

**EL PASO COUNTY  
RETIREMENT PLAN**

*Actuarial Valuation Report as of  
January 1, 2011*

May 2011

Submitted By:

Buck Consultants  
1200 Seventeenth Street, Suite 1200  
Denver, CO 80202



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May 6, 2011

Board of Retirement  
El Paso County Retirement Plan  
105 E. Vermijo, Suite 200  
Colorado Springs, CO 80903-2007

***Certification of Actuarial Valuation***

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of the El Paso County Retirement Plan as of January 1, 2011 performed by Buck Consultants.

The actuarial valuation is based on audited financial and member data provided by the Retirement Plan Administrator and summarized in this report. The benefits considered are those delineated in the plan as amended and restated effective January 1, 2011.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures, using an actuarial cost method which we believe is reasonable. This report fully and fairly discloses the actuarial position of the Plan.

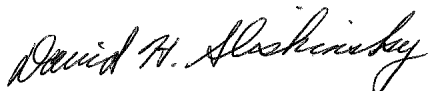
In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 4.3 beginning on page 28.

Both David H. Slishinsky and Douglas J. Fiddler are Enrolled Actuaries, Associates of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice and David H. Slishinsky has primary responsibility for the report.

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

Respectfully submitted,

BUCK CONSULTANTS



David H. Slishinsky, A.S.A., E.A., M.A.A.A.  
Principal & Consulting Actuary



Douglas J. Fiddler, A.S.A., E.A., M.A.A.A.  
Director, Retirement Actuary



## PURPOSE AND HIGHLIGHTS

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The main purposes of this report are:

1. To determine if the Board's funding policy for the Retirement Plan is being met considering current assets and the current employer and member contribution rates;
2. To review the current funded status of the Plan; and
3. To compare actual and expected experience under the Plan during 2010.

The 2011 actuarial valuation is based upon the plan provisions as of January 1, 2011; as described in Section 4.2. The actuarial methods and assumptions are described in Section 4.3.

Highlights from the current and prior valuations are:

1. A contribution rate of 7.0% of salary by both the participating employers and members (14% of salary in total) in 2011 will **not** be sufficient to fund the normal cost and amortize the unfunded actuarial accrued liability over 30 years from the valuation date. The total actuarially required contribution necessary to fund the Plan's benefits under the Board's funding policy for 2011 is 16.9% of salary.
2. The Market Value of Assets was sufficient to provide for 81.2% of the actuarial present value of accumulated plan benefits as of January 1, 2011 as compared with 77.6% as of January 1, 2010. Benefits are based on accrued service and current salary history as of the valuation date.
3. Actuarial losses were experienced in 2010 from asset sources and actuarial gains were experienced in 2010 from liability sources, resulting in a net actuarial loss which increased the unfunded actuarial accrued liability by \$15,257,914. The net gain from liability sources of \$704,396 was primarily due to gains caused by pay increases less than expected. The rate of return on Actuarial Value of Assets of 2.3% in 2010 was significantly lower than the 8% assumed investment return rate, resulting in the loss from asset sources of \$15,962,310.
4. The Actuarial Value of Assets was sufficient to provide for 75.8% of the Actuarial Accrued Liability as of January 1, 2011. This is a decrease of 4.0% from 79.8% as of January 1, 2010. This rate is called the Funded Ratio and is a measure of the current funding level of the plan under the Entry Age Actuarial Cost Method.

## SUMMARY OF PRINCIPAL VALUATION RESULTS

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described in the section titled "Effects of Changes."

	Actuarial Valuation as of		Change Between Years	
	January 1, 2010	January 1, 2011	Amount	Percent
<b>Summary of Costs</b>				
Contribution Requirement	\$ 17,091,186	\$ 18,947,495	\$ 1,856,309	10.9%
Estimated Contributions	\$ 13,870,042	\$ 15,675,712	\$ 1,805,670	13.0%
Contribution Requirement as a Percentage of Pay	16.0%	16.9%	0.9%	5.6%
<b>GASB No. 25 Funded Status</b>				
Actuarial Accrued Liability	\$ 354,376,983	\$ 375,801,894	\$ 21,424,911	6.0%
Actuarial Value of Assets	\$ 282,841,807	\$ 285,036,737	\$ 2,194,930	0.8%
Unfunded Actuarial Accrued Liability/(Surplus)	\$ 71,535,176	\$ 90,765,157	\$ 19,229,981	26.9%
<b>Market Value of Assets and Additional Liabilities</b>				
Market Value of Assets	\$ 235,701,506	\$ 262,645,839	\$ 26,944,333	11.4%
Actuarial Present Value of Accumulated Plan Benefits (FAS No. 35)	\$ 303,907,938	\$ 323,503,084	\$ 19,595,146	6.4%
Present Value of Projected Plan Benefits	\$ 437,798,420	\$ 462,809,290	\$ 25,010,870	5.7%
<b>Summary of Data</b>				
Number of Members in Valuation:				
Active Members	2,264 <sup>(1)</sup>	2,333 <sup>(2)</sup>	69	3.0%
Members with Deferred Benefits	310	324	14	4.5%
Retired Members	1,009	1,050	41	4.1%
Beneficiaries	74	80	6	8.1%
<b>Total</b>	3,657	3,787	130	3.6%
<b>Active Member Statistics</b>				
Total Annual Compensation	\$ 107,456,208	\$ 112,669,369	\$ 5,213,161	4.9%
Average Compensation	\$ 47,685 <sup>(3)</sup>	\$ 48,439 <sup>(4)</sup>	\$ 754	1.6%
Average Age	44.9 <sup>(3)</sup>	45.2 <sup>(4)</sup>	0.3	0.7%
Average Service	8.3 <sup>(3)</sup>	8.4 <sup>(4)</sup>	0.1	1.2%

(1) Includes 21 members on leave of absence.

(2) Includes 16 members on leave of absence.

(3) Excludes 21 members on leave of absence.

(4) Excludes 16 members on leave of absence.



## **EFFECTS OF CHANGES**

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### **Changes in Actuarial Assumptions**

There were no changes in the actuarial assumptions since the prior valuation.

### **Changes in Plan Provisions**

There were no changes in plan provisions since the prior valuation.

### **Changes in Actuarial Methods**

There were no changes in actuarial methods since the prior valuation.



## **SECTION 1: FUNDING RESULTS**

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- Section 1.1** A comparative summary of valuation results.
- Section 1.2** The actuarially required contribution.
- Section 1.3** The actuarial gain/(loss) during the preceding year.
- Section 1.4** The normal cost and unfunded actuarial accrued liability as of the current and proceeding valuation dates.
- Section 1.5** The present value of projected plan benefits.
- Section 1.6** A ten-year projection of benefit payments.

