Volunteer Firefighters' Compensation Act of the State of Montana

Actuarial Valuation as of June 30, 2010

Produced by Cheiron

October 2010

CHEIRON Classic Values, Innovative Advice

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October 5, 2010

Public Employees' Retirement Board
100 North Park, Suite 200
Helena, Montana 59620

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Volunteer Firefighters' Compensation Act as of June 30, 2010. The results of the valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on System assets, as well as analyses which combine asset and liability performance and projections. The report also discloses employer contribution levels, and required disclosures under the Governmental Accounting Standards Board Statement No. 25.

Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief. The results of this report are only applicable for Fiscal Year ending 2010 and rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results would vary accordingly.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as Members of the American Academy of Actuaries, we meet the Qualification Standards to render the opinions contained herein.

Sincerely,
Cheiron

Stephen T. McElhaney, FSA
Consulting Actuary

Margaret A. Tempkin, FSA, EA
Consulting Actuary

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FOREWORD

Cheiron has performed the actuarial valuation of the Volunteer Firefighters' Compensation Act as of June 30, 2010. The purpose of this report is to:

1) **Measure and disclose**, as of the valuation date, the financial condition of the System;

2) **Indicate trends** in the financial progress of the System;

3) **Determine the annual required contribution** for Fiscal Year 2010; and

4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

An actuarial valuation establishes and analyzes System assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of the System's investment performance as well as an analysis of actuarial liability gains and losses.

Section I presents a summary containing our findings and disclosing important trends experienced by the System in recent years.

Section II contains details on various asset measures, together with pertinent performance measurements.

Section III shows similar information on System liabilities, measured for actuarial, accounting, and government reporting purposes.

Section IV develops the annual required contribution determined using actuarial techniques.

Section V includes the required disclosures under GASB Statement number 25.

The appendices to this report contain a summary of the System's membership at the valuation date, a summary of the major provisions of the System, and the actuarial methods and assumptions used in the valuations.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the staff of the Public Employee Retirement Administration. This information includes, but is not limited to, plan provisions, employee data, and financial information.

The actuarial assumptions reflect our understanding of the likely future experience of the System and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the System could vary from our results.

Finally, in preparing this report, we have conformed to generally accepted actuarial principles and practices which are consistent with the Code of Professional Conduct, and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board.

SECTION I
BOARD SUMMARY

General Comments

This is the second valuation of the Volunteer Firefighters' Compensation Act performed by Cheiron. All results shown for valuations prior to June 30, 2009 were derived from reports prepared by the prior actuary.

The annual required contribution decreased from $1,013,684 at the June 30, 2009 valuation to $987,116 at the June 30, 2010 valuation. During the year ended June 30, 2010, the System's assets gained 12.30% on a market value basis. However, due to the System's asset-smoothing technique which recognizes only a portion of the gains and losses, the return on the actuarial asset value was a negative 1.30%. This return was below the assumed rate of return of 8.0% and resulted in an actuarial loss on investments of $2.5 million.

The System also experienced an actuarial gain on System liabilities resulting from members retiring, terminating, becoming disabled and dying at rates different from the actuarial assumptions. The gain deducted $0.03 million from the actuarial liability. This type of activity is normal in the course of System experience. The System will experience actuarial gains and losses over time because we cannot predict exactly how people will behave. When a plan experiences alternating gains and losses that are small compared to the total actuarial liability, then the plan's actuarial assumptions are reasonable.

As of the June 30, 2010 actuarial valuation, the System's unfunded actuarial liability was $7.9 million. This is an increase from last year's unfunded actuarial liability of $6.3 million. The funded ratio decreased from 81% at the prior valuation to 77% at June 30, 2010.

Montana Code Annotated (MCA) 19-2-407 requires an analysis of how market performance is affecting the actuarial funding of the Retirement System. The market value at June 30, 2010 was $3.9 million less than actuarial value. If market value were used rather than actuarial value, the funded ratio on the valuation date would be 66%, and the annual required contribution would be $1,366,641 .

Since the previous valuation an experience study was performed and several of the actuarial assumptions were changed. A description of the changes in assumptions appears within Appendix B of this report. The following table compares the results at June 30, 2010 using the previous and the revised assumptions.

SECTION I
BOARD SUMMARY

Table I-1
Montana Volunteer Firefighters' Compensation Act
Summary of Assumption Changes

	Previous Assumptions	New Assumptions
Valuation as of:	**June 30, 2010**	**June 30, 2010**
Actuarial Accrued Liability (AL)	$ 34,681,541	$ 34,511,511
Actuarial Value of Assets (AVA)	26,575,478	26,575,478
Unfunded AL	$ 8,106,063	$ 7,936,033
Funded ratio	76.63%	77.00%
Normal Cost	$ 408,953	$ 222,855
Amortization Payment	794,454	764,261
Total	$ 1,203,407	$ 987,116

SECTION I
BOARD SUMMARY

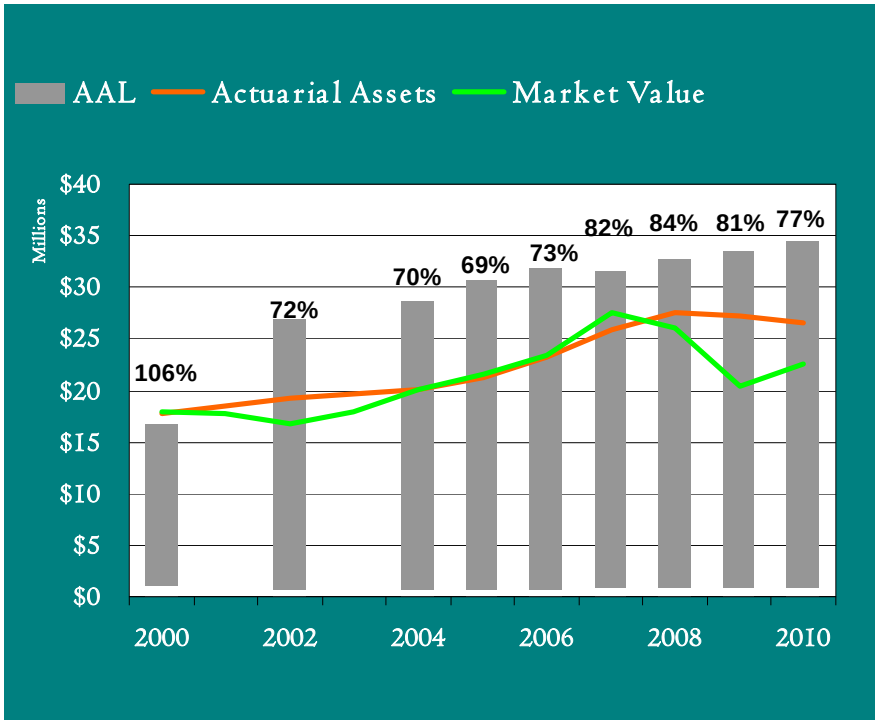
Trends

Assets and Liabilities

The market value of assets (MVA) increased over last year, gaining 12.3% from the value at the prior valuation. The determination of the System's actuarial value of assets reflects only a portion of the amount by which the return was below the assumed rate of 8%.

