



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*

**Nebraska Public Employees  
Retirement Systems  
2016**

**County Equal Retirement Benefit Fund**

Actuarial Valuation Results  
as of January 1, 2016 for Fiscal Year  
ending June 30, 2017





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April 1, 2016

Public Employees Retirement Board  
Nebraska Public Employees Retirement Systems  
1526 "K" Street  
Suite 400  
Lincoln, NE 68509-4816

**RE: Certification of Actuarial Valuation  
County Equal Retirement Benefit Fund**

Members of the Board:

At your request, we have prepared an actuarial valuation of the County Equal Retirement Benefit Fund as of January 1, 2016 for the purpose of determining the funded status of the Plan and any required contributions for the plan year. Funding required from each participating County for current plan members, as approved by the Retirement Board, is equal to an amount necessary to fully fund the benefit obligation, or alternatively, an annual payment which would amortize the unfunded liability over a period of twenty years commencing January 1, 1999. There were no changes to the plan provisions or actuarial methods from the prior valuation. The only change to the actuarial assumptions was the annual update of the annuity conversion interest rate for members of the Defined Contribution Plan.

The actuarial valuation is based on unaudited financial data provided by the System and member data provided by Ameritas, the record keeper for the Plan. We found this information to be reasonably consistent and comparable with the information used in the prior report. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised. The benefits considered are those delineated in Nebraska State Statutes as of January 1, 2016.

We further certify that all costs, liabilities, rates of interest and other factors for the County Equal Retirement Benefit Fund have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Public Employees Retirement Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix B.

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April 1, 2016  
Public Employees Retirement Board  
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Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

The consultants who worked on this assignment are pension actuaries. CMC's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

We respectfully submit the following report and look forward to discussing it with you.

Respectfully submitted,

A handwritten signature in blue ink that reads "Patrice Beckham".

Patrice Beckham, FSA, FCA, EA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink that reads "Brent A. Banister".

Brent Banister, PhD, FSA, FCA, EA, MAAA  
Chief Pension Actuary



## EXECUTIVE SUMMARY

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The County Equal Retirement Benefit Fund provides a benefit for members who had account balances on January 1, 1984 and who elect to annuitize those balances upon retirement. The fund was established to protect members who might have been negatively affected by the change in annuitization factors at that time when sex-distinct factors were replaced with unisex factors. As such, the characteristics of the actuarial liability of the Fund and the funding requirements are somewhat different from the other defined benefit plans overseen by NPERS. This report determines the contribution requirements for the counties who still have members in the Fund as well as providing statistical information that may provide insight into the Fund's longer term financial health.

There are several risk factors that are key to the Fund's financial status over time. One of the most significant of these factors is the proportion of retirees that elect to take an annuity rather than a lump sum. An individual member's choice is based on their own personal situation and may consider different factors from other individuals who are also making this choice. The funding assumption is that 25% of retirees, in aggregate, will elect an annuity. While this assumption is reasonable, there are other assumptions that would also be considered to be reasonable. If a greater portion of retirees elect an annuity at retirement, the liability of the Fund would be higher than estimated in this report. The possible liability volatility, especially at the individual county level, should be considered and evaluated. To assist with this analysis, we have included an exhibit in the report that shows the impact of a higher annuity election by retiring members (Exhibit 4). Liability results are shown should 50% or 75% of the retirees elect an annuity rather than the 25% assumed in the basic liability calculations. These alternative assumptions may or may not be reasonable in the aggregate, but because most counties have relatively few members, the alternative results provide some measure of the possible downside risk.

