



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*

**Nebraska Public Employees  
Retirement Systems  
2017**

**County Equal Retirement Benefit Fund**

Actuarial Valuation Results  
as of January 1, 2017 for Fiscal Year  
ending June 30, 2018





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April 21, 2017

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, 2017 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. As of the valuation date, two years remain in the amortization period.

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 retiring from the Defined Contribution Plan. However, at their meeting on October 17, 2016, the Board adopted the set of recommended assumptions from the experience study that will be implemented with the January 1, 2018 valuation.

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, 2017.



April 21, 2017  
Public Employees Retirement Board  
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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.

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' in a cursive script.

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

A handwritten signature in blue ink that reads 'Brent A. Banister' in a cursive script.

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 managed 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. The initial amortization period, which was set at 20 years, has shortened and is currently two years long.

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 could 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 volatility in the liability, 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:

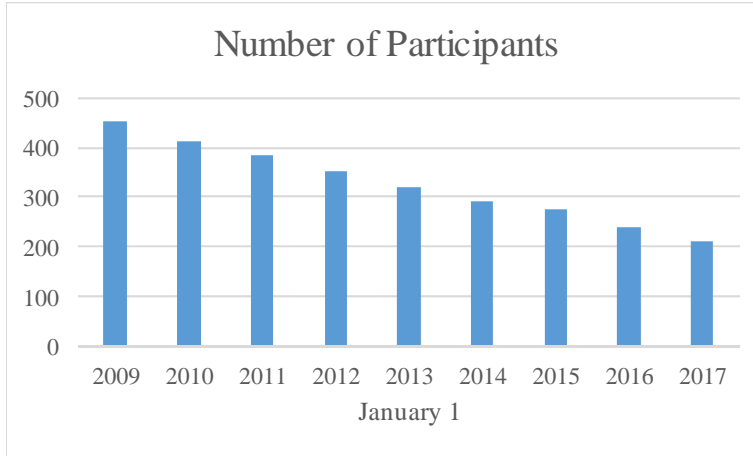
- Account growth – both the cash balance and defined contribution member balances are assumed to grow at 7.75% annually. To the extent actual investment returns (or interest credits and dividends in the cash balance accounts) are lower, the benefits assumed to be paid from the Fund are lower and so are the liabilities.
- Annuity factor interest rate – the defined contribution balances are assumed to be annuitized at the current applicable interest rate (2.62% as of January 1, 2017). If interest rates decrease in the future, the liabilities 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 annuity factor interest 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. 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 financial health will continue indefinitely.

It is important to note that the unfunded actuarial liability is not, by itself, an indication of whether or not the Fund has sufficient assets to meet future liabilities. Further, the presence of an unfunded actuarial liability or surplus is not an indication of what future contributions may be required to fund the benefits.

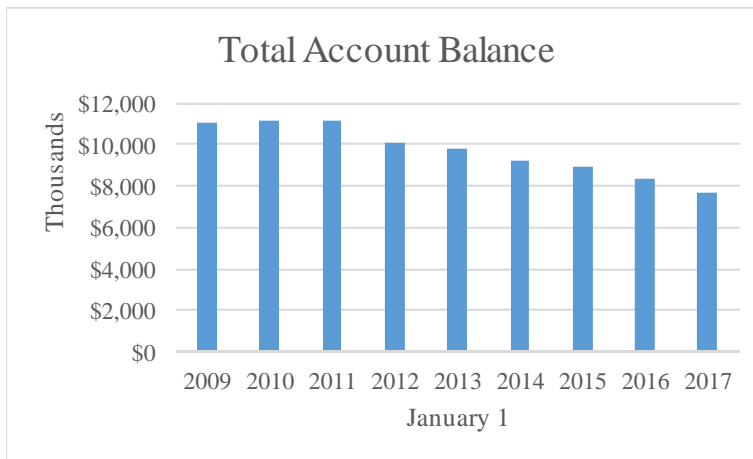


## EXECUTIVE SUMMARY

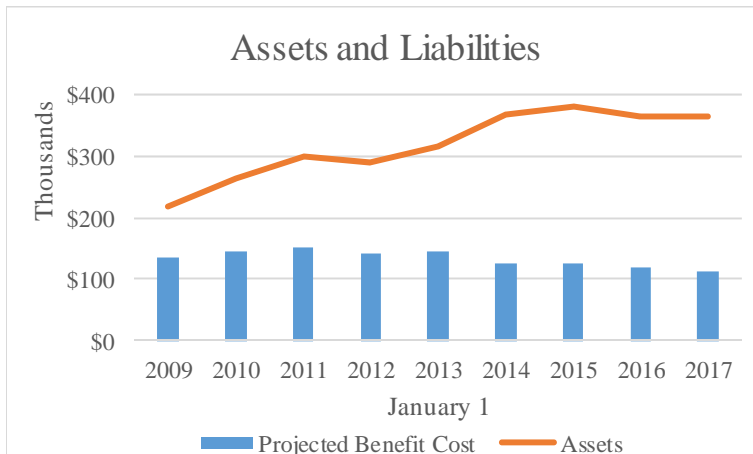
The following graphs show trends in the Fund over recent years:



