039,921	\$53,517,811	\$47,958,651
2011	73,632,427	20,140,844	46,850,764	57,359,297	50,718,478
2012	77,628,426	21,220,956	48,735,156	61,427,760	53,755,446
2013	81,839,669	22,357,493	50,696,047	65,740,606	56,954,478
2014	85,904,697	23,553,345	52,736,508	70,325,957	60,711,113
2015	90,099,025	24,811,550	54,859,729	75,218,817	64,791,071
2016	94,719,912	26,135,299	57,069,026	80,433,992	68,918,406
2017	99,377,415	27,527,941	59,367,848	85,991,314	73,509,687
2018	104,029,042	28,992,997	61,759,776	91,930,943	78,654,675
2019	108,707,005	30,534,164	63,663,561	98,285,607	83,776,327
2020	113,458,078	32,155,326	65,959,988	105,069,400	89,726,637
2021	118,067,981	33,860,560	68,654,178	112,359,567	96,806,323
2022	122,742,743	35,654,150	71,457,275	120,235,231	104,603,912
2023	127,215,578	37,540,597	74,373,626	128,766,618	113,465,262
2024	131,482,052	39,524,623	77,407,748	138,041,894	123,492,212
2025	135,439,587	41,611,193	80,564,334	148,161,604	134,897,544
2026	139,283,245	43,805,516	83,848,262	159,231,827	147,602,360
2027	142,814,934	46,113,066	87,264,603	171,368,040	161,930,775
2028	146,020,921	48,539,589	90,818,619	184,705,024	178,042,311
2029	148,746,350	51,091,120	15,725,593	197,803,587	115,873,951
2030	150,853,485	53,773,996	16,026,040	207,325,527	126,272,079
2031	152,408,268	56,594,872	16,321,682	217,730,840	138,239,127
2032	153,443,488	59,560,734	16,611,479	229,147,827	151,876,552
2033	153,983,170	62,678,919	16,894,307	241,713,523	167,303,579
2034	153,848,122	65,957,130	17,168,951	255,583,029	184,860,988
2035	153,110,370	69,403,456	17,434,102	270,929,416	204,656,603
2036	151,985,282	73,026,387	17,688,350	287,928,863	226,658,318
2037	150,264,362	76,834,841	17,930,175	306,772,058	251,272,712
2038	147,952,103	80,838,177	18,157,946	327,674,628	278,718,648
2039	152,917,912	85,046,222	18,369,908	350,552,273	301,050,491

amounts in thousands

## **EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:**

This summary is prepared in accordance with Chapter 32 as of January 1, 2010, and does not take into account any subsequent changes.

### **1. Administration**

Each of the 107 contributory retirement systems for public employees of the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

### **2. Participation**

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

### 3. **Salary**

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

### 4. **Member Contributions**

Member contributions vary depending upon date hired as follows:

<b><u>Date of Hire</u></b>	<b><u>Member Contribution Rate</u></b>
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of \$30,000

### 5. **Average Salary**

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

### 6. **Creditable Service**

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

**7. Service Retirement**

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

- (i) completion of 20 years of service
- (ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service



b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

<u>Age at Retirement</u>	<u>Percentage of Average Salary</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

**8. Deferred Vested Retirement**

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

**9. Accidental Disability**

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$648.48 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

**10. Ordinary Disability****a. Eligibility:**

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

**b. Benefit Amount:**

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

**11. Survivor Benefits****a. Occupational Death:**

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

**b. Non-Occupational Death:**

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

**12. Cost-of-Living Increases**

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

**13. Postretirement Death Benefits**

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A – Life annuity
- (ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

## **EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:**

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

### **1. Member Data**

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

### **2. Valuation Date**

January 1, 2010.

### **3. Actuarial Cost Method**

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

### **4. Rate of Investment Return**

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.25% per annum.

### **5. Salary Scale**

It is assumed that salaries including longevity will increase at a rate of 4.0% per year.

### **6. Cost-of-Living Increases**

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and \$12,000 per year.

### **7. Value of Investments**

Assets held by the fund are valued at market value as reported by the Public Employees'

Retirement Administration Commission (PERAC). The actuarial value is based on a 5 year smoothing of realized and unrealized investment earnings greater than or less than the expected return. The result must be within 20% of market value.

**8. Annual Rate of Withdrawal Prior to Retirement**

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>	<u>Jail Employees</u>
0	0.1500	0.0150	0.4500
10	0.0540	0.0150	0.1620
20	0.0200	0.0000	0.0600
30	0.0000	0.0000	0.0000

**9. Annual Rate of Mortality**

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 Mortality Table for males and females. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years.

**10. Service Retirement**

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

<u>Age</u>	<u>Male General Employees</u>	<u>Female General Employees</u>	<u>Male and Female Police and Fire Employees</u>
45	0.0000	0.0000	0.01000
46	0.0000	0.0000	0.01000
47	0.0000	0.0000	0.01000
48	0.0000	0.0000	0.01000
49	0.0000	0.0000	0.01000
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

**11. Annual Rate of Disability Prior to Retirement**

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

<b><u>Attained Age</u></b>	<b><u>General Employees</u></b>	<b><u>Police and Fire Employees</u></b>
20	0.0001	0.0010
30	0.0003	0.0030
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 40% of all disabilities are ordinary (60% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

**12. Family Composition**

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

**13. Administrative Expenses**

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2010 is \$1,600,000 and is anticipated to increase at 4.5% per year.



## **EXHIBIT 7 – GLOSSARY OF TERMS:**

This glossary summarizes the technical terms contained in this report.