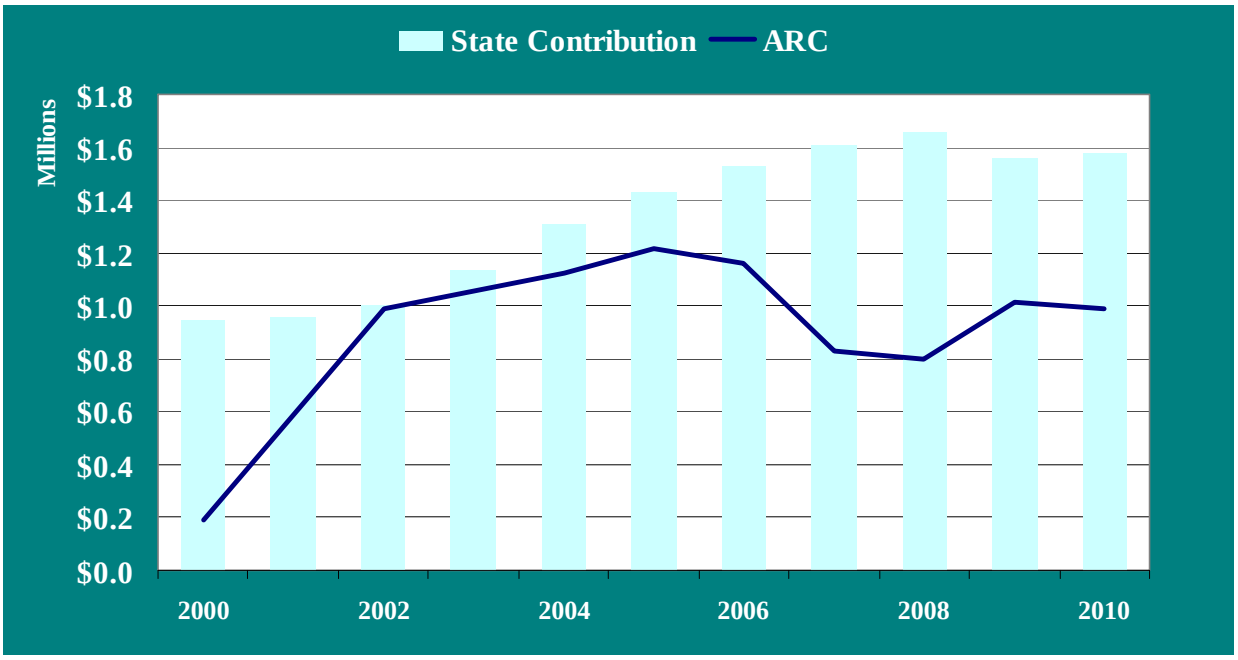
Over the period July 1, 2004 to June 30, 2010 the System's assets returned approximately 5.3% per year measured at actuarial value, compared to a valuation assumption of 8% per year.

For funding purposes, the target amount is represented by the top of the gray bar. We compare the actuarial value of assets to this measure of liability in developing the funded percent. These are the percentages shown in the graph labels.



SECTION I
BOARD SUMMARY

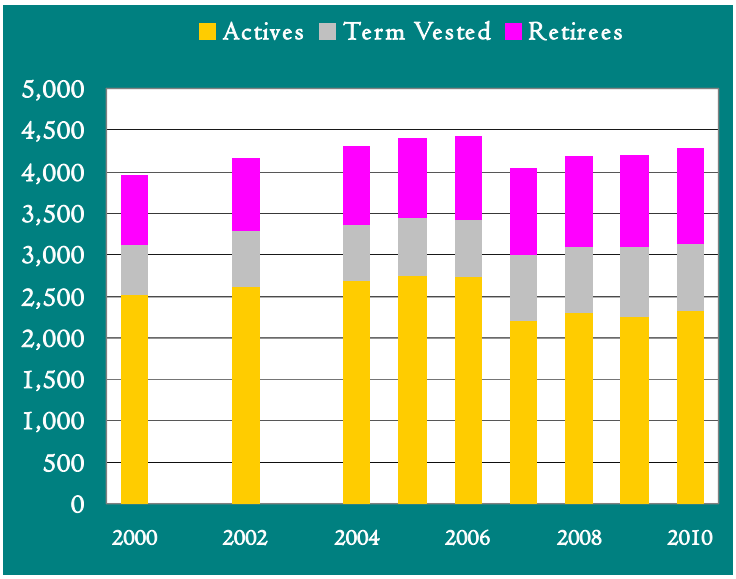
Contributions



The bar in this graph show the contributions made by the State. The black line shows the Annual Required Contribution (ARC).

Participant Trends

The bars show the number of participants in each category and should be read using the left-hand scale. As with any maturing fund, this System continues to show growth in the number of retired members. The active-to-inactive ratio has decreased from 1.7 actives for each inactive in 2000 to 1.2 actives for each inactive today.



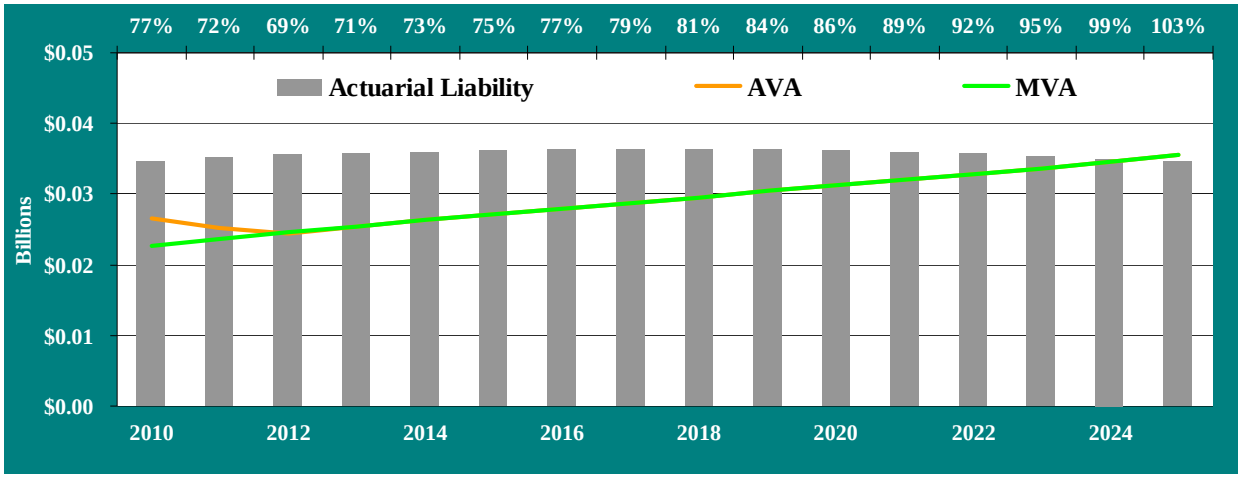
SECTION I
BOARD SUMMARY

Future Outlook

Base Line Projections

These graphs show the expected progress of the System over the next fifteen years assuming the System's assets earn 7.75% on their *market value*, and that contributions continue to be made at the same amount as in the most recent fiscal year.

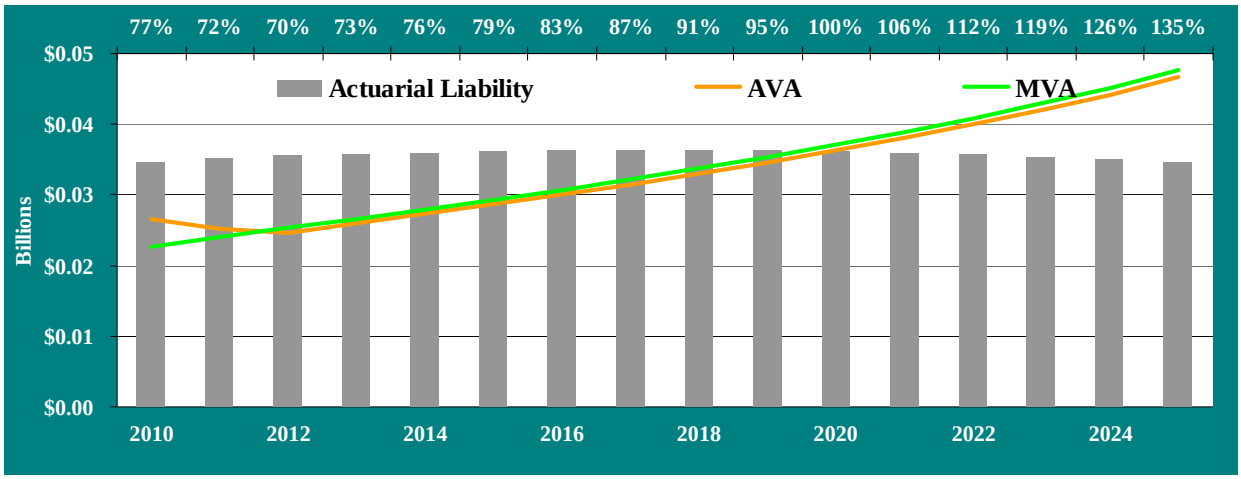
The chart below shows the funded status of the plan is expected to decrease substantially over the next two years as excluded investment losses are recognized by the smoothing method. The funded status will then increase gradually over the remainder of the fifteen years.