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	
	2017	2016
Number of Members		
Cash Balance	117	135
Defined Contribution	96	105
Total	<u>213</u>	<u>240</u>
Pre-1984 Account Balance with Interest, Beginning of Year		
Cash Balance	\$ 4,502,470	\$ 4,959,013
Defined Contribution	<u>3,163,589</u>	<u>3,342,350</u>
Total	<u>\$ 7,666,059</u>	<u>\$ 8,301,363</u>
Projected Benefit Cost*		
a. Amount	\$ 113,640	\$ 117,774
b. As a Percent of the Account Balance	1.482%	1.419%
c. Annuity Factor Interest Rate – Cash Balance	7.75%	7.75%
d. Annuity Factor Interest Rate – Defined Contribution	2.62%	3.57%
Actuarial Value of Assets (Market Value)		
a. Asset Value as of Prior Year’s Valuation	\$ 362,068	\$ 380,600
b. Deposits During the Year	0	0
c. Withdrawals During the Year	27,437	17,778
d. Investment Return or (Loss)	30,202	(754)
e. Other	<u>(1,196)</u>	<u>0</u>
f. Actuarial Value of Assets as of Valuation Date [a. + b. - c. + d + e.]	\$ 363,637	\$ 362,068
Unfunded Liability/(Surplus)	\$ (249,997)	\$ (244,294)
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, 2016	Employer Contributions for 2016	Withdrawals	Investment Return	Other	Ending Balance December 31, 2016
1. Adams	\$ 16,107	\$ 0	\$ 0	\$ 1,419	\$ 0	\$ 17,526
2. Box Butte	6,408	0	0	565	0	6,973
3. Buffalo	19,252	0	644	1,663	0	20,271
4. Cass	1,064	0	0	94	0	1,158
5. Cedar	1,175	0	0	21	(1,196)	0
6. Cheyenne	1,604	0	0	142	0	1,746
7. Cuming	12,098	0	0	1,066	0	13,164
8. Custer	11,003	0	0	969	0	11,972
9. Dawson	24,473	0	0	2,156	0	26,629
10. Dodge	20,835	0	0	1,835	0	22,670
11. Gage	8,706	0	0	767	0	9,473
12. Gosper	1,230	0	0	109	0	1,339
13. Hall	27,499	0	0	2,426	0	29,925
14. Harlan	3,341	0	0	294	0	3,635
15. Hitchcock	7,266	0	0	640	0	7,906
16. Jefferson	12,655	0	0	1,115	0	13,770
17. Kimball	11,265	0	0	992	0	12,257
18. Lincoln	4,067	0	0	358	0	4,425
19. Madison	9,335	0	0	822	0	10,157
20. Morrill	11,725	0	0	1,033	0	12,758
21. Platte	26,816	0	0	2,362	0	29,178
22. Polk	2,796	0	0	246	0	3,042
23. Red Willow	4,506	0	963	377	0	3,920
24. Richardson	7,742	0	0	682	0	8,424
25. Saline	7,863	0	4,213	263	0	3,913
26. Sarpy	40,544	0	16,492	2,736	0	26,788
27. Saunders	15,127	0	0	1,333	0	16,460
28. Scotts Bluff	12,676	0	2,241	1,096	0	11,531
29. Seward	9,421	0	2,658	562	0	7,325
30. Washington	13,310	0	226	1,164	0	14,248
31. York	10,159	0	0	895	0	11,054
Totals	\$ 362,068	\$ 0	\$ 27,437	\$ 30,202	\$ (1,196)	\$ 363,637