### **1. Actuarial Accrued Liability**

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

### **2. Actuarial Assumptions**

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

### **3. Actuarial Cost Method**

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

### **4. Actuarial Present Value**

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

### **5. Forecast**

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

**6. Normal Cost**

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

**7. Unfunded Actuarial Accrued Liability**

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

**8. Valuation Method**

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

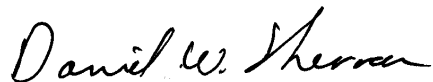
**9. Vested Liability**

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

## **CERTIFICATION:**

This report fairly represents the actuarial position of the Plymouth County Retirement System contributing as of January 1, 2010, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience. Daniel Sherman is an Associate of the Society of Actuaries. He is a Member of the American Academy of Actuaries and meets the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

Buck Consultants, LLC



---

Daniel W. Sherman, ASA, MAAA  
Enrolled Actuary No. 08-4086

November 2010

## **BREAKOUTS**

## County of Plymouth

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	110
Inactives	202
Retirees and Disableds	338
Total	650

Payroll	4,671,212
Average	42,466

### Valuation Results

#### Normal Cost

Employee	384,300
Employer	419,849
Administrative Expense	107,729
Total	911,878

#### Actuarial Accrued Liability

Actives	11,582,128
Inactives	901,498
Retirees and Disableds	63,791,963
Total	76,275,589

Assets	\$45,361,437
--------	--------------

Unfunded Actuarial Accrued Liability	\$30,914,151
--------------------------------------	--------------

Estimated FY12 Contribution - semiannual payments	\$2,977,646
Estimated FY12 Contribution - July payment	\$2,919,788
Estimated FY13 Contribution - semiannual payments	\$3,101,773
Estimated FY13 Contribution - July payment	\$3,041,504

**Abington**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	215
Inactives	55
Retirees and Disableds	125
Total	<u>395</u>

Payroll	8,125,715
Average	37,794

## Valuation Results

## Normal Cost

Employee	677,590
Employer	309,787
Administrative Expense	58,439
Total	<u>1,045,816</u>

## Actuarial Accrued Liability

Actives	19,905,626
Inactives	312,908
Retirees and Disableds	21,158,142
Total	<u>41,376,676</u>

Assets \$24,606,896

Unfunded Actuarial Accrued Liability \$16,769,780

Estimated FY12 Contribution - semiannual payments	\$1,729,390
Estimated FY12 Contribution - July payment	\$1,695,786
Estimated FY13 Contribution - semiannual payments	\$1,798,806
Estimated FY13 Contribution - July payment	\$1,763,854

**Bridgewater**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	145
Inactives	55
Retirees and Disableds	150
Total	<u>350</u>

Payroll	7,596,442
Average	52,389

## Valuation Results

## Normal Cost

Employee	648,737
Employer	270,426
Administrative Expense	79,885
Total	<u>999,048</u>

## Actuarial Accrued Liability

Actives	22,355,553
Inactives	225,099
Retirees and Disableds	33,980,210
Total	<u>56,560,862</u>

Assets \$33,637,000

Unfunded Actuarial Accrued Liability \$22,923,862

Estimated FY12 Contribution - semiannual payments	\$2,266,096
Estimated FY12 Contribution - July payment	\$2,222,064
Estimated FY13 Contribution - semiannual payments	\$2,357,101
Estimated FY13 Contribution - July payment	\$2,311,301

## Bridgewater Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	5
Inactives	1
Retirees and Disableds	5
Total	11

Payroll	233,775
Average	46,755

### Valuation Results

#### Normal Cost

Employee	20,700
Employer	7,675
Administrative Expense	1,702
Total	30,077

#### Actuarial Accrued Liability

Actives	400,741
Inactives	3,619
Retirees and Disableds	800,992
Total	1,205,352

Assets \$716,829

Unfunded Actuarial Accrued Liability \$488,524

Estimated FY12 Contribution - semiannual payments	\$64,901
Estimated FY12 Contribution - July payment	\$63,640
Estimated FY13 Contribution - semiannual payments	\$66,889
Estimated FY13 Contribution - July payment	\$65,590



**Bridgewater/Raynham Regional School**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	175
Inactives	51
Retirees and Disableds	101
Total	<u>327</u>

Payroll	5,556,276
Average	31,750

## Valuation Results

## Normal Cost

Employee	445,751
Employer	144,822
Administrative Expense	34,122
Total	<u>624,695</u>

## Actuarial Accrued Liability

Actives	12,247,093
Inactives	415,148
Retirees and Disableds	11,497,371
Total	<u>24,159,612</u>

Assets \$14,367,830

Unfunded Actuarial Accrued Liability \$9,791,781

Estimated FY12 Contribution - semiannual payments	\$1,071,514
Estimated FY12 Contribution - July payment	\$1,050,694
Estimated FY13 Contribution - semiannual payments	\$1,111,131
Estimated FY13 Contribution - July payment	\$1,089,541

## Carver

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	209
Inactives	48
Retirees and Disableds	71
Total	328

Payroll	6,815,321
Average	32,609

### Valuation Results

Normal Cost

Employee	574,820
Employer	198,614
Administrative Expense	42,618
Total	816,052

Actuarial Accrued Liability

Actives	16,059,617
Inactives	102,848
Retirees and Disableds	14,012,151
Total	30,174,616

Assets \$17,944,980

Unfunded Actuarial Accrued Liability \$12,229,635

Estimated FY12 Contribution - semiannual payments	\$1,348,051
Estimated FY12 Contribution - July payment	\$1,321,858
Estimated FY13 Contribution - semiannual payments	\$1,397,981
Estimated FY13 Contribution - July payment	\$1,370,817

## Carver/Marion/Wareham Regional Refuse

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	4
Inactives	0
Retirees and Disableds	1
Total	5

Payroll	109,686
Average	27,422

### Valuation Results

Normal Cost

Employee	6,819
Employer	7,525
Administrative Expense	693
Total	15,037

Actuarial Accrued Liability

Actives	400,621
Inactives	0
Retirees and Disableds	90,260
Total	490,881

Assets	\$291,929
--------	-----------

Unfunded Actuarial Accrued Liability	\$198,952
--------------------------------------	-----------

Estimated FY12 Contribution - semiannual payments	\$24,402
Estimated FY12 Contribution - July payment	\$23,928
Estimated FY13 Contribution - semiannual payments	\$25,324
Estimated FY13 Contribution - July payment	\$24,831