## Section 1.1

### Comparative Summary of Principal Valuation Results

	Actuarial Valuation as of		Percent Change
	January 1, 2010	January 1, 2011	
<b>A. Summary of Data</b>			
1. Active Members			
a. Number <sup>(1)</sup>	2,264	2,333	3.0%
b. Annual Compensation	\$ 107,456,208	\$ 112,669,369	4.9%
c. Average Annual Compensation	\$ 47,685 <sup>(3)</sup>	\$ 48,439 <sup>(4)</sup>	1.6%
d. Average Age	44.9 <sup>(3)</sup>	45.2 <sup>(4)</sup>	0.7%
e. Average Service	8.3 <sup>(3)</sup>	8.4 <sup>(4)</sup>	1.2%
f. Accumulated Member Contributions			
i. With Interest	\$ 58,650,272	\$ 62,742,920	7.0%
ii. Without Interest	\$ 43,876,369	\$ 47,638,520	8.6%
2. Refund of Employee Contributions due			
a. Number	47	66	40.4%
b. Amount of Refunds Due	\$ 138,077	\$ 266,311	92.9%
3. Vested Terminated Members			
a. Number <sup>(2)</sup>	263	258	(1.9%)
b. Annual Deferred Benefits	\$ 2,461,920	\$ 2,428,009	(1.4%)
c. Average Annual Deferred Benefit	\$ 9,361	\$ 9,411	0.5%
4. Retired and Disabled Members			
a. Number	1,009	1,050	4.1%
b. Annual Retirement Benefits	\$ 15,840,017	\$ 16,775,454	5.9%
c. Average Annual Retirement Benefit	\$ 15,699	\$ 15,977	1.8%
5. Beneficiaries			
a. Number	74	80	8.1%
b. Annual Retirement Benefits	\$ 751,718	\$ 868,797	15.6%
c. Average Annual Retirement Benefit	\$ 10,158	\$ 10,860	6.9%
6. Total Members Included in Valuation	<b>3,657</b>	<b>3,787</b>	<b>3.6%</b>

<sup>(1)</sup> Includes 16 members on leave of absence in 2011 and 21 members on leave of absence in 2010.

<sup>(2)</sup> Includes 11 deferred disableds and 2 deferred beneficiaries in 2011 and 11 deferred disableds and 2 deferred beneficiaries in 2010.

<sup>(3)</sup> Excludes 21 members on leave of absence.

<sup>(4)</sup> Excludes 16 members on leave of absence.

## Section 1.1

### Comparative Summary of Principal Valuation Results (continued)

	Actuarial Valuation as of		Percent Change
	January 1, 2010	January 1, 2011	
<b>B. Summary of Assets, Liabilities and Funded Status</b>			
1. Plan Assets on Valuation Date			
a. Actuarial Value	\$ 282,841,807	\$ 285,036,737	0.8%
b. Market Value	\$ 235,701,506	\$ 262,645,839	11.4%
2. Actuarial Accrued Liability (Valuation Basis)			
a. Funded Ratio - Actuarial Value	79.8%	75.8%	(5.0%)
b. Funded Ratio - Market Value	66.5%	69.9%	5.1%
3. Unfunded Actuarial Accrued Liability (Based on Actuarial Value of Assets)			
	\$ 71,535,176	\$ 90,765,157	26.9%
4. Present Value of Accumulated Benefits (FASB #35)			
a. Funded Ratio - Actuarial Value	93.1%	88.1%	(5.4%)
b. Funded Ratio - Market Value	77.6%	81.2%	4.7%
5. Present Value of Projected Benefits			
	\$ 437,798,420	\$ 462,809,290	5.7%

	Actuarial Valuation as of				Percent Change in Amount
	January 1, 2010		January 1, 2011		
	Amount	% of Covered Comp.	Amount	% of Covered Comp.	
<b>C. Summary of Contribution Requirements</b>					
1. Normal Cost Compensation	\$ 106,692,636	N/A	\$ 111,969,375	N/A	4.9%
2. Total Normal Cost Beginning of Year	\$ 12,263,438	11.5%	\$ 12,962,859	11.5%	5.7%
3. Amortization of Unfunded Actuarial Accrued Liability over 30 years from the valuation date	\$ 4,303,598	4.0%	\$ 5,460,486	4.9%	26.9%
4. Administrative Expenses	\$ 524,150	0.5%	\$ 524,150	0.5%	0.0%
5. Total Actuarially Required Contribution (2. + 3. + 4.)	\$ 17,091,186	16.0%	\$ 18,947,495	16.9%	10.9%
6. Estimated Member Contribution <sup>(1)</sup>	\$ 7,775,759	7.3%	\$ 8,314,846	7.4%	6.9%
7. Recommended Employer Contribution (5. - 6.)	\$ 9,315,427	8.7%	\$ 10,632,649	9.5%	14.1%

<sup>(1)</sup> Present value of future member contributions as a percent of present value of future salaries equals 7.288% of normal cost compensation for 2010 and 7.426% for 2011 based on future member contributions of 6.5% of normal cost compensation for 2010, increasing to 7.0% for 2011 and 7.5% for all years after 2011.

## Section 1.2

### Actuarially Required Contribution

The actuarially required contribution has been determined using the Entry Age Normal Actuarial Cost Method.

	January 1, 2010	January 1, 2011
1. Normal Cost	\$ 12,263,438	\$ 12,962,859
2. Amortization of Unfunded Actuarial Accrued Liability	\$ 4,303,598	\$ 5,460,486
3. Administrative Expenses	\$ 524,150	\$ 524,150
4. Total Actuarially Required Contribution		
a. Amount (1. + 2. + 3.)	\$ 17,091,186	\$ 18,947,495
b. Percent of Normal Cost Payroll	16.0%	16.9%
5. Estimated Member Contribution <sup>(1)</sup>	\$ 7,775,759	\$ 8,314,846
6. Recommended Employer Contribution		
a. Amount (4.a. - 5.)	\$ 9,315,427	\$ 10,632,649
b. Percent of Normal Cost Payroll	8.7%	9.5%
7. Estimated Employer Contribution <sup>(2)</sup>	\$ 6,935,021	\$ 7,837,856
8. Amount of Total Contribution in Excess of Actuarially Required Contribution/(Deficit) (7. - 6.a.)	\$ (2,380,406)	\$ (2,794,793)

<sup>(1)</sup> Present value of future member contributions as a percent of present value of future salaries equals 7.288% of normal cost compensation for 2010 and 7.426% for 2011 based on future member contributions of 6.5% of normal cost compensation for 2010, increasing to 7.0% for 2011 and 7.5% for all years after 2011.

