

**GUNNISON FIREMEN'S PENSION FUND**

**Actuarial Valuation as of January 1, 2013**

# ACTUARIAL CONSULTING GROUP

Gunnison Firemen's Pension Fund  
P. O. Box 239  
Gunnison, Colorado 81230

Ladies and Gentlemen:

Actuarial Valuation as of January 1, 2013

Gunnison Firemen's Pension Fund

In accordance with the provisions of Colorado Revised Statutes 31-30, the Actuarial Consulting Group performed an actuarial valuation of the Gunnison firemen's Pension Fund as of January 1, 2013.

The valuation was based on unaudited financial and Member data which were prepared by your organization and the Plan provisions that were in effect as of the valuation date. In my opinion, all costs and liabilities included in this report:

1. Present fairly, in all material respects, the actuarial position of the Pension Fund as of the valuation date,
2. Are consistent with current benefit provisions and other benefit limitations for Volunteer Firefighter Pension Funds,
3. Were determined in accordance with generally accepted actuarial principles and procedures,
4. Comply with current Colorado pension funding procedures and regulations, and
5. Are based on actuarial assumptions that are reasonably related to the experience of the Plan, and to reasonable expectations, and that represent at this time the best estimate of anticipated long-term experience under the Plan.

To the extent that actual contributions to the Pension Fund equal or exceed the requirements of Colorado Law, as determined by this Actuarial Valuation, the Pension Fund will be actuarially sound.

Respectfully submitted,

ACTUARIAL CONSULTING GROUP

*Paul W Barker*

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Enrolled Actuary No. 886

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COMPARISON OF ACTUARIAL VALUATION RESULTS  
CURRENT AND PREVIOUS VALUATIONS

A summary and comparison of the principal results from the current and previous actuarial valuations for the Gunnison Firemen's Pension Fund are outlined below:

	\$100 Funeral \$235 per Month 6.00%	\$500 Funeral \$300 per Month 6.00%	\$1,000 Funeral \$300 per Month 6.00%	\$1,000 Funeral \$400 per Month 6.00%
	<u>January 1, 2011</u>	<u>January 1, 2013</u>	<u>January 1, 2013</u>	<u>January 1, 2013</u>
Monthly Benefit Level				
Investment Return				
Active members	34	35	35	35
Vested terminated lives	2	1	1	1
Retired lives and beneficiaries	34	34	34	34
Total	70	70	70	70
Total Actuarial Liability	\$1,516,769	\$2,050,877	\$2,054,607	\$2,736,986
Pension Fund Assets	1,520,739	1,775,654	1,775,654	1,775,654
Unfunded Actuarial Liability	(\$3,970)	\$275,223	\$278,953	\$961,332
Normal Cost	\$13,200	\$27,597	\$28,497	\$37,397
Normal Cost per Active Member	\$388	\$788	\$814	\$1,068
<u>Funding Requirements</u>				
Normal Cost plus 30 year pay off of Unfunded Actuarial Liability	\$12,928	\$46,460	\$47,616	\$103,284
Entry-Age Full Funding Limit	\$9,230	\$302,820	\$307,450	\$998,729
<u>GASB 5 Pension Obligation</u>				
Total Obligation	Not Calculated	\$2,000,857	\$2,005,495	\$2,670,899
Net Plan Assets	1,520,739	1,775,654	1,775,654	1,775,654
Unfunded Obligation	Not Calculated	\$225,203	\$229,841	\$895,245
<u>GASB 27 Financial Reporting</u>				
Net Pension Obligation / (Asset)	\$0	(\$241,381)	(\$241,381)	(\$241,381)
Annual Required Contribution	\$12,928	\$46,460	\$47,616	\$103,284
Annual Pension Cost	\$12,928	\$48,983	\$50,119	\$105,787
Expected Contributions	\$130,480	\$124,260	\$124,260	\$124,260
<u>Funding Margins</u>				
Annual Contributions**	\$130,480	\$124,260	\$124,260	\$124,260
Future 30-Year Funding Surplus	\$117,280	\$96,663	\$95,763	\$86,863
Downside Asset Protection	\$1,715,170	\$1,135,160	\$1,118,298	\$306,062
Expected Pension Payments	\$94,470	\$120,600	\$120,600	\$160,800
Net Investable Contributions	\$36,010	\$3,660	\$3,660	(\$36,540)