**Duxbury**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	412
Inactives	130
Retirees and Disableds	163
Total	<u>705</u>

Payroll	14,663,883
Average	35,592

## Valuation Results

## Normal Cost

Employee	1,236,708
Employer	439,359
Administrative Expense	<u>77,242</u>
Total	1,753,309

## Actuarial Accrued Liability

Actives	32,552,791
Inactives	545,195
Retirees and Disableds	<u>21,591,919</u>
Total	54,689,905

Assets	\$32,524,334
--------	--------------

Unfunded Actuarial Accrued Liability	\$22,165,571
--------------------------------------	--------------

Estimated FY12 Contribution - semiannual payments	\$2,285,248
Estimated FY12 Contribution - July payment	\$2,240,844
Estimated FY13 Contribution - semiannual payments	\$2,377,758
Estimated FY13 Contribution - July payment	\$2,331,557

## Duxbury Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	2
Inactives	1
Retirees and Disableds	4
Total	7

Payroll	82,284
Average	41,142

### Valuation Results

Normal Cost

Employee	6,859
Employer	3,590
Administrative Expense	543
Total	10,992

Actuarial Accrued Liability

Actives	196,563
Inactives	722
Retirees and Disableds	187,490
Total	384,775

Assets \$228,827

Unfunded Actuarial Accrued Liability \$155,948

Estimated FY12 Contribution - semiannual payments	\$16,620
Estimated FY12 Contribution - July payment	\$16,297
Estimated FY13 Contribution - semiannual payments	\$17,283
Estimated FY13 Contribution - July payment	\$16,948

**East Bridgewater**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	208
Inactives	73
Retirees and Disableds	123
Total	<u>404</u>

Payroll	8,198,115
Average	39,414

## Valuation Results

## Normal Cost

Employee	703,419
Employer	224,889
Administrative Expense	57,027
Total	<u>985,335</u>

## Actuarial Accrued Liability

Actives	18,426,692
Inactives	254,103
Retirees and Disableds	21,696,176
Total	<u>40,376,971</u>

Assets \$24,012,367

Unfunded Actuarial Accrued Liability \$16,364,604

Estimated FY12 Contribution - semiannual payments	\$1,579,103
Estimated FY12 Contribution - July payment	\$1,548,420
Estimated FY13 Contribution - semiannual payments	\$1,644,877
Estimated FY13 Contribution - July payment	\$1,612,916

## East Bridgewater Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	5
Inactives	1
Retirees and Disableds	4
Total	10

Payroll	179,742
Average	35,948

### Valuation Results

Normal Cost

Employee	15,884
Employer	6,750
Administrative Expense	767
Total	23,401

Actuarial Accrued Liability

Actives	184,320
Inactives	522
Retirees and Disableds	358,500
Total	543,342

Assets \$323,128

Unfunded Actuarial Accrued Liability \$220,214

Estimated FY12 Contribution - semiannual payments	\$31,429
Estimated FY12 Contribution - July payment	\$30,819
Estimated FY13 Contribution - semiannual payments	\$32,409
Estimated FY13 Contribution - July payment	\$31,779

**Halifax**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	132
Inactives	33
Retirees and Disableds	41
Total	<u>206</u>

Payroll	4,209,087
Average	31,887

## Valuation Results

## Normal Cost

Employee	354,200
Employer	161,001
Administrative Expense	25,145
Total	<u>540,346</u>

## Actuarial Accrued Liability

Actives	9,009,672
Inactives	138,142
Retirees and Disableds	8,655,807
Total	<u>17,803,621</u>

Assets	\$10,587,894
--------	--------------

Unfunded Actuarial Accrued Liability	\$7,215,727
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$763,459
Estimated FY12 Contribution - July payment	\$748,624
Estimated FY13 Contribution - semiannual payments	\$794,030
Estimated FY13 Contribution - July payment	\$778,602



**Hanover**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	270
Inactives	79
Retirees and Disableds	150
Total	<u>499</u>

Payroll	11,693,292
Average	43,308

## Valuation Results

## Normal Cost

Employee	983,634
Employer	404,670
Administrative Expense	69,278
Total	<u>1,457,582</u>

## Actuarial Accrued Liability

Actives	26,306,018
Inactives	494,594
Retirees and Disableds	22,250,455
Total	<u>49,051,068</u>

Assets \$29,170,892

Unfunded Actuarial Accrued Liability \$19,880,176

Estimated FY12 Contribution - semiannual payments	\$2,061,153
Estimated FY12 Contribution - July payment	\$2,021,104
Estimated FY13 Contribution - semiannual payments	\$2,144,395
Estimated FY13 Contribution - July payment	\$2,102,728

## Hanson

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	113
Inactives	26
Retirees and Disableds	55
Total	194

Payroll	5,188,632
Average	45,917

### Valuation Results

Normal Cost

Employee	433,856
Employer	163,260
Administrative Expense	34,553
Total	631,669

Actuarial Accrued Liability

Actives	13,684,341
Inactives	137,666
Retirees and Disableds	10,642,880
Total	24,464,887

Assets \$14,549,379

Unfunded Actuarial Accrued Liability \$9,915,508

Estimated FY12 Contribution - semiannual payments	\$986,124
Estimated FY12 Contribution - July payment	\$966,963
Estimated FY13 Contribution - semiannual payments	\$1,026,663
Estimated FY13 Contribution - July payment	\$1,006,714

**Kingston**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	209
Inactives	56
Retirees and Disableds	74
Total	<u>339</u>

Payroll	7,837,632
Average	37,501

## Valuation Results

## Normal Cost

Employee	676,010
Employer	234,794
Administrative Expense	47,483
Total	<u>958,287</u>

## Actuarial Accrued Liability

Actives	18,615,306
Inactives	303,615
Retirees and Disableds	14,700,417
Total	<u>33,619,338</u>

Assets	\$19,993,572
--------	--------------

Unfunded Actuarial Accrued Liability	\$13,625,766
--------------------------------------	--------------