SECTION I
BOARD SUMMARY

Projections With Asset Returns of 9.25%

The future funding status of this System will be largely driven by the investment earnings. Due to the size of assets, as compared to liabilities, the System is in a highly leveraged position. This means that relatively minor changes in market returns can have significant effects on the System's status. The chart below shows what the next fifteen years would look like with a 9.25% annual return in each year (i.e. 1.5% greater than the assumed rate of return).

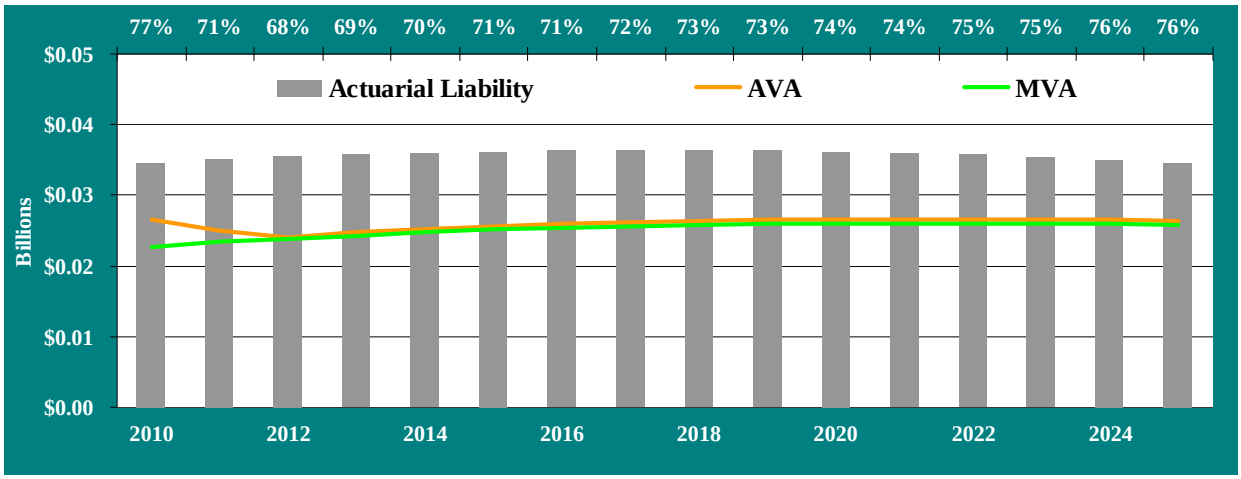


Compared to the baseline projections, the funded status improves to well over 100% by the end of the fifteen year period.

SECTION I
BOARD SUMMARY

Projections With Asset Returns of 6.25%

To further demonstrate how the future funding of this System will be driven by investment earnings, we show the anticipated System funding projections if the invested assets earn 6.25% per year over the entire fifteen-year period (i.e., 1.5% less than the assumed rate of return).



Under this scenario the funded status declines to just over 75% by the end of the fifteen-year period.

SECTION I
BOARD SUMMARY

Table I-2
Montana Volunteer Firefighters' Compensation Act
Summary of Principal System Results

Valuation as of:	June 30, 2009	June 30, 2010	% Change
Participant Counts			
Active Members	2,253	2,315	2.8%
Disabled Members	0	0	N/A
Retirees and Beneficiaries	1,103	1,149	4.2%
Terminated Vested Members	840	827	(1.5%)
Terminated Non-Vested Members	0	0	N/A
Total*	4,196	4,291	136.7%
Annual Retirement Allowances for Retired Members and Beneficiaries	$ 1,793,340	$ 1,884,150	5.1%
Assets and Liabilities			
Actuarial Accrued Liability (AAL)	$ 33,547,784	$ 34,511,511	2.9%
Actuarial Value of Assets (AVA)	27,225,915	26,575,478	(2.4%)
Unfunded AAL	6,321,869	7,936,033	25.5%
Funded Ratio (AVA/AAL)	81.16%	77.00%	
Present Value of Accrued Benefits (PVAB)	$ 31,593,956	$ 29,423,468	(6.9%)
Market Value of Assets	20,438,182	22,634,510	10.7%
Unfunded PVAB	$ 11,155,774	$ 6,788,958	(39.1%)
Accrued Benefit Funding Ratio	64.69%	76.93%	
Ratio of Actuarial Value to Market Value	133.21%	117.41%	
Contributions			
Normal Cost	$ 394,094	$ 222,855	(39.1%)
Amortization Payment	619,590	764,261	23.3%
Total	$ 1,013,684	$ 987,116	(2.6%)
Actual Contributions for Preceding Fiscal Year	$ 1,579,887	$ 1,574,589	
Amortization Period Based on Actual Contributions	6.9 years	7.7 years	

* The total number of members processed in the 2010 valuation was 9,930 compared to 9,933 above being used for the annual report. A reconciliation of this difference appears at the beginning of Appendix A.

SECTION II
ASSETS

Pension Plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, State contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on System assets including:

- **Disclosure** of System assets at June 30, 2009 and June 30, 2010;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An assessment of **investment performance**; and
- A projection of the System's expected **cashflows** for the next ten years.

Disclosure

The market value of assets represents a "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace.

The actuarial values are market values which have been smoothed and are used for evaluating the System's ongoing liability to meet its obligations.

The actuarial value of assets is the current market value, adjusted by a four-year smoothing of gains and losses on a market value basis. Each year's gain or loss is determined difference between the actual market return and the expected market return using the assumed rate of investment return.

SECTION II
ASSETS

Table II-1
Changes in Market Values

Value of Assets – June 30, 2009		**$ 20,438,182**
Additions		
State Contributions	$ 1,574,589	
Investment Return	2,554,152	
Total Additions	**$ 4,128,741**	
Deductions		
Benefit Payments	$ 1,873,933	
Administrative Expenses	58,480	
Total Deductions	**$ 1,932,413**	
Value of Assets – June 30, 2010		**$ 22,634,510**

SECTION II
ASSETS

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this System, the actuarial value has been calculated by taking the market value of assets less 75% of the investment gain (loss) during the preceding year, less 50% of the investment gain (loss) during the second preceding year, and less 25% of the investment gain (loss) during the third preceding year. The tables below illustrate the calculation of actuarial value of assets for the June 30, 2010 valuation.

Table II-2
Market Value Gain/(Loss)

Value of Assets – June 30, 2009	$ 20,438,182
Employer Contributions	$ 1,574,589
Benefit Payments	(1,856,833)
Expected Return at 8.0%	1,623,311
Expected Value at June 30, 2010	$ 21,779,249
Actual Value at June 30, 2010	$ 22,634,510
Investment Gain/(Loss)	$ 855,261

Table II-3
Develop Excluded Gain/(Loss)

	Total Gain/(Loss)	Excluded Portion
Exclude 75% of 2010 Gain/(Loss)	$ 872,361	$ 654,271
Exclude 50% of 2009 Gain/(Loss)	$ (7,432,977)	$ (3,716,488)
Exclude 25% of 2008 Gain/(Loss)	$ (3,515,000)	$ (878,750)
Total Excluded Gain/(Loss) for AVA Calculation		$ (3,940,968)

SECTION II
ASSETS

Table II-4 Actuarial Value of Assets	
Market Value of Assets – June 30, 2010	$ 22,634,510
Total Gain/(Loss) excluded	(3,940,968)
Actuarial Value of Assets – June 30, 2010	$ 26,575,478

Investment Performance

The market value of assets (MVA) returned 12.30% during 2010, which is greater than the assumed 8% return. A return of (1.30%) on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only 25% of the gain or loss from the performance of the System is recognized in a given year, in periods of very good performance, the AVA can lag significantly behind the MVA. In a period of negative returns, the AVA does not decline as rapidly as the MVA.

Table II-5
Annual Rates of Return

Year Ending June 30,	Market Value	Actuarial Value
2005	7.74%	6.49%
2006	8.58%	9.10%
2007	17.52%	11.47%
2008	(4.65%)	7.37%
2009	(20.69%)	(0.37%)
2010	12.30%	(1.30%)

SECTION II
ASSETS

Table II-6
Projection of System's Benefit Payments and Contributions

Year Beginning July 1,	Expected Benefit Payments	Expected Contributions*
2010	$ 2,251,899	$ 1,574,589
2011	2,445,354	1,574,589
2012	2,630,302	1,574,589
2013	2,597,593	1,574,589
2014	2,706,611	1,574,589
2015	2,796,327	1,574,589
2016	2,871,119	1,574,589
2017	2,936,448	1,574,589
2018	2,993,586	1,574,589
2019	3,057,423	1,574,589

* Expected contributions only include expected State contributions. For illustration purposes, we have assumed State contributions will remain at the same level as the most recent fiscal year.