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

County Name	Number of Members	Projected Benefit Cost*	Assets	2016 Full Contribution	2017 Full Contribution
1. Adams	6	\$ 2,225	\$ 17,526	\$ 0	\$ 0
2. Box Butte	6	2,789	6,973	0	0
3. Buffalo	19	7,870	20,271	0	0
4. Cass	2	907	1,158	0	0
5. Cheyenne	2	379	1,746	0	0
6. Cuming	1	162	13,164	0	0
7. Custer	9	3,923	11,972	0	0
8. Dawson	8	4,932	26,629	0	0
9. Dodge	11	8,563	22,670	0	0
10. Gage	11	5,270	9,473	0	0
11. Gosper	3	1,028	1,339	0	0
12. Hall	10	3,233	29,925	0	0
13. Harlan	4	2,317	3,635	0	0
14. Hitchcock	3	2,497	7,906	0	0
15. Jefferson	5	3,384	13,770	0	0
16. Kimball	3	544	12,257	0	0
17. Lincoln	5	1,030	4,425	0	0
18. Madison	13	6,162	10,157	0	0
19. Morrill	2	1,926	12,758	0	0
20. Platte	18	9,558	29,178	0	0
21. Polk	4	1,693	3,042	0	0
22. Red Willow	3	192	3,920	0	0
23. Richardson	5	3,209	8,424	0	0
24. Saline	3	688	3,913	0	0
25. Sarpy	24	15,899	26,788	0	0
26. Saunders	9	8,201	16,460	0	0
27. Scotts Bluff	8	7,792	11,531	0	0
28. Seward	6	3,422	7,325	0	0
29. Washington	7	1,534	14,248	0	0
30. York	3	2,311	11,054	0	0
Totals	213	\$ 113,640	\$ 363,637	\$ 0	\$ 0

\* 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 25% Annuitize	Projected Benefit Cost 50% Annuitize	Projected Benefit Cost 75% Annuitize	Assets
1. Adams	6	\$ 2,225	\$ 4,450	\$ 6,675	\$ 17,526
2. Box Butte	6	2,789	5,578	8,367	6,973
3. Buffalo	19	7,870	15,740	23,610	20,271
4. Cass	2	907	1,814	2,721	1,158
5. Cheyenne	2	379	758	1,137	1,746
6. Cuming	1	162	324	486	13,164
7. Custer	9	3,923	7,846	11,769	11,972
8. Dawson	8	4,932	9,864	14,796	26,629
9. Dodge	11	8,563	17,126	25,689	22,670
10. Gage	11	5,270	10,540	15,810	9,473
11. Gosper	3	1,028	2,056	3,084	1,339
12. Hall	10	3,233	6,466	9,699	29,925
13. Harlan	4	2,317	4,634	6,951	3,635
14. Hitchcock	3	2,497	4,994	7,491	7,906
15. Jefferson	5	3,384	6,768	10,152	13,770
16. Kimball	3	544	1,088	1,632	12,257
17. Lincoln	5	1,030	2,060	3,090	4,425
18. Madison	13	6,162	12,324	18,486	10,157
19. Morrill	2	1,926	3,852	5,778	12,758
20. Platte	18	9,558	19,116	28,674	29,178
21. Polk	4	1,693	3,386	5,079	3,042
22. Red Willow	3	192	384	576	3,920
23. Richardson	5	3,209	6,418	9,627	8,424
24. Saline	3	688	1,376	2,064	3,913
25. Sarpy	24	15,899	31,798	47,697	26,788
26. Saunders	9	8,201	16,402	24,603	16,460
27. Scotts Bluff	8	7,792	15,584	23,376	11,531
28. Seward	6	3,422	6,844	10,266	7,325
29. Washington	7	1,534	3,068	4,602	14,248
30. York	3	2,311	4,622	6,933	11,054
<b>Totals</b>	<b>213</b>	<b>\$ 113,640</b>	<b>\$ 227,280</b>	<b>\$ 340,920</b>	<b>\$ 363,637</b>



**EXHIBIT 5 – SUMMARY OF MEMBER DATA**

Age Range	Data	Gender		Total
		Male	Female	
Less Than 55	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	11	10	21
	Average of Total Balance	\$ 9,952	\$ 10,662	\$ 10,290
	Sum of Total Balance	\$ 109,473	\$ 106,622	\$ 216,095
60-64	Count of Members	52	42	94
	Average of Total Balance	\$ 33,748	\$ 23,964	\$ 29,376
	Sum of Total Balance	\$ 1,754,892	\$ 1,006,482	\$ 2,761,374
65-69	Count of Members	31	26	57
	Average of Total Balance	\$ 47,163	\$ 40,306	\$ 44,036
	Sum of Total Balance	\$ 1,462,068	\$ 1,047,957	\$ 2,510,025
70-74	Count of Members	12	11	23
	Average of Total Balance	\$ 58,750	\$ 45,911	\$ 52,610
	Sum of Total Balance	\$ 704,998	\$ 505,026	\$ 1,210,024
75 and Above	Count of Members	13	5	18
	Average of Total Balance	\$ 66,584	\$ 20,591	\$ 53,808
	Sum of Total Balance	\$ 865,588	\$ 102,953	\$ 968,541
Total Members		119	94	213
Average of Total Balance		\$ 41,151	\$ 29,458	\$ 35,991
Grand Total Balance		\$ 4,897,019	\$ 2,769,040	\$ 7,666,059