\*\*Based on expected 2013 expected contributions

COMMENTS ON VALUATION RESULTS

Estimated Pension Fund contributions for the current calendar year are as follows:

+ Gunnison Fire Protection District taxes**	\$65,400
+ State of Colorado contributions	<u>58,860</u>
+ Estimated contributions	\$124,260

To the extent that expected contributions exceed Funding Requirements the Fire Protection District's Pension fund will be actuarially sound, and can continue to offer benefits that are above Colorado Revised Statutes 31-30-415 minimums.

Fund Benefit Levels

A review of the basic \$300.00 monthly retirement benefit indicates that the current level of expected contributions will support a basic monthly retirement benefit of \$400.00. An increase in benefits may be considered at this time since the District's expected contributions are projected to be higher than levels required to sustain the Pension Fund on an actuarially sound basis as prescribed by the Colorado Revised Statutes. Furthermore, the difference between expected contributions and the 30-year funding requirement is large enough to allow the fund to sustain a "shock" asset value loss of more than \$1,118,000 and still meet state requirements for the \$300.00 benefit rate.

Investment Return Assumption

Recent investment return assumptions in effect for calculating Pension Fund contribution requirements were 6.00% for 2011. There is no reason to consider a change in discount rate.

Asset value used to determine funding requirements continues to be Market Value.

GOVERNMENT ACCOUNTING STANDARDS BOARD STATEMENT NO. 5  
DETERMINATION OF PENSION BENEFIT OBLIGATION

The amount shown below as "Pension Benefit Obligation" is a standardized financial disclosure measure of the Actuarial Present Value of Pension Benefits estimated to be payable in the future as a result of member service as of January 1, 2013.

The "Pension Benefit Obligation" was determined as part of this actuarial valuation in accordance with the precedures required by Government Accounting Standards Board Statement No. 5. The actuarial assumptions used are those used to calculate other results contained in this valuation and are shown on the page entitled "Actuarial Methods and Assumptions" elsewhere in this report.

As of the valuation date, the Unfunded Pension Benefit Obligation determined using the "Pension Fund Provisions" shown elsewhere in this report are follows:

1. Pension Benefit Obligations	
a. Members currently receiving benefits	
i. Age and disability retirements	\$1,304,125
ii. Beneficiaries of deceased memebers	9,391
b. Vested terminated members	55,121
c. Curently active members	
i. Employer financed vested benefits	299,408
ii. Employer financed non-vested benefits	337,450
d. Total Pension Benefit Obligations	\$2,005,495
2. Net assets available for benefits	1,775,654
3. Unfunded Pension Benefit Obligation	\$229,841

GOVERNMENT ACCOUNTING STANDARDS BOARD STATEMENT NO. 25

The Governmental Accounting Standards Board (GASB) issued a new statement Number 25 effective for periods starting after June 15, 1996, titled "Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans" (GASB No. 25).

GASB No. 25 requires funding status to be measured based on the Actuarial Assumptions and the Actuarial Cost Method adopted by the Fire Protection District. The District has adopted the Entry-Age Cost Method to develop costs and liabilities for funding purposes. Actuarial Assumptions shown on "Actuarial Methods and Assumptions" were used in making the required calculations of costs and liabilities.

Under the Entry-Age Cost Method, the target value for Plan Assets is the Total Actuarial Liability, which is developed by this method as the excess, if any, of the Present Value of Future Benefits over the Present Value of Future Normal Costs at the Valuation Date. For this purpose, Plan Assets are considered to be the Actuarial Value of Assets developed using procedures shown on elsewhere in this report.