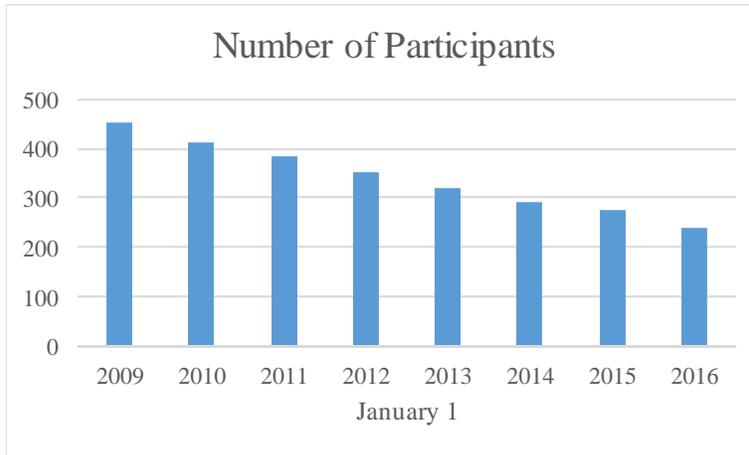
Other factors and assumptions affecting the results include the following:

- Account growth – both the cash balance and defined contribution member balances are assumed to grow at 7.75% annually. To the extent investment returns are lower, the benefits assumed to be paid from the Fund are lower and so are the costs.
- Annuitization rate – the defined contribution balances are assumed to be annuitized at the current applicable interest rate (3.57% as of January 1, 2016). If interest rates decrease in the future, higher benefit amounts would be payable and the cost of the Fund would increase.
- General economic conditions – there are connections between the growth in the members' account balances, the interest rate environment (affecting the annuitization rate), the investment return on the assets of the Fund, and the way in which potential retirees view the financial ramifications of retiring and electing an annuity are linked together. The exact interplay of these variables is extremely complex, but the fact that there is a connection means that the possible variability of the Fund's financial situation is potentially greater than it might otherwise appear. Consequently, we urge caution in concluding that the current strong health will continue indefinitely.

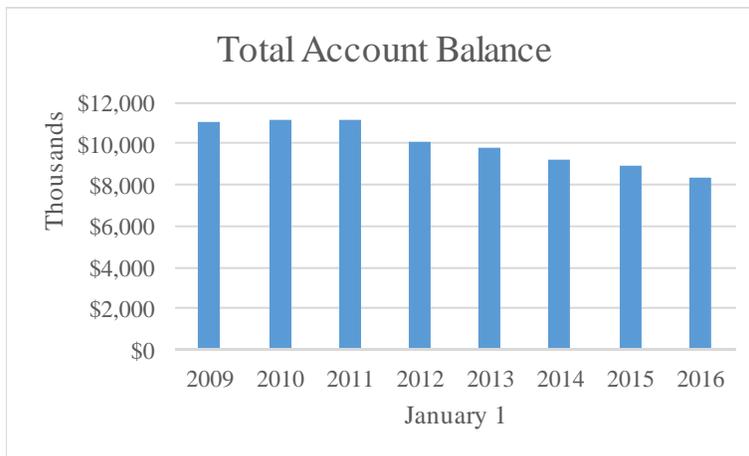


## EXECUTIVE SUMMARY

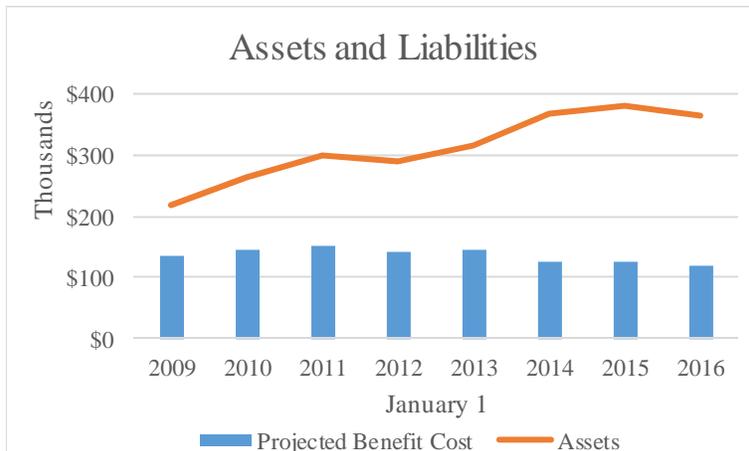
The following graphs show trends in the Fund over recent years:



Because there are no new members in the Fund, the number of participants has declined in past years and is expected to continue to decline in future years.