Expected benefit payments are projected for the closed group valued at June 30, 2010. Projecting any farther than ten years using a closed-group would not yield reliable predictions due to the omission of new hires.

SECTION III
LIABILITIES

In this section, we present detailed information on System liabilities including:

- **Disclosure** of System liabilities at June 30, 2009 and June 30, 2010; and
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Benefits:** Used for analyzing the financial outlook of the System, this represents the amount of money needed today to fully pay off all future benefits and expenses of the System, assuming participants continue to accrue benefits.

- **Actuarial Accrued Liability:** Used for funding calculations and GASB disclosures, this liability is calculated taking the Present Value of Benefits and subtracting the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** (EAN) funding method.

- **Present Value of Accrued Liabilities:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the System, assuming no future accruals of benefits. These liabilities are also required for accounting purposes (FASB ASC Topic No. 960) and used to assess whether the System can meet its current benefit commitments.

The following table discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of System assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

SECTION III
LIABILITIES

Table III-1
Liabilities/Net (Surplus)/Unfunded

	June 30, 2009	June 30, 2010
Present Value of Benefits		
Active Participant Benefits	$ 14,525,285	$ 12,746,275
Retiree and Inactive Benefits	20,993,256	22,748,068
Present Value of Benefits (PVB)	**$ 35,518,541**	**$ 35,494,343**
Market Value of Assets (MVA)	$ 20,438,182	$ 22,634,510
Funding Required by Future State Contributions	15,080,359	12,859,833
Total Resources	**$ 35,518,541**	**$ 35,494,343**
Actuarial Accrued Liability		
Present Value of Benefits (PVB)	$ 35,518,541	$ 35,494,343
Present Value of Future Normal Costs (PVFNC)	1,971,000	982,832
Actuarial Accrued Liability (AAL=PVB–PVFNC)	**33,547,541**	**34,511,511**
Actuarial Value of Assets (AVA)	27,225,915	26,575,478
Net (Surplus)/Unfunded (AAL – AVA)	**$ 6,321,626**	**$ 7,936,033**
Present Value of Accrued Liability		
Present Value of Benefits (PVB)	$ 35,518,541	$ 35,494,343
Present Value of Future Benefit Accruals (PVFBA)	3,924,585	6,070,875
Present Value of Accrued Liability (PVAB=PVB–PVFBA)	**31,593,956**	**29,423,468**
Market Value of Assets (MVA)	20,438,182	22,634,510
Net Unfunded (PVAB – MVA)	**$ 11,155,774**	**$ 6,788,958**

SECTION III
LIABILITIES

Changes in Liabilities

Each of the Liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- System amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in System assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure System assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities since the last valuation.

Table III-2

(In Thousands)	Present Value of Benefits	Actuarial Accrued Liability	Present Value of Accrued Liability
Liabilities June 30, 2009	$ 35,518,541	$ 33,547,784	$ 31,593,956
Liabilities June 30, 2010	35,494,343	34,511,511	29,423,468
Liability Increase (Decrease)	(24,198)	963,727	(2,170,488)
Change Due to:			
Actuarial (Gain)/Loss	NC*	(26,759)	NC*
Assumption Changes	(1,223,539)	(170,030)	975,150
Benefits Accumulated and Other Sources	1,199,341	1,160,516	(3,145,638)

* NC = not calculated.

SECTION III
LIABILITIES

Table III-3
Summary of Actuarial Gains and Losses as of June 30, 2010

Actuarial Liabilities as of July 1, 2009	$	33,547,784
Normal Cost		394,094
Actual Benefit Payments		(1,873,933)
Expected Earnings		2,640,355
Expected Actuarial Liability as of July 1, 2010	$	34,708,300
Actual Liability as of July 1, 2010 (before assumption changes)	$	34,681,541
Liability (Gain)/Loss	$	(26,759)
Sources of Liability (Gain)/Loss		
Salary (Gain)/Loss	$	0
New Participant (Gain)/Loss		456,710
Active Retirements (Gain)/Loss		(101,125)
Active Terminations (Gain)/Loss		(515,469)
Active Deaths (Gain)/Loss		19,217
Active Disability (Gain)/Loss		0
Inactive Decrements (Gain)/Loss		113,908
Actual Liability as of July 1, 2010 (after assumption changes)	$	34,511,511
Liability (Gain)/Loss due to assumption changes	$	(170,030)
Actuarial Value of Assets as of July 1, 2009	$	27,225,915
Net Cash Flow		(299,344)
Expected Earnings		2,166,330
Expected Actuarial Value of Assets as of July 1, 2010	$	29,092,901
Actual Actuarial Value of Assets as of July 1, 2010	$	26,575,478
Investment (Gain)/Loss	$	2,517,423
Total Liability (Gain)/Loss		(196,789)
Total Actuarial (Gain)/Loss	$	2,320,634

SECTION III
LIABILITIES

Table III-4 shows the actuarial liabilities as of the prior and current valuation dates. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets. The funded ratio is the ratio of the actuarial value of assets to the actuarial liability.

Table III-4
Actuarial Liabilities for Funding

	June 30, 2009	June 30, 2010
1. Actuarial Liabilities		
Retiree and Inactive Benefits	$ 20,993,256	$ 22,748,068
Active Member Benefits	12,554,528	11,763,443
Total Actuarial Liability	**$ 33,547,784**	**$ 34,511,511**
2. Actuarial Value of Assets	$ 27,225,915	$ 26,575,478
3. Unfunded Actuarial Liability	$ 6,321,869	$ 7,936,033
4. Funded Ratio	81.16%	77.00%

Montana Code Annotated (MCA) 19-2-407 requires an analysis of how market performance is affecting the actuarial funding of the System. Table III-5 presented below shows the same information as in Table III-4 above, but using market value of assets rather than actuarial value of assets.

Table III-5
Actuarial Liabilities on Market Value Basis (MCA 19-2-407)

	June 30, 2009	June 30, 2010
1. Actuarial Liabilities		
Retiree and Inactive Benefits	$ 20,993,256	$ 22,748,068
Active Member Benefits	12,554,528	11,763,443
Total Actuarial Liability	**$ 33,547,784**	**$ 34,511,511**
2. Market Value of Assets	$ 20,438,182	$ 22,634,510
3. Unfunded Actuarial Liability	$ 13,109,602	$ 11,877,001
4. Funded Ratio	60.92%	65.59%

SECTION IV
CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this System, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are two components to the total contribution: the **normal cost** and the **unfunded actuarial liability payment** (UAL payment). The normal cost is determined by taking the value, as of entry age into the plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of each member's expected future service. The EAN actuarial liability is the portion of the present value future projected benefits that will not be paid by future normal costs. The difference between the EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability.

Under the adopted funding policy, the annual required contribution is computed as the normal cost plus an amount that will amortize the UAL over a 20-year period. All UAL payments are determined as a level dollar amounts.

SECTION IV
CONTRIBUTIONS

The tables below present and compare the contribution rates for the System for this valuation and the prior one.

Table IV-1
Annual Required Contribution

	June 30, 2009	June 30, 2010
Normal Cost	$ 394,094	$ 222,855
Amortization Payment (20-years)	619,590	764,261
Total Annual Required Contribution	$ 1,013,684	$ 987,116
Actual Contributions for Preceding Fiscal Year	$ 1,579,887	$ 1,574,589
Amortization Period Based on Actual Contributions	6.9 years	7.7 years

Table IV-2
Calculated Contribution on Market Value (MCA 19-2-407)

	June 30, 2009	June 30, 2010
Normal Cost	$ 394,094	$ 222,855
Amortization Payment (20-years)	1,284,837	1,143,786
Total Calculated Contribution Rate	$ 1,678,931	$ 1,366,641
Actual Contributions for Preceding Fiscal Year	$ 1,579,887	$ 1,574,589
Amortization Period Based on Actual Contributions	24.7 years	14.3 years

As the remaining unrecognized losses are picked and amortized in future valuations, we project the following results for the next 5 valuations (assuming all assumptions are met, including 7.75% return):

Table IV-3
Projected Calculated Contributions

Valuation Year	Amount
2011	$ 1,055,805
2012	1,149,765
2013	1,084,714
2014	1,034,258
2015	979,891

SECTION V
ACCOUNTING STATEMENT INFORMATION

Accounting Standard Codification Topic No. 960 of the Financial Accounting Standards Board requires the System to disclose certain information regarding its funded status. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The FASB ASC Topic No. 960 disclosures provide a quasi "snap shot" view of how the System's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the System were to terminate.