<sup>(2)</sup> 6.5% of normal cost compensation for 2010, increasing to 7.0% for 2011 and 7.5% for all years after 2011.

**Actuarial Gain/(Loss)**

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of January 1, 2011.

1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at January 1, 2010	\$ 354,376,983
b. Normal Cost and expected Administrative Expenses at January 1, 2010	12,787,588
c. Interest on a. + b. to End of Year	29,373,166
d. Benefit Payments and Administrative Expenses for Plan Year Ending December 31, 2010, with Interest to End of Year Excluding Supplemental Payment	20,031,447
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	376,506,290
f. Change in Actuarial Accrued Liability at January 1, 2011, Due to Change in Actuarial Assumptions	0
g. Change in Actuarial Accrued Liability at January 1, 2011, Due to Change in Plan Provisions	0
h. Expected Actuarial Accrued Liability at January 1, 2011 (e. + f. + g.)	\$ 376,506,290
2. Actuarial Accrued Liability at January 1, 2011	\$ 375,801,894
<b>3. Liability Gain/(Loss) (1.h. - 2.)</b>	<b>\$ 704,396</b>
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at January 1, 2010	\$ 282,841,807
b. Interest on a. to End of Year	22,627,345
c. Contributions Made for Plan Year Ending December 31, 2010	14,962,829
d. Interest on c. to End of Year	598,513
e. Benefit Payments and Administrative Expenses for Plan Year Ending December 31, 2010, with Interest to End of Year Excluding Supplemental Payment	20,031,447
f. Change in Actuarial Value of Assets at January 1, 2011 due to supplemental pension payment	0
g. Expected Actuarial Value of Assets at January 1, 2011 (a. + b. + c. + d. - e. - f.)	\$ 300,999,047
5. Actuarial Value of Assets as of January 1, 2011	\$ 285,036,737
<b>6. Actuarial Asset Gain/(Loss) (5. - 4.g.)</b>	<b>\$ (15,962,310)</b>
<b>7. Actuarial Gain/(Loss) (3. + 6.)</b>	<b>\$ (15,257,914)</b>

**Normal Cost and Unfunded Actuarial Accrued Liability**

**A. Normal Cost**

The components of normal cost under the Plan's funding method are:

Component	January 1, 2010	January 1, 2011
Retirement Benefits	\$ 7,792,001	\$ 8,250,188
Withdrawal Benefits	3,866,492	4,067,531
Disability Benefits	388,496	412,152
Death Benefits	216,449	232,988
<b>Total Normal Cost</b>	<b>\$ 12,263,438</b>	<b>\$ 12,962,859</b>

**B. Unfunded Actuarial Accrued Liability**

The actuarial accrued liability is the present value of projected plan benefits allocated to past service by the actuarial funding method being used. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the Actuarial Value of Assets.

Development of Actuarial Accrued Liability	January 1, 2010	January 1, 2011
1. Actuarial Accrued Liability		
a. Active Participants		
Retirement Benefits	\$ 164,833,712	\$ 175,412,681
Withdrawal Benefits	8,270,449	8,209,285
Disability Benefits	3,215,774	3,418,294
Death Benefits	2,308,025	2,488,760
Total	\$ 178,627,960	\$ 189,529,020
b. Participants with Deferred Benefits	9,800,183	10,440,148
c. Participants Receiving Benefits	165,948,840	175,832,726
<b>d. Actuarial Accrued Liability (a. + b. + c.)</b>	<b>\$ 354,376,983</b>	<b>\$ 375,801,894</b>
2. Actuarial Value of Assets	\$ 282,841,807	\$ 285,036,737
<b>3. Unfunded Actuarial Accrued Liability (1.d. - 2., not less than \$0)</b>	<b>\$ 71,535,176</b>	<b>\$ 90,765,157</b>



**Present Value of Projected Plan Benefits**

The present value of projected benefits is the value of plan benefits using future earnings and service.

<b>Present Value of Projected Benefits</b>	<b>January 1, 2010</b>	<b>January 1, 2011</b>
<b>1. Active Participants</b>		
Retirement Benefits	\$ 218,860,200	\$ 231,742,713
Withdrawal Benefits	33,447,308	34,455,297
Disability Benefits	5,926,905	6,250,013
Death Benefits	3,814,984	4,088,393
<b>Total</b>	<b>\$ 262,049,397</b>	<b>\$ 276,536,416</b>
<b>2. Participants with Deferred Benefits</b>	<b>9,800,183</b>	<b>10,440,148</b>
<b>3. Participants Receiving Benefits</b>	<b>165,948,840</b>	<b>175,832,726</b>
<b>4. Present Value of Projected Plan Benefits (1. + 2. + 3.)</b>	<b>\$ 437,798,420</b>	<b>\$ 462,809,290</b>

## Section 1.6

### Ten-Year Projected Cash Flow (Retirement Benefit Payments)

January 1, 2011			
Plan Year Ending	Actives	Retirees <sup>(1)</sup>	Total
12/31/2011	\$ 1,700,212	\$ 17,590,674	\$ 19,290,886
12/31/2012	3,639,572	17,438,958	21,078,530
12/31/2013	5,634,430	17,290,793	22,925,223
12/31/2014	7,706,043	17,111,007	24,817,050
12/31/2015	9,744,833	16,901,872	26,646,705
12/31/2016	\$ 12,110,608	\$ 16,698,793	\$ 28,809,401
12/31/2017	14,611,342	16,492,495	31,103,837
12/31/2018	17,090,300	16,346,397	33,436,697
12/31/2019	19,498,094	16,232,471	35,730,565
12/31/2020	21,874,572	16,079,940	37,954,512

<sup>(1)</sup> Includes Disabled Members, Beneficiaries, and Deferred Vested Members.

History of Refunds	
Year	Refund Amount
1993	\$ 633,773
1994	544,504
1995	976,233
1996	1,003,922
1997	1,037,519
1998	1,132,847
1999	1,292,444
2000	1,407,960
2001	1,597,686
2002	998,709
2003	1,414,807
2004	1,634,848
2005	1,755,564
2006	1,545,738
2007	1,841,048
2008	1,997,056
2009	1,912,000
2010	1,775,640

## **SECTION 2: ACCOUNTING RESULTS**

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**Section 2.1** Information pertaining to the actuarial present value of accumulated plan benefits as required under FAS No. 35.

**Section 2.2** Items required under GASB No. 25.

## Section 2.1

### FAS No. 35 Information

#### A. Actuarial Present Value of Accumulated Plan Benefits

The actuarial present value of vested and nonvested accumulated plan benefits was computed on an ongoing plan basis in order to provide required information under Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current participants as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions regarding future salary and Social Security increases and accrual of future benefit service are not necessary for this purpose.