Estimated FY12 Contribution - semiannual payments	\$1,366,465
Estimated FY12 Contribution - July payment	\$1,339,914
Estimated FY13 Contribution - semiannual payments	\$1,422,438
Estimated FY13 Contribution - July payment	\$1,394,799

## Kingston Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	2
Inactives	0
Retirees and Disableds	0
Total	2

Payroll	60,256
Average	30,128

### Valuation Results

Normal Cost

Employee	4,857
Employer	2,581
Administrative Expense	78
Total	7,516

Actuarial Accrued Liability

Actives	55,343
Inactives	0
Retirees and Disableds	0
Total	55,343

Assets \$32,913

Unfunded Actuarial Accrued Liability \$22,430

Estimated FY12 Contribution - semiannual payments	\$4,633
Estimated FY12 Contribution - July payment	\$4,543
Estimated FY13 Contribution - semiannual payments	\$4,781
Estimated FY13 Contribution - July payment	\$4,688

## Lakeville

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	127
Inactives	34
Retirees and Disableds	58
Total	219

Payroll	4,312,860
Average	33,960

### Valuation Results

Normal Cost

Employee	361,977
Employer	136,367
Administrative Expense	25,884
Total	524,228

Actuarial Accrued Liability

Actives	10,555,773
Inactives	162,470
Retirees and Disableds	7,608,637
Total	18,326,880

Assets \$10,899,078

Unfunded Actuarial Accrued Liability \$7,427,801

Estimated FY12 Contribution - semiannual payments	\$753,997
Estimated FY12 Contribution - July payment	\$739,346
Estimated FY13 Contribution - semiannual payments	\$784,722
Estimated FY13 Contribution - July payment	\$769,474

**Marion**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	99
Inactives	22
Retirees and Disableds	47
Total	<u>168</u>

Payroll	3,605,074
Average	36,415

## Valuation Results

## Normal Cost

Employee	307,946
Employer	90,585
Administrative Expense	22,118
Total	<u>420,649</u>

## Actuarial Accrued Liability

Actives	7,259,428
Inactives	73,093
Retirees and Disableds	8,327,427
Total	<u>15,659,948</u>

Assets	\$9,313,042
--------	-------------

Unfunded Actuarial Accrued Liability	\$6,346,906
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$616,098
Estimated FY12 Contribution - July payment	\$604,127
Estimated FY13 Contribution - semiannual payments	\$641,694
Estimated FY13 Contribution - July payment	\$629,225

**Marshfield**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	541
Inactives	181
Retirees and Disableds	237
Total	<u>959</u>

Payroll	19,596,406
Average	36,223

## Valuation Results

## Normal Cost

Employee	1,646,331
Employer	769,420
Administrative Expense	127,023
Total	<u>2,542,774</u>

## Actuarial Accrued Liability

Actives	43,689,065
Inactives	946,572
Retirees and Disableds	45,300,216
Total	<u>89,935,853</u>

Assets \$53,485,258

Unfunded Actuarial Accrued Liability \$36,450,595

Estimated FY12 Contribution - semiannual payments	\$3,808,976
Estimated FY12 Contribution - July payment	\$3,734,965
Estimated FY13 Contribution - semiannual payments	\$3,962,297
Estimated FY13 Contribution - July payment	\$3,885,307

## Marshfield Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	5
Inactives	2
Retirees and Disableds	3
Total	10

Payroll	175,491
Average	35,098

### Valuation Results

Normal Cost

Employee	15,034
Employer	6,373
Administrative Expense	951
Total	22,358

Actuarial Accrued Liability

Actives	281,287
Inactives	16,090
Retirees and Disableds	376,078
Total	673,455

Assets \$400,507

Unfunded Actuarial Accrued Liability \$272,948

Estimated FY12 Contribution - semiannual payments	\$29,186
Estimated FY12 Contribution - July payment	\$28,619
Estimated FY13 Contribution - semiannual payments	\$30,350
Estimated FY13 Contribution - July payment	\$29,760



**Mattapoisett**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	118
Inactives	37
Retirees and Disableds	51
Total	<u>206</u>

Payroll	4,185,732
Average	35,472

## Valuation Results

## Normal Cost

Employee	352,750
Employer	132,406
Administrative Expense	25,748
Total	<u>510,904</u>

## Actuarial Accrued Liability

Actives	9,993,438
Inactives	192,603
Retirees and Disableds	8,044,435
Total	<u>18,230,477</u>

Assets	\$10,841,747
--------	--------------

Unfunded Actuarial Accrued Liability	\$7,388,730
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$746,507
Estimated FY12 Contribution - July payment	\$732,002
Estimated FY13 Contribution - semiannual payments	\$776,988
Estimated FY13 Contribution - July payment	\$761,890

**Middleborough**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	393
Inactives	112
Retirees and Disableds	255
Total	<u>760</u>

Payroll	18,503,616
Average	47,083

## Valuation Results

## Normal Cost

Employee	1,553,673
Employer	683,717
Administrative Expense	145,127
Total	<u>2,382,517</u>

## Actuarial Accrued Liability

Actives	47,642,008
Inactives	648,962
Retirees and Disableds	54,463,521
Total	<u>102,754,491</u>

Assets	\$61,108,560
--------	--------------

Unfunded Actuarial Accrued Liability	\$41,645,931
--------------------------------------	--------------

Estimated FY12 Contribution - semiannual payments	\$4,157,339
Estimated FY12 Contribution - July payment	\$4,076,559
Estimated FY13 Contribution - semiannual payments	\$4,327,554
Estimated FY13 Contribution - July payment	\$4,243,466

## Middleborough Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	8
Inactives	4
Retirees and Disableds	3
Total	15

Payroll	357,421
Average	44,678

### Valuation Results

#### Normal Cost

Employee	30,967
Employer	5,665
Administrative Expense	2,046
Total	38,678

#### Actuarial Accrued Liability

Actives	925,639
Inactives	12,710
Retirees and Disableds	510,283
Total	1,448,632

Assets	\$861,508
--------	-----------

Unfunded Actuarial Accrued Liability	\$587,124
--------------------------------------	-----------