The GASB-25 actuarial accrued liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB ASC Topic No. 960) and the actuarial accrued liability (GASB-25) are determined assuming that the System is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.75% per annum.

FASB ASC Topic No. 960 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2010 are exhibited in Table V-1.

Tables V-2 through V-5 are exhibits to be used with the State CAFR report. Table V-2 is the Note to Required Supplementary Information, Table V-3 is a history of gains and losses in Accrued Liability, Table V-4 is the Schedule of Funding Progress, and V-5 is the Solvency Test which shows the portion of Accrued Liability covered by Assets.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accounting Statement Information

	June 30, 2009	June 30, 2010
A. FASB ASC Topic No. 960 Basis		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	$ 14,498,081	$ 15,846,209
b. Former Vested Members	6,495,175	6,901,859
c. Active Members	10,600,700	6,675,400
2. Total Present Value of Accrued Benefits (1 (a) + 1(b) + 1(c))	$ 31,593,956	$ 29,423,468
3. Assets at Market Value	20,438,182	22,634,510
4. Unfunded Present Value of Accrued Benefits (2 – 3)	$ 11,155,774	$ 6,788,958
5. Ratio of Assets to Present Value of Accrued Benefits (3 / 2)	64.69%	76.93%
B. GASB No. 25 Basis		
1. Actuarial Accrued Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 20,993,256	$ 22,748,068
2. Actuarial Accrued Liabilities for current employees	12,554,528	11,763,443
3. Total Actuarial Accrued Liability (1 + 2)	$ 33,547,784	$ 34,511,511
4. Net Actuarial Assets available for benefits	27,225,915	26,575,478
5. Unfunded Actuarial Accrued Liability (3 – 4)	$ 6,321,869	$ 7,936,033

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

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

Valuation date	June 30, 2010
Actuarial cost method	Entry age
Amortization method	Open
Remaining amortization period	20 years
Asset valuation method	4-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.75%
General wage growth*	N/A
Merit salary increases	N/A
*Includes inflation at	3.00%

The actuarial assumptions used have been recommended by the prior actuary and adopted by the Retirement Board based on the most recent review of the System's experience, completed in 2004.

The rate of employer contributions to the System is composed of the normal cost and amortization of the unfunded actuarial accrued liability. The normal cost is a level cost which will pay for projected benefits at retirement for each participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future normal costs. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
ANALYSIS OF FINANCIAL EXPERIENCE*

Gain and Loss in Accrued Liability During Years Ended June 30
Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	*Gain (or Loss) for Year ending June 30, (expressed in thousands)* 2005	2006	2007	2008	2009	2010
Investment Income on Actuarial Assets	$ (362)	$ 186	$ 754	$ (212)	$ (2,301)	$ (2,517)
Combined Liability Experience	425	245	1,643	1	396	27
(Loss)/Gain During Year from Financial Experience	$ 63	$ 431	$ 2,397	$ (211)	$ (1,905)	$ (2,490)
Non-Recurring Items	(1,310)	0	0	0	0	170
Composite Gain (or Loss) During Year	$ (1,247)	$ 431	$ 2,397	$ (211)	$ (1,905)	$ (2,320)

Table V-4
SCHEDULE OF FUNDING PROGRESS*
(expressed in thousands)

Valuation Date June 30,	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Funded Ratio	Unfunded AAL (UAAL)	Covered Payroll	UAAL as a Percentage of Covered Payroll
2010	$ 26,575	$ 34,512	77	$ 7,937	N/A	N/A
2009	27,239	33,548	81	6,309	N/A	N/A
2008	27,544	32,735	84	5,191	N/A	N/A
2007	25,862	31,599	82	5,737	N/A	N/A
2006	23,238	31,883	73	8,645	N/A	N/A
2005	21,311	30,773	69	9,462	N/A	N/A

* Years prior to 2009 were taken from reports prepared by prior actuary.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-5
SOLVENCY TEST*
Aggregate Accrued Liabilities for
(expressed in thousands)

Valuation Date June 30,	Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member Employer Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets (1)	(2)	(3)
2010	$0	15,846	$ 18,665	$ 26,575	N/A	100	57
2009	0	14,498	19,050	27,239	N/A	100	67
2008	0	20,129	12,606	27,544	N/A	100	59
2007	0	19,579	12,019	25,862	N/A	100	52
2006	0	17,803	14,080	23,238	N/A	100	39
2005	0	16,997	13,776	21,311	N/A	100	31

* Years prior to 2009 were taken from reports prepared by prior actuary.

APPENDIX A
MEMBERSHIP INFORMATION

Reconciliation of Participant Counts

	Active	Disabled	Retirees and Beneficiaries	Terminated Vested Members	Terminated Non-Vested Members	Total
Participant counts used for valuation	2,315	-	1,149	824	5,642	9,930
Disabled members having attained normal retirement age		-	-			0
Beneficiaries of Disabled Members						0
Beneficiaries with less than one year of certain payments remaining			-			0
Other Adjustments						0
Participant counts shown in Annual Financial Report	2,315	0	1,149	827	5,642	9,933

This chart is presented for informational purposes only. The counts shown in the valuation line were used for preparation of the liabilities disclosed within this report. The counts disclosed for the Annual Financial Report and the Board Summary (page 8) match the CAFR reports at the request of the Board. The differences between the counts have no material effect upon the liability calculation.

The benefits for retirees and beneficiaries used for the tables and charts which follow are different than the benefits used for the Board Summary on page 8. For this Appendix A, the valuation projected benefits to be paid for the following fiscal year, whereas for the Board Summary, annual benefits are as of the valuation date.

APPENDIX A
MEMBERSHIP INFORMATION

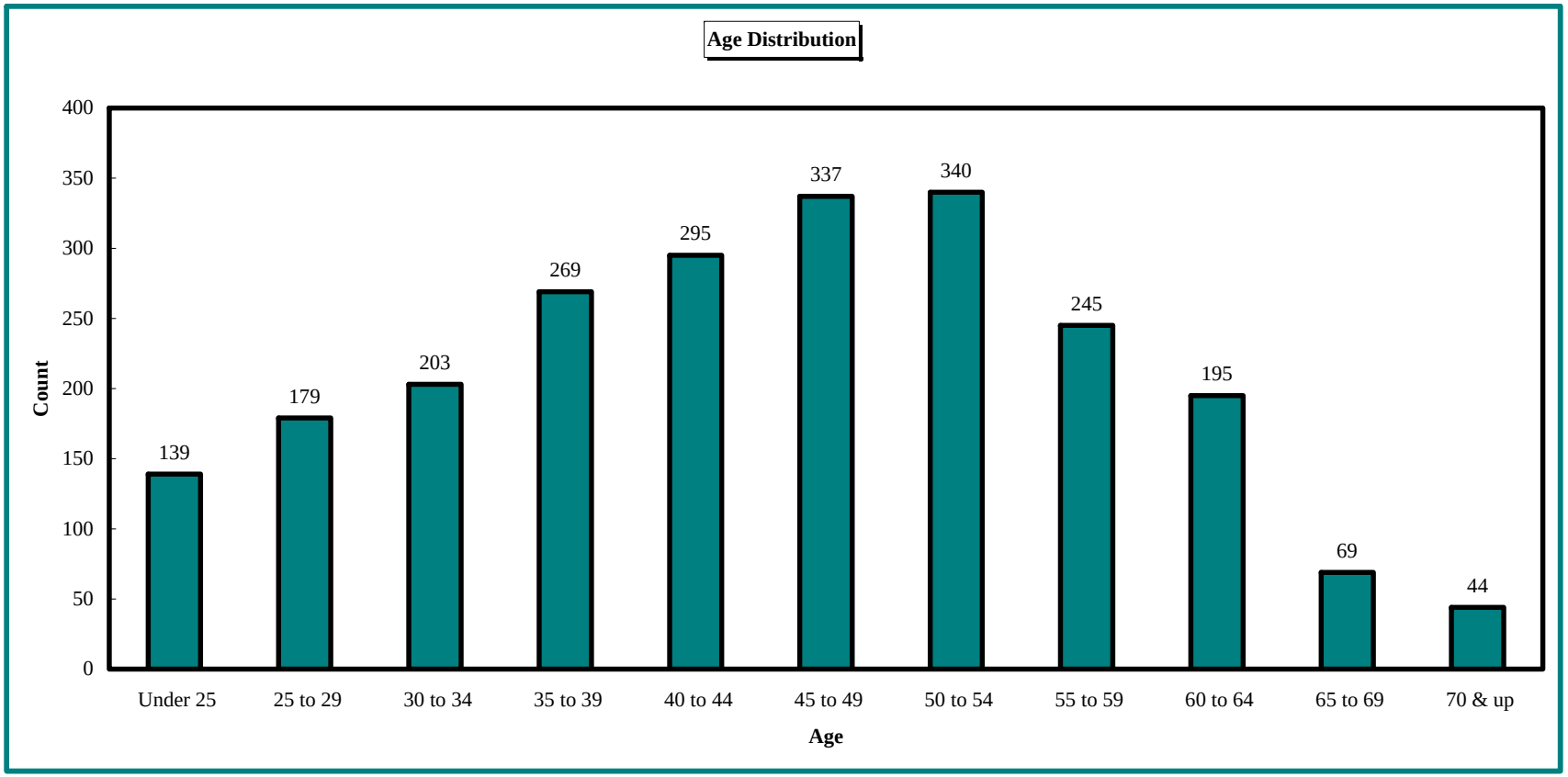
Montana Volunteer Firefighters' Compensation Act Distribution of Active Members by Age and Service as of June 30, 2010