When comparing the total account balances in the current and past years, the growth in account balances due to investment earnings partially offsets the impact of a declining membership.



While an individual county may occasionally need to make a contribution to avoid a shortfall between liabilities and assets, the combined assets of the Fund are well above the aggregate liabilities.



**EXHIBIT 1 – SUMMARY OF ACTUARIAL RESULTS AND CONTRIBUTION ALTERNATIVES**

Below is a comparison of the aggregate results of the current and prior years’ actuarial valuations.

Results	Actuarial Valuation as of January 1	
	2016	2015
Number of Members		
Cash Balance	135	154
Defined Contribution	<u>105</u>	<u>120</u>
Total	240	274
Pre-1984 Account Balance with Interest, Beginning of Year		
Cash Balance	\$ 4,959,013	\$ 5,032,281
Defined Contribution	<u>3,342,350</u>	<u>3,855,655</u>
Total	\$ 8,301,363	\$ 8,887,936
Projected Benefit Cost*		
a. Amount	\$ 117,774	\$ 126,348
b. As a Percent of the Account Balance	1.419%	1.422%
c. Annuity Factor Interest Rate – Cash Balance	7.75%	7.75%
d. Annuity Factor Interest Rate – Defined Contribution	3.57%	3.64%
Actuarial Value of Assets (Market Value)		
a. Asset Value as of Prior Year’s Valuation	\$ 380,600	\$ 367,326
b. Deposits During the Year	0	0
c. Withdrawals During the Year	17,778	13,484
d. Investment Return or (Loss)	<u>(754)</u>	<u>26,758</u>
e. Actuarial Value of Assets as of Valuation Date [a. + b. - c. + d]	\$ 362,068	\$ 380,600
Unfunded Liability/(Surplus)	\$ (244,294)	\$ (254,252)
Total Contribution Amount (All Counties)	\$ 0	\$ 0

\*Cost is based on the assumption that 75% of members will elect a lump sum or installment payment instead of an annuity. To the extent that actual experience in the future deviates from this assumption, the costs in future years could vary as well, at times significantly.



## EXHIBIT 2 – SUMMARY OF FUND ASSETS BY COUNTY

County Name	Beginning Balance January 1, 2015	Employer Contributions for 2015	Withdrawals	Investment Return	Ending Balance December 31, 2015
1. Adams	\$ 16,147	\$ 0	\$ 0	\$ (40)	\$ 16,107
2. Box Butte	6,424	0	0	(16)	6,408
3. Buffalo	19,298	0	0	(46)	19,252
4. Cass	1,067	0	0	(3)	1,064
5. Cedar	1,177	0	0	(2)	1,175
6. Cheyenne	3,501	0	1,846	(51)	1,604
7. Cuming	12,127	0	0	(29)	12,098
8. Custer	11,030	0	0	(27)	11,003
9. Dawson	24,533	0	0	(60)	24,473
10. Dodge	20,885	0	0	(50)	20,835
11. Gage	8,727	0	0	(21)	8,706
12. Gosper	3,178	0	1,970	22	1,230
13. Hall	28,666	0	1,073	(94)	27,499
14. Harlan	3,349	0	0	(8)	3,341
15. Hitchcock	7,284	0	0	(18)	7,266
16. Jefferson	12,686	0	0	(31)	12,655
17. Kimball	11,292	0	0	(27)	11,265
18. Lincoln	4,076	0	0	(9)	4,067
19. Madison	9,358	0	0	(23)	9,335
20. Morrill	11,753	0	0	(28)	11,725
21. Platte	26,881	0	0	(65)	26,816
22. Polk	4,456	0	1,679	19	2,796
23. Red Willow	4,517	0	0	(11)	4,506
24. Richardson	7,761	0	0	(19)	7,742
25. Saline	7,882	0	0	(19)	7,863
26. Sarpy	40,642	0	0	(98)	40,544
27. Saunders	18,871	0	3,773	29	15,127
28. Scotts Bluff	18,394	0	5,735	17	12,676
29. Seward	11,114	0	1,703	10	9,421
30. Washington	13,342	0	0	(32)	13,310
31. York	10,183	0	0	(24)	10,159
Totals	\$ 380,601	\$ 0	\$ 17,779	\$ (754)	\$ 362,068