Estimated FY12 Contribution - semiannual payments	\$55,825
Estimated FY12 Contribution - July payment	\$54,740
Estimated FY13 Contribution - semiannual payments	\$58,123
Estimated FY13 Contribution - July payment	\$56,994

## Norwell

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	244
Inactives	100
Retirees and Disableds	128
Total	472

Payroll	8,802,548
Average	36,076

### Valuation Results

Normal Cost

Employee	744,870
Employer	288,395
Administrative Expense	55,734
Total	1,088,999

Actuarial Accrued Liability

Actives	19,439,918
Inactives	426,129
Retirees and Disableds	19,595,016
Total	39,461,063

Assets \$23,467,673

Unfunded Actuarial Accrued Liability \$15,993,391

Estimated FY12 Contribution - semiannual payments	\$1,617,811
Estimated FY12 Contribution - July payment	\$1,586,376
Estimated FY13 Contribution - semiannual payments	\$1,683,835
Estimated FY13 Contribution - July payment	\$1,651,117

## Norwell Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	2
Inactives	0
Retirees and Disableds	1
Total	3

Payroll	86,334
Average	43,167

### Valuation Results

Normal Cost

Employee	7,711
Employer	3,972
Administrative Expense	254
Total	11,937

Actuarial Accrued Liability

Actives	132,463
Inactives	0
Retirees and Disableds	47,337
Total	179,800

Assets \$106,928

Unfunded Actuarial Accrued Liability \$72,872

Estimated FY12 Contribution - semiannual payments	\$10,259
Estimated FY12 Contribution - July payment	\$10,059
Estimated FY13 Contribution - semiannual payments	\$10,627
Estimated FY13 Contribution - July payment	\$10,421

## Old Rochester Regional School

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	84
Inactives	27
Retirees and Disableds	36
Total	147

Payroll	2,344,588
Average	27,912

### Valuation Results

#### Normal Cost

Employee	188,782
Employer	82,754
Administrative Expense	12,270
Total	283,806

#### Actuarial Accrued Liability

Actives	4,543,857
Inactives	118,457
Retirees and Disableds	4,025,560
Total	8,687,874

Assets	\$5,166,718
--------	-------------

Unfunded Actuarial Accrued Liability	\$3,521,156
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$377,105
Estimated FY12 Contribution - July payment	\$369,777
Estimated FY13 Contribution - semiannual payments	\$392,130
Estimated FY13 Contribution - July payment	\$384,510

**Onset Fire District**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	19
Inactives	6
Retirees and Disableds	14
Total	<u>39</u>

Payroll	678,349
Average	35,703

## Valuation Results

## Normal Cost

Employee	57,047
Employer	27,361
Administrative Expense	5,001
Total	<u>89,409</u>

## Actuarial Accrued Liability

Actives	1,405,386
Inactives	13,604
Retirees and Disableds	2,121,843
Total	<u>3,540,833</u>

Assets \$2,105,750

Unfunded Actuarial Accrued Liability \$1,435,084

Estimated FY12 Contribution - semiannual payments	\$158,552
Estimated FY12 Contribution - July payment	\$155,471
Estimated FY13 Contribution - semiannual payments	\$164,514
Estimated FY13 Contribution - July payment	\$161,317

**Pembroke**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	267
Inactives	87
Retirees and Disableds	113
Total	<u>467</u>

Payroll	10,679,789
Average	39,999

## Valuation Results

## Normal Cost

Employee	899,562
Employer	404,273
Administrative Expense	68,022
Total	<u>1,371,857</u>

## Actuarial Accrued Liability

Actives	25,362,808
Inactives	784,065
Retirees and Disableds	22,014,554
Total	<u>48,161,427</u>

Assets \$28,641,818

Unfunded Actuarial Accrued Liability \$19,519,609

Estimated FY12 Contribution - semiannual payments	\$2,161,982
Estimated FY12 Contribution - July payment	\$2,119,973
Estimated FY13 Contribution - semiannual payments	\$2,247,705
Estimated FY13 Contribution - July payment	\$2,204,031



## Plymouth County Mosquito Control

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	11
Inactives	5
Retirees and Disableds	6
Total	22

Payroll	604,700
Average	54,973

### Valuation Results

#### Normal Cost

Employee	51,323
Employer	7,936
Administrative Expense	4,668
Total	63,927

#### Actuarial Accrued Liability

Actives	1,615,619
Inactives	28,609
Retirees and Disableds	1,660,640
Total	3,304,868

Assets \$1,965,420

Unfunded Actuarial Accrued Liability \$1,339,448

Estimated FY12 Contribution - semiannual payments	\$139,446
Estimated FY12 Contribution - July payment	\$136,736
Estimated FY13 Contribution - semiannual payments	\$144,563
Estimated FY13 Contribution - July payment	\$141,755

## Plympton

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	39
Inactives	15
Retirees and Disableds	18
Total	72

Payroll	1,259,908
Average	32,305

### Valuation Results

Normal Cost

Employee	104,773
Employer	59,995
Administrative Expense	8,853
Total	173,621

Actuarial Accrued Liability

Actives	2,999,934
Inactives	63,621
Retirees and Disableds	3,204,373
Total	6,267,929

Assets \$3,727,566

Unfunded Actuarial Accrued Liability \$2,540,363

Estimated FY12 Contribution - semiannual payments	\$289,401
Estimated FY12 Contribution - July payment	\$283,777
Estimated FY13 Contribution - semiannual payments	\$300,248
Estimated FY13 Contribution - July payment	\$294,414

**Rochester**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	96
Inactives	28
Retirees and Disableds	24
Total	<u>148</u>

Payroll	3,127,647
Average	32,580

## Valuation Results

## Normal Cost

Employee	267,482
Employer	114,959
Administrative Expense	14,397
Total	<u>396,838</u>