COUNTS BY AGE/SERVICE

	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	0	123	16	0	0	0	0	0	0	0	139
25 to 29	0	120	57	2	0	0	0	0	0	0	179
30 to 34	0	102	79	20	2	0	0	0	0	0	203
35 to 39	0	108	98	46	17	0	0	0	0	0	269
40 to 44	0	78	117	59	27	12	2	0	0	0	295
45 to 49	0	76	96	67	51	39	8	0	0	0	337
50 to 54	0	63	81	57	52	55	26	5	1	0	340
55 to 59	0	39	61	39	45	36	15	10	0	0	245
60 to 64	0	38	47	41	33	22	10	2	1	1	195
65 to 69	0	11	23	9	13	9	4	0	0	0	69
70 & up	0	7	15	13	7	1	1	0	0	0	44
Total	0	765	690	353	247	174	66	17	2	1	2,315

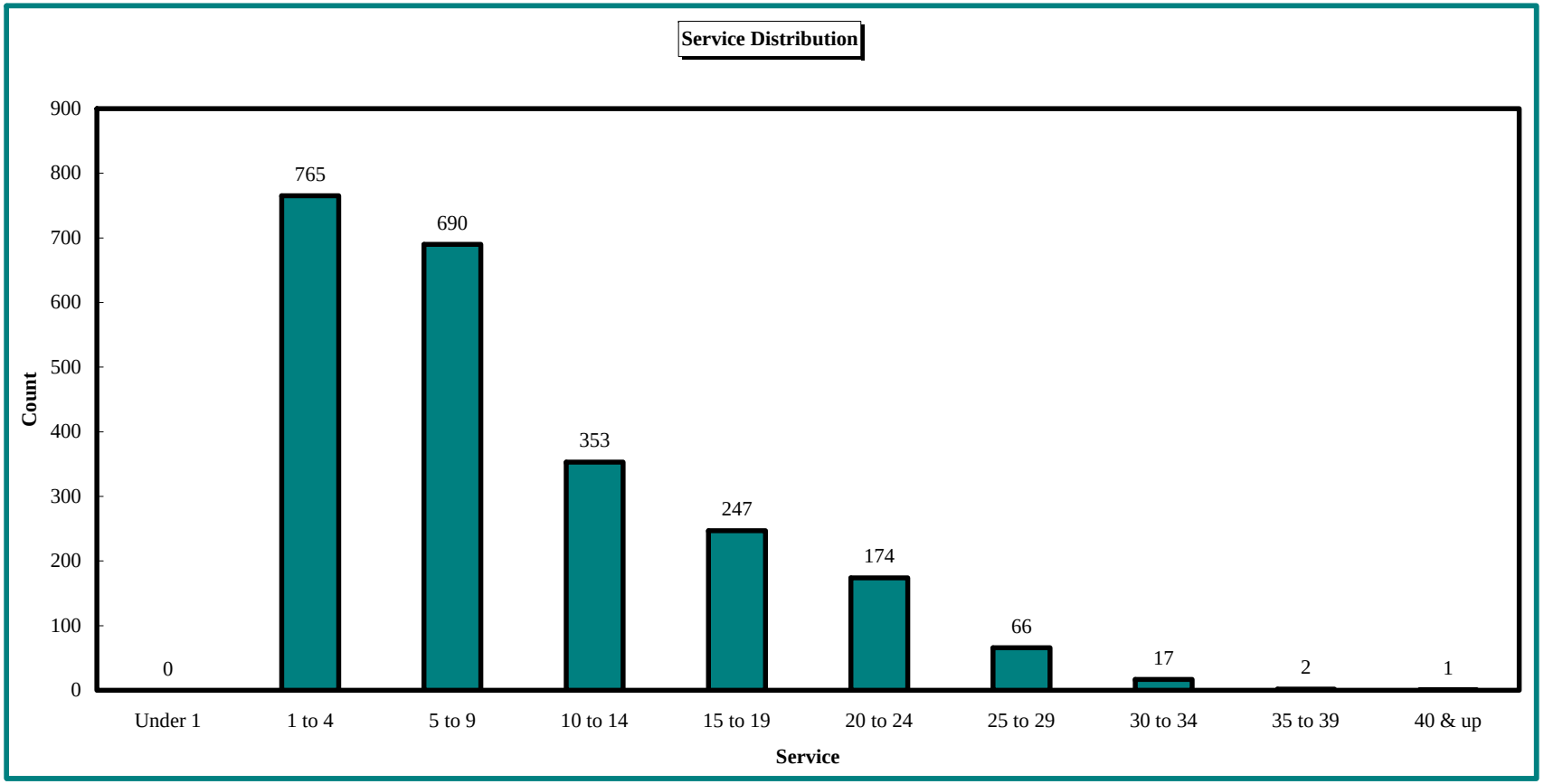
APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Active Members by Age as of June 30, 2010



APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Active Members by Service as of June 30, 2010