Accumulated Plan Benefits	January 1, 2010	January 1, 2011
Vested Benefits		
• Active Participants	\$ 114,176,291	\$ 122,919,961
• Participants with Deferred Benefits	9,800,183	10,440,148
• Participants Receiving Benefits	165,948,840	175,832,726
<b>Total Vested Benefits</b>	<b>\$ 289,925,314</b>	<b>\$ 309,192,835</b>
Nonvested Benefits	13,982,624	14,310,249
<b>Total Accumulated Plan Benefits</b>	<b>\$ 303,907,938</b>	<b>\$ 323,503,084</b>
Assumed Rate of Interest	8.00%	8.00%
Market Value of Assets Available for Benefits	\$ 235,701,506	\$ 262,645,839
Funded Ratio	77.6%	81.2%
Change in Accumulated Plan Benefits Due to:		
• Assumption Changes	\$ 0	\$ 0
• Plan Provision Changes	\$ (2,113)	\$ 0
<b>Number of Members</b>		
Vested Members		
• Active Participants	1,211	1,283
• Participants with Deferred Benefits	310 <sup>(1)</sup>	324 <sup>(2)</sup>
• Participants Receiving Benefits	1,083 <sup>(3)</sup>	1,130 <sup>(4)</sup>
<b>Total Vested Members</b>	<b>2,604</b>	<b>2,737</b>
Nonvested Members	1,053	1,050
<b>Total Members</b>	<b>3,657</b>	<b>3,787</b>

<sup>(1)</sup> Includes 47 former members due a refund of contributions.

<sup>(2)</sup> Includes 66 former members due a refund of contributions.

<sup>(3)</sup> Includes four QDRO recipients.

<sup>(4)</sup> Includes five QDRO recipients.

**B. Statement of Changes in Accumulated Plan Benefits**

A statement of changes in the actuarial present value of accumulated plan benefits (FAS No. 35 basis) follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

<b>Actuarial Present Value of Accumulated Plan Benefits as of January 1, 2010</b>	<b>\$ 303,907,938</b>
Increase/(Decrease) During Year Attributable to:	
• Normal Cost	\$ 12,801,474
• Benefits Paid	(18,775,013)
• Increase for interest due to decrease in discount period	24,600,200
• Plan Amendments	0
• Assumption Changes	0
• (Gains)/Losses	968,485 <sup>(1)</sup>
Net Increase/(Decrease)	\$ 19,595,146
<b>Actuarial Present Value of Accumulated Plan Benefits as of January 1, 2011</b>	<b>\$ 323,503,084</b>

<sup>(1)</sup> Includes approximately \$851,000 increase in liability due to purchases of service.

The benefits valued include all benefits -- retirement, preretirement death and vested termination -- payable from the Plan for employee service prior to the valuation date. Benefits are assumed to accrue/accumulate in accordance with the plan provisions.

**GASB No. 25 Information**

**Supplementary Schedules**

The GASB has issued a statement; Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). This standard became effective for periods beginning after June 15, 1996, and requires funding status to be measured based upon the actuarial funding method adopted by the El Paso County Board of Retirement. The method adopted is the Entry Age Normal Cost Method. The target value of assets is equal to the Actuarial Accrued Liability (AAL). The Actuarial Value of Assets was determined using techniques that smooth the effects of short-term volatility in the Market Value of investments over a five-year period. The actual value of assets is the Market Value.

**A. Schedule of Funding Progress**

The GASB Statement No. 25 liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
01/01/2002	\$ 194,589,207	\$ 193,721,675	\$ (867,532)	100.4%	\$ 85,260,314	0.0%
01/01/2003	\$ 192,439,607	\$ 212,239,372	\$ 19,799,765	90.7%	\$ 89,629,062	22.1%
01/01/2004	\$ 207,538,410	\$ 230,926,211	\$ 23,387,801	89.9%	\$ 91,978,099	25.4%
01/01/2005	\$ 219,697,172	\$ 249,693,945	\$ 29,996,773	88.0%	\$ 92,757,865	32.3%
01/01/2006	\$ 234,660,873	\$ 270,180,072	\$ 35,519,199	86.9%	\$ 98,915,975	35.9%
01/01/2007	\$ 257,214,257	\$ 293,358,174	\$ 36,143,917	87.7%	\$ 103,402,651	35.0%
01/01/2008	\$ 285,740,434	\$ 312,549,096	\$ 26,808,662	91.4%	\$ 105,140,088	25.5%
01/01/2009	\$ 249,776,755	\$ 331,357,842	\$ 81,581,037	75.4%	\$ 102,703,108	79.4%
01/01/2010	\$ 282,841,807	\$ 354,376,983	\$ 71,535,176	79.8%	\$ 106,956,655	66.9%
01/01/2011	\$ 285,036,737	\$ 375,801,894	\$ 90,765,157	75.8%	\$ 112,232,244	80.9%

**B. Schedule of Employer Contributions**

The GASB Statement No. 25 required contributions and actual percentages contributed over the last ten years are as follows:

**Schedule of Employer Contributions**

Year Ended December 31	Annual Required Contribution <sup>(1)</sup>	Percentage Contributed
2001	\$ 4,408,392	111%
2002	\$ 4,303,733	123%
2003	\$ 5,709,580	97%
2004	\$ 5,951,443	92%
2005	\$ 6,551,304	87%
2006	\$ 7,387,051	83%
2007	\$ 8,158,839	77%
2008	\$ 7,724,074	82%
2009	\$ 10,945,353	56%
2010	\$ 9,603,845	75%

<sup>(1)</sup> Beginning of year.

### C. Actuarial Assumptions, Method and Additional Information

Valuation Date	January 1, 2011
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Open
Remaining amortization period	30 years
Asset valuation method	Five-year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.0%
Projected salary increases*	4.5% – 11.6%
<b>*Includes inflation at</b>	<b>3.5%</b>
Cost-of-living adjustments	None

## **SECTION 3: PLAN ASSETS**

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This section presents information regarding plan assets as reported by the plan administrator or the auditor. The plan assets represent the portion of total plan liabilities which has been funded as of the valuation date.