**EXHIBIT 3 – ACTUARIAL RESULTS AND CONTRIBUTION ALTERNATIVES BY COUNTY**

County Name	Number of Members	Projected Benefit Cost**	Assets	2015 Full Contribution	2016 Full Contribution
1. Adams	7	\$ 2,076	\$ 16,107	\$ 0	\$ 0
2. Box Butte	6	2,589	6,408	0	0
3. Buffalo	21	7,807	19,252	0	0
4. Cass	2	851	1,064	0	0
5. Cedar*	0	0	1,175	0	0
6. Cheyenne	2	356	1,604	0	0
7. Cuming	1	153	12,098	0	0
8. Custer	10	3,715	11,003	0	0
9. Dawson	8	4,527	24,473	0	0
10. Dodge	12	9,550	20,835	0	0
11. Gage	11	4,796	8,706	0	0
12. Gosper	3	892	1,230	0	0
13. Hall	11	3,506	27,499	0	0
14. Harlan	5	2,298	3,341	0	0
15. Hitchcock	3	2,208	7,266	0	0
16. Jefferson	5	3,009	12,655	0	0
17. Kimball	3	501	11,265	0	0
18. Lincoln	7	1,561	4,067	0	0
19. Madison	13	5,413	9,335	0	0
20. Morrill	2	1,862	11,725	0	0
21. Platte	20	9,535	26,816	0	0
22. Polk	4	1,533	2,796	0	0
23. Red Willow	4	685	4,506	0	0
24. Richardson	5	2,786	7,742	0	0
25. Saline	6	2,317	7,863	0	0
26. Sarpy	30	19,562	40,544	0	0
27. Saunders	11	8,064	15,127	0	0
28. Scotts Bluff	10	8,251	12,676	0	0
29. Seward	7	3,776	9,421	0	0
30. Washington	8	1,439	13,310	0	0
31. York	3	2,156	10,159	0	0
Totals	240	\$ 117,774	\$ 362,068	\$ 0	\$ 0

\* County no longer has any members covered by the fund.

\*\* Cost is based on the assumption that 75% of retiring members will choose a lump sum or installment payment instead of an annuity. To the extent that actual experience in the future deviates from this assumption, the costs in future years could vary as well, at times significantly.



## EXHIBIT 4 – RISK MEASURES BY COUNTY

This exhibit compares the Projected Benefit Cost (liability) assuming 25% of retirees elect an annuity (the funding assumption) with alternative assumptions of 50% and 75%. If a county has assets exceeding the liability of one or both of the alternative assumption scenarios, it indicates it is in a better position to withstand possible adverse experience.

County Name	Number of Members	Projected Benefit Cost			Assets
		25% Annuitize	50% Annuitize	75% Annuitize	
1. Adams	7	\$ 2,076	\$ 4,152	\$ 6,228	\$ 16,107
2. Box Butte	6	2,589	5,178	7,767	6,408
3. Buffalo	21	7,807	15,614	23,421	19,252
4. Cass	2	851	1,702	2,553	1,064
5. Cedar	0	0	0	0	1,175
6. Cheyenne	2	356	712	1,068	1,604
7. Cuming	1	153	306	459	12,098
8. Custer	10	3,715	7,430	11,145	11,003
9. Dawson	8	4,527	9,054	13,581	24,473
10. Dodge	12	9,550	19,100	28,650	20,835
11. Gage	11	4,796	9,592	14,388	8,706
12. Gosper	3	892	1,784	2,676	1,230
13. Hall	11	3,506	7,012	10,518	27,499
14. Harlan	5	2,298	4,596	6,894	3,341
15. Hitchcock	3	2,208	4,416	6,624	7,266
16. Jefferson	5	3,009	6,018	9,027	12,655
17. Kimball	3	501	1,002	1,503	11,265
18. Lincoln	7	1,561	3,122	4,683	4,067
19. Madison	13	5,413	10,826	16,239	9,335
20. Morrill	2	1,862	3,724	5,586	11,725
21. Platte	20	9,535	19,070	28,605	26,816
22. Polk	4	1,533	3,066	4,599	2,796
23. Red Willow	4	685	1,370	2,055	4,506
24. Richardson	5	2,786	5,572	8,358	7,742
25. Saline	6	2,317	4,634	6,951	7,863
26. Sarpy	30	19,562	39,124	58,686	40,544
27. Saunders	11	8,064	16,128	24,192	15,127
28. Scotts Bluff	10	8,251	16,502	24,753	12,676
29. Seward	7	3,776	7,552	11,328	9,421
30. Washington	8	1,439	2,878	4,317	13,310
31. York	3	2,156	4,312	6,468	10,159
<b>Totals</b>	<b>240</b>	<b>\$ 117,774</b>	<b>\$ 235,548</b>	<b>\$ 353,322</b>	<b>\$ 362,068</b>