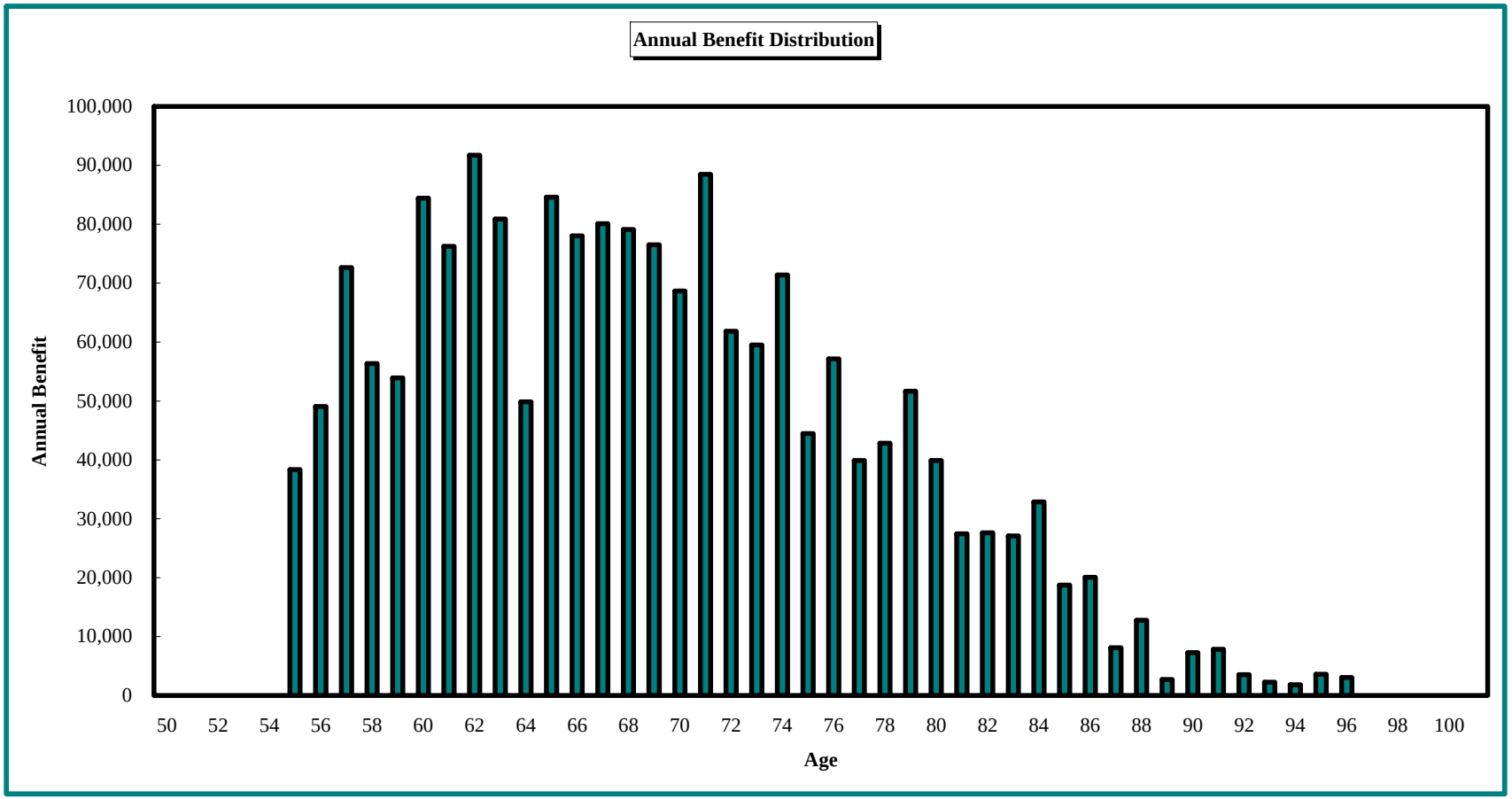
APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Retired Members and Survivors as of June 30, 2010

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	$0	73	38	$59,490
25	0	$0	74	45	$71,370
26	0	$0	75	29	$44,460
27	0	$0	76	37	$57,150
28	0	$0	77	25	$39,870
29	0	$0	78	27	$42,840
30	0	$0	79	33	$51,660
31	0	$0	80	27	$39,870
32	0	$0	81	19	$27,450
33	0	$0	82	17	$27,630
34	0	$0	83	18	$27,090
35	0	$0	84	21	$32,850
36	0	$0	85	12	$18,720
37	0	$0	86	14	$20,070
38	0	$0	87	6	$8,100
39	0	$0	88	9	$12,780
40	0	$0	89	2	$2,700
41	0	$0	90	6	$7,290
42	0	$0	91	5	$7,830
43	0	$0	92	3	$3,510
44	0	$0	93	2	$2,250
45	0	$0	94	1	$1,800
46	0	$0	95	2	$3,600
47	0	$0	96	2	$3,060
48	0	$0	97	0	$0
49	0	$0	98	0	$0
50	0	$0	99	0	$0
51	0	$0	100	0	$0
52	0	$0	101	0	$0
53	0	$0	102	0	$0
54	0	$0	103	0	$0
55	19	$38,340	104	0	$0
56	24	$49,050	105	0	$0
57	35	$72,630	106	0	$0
58	27	$56,340	107	0	$0
59	27	$53,910	108	0	$0
60	47	$84,420	109	0	$0
61	44	$76,230	110	0	$0
62	54	$91,710	111	0	$0
63	49	$80,910	112	0	$0
64	31	$49,860	113	0	$0
65	54	$84,600	114	0	$0
66	51	$78,030	115	0	$0
67	50	$80,100	116	0	$0
68	49	$79,110	117	0	$0
69	46	$76,500	118	0	$0
70	43	$68,670	119	0	$0
71	57	$88,470	120	0	$0
72	42	$61,830			
			Totals	1,149	$1,884,150

APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Retired Members and Survivors as of June 30, 2010



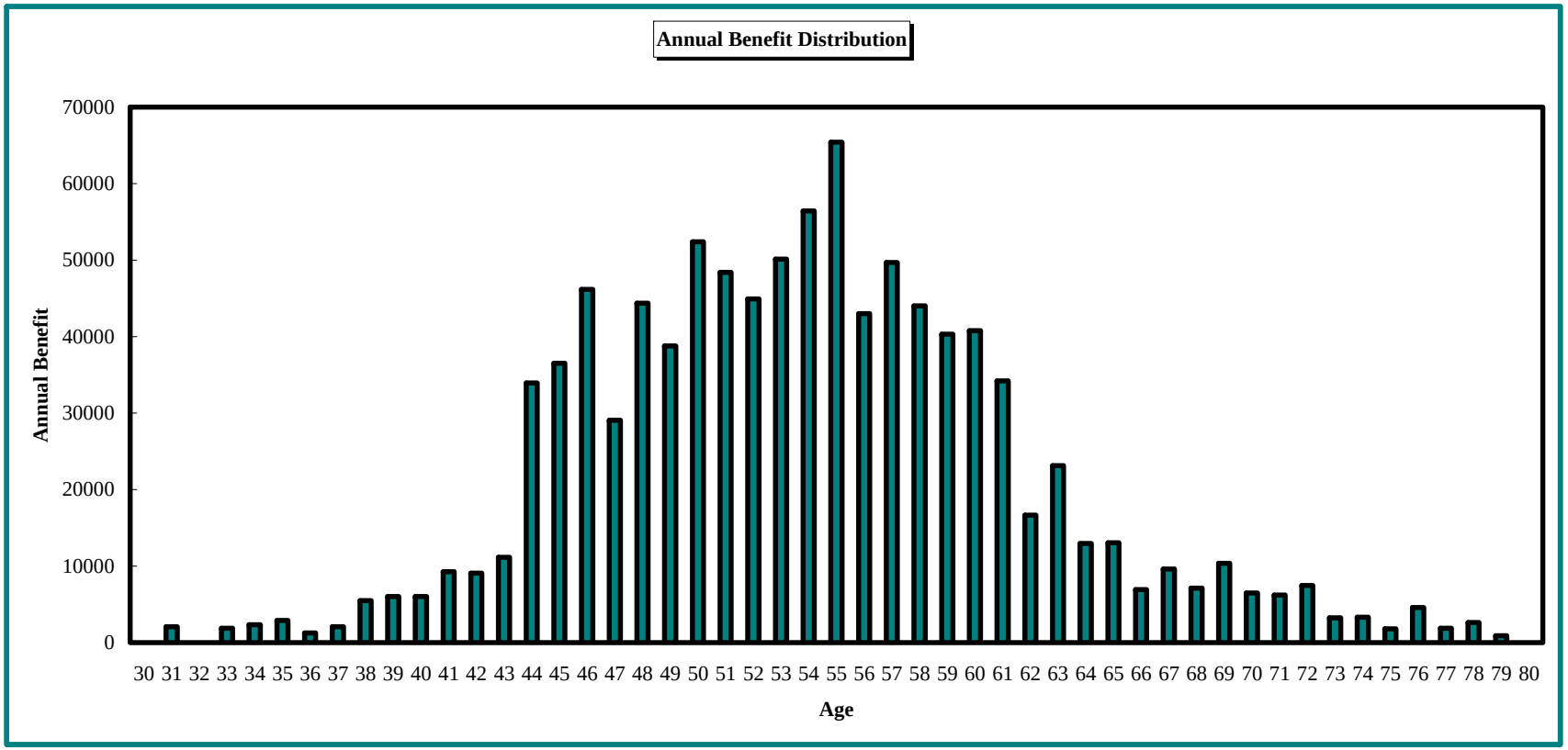
APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Vested Members as of June 30, 2010