**Section 3.1** A summary of the Market Value of Assets.

**Section 3.2** A reconciliation of the Market Value of Assets.

**Section 3.3** The Actuarial Value of Plan Assets as of January 1, 2011.

**Section 3.4** A history of the average annual rates of investment return.



## Section 3.1

### Summary of Assets

Asset Category	Market Value as of December 31, 2009		Market Value as of December 31, 2010	
	Amount	%	Amount	%
<b>1. Cash and Short-Term Investments</b>				
a. Cash in Bank	\$ 2,653,169	1.1%	\$ 3,495,675	1.3%
b. Cash – Money Manager	1,141,971	0.5	1,194,826	0.5
c. Total	\$ 3,795,140	1.6	\$ 4,690,501	1.8
<b>2. Receivables</b>				
a. Interest and Dividends	\$ 242,213	0.1	\$ 245,450	0.1
b. Investments Sold	121,869	0.1	197,426	0.1
c. Other Receivables	60,513	0.0	78,587	0.0
d. Total	\$ 424,595	0.2	\$ 521,463	0.2
<b>3. Investments at Fair Value</b>				
a. U.S. Treasury Notes	\$ 6,020,278	2.6	\$ 5,805,496	2.2
b. Fixed Income	61,822,688	26.2	68,624,316	26.1
c. Domestic Stocks and Equity	98,678,256	41.8	75,182,388	28.6
d. International Equity	52,162,255	22.1	77,853,668	29.7
e. Real Estate	13,914,189	5.9	16,027,023	6.1
f. Fund of Hedge Funds	N/A	0.0	14,043,148	5.3
g. Total	\$ 232,597,666	98.6	\$ 257,536,039	98.0
<b>4. Fixed Assets</b>	\$ 179,003	0.1	\$ 144,829	0.1
<b>5. Total Assets</b>	\$ 236,996,404	100.5	\$ 262,892,832	100.1
<b>6. Liabilities</b>				
a. Payable for Investments Purchased	\$ 70,264	-	\$ 63,914	0.0
b. Securities Lending Obligation in Excess of Collateral	987,014	0.4	0	0.0
c. Accounts Payable and Accrued Liabilities	237,620	0.1	183,079	0.1
d. Total	\$ 1,294,898	0.5	\$ 246,993	0.1
<b>7. Net Assets for Pension Benefits [5. – 6.c.]</b>	<b>\$ 235,701,506</b>	<b>100.0</b>	<b>\$ 262,645,839</b>	<b>100.0</b>

## Section 3.2

### Reconciliation of Assets

Transactions	2009 Plan Year	2010 Plan Year
<b>Additions</b>		
<b>1. Contributions</b>		
a. Contributions from Employers	\$ 6,137,581	\$ 7,175,286
b. Contributions from Plan Members	6,593,114	7,787,543
c. Total	\$ 12,730,695	\$ 14,962,829
<b>2. Net Investment Income</b>		
a. Interest and Dividends	\$ 3,907,206	\$ 3,626,209
b. Net Appreciation(Depreciation)	28,775,810	28,788,996
c. Rental Income	630,683	0
d. Net Securities Lending Income	53,989	1,963
e. Securities Lending Unrealized Gain/(Loss)	895,646	(256,091)
f. Miscellaneous	336	0
g. Total	\$ 34,263,670	\$ 32,161,077
h. Investment Expense	\$ (1,128,385)	\$ (918,566)
i. Net Investment Income	\$ 33,135,285	\$ 31,242,511
<b>3. Total Additions</b>	<b>\$ 45,865,980</b>	<b>\$ 46,205,340</b>
<b>Deductions</b>		
<b>4. Benefits and Expenses</b>		
a. Retirement Benefits	\$ 15,247,023	\$ 16,339,242
b. Refund of Contributions	1,912,000	1,775,640
c. Death	637,219	660,131
d. Supplemental Payment	N/A	N/A
e. Administrative Expenses	515,528	485,994
<b>5. Total Deductions</b>	<b>\$ 18,311,770</b>	<b>\$ 19,261,007</b>
<b>6. Net Increase</b>	<b>\$ 27,554,210</b>	<b>\$ 26,944,333</b>
<b>7. Net Assets Held in Trust for Pension Benefits</b>		
a. Beginning of Year	\$ 208,147,296	\$ 235,701,506
b. End of Year	\$ 235,701,506	\$ 262,645,839

## Section 3.3

### Actuarial Value of Assets

Schedule of Asset Gains/(Losses)				
Year Ending December 31	Original Amount	Recognized in Prior Years	Recognized This Year	Recognized in Future Years
2006	\$ 16,445,557	\$ 13,156,445	\$ 3,289,112	\$ 0
2007	(1,971,286)	(1,182,771)	(394,257)	(394,258)
2008	(105,168,354)	(42,067,342)	(21,033,671)	(42,067,341)
2009	16,706,744	3,341,349	3,341,349	10,024,046
2010	12,558,319	0	2,511,664	10,046,655
<b>Total</b>	<b>\$ (61,429,020)</b>	<b>\$ (26,752,319)</b>	<b>\$ (12,285,803)</b>	<b>\$ (22,390,898)</b>

Development of Actuarial Value of Assets	
1. Initial Actuarial Value of Assets as of January 1, 2010 (before corridor)	\$ 282,936,525
2. Contributions	
a. Employers	\$ 7,175,286
b. Members	7,787,543
c. Total (a. + b.)	\$ 14,962,829
3. Decreases during Year	
a. Benefit Payments	\$ 16,999,373
b. Return of Member Contributions	1,775,640
c. Supplemental Payment	0
d. Non-investment Expenses	485,994
e. Total (a. + b. + c. + d.)	\$ 19,261,007
4. Expected Return at 8.0% on:	
a. Actuarial Value of Assets as of January 1, 2010	\$ 22,634,922
b. Item 2 (one-half year)	598,513
c. Item 3 (one-half year)	770,440
d. Item 6	(3,778,802)
e. Total (a. + b. - c. + d.)	\$ 18,684,193
5. Expected Actuarial Value of Assets as of December 31, 2010 (1. + 2.c. - 3.e. + 4.e.)	\$ 297,322,540
6. Unrecognized Asset Gain as of December 31, 2009	\$ (47,235,020)
7. Expected Actuarial Value of Assets as of December 31, 2010, plus Previous Year's Unrecognized Asset Gain (5. + 6.)	\$ 250,087,520
8. Market Value of Assets as of December 31, 2010	\$ 262,645,839
9. 2010 Asset Gain/(Loss) (8. - 7.)	\$ 12,558,319
10. Asset Gain/(Loss) to be Recognized as of December 31, 2010	\$ (12,285,803)
11. Initial Actuarial Value of Assets as of January 1, 2011 (5. + 10.)	\$ 285,036,737
12. Constraining Values:	
a. 80% of Market Value (8. x .8)	\$ 210,116,672
b. 120% of Market Value (8. x 1.2)	\$ 315,175,007
<b>13. Actuarial Value of Assets as of January 1, 2011 (11.), but not less than (12.a.), nor greater than (12.b.)</b>	<b>\$ 285,036,737</b>