GASB No. 25 liabilities and ratios from the current and previous Actuarial Valuations are as follows:

<u>Valuation</u> <u>Year</u>	<u>Actuarial</u> <u>Liability</u>	<u>Plan</u> <u>Assets</u>	<u>Unfunded</u> <u>Liability</u>	<u>Funded</u> <u>Ratio</u>	<u>Benefit</u> <u>Rate</u>
2011	\$1,516,769	\$1,520,739	(\$3,970)	100.3%	\$235
2013	2,054,607	1,775,654	278,953	86.4%	300

GOVERNMENT ACCOUNTING STANDARDS BOARD STATEMENT NO. 27

The Governmental Accounting Standards Board (GASB) issued a new statement Number 27 effective for periods starting after June 15, 1997, titled "Accounting for Pensions by State and Local Governmental Employers" (GASB No. 27).

GASB No. 27 establishes accounting standards and financial reporting for pension expenditures and related pension liabilities, assets and disclosures. The ruling provides for the determination of an "Annual Required Contribution" (ARC), an "Annual Pension Cost" (APC), and a "Net Pension Obligation" (NPO) based on a range of prescribed actuarial methods and assumptions that must be consistent with methods and assumptions used to determine the Plan's funding requirements.

GASB No. 27 requires that the ARC be determined using an acceptable actuarial cost method (the District has adopted the Entry-Age Actuarial Cost Method which is an acceptable method under the ruling) to calculate a "Normal Cost" and an "Unfunded Actuarial Accrued Liability". The ARC is then determined as the Normal Cost plus an amortization charge on any Unfunded Actuarial Accrued Liability over a period of not less than 10 years, nor more than 40 years. The 40-year period is reduced to 30 years for valuation dates after 2006. The APC is then determined by adjusting the ARC for any NPO that exists at the valuation date. The ruling also requires that the Actuarial Value of Assets should be "Market Related".

<u>Valuation</u> <u>Year</u>	<u>Annual</u> <u>Requirement</u>	<u>Actual</u> <u>Contributions</u>	<u>Discount</u> <u>Rate</u>	<u>Net Pension</u> <u>Obligation</u>	<u>Annual</u> <u>Cost</u>
2011	\$12,928	\$130,480	6.00%	\$0	\$12,928
2012	12,928	130,830	6.00%	(117,542)	14,044
2013	47,616		6.00%	(241,381)	50,119

## PENSION FUND PROVISIONS

Pension Funds for Fire Protection Districts are governed by Colorado Revised Statutes 31-30 Parts 1 through 10, key provisions of which that apply to Volunteer Fire Protection Districts are summarized below:

### Normal Pension

Age requirement: Age 50, or older  
Service requirement: 20 or more years of service  
Benefit amount: \$15.00 per month for each year of service  
not to exceed \$300.00

### Deferred Vested Pension

Age requirement: Deferred to age 50, or older  
Service requirement: 20 or more years of service  
Benefit amount: \$15.00 per month for each year of service  
not to exceed \$300.00

### Pre-Retirement Death Benefit

Age requirement: None  
Service requirement: None  
Benefit amount: \$150.00 per month payable immediately to  
surviving spouse, dependent children or  
parents

### Post-Retirement Death Benefit

A married pensioner's surviving spouse will receive a monthly pension in an amount equal to 50% of the pension being paid at the date of the pensioner's death.

### Lump-Sum Death Benefit

A lump sum amount of \$1,000.00 is payable to the spouse or other beneficiary upon the death of any active or retired Member of the Pension Fund.

### Disability Retirement Benefit

A Member who is injured in the line of duty is entitled to a monthly Disability Benefit in an amount equal to \$150.00, payable for not more than 12 months. For periods of injury-related disability that last longer than 12 months, the Board of Trustees, in their discretion, can continue Disability Benefits in amounts that are necessary and proper.

### Credited Service

One year of Credited Service is granted for each Calendar Year after 1977 in which a Member completes at least 36 hours of training. Credited Service before 1978 is granted for each period of service to the Fire Protection District as a volunteer firefighter.