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	$0	73	3	$3,240
25	0	$0	74	3	$3,330
26	0	$0	75	1	$1,800
27	0	$0	76	3	$4,590
28	0	$0	77	2	$1,890
29	0	$0	78	2	$2,610
30	0	$0	79	1	$900
31	2	$2,070	80	0	$0
32	0	$0	81	0	$0
33	2	$1,890	82	0	$0
34	2	$2,340	83	0	$0
35	3	$2,880	84	0	$0
36	1	$1,260	85	0	$0
37	2	$2,070	86	0	$0
38	5	$5,490	87	0	$0
39	6	$6,030	88	0	$0
40	6	$6,030	89	0	$0
41	8	$9,270	90	0	$0
42	7	$9,090	91	0	$0
43	9	$11,160	92	0	$0
44	36	$33,930	93	0	$0
45	35	$36,540	94	0	$0
46	42	$46,170	95	0	$0
47	25	$29,070	96	0	$0
48	37	$44,370	97	0	$0
49	31	$38,790	98	0	$0
50	42	$52,380	99	0	$0
51	36	$48,420	100	0	$0
52	34	$44,910	101	0	$0
53	37	$50,130	102	0	$0
54	41	$56,430	103	0	$0
55	46	$65,430	104	0	$0
56	33	$43,020	105	0	$0
57	40	$49,680	106	0	$0
58	36	$44,010	107	0	$0
59	34	$40,320	108	0	$0
60	35	$40,770	109	0	$0
61	29	$34,200	110	0	$0
62	15	$16,650	111	0	$0
63	20	$23,130	112	0	$0
64	12	$12,960	113	0	$0
65	12	$13,050	114	0	$0
66	7	$6,930	115	0	$0
67	9	$9,630	116	0	$0
68	6	$7,110	117	0	$0
69	8	$10,350	118	0	$0
70	6	$6,480	119	0	$0
71	6	$6,210	120	0	$0
72	6	$7,470			
			Totals	824	$996,480

APPENDIX A
MEMBERSHIP INFORMATION

Montana Volunteer Firefighters' Compensation Act Distribution of Vested Members as of June 30, 2010



APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Long-Term Assumptions Used to Determine Plan Costs and Liabilities

1. Demographic Assumptions

a. Healthy Retirees, Beneficiaries and Non-Retired Members

RP-2000 Combined Healthy Male and Female Mortality Tables projected to 2015 with scale AA.

Sample Rates of Healthy Mortality		
Age	**Male**	**Female**
50	0.163%	0.130%
55	0.241%	0.241%
60	0.530%	0.469%
65	1.031%	0.900%
70	1.770%	1.553%
75	3.062%	2.492%
80	5.536%	4.129%
85	9.968%	7.076%
90	17.271%	12.588%

b. Disabled Inactive Mortality

RP-2000 Combined Healthy Male and Female Mortality Tables with no projections.

Sample Rates of Disabled Inactive Mortality		
Age	**Male**	**Female**
50	0.241%	0.168%
55	0.362%	0.272%
60	0.675%	0.506%
65	1.274%	0.971%
70	2.221%	1.674%
75	3.783%	2.811%
80	6.437%	4.588%
85	11.076%	7.745%
90	18.341%	13.168%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

c. Rates of Active Disability

None assumed.

d. Termination of Service (Prior to Normal Retirement Eligibility)

Annual Rates of Termination	
Service	**Rate**
<4	20.00%
4 – 9	15.00%
10 & over	10.00%

e. Retirement

Annual Retirement Rates		
Age	**10-19 Years**	**20 years or more**
<55	0.00%	0.00%
55 – 59	0.00%	40.00%
60 – 69	20.00%	40.00%
70 & over	100.00%	100.00%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

f. Family Composition

Female spouses are assumed to be three years younger than males.

100% of non-retired members are assumed married for both male and female employees.

Actual marital characteristics are used for pensioners.

g. Vested Benefits for Terminated Members

Vested benefits for members who terminated during the years ending June 30, 2009 and later were estimated based upon service information in the census data. For members who terminated prior to June 30, 2008, vested benefits valued were the same as had been calculated by the prior actuary for the June 30, 2008 actuarial valuation.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

2. Economic Assumptions

a. Rate of Investment Return: 7.75%

b. Rate of Increase in Inflation (for Amortization): 3.00%

3. Changes Since Last Valuation

The demographic and economic assumptions were updated to reflect the 2009 experience study. The prior assumptions are listed below for those assumptions where changes were made:

a. Demographic Assumptions

i. Healthy Retirees, Beneficiaries and Non-Retired Members

Male: Male UP-1994 Mortality Table set back one year.
Female: Female UP-1994 Mortality Table set back one year.

Sample Rates of Healthy Mortality		
Age	**Male**	**Female**
50	0.250%	0.141%
55	0.428%	0.224%
60	0.762%	0.415%
65	1.391%	0.819%
70	2.336%	1.367%
75	3.661%	2.192%
80	6.007%	3.802%
85	9.636%	6.557%
90	14.995%	11.247%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

ii. Disabled Inactive Mortality

Male: IRS Revenue Ruling 96-7, Male Table set back one year.
Female: IRS Revenue Ruling 96-7, Female Table set forward three years.

Sample Rates of Disabled Inactive Mortality		
Age	**Male**	**Female**
50	2.264%	1.800%
55	2.826%	2.111%
60	3.470%	2.522%
65	4.272%	3.060%
70	5.447%	3.935%
75	7.288%	5.279%
80	9.418%	7.256%
85	12.195%	10.508%
90	16.177%	15.558%

iii. Termination of Employment (Prior to Normal Retirement Eligibility)

Sample Rates of Termination	
Age	**Rate**
25	12.79%
30	12.33%
35	11.61%
40	10.34%
45	8.30%
50	5.32%

iv. Retirement

Annual Retirement Rates		
Age	**10-19 Years**	**20 years or more**
<55	0.00%	0.00%
55 – 59	0.00%	100.00%
60 & over	100.00%	100.00%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

b. Economic Assumptions

i.	Rate of Investment Return:	8.00%
ii.	Rate of Increase in Inflation (for Amortization):	3.25%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Funding Method

The Entry Age Normal Actuarial Cost method is used to determine costs. Under this funding method, a normal cost is determined as a level ("percent of revenue") dollar amount individually for each active member.

The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future normal costs. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The portion of the actuarial accrued liability in excess of plan assets is amortized to develop an additional cost or savings which is added to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

2. Actuarial Value of Assets

For purposes of determining the unfunded actuarial accrued liability, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The actuarial value of assets is the current market value, adjusted by a four-year smoothing of gains and losses on a market value basis. Each year's gain or loss is determined as the difference between the actual market return and the expected market return using the assumed rate of investment return.

3. Amortization Method

The unfunded actuarial accrued liability is amortized over a rolling 20-year period, as level dollar amounts.

4. Changes Since Last Valuation

Previously, the unfunded actuarial accrued liability was amortized over a rolling 20-year period as dollar amounts increasing at the assumed rate of inflation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

1. Membership

The Plan is a state-wide retirement and disability plan. The plan covers volunteer firefighters serving with qualified volunteer fire companies in unincorporated areas throughout the state. All members are unpaid volunteers and the State of Montana is the only contributor to the plan.

2. Contributions

There are no member contributions.

The State contributes 5.0% of premium taxes collected.

3. Service Credit

To receive a year of service, a volunteer firefighter must serve with a fire company for an entire fiscal year and received a minimum of 30 hours of training. Fractional years are not credited.

4. Normal Retirement

Eligibility: Age 55 with 20 years of service credit, or age 60 with 10 years of service credit.

Benefit: $7.50 per month for each year of service but not exceeding 30 years

5. Disability Benefit

Eligibility: Any active member.

Benefit: The greater of (a) $75 per month, or (b) $7.50 per month per year of service (up to 30 years of service).

6. Survivor's Benefit

Eligibility: 10 years of service or a retired member.

Benefit: A monthly survivor benefit to the surviving spouse (or equally to dependent children if there is no surviving spouse or after a surviving spouse dies, for as long as they remain dependent children) equal to the full benefit otherwise payable to the member. Survivor benefits terminate when benefits have been paid for a total of 40 months, including any benefits paid to the retired member prior to death.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

7. Changes Since Last Valuation

None.