## Section 3.4

### Average Annual Rates of Investment Return

Year Ending December 31	Actuarial Value		Market Value	
	Annual	Cumulative	Annual	Cumulative
1995	11.2%	11.2%	21.4%	21.4%
1996	12.0%	11.6%	16.4%	18.9%
1997	12.4%	11.9%	16.5%	18.1%
1998	14.0%	12.4%	11.4%	16.4%
1999	13.7%*	12.7%	4.8%	14.0%
2000	9.5%	12.1%	0.8%	11.7%
2001	5.7%	11.2%	(2.5%)	9.5%
2002	(2.4%)	9.4%	(8.0%)	7.2%
2003	3.0%	8.7%	26.3%	9.1%
2004	5.7%	8.4%	10.9%	9.3%
2005	6.9%	8.2%	5.9%	9.0%
2006	9.9%	8.4%	14.8%	9.5%
2007	12.1%	8.6%	7.3%	9.3%
2008	(11.5%)	7.1%	(28.1%)	6.1%
2009	15.6%	7.6%	16.1%	6.7%
2010	2.3%	7.3%	13.4%	7.1%

\* Includes change in Asset valuation method.

## **SECTION 4: BASIS OF VALUATION**

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This section presents and describes the basis of the valuation. The census of participants, actuarial basis and provisions of the Plan are the foundation of the valuation, since these are the present facts on which the projection of benefit payments will depend. The valuation is based on the premise that the Plan will continue in existence.

**Section 4.1** The participant data used for the actuarial valuation.

**Section 4.2** The plan provisions valued in the actuarial valuation.

**Section 4.3** The actuarial funding method, procedures and actuarial assumptions.

## Section 4.1

### Plan Participants

#### A. Participant Data Reconciliation

	Active Members	Inactive Members <sup>(1)</sup>				Total
		With Deferred Benefits	Retired Members	Disabled Members	Bene-ficiaries	
<b>As of January 1, 2010</b>	<b>2,264</b>	<b>263</b>	<b>996</b>	<b>13</b>	<b>74</b>	<b>3,610</b>
Age Retirements	(54)	(9)	63	-	-	-
Disability Retirements	-	(1)	-	1	-	-
Deaths Without Beneficiary	(3)	(2)	(15)	-	(4)	(24)
Deaths With Beneficiary	(2)	-	(7)	(1)	10	-
Nonvested Terminations	(31)	-	-	-	-	(31)
Vested Terminations	(19)	19	-	-	-	-
Rehires	6	(2)	-	-	-	4
Cashouts	(110)	(11)	-	-	-	(121)
Expiration of Benefits	-	-	-	-	(1)	(1)
Data Corrections	-	-	-	-	-	-
Transfers Out	-	-	-	-	-	-
Pick Ups	-	1	-	-	1	2
<b>Net Change</b>	<b>(213)</b>	<b>(5)</b>	<b>41</b>	<b>-</b>	<b>6</b>	<b>(171)</b>
New Entrants During the Year	282	-	-	-	-	282
<b>As of January 1, 2011</b>	<b>2,333</b>	<b>258</b>	<b>1,037</b>	<b>13</b>	<b>80</b>	<b>3,721</b>

<sup>(1)</sup> Excludes nonvested terminated members who are due a refund of member contributions as of the valuation date.

## Section 4.1

### B. Count of Active Members

Age <sup>(1)</sup>	Years of Service <sup>(2)</sup>								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	
Under 20	-	-	-	-	-	-	-	-	-
20-24	61	2	-	-	-	-	-	-	63
25-29	181	23	-	-	-	-	-	-	204
30-34	173	61	10	-	-	-	-	-	244
35-39	136	83	43	9	-	-	-	-	271
40-44	133	71	52	24	14	-	-	-	294
45-49	126	95	49	43	58	16	-	-	387
50-54	112	70	61	42	47	17	5	-	354
55-59	73	63	60	49	30	16	5	1	297
60-64	36	41	35	18	20	5	4	3	162
65-69	8	7	7	3	9	-	2	-	36
Over 70	1	1	-	2	-	-	1	-	5
<b>Total</b>	<b>1,040</b>	<b>517</b>	<b>317</b>	<b>190</b>	<b>178</b>	<b>54</b>	<b>17</b>	<b>4</b>	<b>2,317</b>

### C. Average Compensation

Age <sup>(1)</sup>	Years of Service <sup>(2)</sup>								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	
Under 20	-	-	-	-	-	-	-	-	-
20-24	\$36,494	\$40,767	-	-	-	-	-	-	\$36,630
25-29	\$41,205	\$49,767	-	-	-	-	-	-	\$42,170
30-34	\$43,169	\$51,736	\$56,452	-	-	-	-	-	\$45,855
35-39	\$43,157	\$52,604	\$54,147	\$57,531	-	-	-	-	\$48,271
40-44	\$42,373	\$50,437	\$58,086	\$59,117	\$56,498	-	-	-	\$49,139
45-49	\$43,144	\$52,077	\$52,602	\$55,857	\$61,346	\$56,884	-	-	\$51,243
50-54	\$41,252	\$48,995	\$53,345	\$49,972	\$60,594	\$66,316	\$56,657	-	\$49,890
55-59	\$41,064	\$46,977	\$49,560	\$53,430	\$60,344	\$66,843	\$62,754	\$63,322	\$49,851
60-64	\$40,499	\$50,038	\$56,258	\$53,773	\$56,690	\$54,896	\$76,620	\$82,687	\$51,909
65-69	\$39,139	\$45,010	\$46,805	\$37,228	\$49,995	-	\$79,680	-	\$46,578
Over 70	\$48,960	\$36,108	-	\$48,906	-	-	\$37,780	-	\$44,132
<b>Total</b>	<b>\$41,857</b>	<b>\$50,423</b>	<b>\$53,675</b>	<b>\$53,857</b>	<b>\$59,500</b>	<b>\$62,620</b>	<b>\$64,746</b>	<b>\$77,846</b>	<b>\$48,439</b>

(1) Attained age last birthday.

(2) Attained service last hire date. Excludes 16 members on leave of absence.

**D. Inactive Members - Annual Benefits**

Attained Age	Members With Deferred Benefits <sup>(1)</sup>		Retired Members <sup>(2)</sup>		Beneficiaries	
	No.	Benefit	No.	Benefit	No.	Benefit
Under 50	137	\$ 1,236,255	7	\$ 231,827	8	\$ 102,566
50 - 54	80	851,166	57	1,737,681	-	-
55 - 59	34	290,619	152	3,162,620	3	45,124
60 - 64	7	49,969	249	4,214,139	14	130,492
65 - 69	-	-	234	3,320,987	17	217,214
70 - 74	-	-	138	1,810,632	9	104,216
75 - 79	-	-	97	1,128,682	15	177,874
80 - 84	-	-	75	831,155	11	79,465
Over 84	-	-	41	337,731	3	11,846
<b>Total</b>	<b>258</b>	<b>\$ 2,428,009</b>	<b>1,050</b>	<b>\$ 16,775,454</b>	<b>80</b>	<b>\$ 868,797</b>

(1) Includes 11 deferred disabled participants.