**SUMMARY OF PENSION FUND ASSETS**

**Investments**

Cash and Cash Equivalents	\$ 87,870	4.95%
Bonds	643,584	36.24%
Common Stock	1,044,196	58.81%
Accrued Interest	4	0.00%
<b>Total Assets</b>	<b>\$ 1,775,654</b>	<b>100.00%</b>

**RECEIPTS AND DISBURSEMENTS FOR PREVIOUS PLAN YEAR**

**Receipts**

**Contributions**

City and District	\$ 65,400	
State	65,430	
Other	0	
<b>Total</b>	<b>\$ 130,830</b>	

**Investment Income**

Income from all sources	22,895	
Other	0	
<b>Total</b>	<b>22,895</b>	

Realized Gains / (Losses) 265,751

Other Receipts 0

**Total Receipts \$ 419,476**

**Disbursements**

Benefits Paid	\$ 98,993	
Expenses and Fees	6,081	
Other Disbursements	0	

**Total Disbursements \$ 105,074**

**Reconciliation**

Market Value Plan Year Beginning \$ 1,549,305

Net Cash Flow 314,402

Change in Asset Values (88,053)

**Market Value at Plan Year End \$ 1,775,654**

**Rate of Return**

Estimated Rate of Return for the Plan Year 12.84%

SUMMARY OF ACTIVE MEMBERS

<u>Age Group</u>	<u>Number</u>	<u>Accrued Pension</u>	<u>Average Age</u>	<u>Average Service</u>	<u>Average Fut Service</u>
Under 25	5	\$1,380	21.8	1.5	28.3
25 to 29	3	915	27.3	1.7	22.7
30 to 34	6	8,910	33.1	8.3	17.2
35 to 39	5	7,170	36.8	8.0	15.1
40 to 44	5	12,894	42.4	14.3	8.5
45 to 49	6	17,145	47.6	16.7	5.4
50 to 54	3	7,935	51.7	18.4	5.3
55 to 59	0	0	0.0	0.0	0.0
60 to 64	2	7,200	60.4	30.4	0.0
Over 64	0	0	0.0	0.0	0.0
Total	35	\$63,550	38.5	11.1	13.7

SUMMARY OF RETIRED MEMBERS

<u>Age Group</u>	<u>Vested Terminated</u>		<u>Pensioners</u>		<u>Total</u>	<u>Accrued</u>	<u>Actuarial</u>
	<u>No.</u>	<u>Benefits</u>	<u>No.</u>	<u>Benefits</u>	<u>No.</u>	<u>Benefits</u>	<u>Liability</u>
Under 40	0	\$ 0	0	\$ 0	0	\$ 0	\$ 0
40 TO 44	0	0	0	0	0	0	43,625
45 TO 49	1	3,600	3	10,800	4	14,400	124,173
50 TO 54	0	0	3	10,800	3	10,800	702,606
55 TO 59	0	0	12	43,200	12	43,200	943,324
60 TO 64	0	0	3	10,800	3	10,800	650,834
65 TO 69	0	0	6	21,600	6	21,600	390,684
70 TO 74	0	0	2	7,200	2	7,200	239,007
75 TO 79	0	0	1	3,600	1	3,600	55,667
80 TO 84	0	0	3	9,000	3	9,000	13,005
85 TO 89	0	0	1	3,600	1	3,600	69,304
90 and over	0	0	0	0	0	0	0
Total	1	\$ 3,600	34	\$ 120,600	35	\$ 124,200	\$ 3,232,229