**EXHIBIT 5 – SUMMARY OF MEMBER DATA**

Age Range	Data	Gender		Total
		Male	Female	
Less Than 40	Count of Members	0	0	0
	Average of Total Balance	\$ 0	\$ 0	\$ 0
	Sum of Total Balance	\$ 0	\$ 0	\$ 0
40-44	Count of Members	0	0	0
	Average of Total Balance	\$ 0	\$ 0	\$ 0
	Sum of Total Balance	\$ 0	\$ 0	\$ 0
45-49	Count of Members	0	0	0
	Average of Total Balance	\$ 0	\$ 0	\$ 0
	Sum of Total Balance	\$ 0	\$ 0	\$ 0
50-54	Count of Members	0	0	0
	Average of Total Balance	\$ 0	\$ 0	\$ 0
	Sum of Total Balance	\$ 0	\$ 0	\$ 0
55-59	Count of Members	19	18	37
	Average of Total Balance	\$ 13,615	\$ 13,269	\$ 13,447
	Sum of Total Balance	\$ 258,686	\$ 238,850	\$ 497,536
60-64	Count of Members	64	45	109
	Average of Total Balance	\$ 37,569	\$ 23,947	\$ 31,945
	Sum of Total Balance	\$ 2,404,399	\$ 1,077,593	\$ 3,481,992
65-69	Count of Members	27	30	57
	Average of Total Balance	\$ 52,187	\$ 34,609	\$ 42,935
	Sum of Total Balance	\$ 1,409,051	\$ 1,038,257	\$ 2,447,308
70-74	Count of Members	9	8	17
	Average of Total Balance	\$ 47,766	\$ 49,642	\$ 48,649
	Sum of Total Balance	\$ 429,894	\$ 397,136	\$ 827,030
75 and Above	Count of Members	14	6	20
	Average of Total Balance	\$ 64,631	\$ 23,776	\$ 52,375
	Sum of Total Balance	\$ 904,840	\$ 142,657	\$ 1,047,497
Total Members		133	107	240
Total Average Balance		\$ 40,653	\$ 27,051	\$ 34,589
Grand Total Balance		\$ 5,406,870	\$ 2,894,493	\$ 8,301,363