## Actuarial Accrued Liability

Actives	5,528,557
Inactives	170,025
Retirees and Disableds	4,494,833
Total	<u>10,193,414</u>

Assets	\$6,062,069
--------	-------------

Unfunded Actuarial Accrued Liability	\$4,131,345
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$491,446
Estimated FY12 Contribution - July payment	\$481,896
Estimated FY13 Contribution - semiannual payments	\$509,527
Estimated FY13 Contribution - July payment	\$499,627

**Rockland**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	295
Inactives	100
Retirees and Disableds	179
Total	<u>574</u>

Payroll	11,204,003
Average	37,980

## Valuation Results

## Normal Cost

Employee	926,363
Employer	336,231
Administrative Expense	87,059
Total	<u>1,349,653</u>

## Actuarial Accrued Liability

Actives	31,202,453
Inactives	530,708
Retirees and Disableds	29,906,920
Total	<u>61,640,081</u>

Assets	\$36,657,635
--------	--------------

Unfunded Actuarial Accrued Liability	\$24,982,446
--------------------------------------	--------------

Estimated FY12 Contribution - semiannual payments	\$2,484,251
Estimated FY12 Contribution - July payment	\$2,435,980
Estimated FY13 Contribution - semiannual payments	\$2,584,483
Estimated FY13 Contribution - July payment	\$2,534,264

**Scituate**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	393
Inactives	154
Retirees and Disableds	218
Total	<u>765</u>

Payroll	15,332,862
Average	39,015

## Valuation Results

## Normal Cost

Employee	1,285,891
Employer	588,735
Administrative Expense	107,876
Total	<u>1,982,502</u>

## Actuarial Accrued Liability

Actives	37,596,965
Inactives	695,801
Retirees and Disableds	38,086,508
Total	<u>76,379,274</u>

Assets \$45,423,100

Unfunded Actuarial Accrued Liability \$30,956,175

Estimated FY12 Contribution - semiannual payments	\$3,164,536
Estimated FY12 Contribution - July payment	\$3,103,047
Estimated FY13 Contribution - semiannual payments	\$3,293,103
Estimated FY13 Contribution - July payment	\$3,229,116

## Scituate Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	5
Inactives	1
Retirees and Disableds	6
Total	<u>12</u>

Payroll	222,368
Average	44,474

### Valuation Results

#### Normal Cost

Employee	19,543
Employer	15,534
Administrative Expense	1,765
Total	<u>36,842</u>

#### Actuarial Accrued Liability

Actives	157,767
Inactives	284
Retirees and Disableds	1,091,579
Total	<u>1,249,629</u>

Assets	\$743,160
--------	-----------

Unfunded Actuarial Accrued Liability	\$506,469
--------------------------------------	-----------

Estimated FY12 Contribution - semiannual payments	\$75,996
Estimated FY12 Contribution - July payment	\$74,519
Estimated FY13 Contribution - semiannual payments	\$78,249
Estimated FY13 Contribution - July payment	\$76,729

**Silver Lake Regional School**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	111
Inactives	32
Retirees and Disableds	46
Total	<u>189</u>

Payroll	3,233,409
Average	29,130

## Valuation Results

## Normal Cost

Employee	260,700
Employer	93,292
Administrative Expense	17,717
Total	<u>371,709</u>

## Actuarial Accrued Liability

Actives	7,666,378
Inactives	98,434
Retirees and Disableds	4,779,685
Total	<u>12,544,497</u>

Assets \$7,460,269

Unfunded Actuarial Accrued Liability \$5,084,228

Estimated FY12 Contribution - semiannual payments	\$431,250
Estimated FY12 Contribution - July payment	\$422,870
Estimated FY13 Contribution - semiannual payments	\$448,464
Estimated FY13 Contribution - July payment	\$439,750

**South Shore Regional School**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	38
Inactives	18
Retirees and Disableds	20
Total	<u>76</u>

Payroll	1,332,133
Average	35,056

## Valuation Results

## Normal Cost

Employee	107,325
Employer	48,763
Administrative Expense	8,107
Total	<u>164,195</u>

## Actuarial Accrued Liability

Actives	2,728,057
Inactives	165,226
Retirees and Disableds	2,846,781
Total	<u>5,740,064</u>

Assets \$3,413,642

Unfunded Actuarial Accrued Liability \$2,326,422

Estimated FY12 Contribution - semiannual payments	\$242,730
Estimated FY12 Contribution - July payment	\$238,013
Estimated FY13 Contribution - semiannual payments	\$252,507
Estimated FY13 Contribution - July payment	\$247,600



**Wareham**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	327
Inactives	104
Retirees and Disableds	186
Total	<u>617</u>

Payroll	11,725,948
Average	35,859

## Valuation Results

## Normal Cost

Employee	979,437
Employer	273,109
Administrative Expense	80,496
Total	<u>1,333,042</u>

## Actuarial Accrued Liability

Actives	28,374,171
Inactives	665,471
Retirees and Disableds	27,953,892
Total	<u>56,993,534</u>

Assets \$33,894,312

Unfunded Actuarial Accrued Liability \$23,099,222

Estimated FY12 Contribution - semiannual payments	\$2,388,954
Estimated FY12 Contribution - July payment	\$2,342,535
Estimated FY13 Contribution - semiannual payments	\$2,480,672
Estimated FY13 Contribution - July payment	\$2,432,471

## Wareham Fire District

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	48
Inactives	10
Retirees and Disableds	21
Total	79

Payroll	2,303,147
Average	47,982

### Valuation Results

#### Normal Cost

Employee	198,108
Employer	69,872
Administrative Expense	14,314
Total	282,294

#### Actuarial Accrued Liability

Actives	6,677,223
Inactives	28,905
Retirees and Disableds	3,428,333
Total	10,134,461

Assets	\$6,027,010
--------	-------------

Unfunded Actuarial Accrued Liability	\$4,107,451
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$426,666
Estimated FY12 Contribution - July payment	\$418,375
Estimated FY13 Contribution - semiannual payments	\$443,516
Estimated FY13 Contribution - July payment	\$434,898