SUMMARY OF HISTORICAL ACTUARIAL VALUATIONS

<u>Monthly Benefit Rate</u>	\$235	\$300
<u>Member Data</u>	<u>2011</u>	<u>2013</u>
Active Members	34	35
Retired Members	33	33
Beneficiaries	1	1
Vested Terminated	2	1
Total	<hr/> 70	<hr/> 70
Average Age-Actives	37.7	38.5
Average Service-Actives	10.1	11.1
Average Future Service-Actives	N / C	13.7
<u>Financial Data</u>		
Investment Return Assumption	6.00%	6.00%
Market Value of Assets	1,520,739	1,775,654
Market-Related Value of Assets	1,520,739	1,775,654
State Contributions	72,700	65,400
City / District Contributions	57,780	58,860
<u>Plan Funding Data</u>		
Normal Cost	13,200	28,497
Total Actuarial Liability	1,516,769	2,054,607
Unfunded Actuarial Liability	(3,970)	278,935
30-Year Funding Amount	12,928	47,616
Entry-Age Full Funding Limit	9,230	307,432

## GLOSSARY

To gain a better understanding of the results contained in this report, descriptions of key actuarial concepts used in this report are outlined below:

### Present Value

Lump sum amount of a payment or series of payments payable in the future determined by discounting such payments at a predetermined rate of interest and the probability of making such payments.

### Actuarial Cost Method

Technique for establishing the amount and incidence of pension plan costs by dividing such costs into past service and future service elements.

### Entry-Age Actuarial Cost Method

An Actuarial Cost Method that determines Normal Cost as a level amount that is payable each year from the non-retired participant's entry age to retirement age. Actuarial costs arising from experience deviations are recognized as changes in Unfunded Actuarial Liability.

### Normal Cost

Cost assigned for each non-retired participant, under the Entry-Age Actuarial Cost Method, to each year between the participant's entry age and retirement age.

### Actuarial (Accrued) Liability

The difference, on the valuation date, between the Present Value of Future Benefits and the Present Value of Future Normal Costs, representing the accumulated actuarial cost, under the Entry-Age Actuarial Cost Method, assigned to years before the valuation date.

### Unfunded Actuarial (Accrued) Liability

The difference, on the valuation date, between the Total Actuarial Liability and the Actuarial Value of Plan Assets, representing the net plan cost, under the Entry-Age Actuarial Cost Method, assigned to years before the valuation date.

### Funding Requirement

An amount equal to the sum of the total Normal Cost for all non-retired participants, plus a level dollar amount to amortize any Unfunded Actuarial Liability over a fixed period of years from the valuation date.

## GLOSSARY

(Continued)

### Net Pension Obligation (NPO)

The cumulative difference since the effective date of GASB No. 27 between Annual Pension Cost and the employer's contributions to the plan, including the pension liability (asset) at transition.

### Annual Pension Cost (APC)

A measure of the periodic cost of the employer's participation in a defined benefit pension plan, calculated as the Annual Required Contribution plus interest on the Net Pension Obligation and an adjustment based on an amortization of the Net Pension Obligation using the same amortization methodology used to calculate the Annual Required Contribution.

### Annual Required Contribution (ARC)

A measure of the periodic contribution to a defined benefit Plan, calculated from the values developed by using one of the prescribed actuarial cost methods of GASB No. 27, and includes the Normal Cost plus an amortization charge to recognize any Unfunded Actuarial Liability over a period of not less than 10 years nor more than 30 years (40 years for years before 2007).

### Actuarial Value of Assets

A three-year moving average of expected and actual market values determined by projecting an expected market value based on the assumed investment return and the cash flow net of expenses. The difference between the projected value and the actual market value is the investment gain or loss for the year. The Actuarial Value of Assets is the actual market value less any deferred gains and losses from the three previous years. The Actuarial Value can not be less than 80% of the actual market value, nor more than 120% of the actual market value.

### Actuarial Assumptions

Statistical representation of future experience for census under consideration, which may include expectations regarding interest rate, mortality, disability, turnover and other related contingencies that have a material effect on benefits being valued.

Assumptions used should smooth emerging benefit program costs so that year-to-year results are stable and predictable. For groups with fewer than 3,000 members, complicated assumptions produce more cost instability than simplified assumptions. More simplified assumptions have been employed for this valuation which should lead to better actuarial cost stability.