**EXHIBIT 6 (Continued) – SUMMARY OF MEMBER DATA BY COUNTY**

County*	Data	Gender		Total
		Male	Female	
Adams	Count of Members	4	3	7
	Sum of Total Balance	\$ 104,597	\$ 52,637	\$ 157,234
Box Butte	Count of Members	3	3	6
	Sum of Total Balance	\$ 53,962	\$ 143,067	\$ 197,029
Buffalo	Count of Members	11	10	21
	Sum of Total Balance	\$ 315,244	\$ 244,279	\$ 559,523
Cass	Count of Members	2	0	2
	Sum of Total Balance	\$ 71,502	\$ 0	\$ 71,502
Cheyenne	Count of Members	0	2	2
	Sum of Total Balance	\$ 0	\$ 29,818	\$ 29,818
Cuming	Count of Members	0	1	1
	Sum of Total Balance	\$ 0	\$ 11,577	\$ 11,577
Custer	Count of Members	6	4	10
	Sum of Total Balance	\$ 188,665	\$ 69,182	\$ 257,847
Dawson	Count of Members	6	2	8
	Sum of Total Balance	\$ 251,961	\$ 77,280	\$ 329,241
Dodge	Count of Members	6	6	12
	Sum of Total Balance	\$ 330,540	\$ 300,172	\$ 630,712
Gage	Count of Members	6	5	11
	Sum of Total Balance	\$ 237,992	\$ 116,212	\$ 354,204
Gosper	Count of Members	2	1	3
	Sum of Total Balance	\$ 22,902	\$ 34,885	\$ 57,787
Hall	Count of Members	4	7	11
	Sum of Total Balance	\$ 119,023	\$ 115,439	\$ 234,462
Harlan	Count of Members	1	4	5
	Sum of Total Balance	\$ 117,050	\$ 55,468	\$ 172,518
Hitchcock	Count of Members	2	1	3
	Sum of Total Balance	\$ 62,584	\$ 65,182	\$ 127,766
Jefferson	Count of Members	3	2	5
	Sum of Total Balance	\$ 151,493	\$ 53,408	\$ 204,901
Kimball	Count of Members	0	3	3
	Sum of Total Balance	\$ 0	\$ 40,055	\$ 40,055
Lincoln	Count of Members	3	4	7
	Sum of Total Balance	\$ 81,660	\$ 41,283	\$ 122,943
Madison	Count of Members	7	6	13
	Sum of Total Balance	\$ 186,835	\$ 165,020	\$ 351,855
Morrill	Count of Members	1	1	2
	Sum of Total Balance	\$ 135,690	\$ 21,437	\$ 157,127

\* Cedar County no longer has any members covered by the Fund.



**EXHIBIT 6 (Continued) – SUMMARY OF MEMBER DATA BY COUNTY**

County*	Data	Gender		Total
		Male	Female	
Platte	Count of Members	14	6	20
	Sum of Total Balance	\$ 499,891	\$ 178,527	\$ 678,418
Polk	Count of Members	3	1	4
	Sum of Total Balance	\$ 91,175	\$ 12,520	\$ 103,695
Red Willow	Count of Members	2	2	4
	Sum of Total Balance	\$ 7,808	\$ 46,582	\$ 54,390
Richardson	Count of Members	4	1	5
	Sum of Total Balance	\$ 137,593	\$ 25,140	\$ 162,733
Saline	Count of Members	5	1	6
	Sum of Total Balance	\$ 151,353	\$ 21,889	\$ 173,242
Sarpy	Count of Members	19	11	30
	Sum of Total Balance	\$ 1,096,949	\$ 302,854	\$ 1,399,803
Saunders	Count of Members	7	4	11
	Sum of Total Balance	\$ 319,451	\$ 209,627	\$ 529,078
Scotts Bluff	Count of Members	6	4	10
	Sum of Total Balance	\$ 513,496	\$ 82,316	\$ 595,812
Seward	Count of Members	2	5	7
	Sum of Total Balance	\$ 90,406	\$ 174,526	\$ 264,932
Washington	Count of Members	3	5	8
	Sum of Total Balance	\$ 52,649	\$ 53,083	\$ 105,732
York	Count of Members	1	2	3
	Sum of Total Balance	\$ 14,399	\$ 151,028	\$ 165,427
	Members			
	Cash Balance	73	62	135
	Defined Contribution	60	45	105
	Total	133	107	240
Grand Total Balance				
	Cash Balance	\$ 3,140,437	\$ 1,818,576	\$ 4,959,013
	Defined Contribution	2,266,433	1,075,917	3,342,350
	Total	\$ 5,406,870	\$ 2,894,493	\$ 8,301,363

\* Cedar County no longer has any members covered by the Fund.