## Wareham Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	3
Inactives	1
Retirees and Disableds	1
Total	5

Payroll	125,096
Average	41,699

### Valuation Results

Normal Cost

Employee	9,771
Employer	5,164
Administrative Expense	695
Total	15,630

Actuarial Accrued Liability

Actives	397,153
Inactives	5,589
Retirees and Disableds	89,403
Total	492,145

Assets \$292,681

Unfunded Actuarial Accrued Liability \$199,464

Estimated FY12 Contribution - semiannual payments	\$21,879
Estimated FY12 Contribution - July payment	\$21,454
Estimated FY13 Contribution - semiannual payments	\$22,742
Estimated FY13 Contribution - July payment	\$22,301

## West Bridgewater

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	144
Inactives	47
Retirees and Disableds	83
Total	274

Payroll	5,841,063
Average	40,563

### Valuation Results

#### Normal Cost

Employee	495,367
Employer	205,936
Administrative Expense	41,285
Total	742,588

#### Actuarial Accrued Liability

Actives	13,472,259
Inactives	217,951
Retirees and Disableds	15,541,070
Total	29,231,280

Assets \$17,383,974

Unfunded Actuarial Accrued Liability \$11,847,306

Estimated FY12 Contribution - semiannual payments	\$1,190,054
Estimated FY12 Contribution - July payment	\$1,166,930
Estimated FY13 Contribution - semiannual payments	\$1,238,766
Estimated FY13 Contribution - July payment	\$1,214,696

**Whitman**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	119
Inactives	38
Retirees and Disableds	119
Total	<u>276</u>

Payroll	5,918,909
Average	49,739

## Valuation Results

## Normal Cost

Employee	510,671
Employer	211,756
Administrative Expense	47,685
Total	<u>770,112</u>

## Actuarial Accrued Liability

Actives	13,135,272
Inactives	196,191
Retirees and Disableds	20,431,022
Total	<u>33,762,485</u>

Assets \$20,078,702

Unfunded Actuarial Accrued Liability \$13,683,783

Estimated FY12 Contribution - semiannual payments	\$1,346,171
Estimated FY12 Contribution - July payment	\$1,320,014
Estimated FY13 Contribution - semiannual payments	\$1,401,772
Estimated FY13 Contribution - July payment	\$1,374,535

**Whitman/Hanson Regional School**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	201
Inactives	69
Retirees and Disableds	96
Total	<u>366</u>

Payroll	5,095,845
Average	25,352

## Valuation Results

## Normal Cost

Employee	421,340
Employer	136,826
Administrative Expense	28,812
Total	<u>586,978</u>

## Actuarial Accrued Liability

Actives	10,475,937
Inactives	242,407
Retirees and Disableds	9,681,177
Total	<u>20,399,521</u>

Assets	\$12,131,687
--------	--------------

Unfunded Actuarial Accrued Liability	\$8,267,834
--------------------------------------	-------------

Estimated FY12 Contribution - semiannual payments	\$823,014
Estimated FY12 Contribution - July payment	\$807,022
Estimated FY13 Contribution - semiannual payments	\$856,834
Estimated FY13 Contribution - July payment	\$840,185

## Whitman Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	6
Inactives	1
Retirees and Disableds	5
Total	12

Payroll	267,837
Average	44,640

### Valuation Results

#### Normal Cost

Employee	22,571
Employer	2,664
Administrative Expense	1,973
Total	27,208

#### Actuarial Accrued Liability

Actives	581,943
Inactives	331
Retirees and Disableds	814,518
Total	1,396,793

Assets \$830,679

Unfunded Actuarial Accrued Liability \$566,114

Estimated FY12 Contribution - semiannual payments	\$53,226
Estimated FY12 Contribution - July payment	\$52,191
Estimated FY13 Contribution - semiannual payments	\$55,371
Estimated FY13 Contribution - July payment	\$54,295

**Abington Housing**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	2
Inactives	2
Retirees and Disableds	3
Total	<u>7</u>

Payroll	103,139
Average	51,570

## Valuation Results

## Normal Cost

Employee	7,951
Employer	(290)
Administrative Expense	859
Total	<u>8,520</u>

## Actuarial Accrued Liability

Actives	275,896
Inactives	4,351
Retirees and Disableds	327,724
Total	<u>607,971</u>

Assets \$361,563

Unfunded Actuarial Accrued Liability \$246,408

Estimated FY12 Contribution - semiannual payments	\$24,727
Estimated FY12 Contribution - July payment	\$24,246
Estimated FY13 Contribution - semiannual payments	\$25,624
Estimated FY13 Contribution - July payment	\$25,126



## Pembroke Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	7
Inactives	2
Retirees and Disableds	2
Total	11

Payroll	313,092
Average	44,727

### Valuation Results

#### Normal Cost

Employee	26,199
Employer	8,170
Administrative Expense	2,133
Total	36,502

#### Actuarial Accrued Liability

Actives	990,284
Inactives	4,926
Retirees and Disableds	515,209
Total	1,510,419

Assets \$898,253

Unfunded Actuarial Accrued Liability \$612,166

Estimated FY12 Contribution - semiannual payments	\$58,807
Estimated FY12 Contribution - July payment	\$57,665
Estimated FY13 Contribution - semiannual payments	\$61,262
Estimated FY13 Contribution - July payment	\$60,071

## Hanson Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	3
Inactives	1
Retirees and Disableds	2
Total	6

Payroll	103,121
Average	34,374

### Valuation Results

Normal Cost

Employee	9,112
Employer	3,872
Administrative Expense	625
Total	13,609

Actuarial Accrued Liability

Actives	152,121
Inactives	1,260
Retirees and Disableds	289,389
Total	442,770

Assets \$263,318

Unfunded Actuarial Accrued Liability \$179,453

Estimated FY12 Contribution - semiannual payments	\$18,844
Estimated FY12 Contribution - July payment	\$18,477
Estimated FY13 Contribution - semiannual payments	\$19,600
Estimated FY13 Contribution - July payment	\$19,220