**EXHIBIT 6 – SUMMARY OF MEMBER DATA BY COUNTY**

County	Data	Gender		Total
		Male	Female	
Adams	Count of Members	4	2	6
	Sum of Total Balance	\$ 109,884	\$ 54,973	\$ 164,857
Box Butte	Count of Members	3	3	6
	Sum of Total Balance	\$ 56,742	\$ 150,946	\$ 207,688
Buffalo	Count of Members	11	8	19
	Sum of Total Balance	\$ 328,635	\$ 211,178	\$ 539,813
Cass	Count of Members	2	0	2
	Sum of Total Balance	\$ 75,082	\$ 0	\$ 75,082
Cheyenne	Count of Members	0	2	2
	Sum of Total Balance	\$ 0	\$ 31,310	\$ 31,310
Cuming	Count of Members	0	1	1
	Sum of Total Balance	\$ 0	\$ 12,157	\$ 12,157
Custer	Count of Members	6	3	9
	Sum of Total Balance	\$ 189,044	\$ 71,311	\$ 260,355
Dawson	Count of Members	6	2	8
	Sum of Total Balance	\$ 265,170	\$ 81,146	\$ 346,316
Dodge	Count of Members	6	5	11
	Sum of Total Balance	\$ 272,745	\$ 273,167	\$ 545,912
Gage	Count of Members	6	5	11
	Sum of Total Balance	\$ 251,898	\$ 121,992	\$ 373,890
Gosper	Count of Members	2	1	3
	Sum of Total Balance	\$ 24,131	\$ 37,680	\$ 61,811
Hall	Count of Members	3	7	10
	Sum of Total Balance	\$ 88,826	\$ 120,805	\$ 209,631
Harlan	Count of Members	1	3	4
	Sum of Total Balance	\$ 122,907	\$ 48,793	\$ 171,700
Hitchcock	Count of Members	2	1	3
	Sum of Total Balance	\$ 67,680	\$ 66,308	\$ 133,988
Jefferson	Count of Members	3	2	5
	Sum of Total Balance	\$ 160,332	\$ 56,236	\$ 216,568
Kimball	Count of Members	0	3	3
	Sum of Total Balance	\$ 0	\$ 42,187	\$ 42,187
Lincoln	Count of Members	2	3	5
	Sum of Total Balance	\$ 48,603	\$ 28,022	\$ 76,625
Madison	Count of Members	7	6	13
	Sum of Total Balance	\$ 199,502	\$ 177,315	\$ 376,817
Morrill	Count of Members	1	1	2
	Sum of Total Balance	\$ 143,179	\$ 22,509	\$ 165,688



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

County	Data	Gender		Total
		Male	Female	
Platte	Count of Members	12	6	18
	Sum of Total Balance	\$ 468,956	\$ 186,084	\$ 655,040
Polk	Count of Members	3	1	4
	Sum of Total Balance	\$ 97,054	\$ 13,254	\$ 110,308
Red Willow	Count of Members	2	1	3
	Sum of Total Balance	\$ 8,199	\$ 7,983	\$ 16,182
Richardson	Count of Members	4	1	5
	Sum of Total Balance	\$ 145,979	\$ 27,081	\$ 173,060
Saline	Count of Members	3	0	3
	Sum of Total Balance	\$ 58,022	\$ 0	\$ 58,022
Sarpy	Count of Members	13	11	24
	Sum of Total Balance	\$ 776,629	\$ 318,365	\$ 1,094,994
Saunders	Count of Members	7	2	9
	Sum of Total Balance	\$ 338,041	\$ 172,370	\$ 510,411
Scotts Bluff	Count of Members	5	3	8
	Sum of Total Balance	\$ 492,160	\$ 52,881	\$ 545,041
Seward	Count of Members	1	5	6
	Sum of Total Balance	\$ 36,302	\$ 186,422	\$ 222,724
Washington	Count of Members	3	4	7
	Sum of Total Balance	\$ 56,198	\$ 50,842	\$ 107,040
York	Count of Members	1	2	3
	Sum of Total Balance	\$ 15,119	\$ 145,723	\$ 160,842
	Members			
	Cash Balance	64	53	117
	Defined Contribution	55	41	96
	Total	119	94	213
Grand Total Balance				
	Cash Balance	\$ 2,808,975	\$ 1,693,495	\$ 4,502,470
	Defined Contribution	2,088,044	1,075,545	3,163,589
	Total	\$ 4,897,019	\$ 2,769,040	\$ 7,666,059



## **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 2017 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 2017 is 2.62%.

### 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>2.62% 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 annuity factor interest rate in effect as of the valuation date. The rate has changed from 3.57% to 2.62%.