## **APPENDIX A – SUMMARY OF BENEFIT PROVISIONS**

---

<b>Member</b>	Any person employed by a County participating in either the Defined Contribution or Cash Balance Benefit under the County Employees Retirement System who has an accumulated account balance based on contributions which were made prior to January 1, 1984.
<b>Contributions</b>	Each participating County shall make contributions to the fund on an actuarial basis as approved by the Retirement Board.
<b>Eligibility for Benefits</b>	Any member who retires or terminates service and elects to convert to an annuity using their accumulated account balance, with interest, commencing on or after age 55, is eligible to receive a benefit from the fund.
<b>Benefit Amount</b>	<p>The fund shall provide the Actuarially Equivalent amount required to purchase the additional monthly annuity, if any, which is equal to:</p> <p>a. the income provided by the accumulated contributions made prior to January 1, 1984 with interest, based on male annuity conversion factors in effect on the annuity starting date,</p> <p style="text-align: center;">Less</p> <p>b. the income provided by the accumulated contributions made prior to January 1, 1984 with interest, which are based on 50% male / 50% female annuity conversion factors in effect on the annuity starting date.</p>
<b>Cash Balance Conversion</b>	Any member who elected to transfer his or her account balance to the Nebraska County Cash Balance Plan as of January 1, 2003, January 1, 2008 or January 2, 2013 will have his or her Benefit Amount determined using the annuity conversion interest rate applicable to the County Employees Retirement System (Cash Balance Benefit), which for 2016 is 7.75%. Any other member will have his or her Benefit amount determined using the annuity conversion interest rate applicable to the County Employees Retirement System (Defined Contribution benefit), which for 2016 is 3.57%.

### Changes in Benefit Provisions Since the Prior Year

There were no changes in the benefit provisions since the last valuation.



## **APPENDIX B – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

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### **Economic Assumptions**

- |  |  |
|--|--|
| 1. Investment Return   | 7.75% per annum, compounded annually, net of expenses.   |
| 2. Consumer Price Inflation  | 3.25% per annum, compounded annually.  |
| 3. Interest on accumulated contribution balances (contributions made before January 1, 1984) | 7.75% per annum, compounded annually.  |
| 4. COLA (optional purchase applicable to annuities)  | 2.50% per annum, compounded annually.  |
| 5. Annuity Conversion Interest Rates   | 7.75% for annuities from the Cash Balance Plan<br>3.57% for annuities from the Defined Contribution Plan |

### **Demographic Assumptions**

- |                    |  |
|--------------------|--|
| 1. Mortality       |  |
| a. Pre-retirement  | None.  |
| b. Post-retirement | 1994 Group Annuity Mortality (based on Actuarial Equivalence definition in statute). |
| 2. Withdrawal      | None.  |
| 3. Disability      | None   |



## APPENDIX B – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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### 4. Retirement

Rates vary by age as follows:

Age	County Annual Rates
55	5%
56	5
57	5
58	5
59	5
60	5
61	5
62	10
63	10
64	10
65	20
66	20
67	15
68	15
69	15
70-79	20
80	100

### Other Assumptions

#### 1. Payment election

75% of retiring members were assumed to elect a lump sum distribution or installment payments, and 25% of retiring members were assumed to elect an annuity form of distribution.

#### 2. Form of Annuity Payment

Of members electing an annuity, 80% of those members were assumed to elect a 5-year certain and life annuity without COLA, and 20% of those members were assumed to elect a 5-year certain and life with a 2.5% annual COLA.



## **APPENDIX B – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

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### **Methods**

1. Funding Method

The present value of future benefits or Projected Benefit Cost, less the Actuarial Value of Assets, equals the Unfunded Liability or Surplus. The minimum recommended contribution is equal to an annual amount necessary to amortize the Unfunded Liability over twenty years from January 1, 1999.

2. Asset Valuation Method

Fair market value.

### **Changes in Assumptions Since the Prior Year**

The assumed interest rate used for Defined Contribution annuity calculations is the annuitization rate in effect as of the valuation date. The rate has changed from 3.64% to 3.57%.