(2) Includes 13 disabled participants.



## Section 4.1

### E. Participant Statistics

Inactive Participants as of January 1, 2011	No.	Amount of Annual Benefit
<b>Participants Receiving Benefits</b>		
• Retired	1,050	\$ 16,775,454
• Beneficiaries	80	868,797
<b>Total</b>	<b>1,130</b>	<b>\$ 17,644,251</b>
<b>Participants with Deferred Benefits</b>		
• Vested Terminated	245	\$ 2,290,357
• Beneficiaries	2	14,364
• Disabled	11	123,288
<b>Total</b>	<b>258</b>	<b>\$ 2,428,009</b>

Statistics for Active Participants	No.	Average		
		Age	Service <sup>(1)</sup>	Earnings
<b>As of January 1, 2010</b>				
• Continuing	1,977	45.6	9.3	\$ 48,901
• New <sup>(2)</sup>	266	39.9	1.2	38,646
<b>Total</b>	<b>2,243</b>	<b>44.9</b>	<b>8.3</b>	<b>\$ 47,685</b>
<b>As of January 1, 2011</b>				
• Continuing	2,021	46.2	9.5	\$ 49,700
• New <sup>(2)</sup>	296	38.3	0.9	39,826
<b>Total</b>	<b>2,317</b>	<b>45.2</b>	<b>8.4</b>	<b>\$ 48,439</b>

<sup>(1)</sup> Service since date of hire.

<sup>(2)</sup> Includes rehires.

### **Summary of Plan Provisions** ***El Paso County Retirement Plan***

#### **Effective Date and Plan Year**

Originally effective September 1, 1967; the plan was last amended and restated effective January 1, 2010. The plan year is January 1, through December 31.

#### ***Administration***

The plan is administered by the El Paso County Board of Retirement which consists of five voting members including the Treasurer of El Paso County, two non-elected employees of participating employers, and two registered electors of El Paso County appointed by the Board of County Commissioners.

#### ***Type of Plan***

A self-administered defined benefit pension plan.

#### ***Employers Included***

El Paso County, Colorado, El Paso County Health Department, Pikes Peak Library District, Office of the 4<sup>th</sup> Judicial District, El Paso County Board of Retirement.

#### ***Employees Included***

A Covered Employee is any elected or appointed officer or any person employed by the employer who is defined as a full-time employee or a job-share employee by the employer. A Covered Employee participates in the plan on the first date of employment.

#### ***Service***

Credited Service is the sum of Past Service, Membership Service and Purchased Service and is used in determining the amount of pension benefits and benefit eligibility. Past Service and Membership Service are periods of employment before and after September 1, 1967, respectively, and are measured in years and months. Past Service is limited to five years, and Purchased Service is also limited to 5 years and is subject to additional conditions.

### ***Compensation***

Total regular compensation excluding bonuses, extra pay, overtime, etc., but including any deferred compensation. The amount of compensation for plan purposes for any participant, who first became a participant on or after January 1, 1996, is limited in any year to a maximum of \$200,000 (as indexed).

### ***Final Average Monthly Compensation***

The average compensation of the highest paid 36 consecutive calendar months within the last 120 calendar months of Credited Service.

### ***County Contributions***

The County will contribute an amount that along with participant contributions will be sufficient to provide benefits provided by the plan and pay all administrative expenses of the plan. Such County contributions must at least match participant contributions.

### ***Member Contributions***

Effective January 1, 1986, members are required to make monthly contributions equal to 6% of earnings. Effective January 1, 2010, the required monthly member contribution is equal to 6.5% of earnings. The member monthly contribution rate becomes 7.0% effective January 1, 2011 and 7.5% effective January 1, 2012. The rate of interest credited on member contributions after July 1, 2005 is 3% per year monthly compounded annually, or such other rate as established by the Retirement Board.

### ***Normal Form of Benefit***

The Normal Form of Benefit provided by the plan is a 10-year certain and life annuity payable monthly.

### ***Accrued Benefit***

The benefit determined as for normal retirement payable at the member's normal retirement date considering current earnings and service.

### ***Normal Retirement Benefit***

Normal retirement date for a member hired before January 1, 2010 is the first of the month on or after attainment of age 62. Normal retirement date for a member hired after December 31, 2009 is the first of the month on or after attainment of age 62, but not before the completion of 60 months of continuous service.

If hired before January 1, 2010, the monthly benefit payable at normal retirement is equal to 2.22% times final average monthly compensation, times years of Credited Service.

If hired after December 31, 2009, the monthly benefit payable at normal retirement is equal to 2.00% times final average monthly compensation, times the first 10 years of Credited Service plus 2.11% times final average monthly compensation, times the member's 11<sup>th</sup> through 20<sup>th</sup> years of Credited Service plus 2.22% times final average monthly compensation, times Credited Service in excess of 20 years.

But such benefit will not be greater than 75% of the participant's final average monthly compensation.

### ***Late Retirement Benefit***

The benefit is equal to the Normal Retirement Benefit, recognizing Credited Service and increased compensation to postponed retirement date.

### ***Special Early Retirement Benefit***

An active member may elect to retire with a special early benefit if the sum of his age and years of employment equals at least 75 upon termination of employment. The benefit will be equal to his accrued benefit unreduced for early payment.

### ***Regular Early Retirement Benefit***

An active or vested terminated member who has five or more years of Credited Service may elect to retire on the first of any month after the attainment of age 55. The benefit will be equal to his accrued benefit reduced by .25% per month for each month by which his early retirement date precedes age 62.

### ***Terminated Vested Benefit***

A member who terminates employment with five or more years of Credited Service before he is eligible to receive immediate retirement benefits may elect to receive either his accumulated contributions, in lieu of all other benefits, or his vested accrued benefit payable at his normal retirement date. The member may also elect to receive a reduced benefit at an earlier commencement date.

A member who terminates employment before becoming vested is entitled to a refund of his accumulated contributions with interest.

### ***Disability Benefit***

An active member who becomes permanently and totally disabled under their employer's long-term disability insurance program, or Social Security disability, is entitled to receive a benefit payable at his normal retirement date. This benefit is based on his average monthly compensation for the calendar year prior to the calendar year in which disablement occurred and the Credited Service he would have accumulated to such retirement date. Payments will be made for ten years certain and life thereafter.