## Rockland Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	4
Inactives	1
Retirees and Disableds	3
Total	8

Payroll	187,950
Average	46,988

### Valuation Results

#### Normal Cost

Employee	15,075
Employer	11,313
Administrative Expense	1,219
Total	27,607

#### Actuarial Accrued Liability

Actives	452,635
Inactives	10,381
Retirees and Disableds	400,283
Total	863,299

Assets \$513,408

Unfunded Actuarial Accrued Liability \$349,891

Estimated FY12 Contribution - semiannual payments	\$40,829
Estimated FY12 Contribution - July payment	\$40,035
Estimated FY13 Contribution - semiannual payments	\$42,400
Estimated FY13 Contribution - July payment	\$41,576

**Halifax Housing**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	3
Inactives	0
Retirees and Disableds	0
Total	<u>3</u>

Payroll	81,176
Average	27,059

## Valuation Results

## Normal Cost

Employee	6,298
Employer	1,601
Administrative Expense	483
Total	<u>8,382</u>

## Actuarial Accrued Liability

Actives	341,820
Inactives	0
Retirees and Disableds	0
Total	<u>341,820</u>

Assets	\$203,282
--------	-----------

Unfunded Actuarial Accrued Liability	\$138,538
--------------------------------------	-----------

Estimated FY12 Contribution - semiannual payments	\$13,039
Estimated FY12 Contribution - July payment	\$12,786
Estimated FY13 Contribution - semiannual payments	\$13,588
Estimated FY13 Contribution - July payment	\$13,324

## Mattapoisett Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

#### Participants

Actives	2
Inactives	0
Retirees and Disableds	0
Total	2

Payroll	74,931
Average	37,466

### Valuation Results

#### Normal Cost

Employee	5,541
Employer	803
Administrative Expense	426
Total	6,770

#### Actuarial Accrued Liability

Actives	301,485
Inactives	0
Retirees and Disableds	0
Total	301,485

Assets	\$179,295
--------	-----------

Unfunded Actuarial Accrued Liability	\$122,191
--------------------------------------	-----------

Estimated FY12 Contribution - semiannual payments	\$10,839
Estimated FY12 Contribution - July payment	\$10,628
Estimated FY13 Contribution - semiannual payments	\$11,308
Estimated FY13 Contribution - July payment	\$11,088

**Acushnet/Rochester/Marion Health District**

Actuarial Valuation as of January 1, 2010

## Participant Information

## Participants

Actives	1
Inactives	0
Retirees and Disableds	0
Total	<u>1</u>
Payroll	62,754
Average	62,754

## Valuation Results

## Normal Cost

Employee	5,391
Employer	(1,807)
Administrative Expense	305
Total	<u>3,889</u>

## Actuarial Accrued Liability

Actives	215,848
Inactives	0
Retirees and Disableds	0
Total	<u>215,848</u>

Assets \$128,366

Unfunded Actuarial Accrued Liability \$87,482

Estimated FY12 Contribution - semiannual payments	\$5,173
Estimated FY12 Contribution - July payment	\$5,072
Estimated FY13 Contribution - semiannual payments	\$5,448
Estimated FY13 Contribution - July payment	\$5,342

## West Bridgewater Housing

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	1
Inactives	0
Retirees and Disableds	0
Total	1

Payroll	46,277
Average	46,277

### Valuation Results

Normal Cost

Employee	3,651
Employer	2,416
Administrative Expense	145
Total	6,212

Actuarial Accrued Liability

Actives	102,576
Inactives	0
Retirees and Disableds	0
Total	102,576

Assets \$61,002

Unfunded Actuarial Accrued Liability \$41,573

Estimated FY12 Contribution - semiannual payments	\$6,016
Estimated FY12 Contribution - July payment	\$5,899
Estimated FY13 Contribution - semiannual payments	\$6,229
Estimated FY13 Contribution - July payment	\$6,108

## South Shore Tri Town Development

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	5
Inactives	0
Retirees and Disableds	0
Total	5

Payroll	390,774
Average	78,155

### Valuation Results

Normal Cost

Employee	33,728
Employer	17,614
Administrative Expense	618
Total	51,960

Actuarial Accrued Liability

Actives	437,643
Inactives	0
Retirees and Disableds	0
Total	437,643

Assets \$260,268

Unfunded Actuarial Accrued Liability \$177,375

Estimated FY12 Contribution - semiannual payments	\$33,602
Estimated FY12 Contribution - July payment	\$32,949
Estimated FY13 Contribution - semiannual payments	\$34,700
Estimated FY13 Contribution - July payment	\$34,026



## Retirement Board

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	0
Inactives	0
Retirees and Disableds	0
Total	0

Payroll	0
Average	#DIV/0!

### Valuation Results

Normal Cost

Employee	0
Employer	0
Administrative Expense	0
Total	0

Actuarial Accrued Liability

Actives	0
Inactives	0
Retirees and Disableds	0
Total	0

Assets \$0

Unfunded Actuarial Accrued Liability \$0

Estimated FY12 Contribution - semiannual payments	\$0
Estimated FY12 Contribution - July payment	\$0
Estimated FY13 Contribution - semiannual payments	\$0
Estimated FY13 Contribution - July payment	\$0

## Other

Actuarial Valuation as of January 1, 2010

### Participant Information

Participants

Actives	0
Inactives	0
Retirees and Disableds	4
Total	4

Payroll	0
Average	#DIV/0!

### Valuation Results

Normal Cost

Employee	0
Employer	0
Administrative Expense	234
Total	234

Actuarial Accrued Liability

Actives	0
Inactives	0
Retirees and Disableds	165,426
Total	165,426

Assets \$98,380

Unfunded Actuarial Accrued Liability \$67,046

Estimated FY12 Contribution - semiannual payments	\$5,469
Estimated FY12 Contribution - July payment	\$5,362
Estimated FY13 Contribution - semiannual payments	\$5,715
Estimated FY13 Contribution - July payment	\$5,604