### ***Death Benefit***

#### Death of a Member Prior to Benefit Commencement

In the event a member, either actively accruing service, disabled or terminated vested, dies before payments commence, the following benefits shall be paid:

If such member is not vested at his death, there shall be paid the Beneficiary the member's accumulated contributions at the date of death.

If such member is vested at his death, one of the following death benefits shall be payable to his spouse, at her sole option:

Two times the member's accumulated contributions at the date of death; or

A monthly benefit, payable for life, in an amount equal to 60% of the member's Accrued Benefit on his date of death, reduced if the spouse is more than five years younger than the member. Such death benefit shall commence on the first day of the month coincident with or following the later of the date the member would have attained age 55 or date of death. If the member dies while in active service, on or after attainment of age 62, the surviving spouse is eligible to receive a monthly benefit payable for life as if the member retired the day before death and elected the 100% joint and survivor annuity.

#### Death After Retirement

A lump sum death benefit of \$3,000 is payable to the member's designated beneficiary. In addition, applicable benefits will be paid if the member has elected an option providing for payments to a beneficiary, or has elected the normal form of benefit and dies prior to having received benefits for 120 months, or prior to having received benefits equal to his total accumulated contributions as of the date of his retirement.

### ***Optional Retirement Benefits***

In lieu of the Normal Form of Benefit (10-year certain and life), a member may elect to receive an adjusted amount, payable for life only, or an amount payable as a 100% or 50% joint and survivor benefit. 100% and 50% joint and survivor benefits with benefits increases if beneficiary dies first are also available options.

### Summary of Actuarial Methods, Procedures and Assumptions

#### A. Entry Age Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age** actuarial method of funding.

Sometimes called a “funding method,” this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The Normal Cost for the Plan is determined by summing individual results for each active Member and determining an average normal cost rate by dividing the summed individual normal costs by the total payroll of Members before assumed retirement age.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.) The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

#### B. Asset Valuation Method

The Actuarial Value of Assets is based on a five-year moving average of expected and market values determined as follows:

- at the beginning of each plan year, a preliminary expected actuarial asset value is calculated as the sum of the previous year’s actuarial value increased with a year’s interest at the Plan valuation rate, plus net cash flow (including investment expenses) adjusted for interest (at the same rate) to the end of the previous plan year, plus interest (at the same rate) on the prior year’s unrecognized asset bases to the end of the previous plan year;
- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the end of the previous plan year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous plan year;
- the final actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous plan years, but in no case more than 120% of the market value or less than 80% of the market value,

### **C. Valuation Procedures**

No actuarial liability is included for members who terminated nonvested prior to the valuation date, except those due a refund of contributions.

The compensation amounts used in the projection of benefits and liabilities were January 1, 2011, rates of pay.

In computing accrued benefits, average earnings were determined using actual earnings histories supplied by El Paso County.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans.

**D. Actuarial Assumptions**

**Interest:** 8.0% per annum, compounded annually, net of investment expenses.

**Mortality:** Sample rates are as follows:

**1994 Group Annuity  
Mortality Table  
Setback 1 Year**

Per 100 Members		
Age	Male	Female
20	0.05	0.03
25	0.06	0.03
30	0.08	0.03
35	0.09	0.05
40	0.10	0.07
45	0.15	0.09
50	0.23	0.13
55	0.40	0.21
60	0.71	0.39
64	1.15	0.67

**Withdrawal:**

Per 100 Members		
Age	Male	Female
20	24.50	28.26
25	20.23	23.95
30	15.95	19.63
35	12.30	15.06
40	9.26	11.30
45	6.68	8.29
50	4.48	6.04
55	2.81	5.07
60	1.15	4.10
64	0.80	2.42

*Withdrawal rates are not applied after a member becomes eligible for retirement benefits.*



**Disability:**

Disability rates are the rates at which active Plan members are expected to become disabled, and to be eligible for plan disability retirement. Sample rates are as follows:

Per 100 Members	
Age	Disablement
20	0.06
25	0.06
30	0.06
35	0.09
40	0.12
45	0.20
50	0.28
55	0.50
60	0.72
64	0.77

**Post-Disability Mortality:**

Members who are receiving disability retirement benefits are expected to have a higher mortality risk than other retirees or active plan members. The disability mortality is based on the 1983 Railroad Board Disabled Mortality Table. Sample rates are as follows:

Per 100 Members	
Age	Disabled Mortality
20	1.01
25	1.68
30	1.06
35	1.14
40	1.35
45	2.00
50	3.16
55	3.78
60	4.25
64	4.88

**Salary Increase:**

Anticipated salary increases include both inflationary and merit increases. Merit increases are anticipated to be greater at younger ages. A composite salary increase assumption based on age is, therefore, applied. Sample rates are as follows:

Attained Age	Percentage Increase at Attained Age			Ratio of Salary at Age 65 to Salary at Attained Age
	Merit	Inflation	Total	
20	8.1%	3.5%	11.6%	22.84
25	6.5	3.5	10.0	13.42
30	4.4	3.5	7.9	8.60
35	3.5	3.5	7.0	5.87
40	2.9	3.5	6.4	4.19
45	2.7	3.5	6.2	3.08
50	2.5	3.5	6.0	2.28
55	2.3	3.5	5.8	1.71
60	2.0	3.5	5.5	1.29
64	1.2	3.5	4.7	1.05

**Salary Limit Increase:**

3.5% per year, rounded down to nearest \$10,000.

## Section 4.3

**Retirement Rates:**

According to the following table based on eligibility for reduced or unreduced retirement benefits.

Per 100 Members		
Attained Age	Unreduced	Reduced
49 & Before	5.0	-
50	30.0	-
51	30.0	-
52	30.0	-
53	30.0	-
54	40.0	-
55	40.0	1.6
56	40.0	2.1
57	30.0	2.6
58	30.0	3.1
59	25.0	3.6
60	25.0	4.1
61	30.0	4.6
62	30.0	-
63	20.0	-
64	20.0	-
65	30.0	-
66-69	20.0	-
70	100.0	-

**Expense Loading:**

Loading for administrative expenses is based on an estimate for the year, provided by the Retirement Board. For 2011, the administrative expense loading is \$524,150.

**Percent Married:**

85% of all members are assumed to have eligible spouses.

**Age Difference:**

A husband is assumed to be three years older than his wife.

**Age for  
Commencement of  
Deferred Vested Benefits:**

Age 62.

**Amortization of the  
Unfunded Actuarial  
Accrued Liability**

The Unfunded Actuarial Accrued Liability is amortized as a level percent of payroll over an open amortization period of 30 years. Payroll is assumed to increase 3.5% per year for this purpose.