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# THE NEBRASKA PUBLIC EMPLOYEES 

RETIREMENT SYSTEM

## COUNTY EMPLOYEES' RETIREMENT SYSTEM

## CASH BALANCE BENEFIT FUND

## GASB STATEMENT NO. 68 REPORT

MEASUREMENT DATE: DECEMBER 31, 2017


Cavanaugh Macdonald
C O N SULTIN G, LLC
The experience and dedication you deserve

June 26, 2018
Public Employees Retirement Board
Nebraska Public Employees Retirement Systems
Post Office Box 94816
Lincoln, NE 68509
Dear Members of the Board:
Presented in this report is information to assist the Nebraska Public Employees Retirement System in providing information required under the Governmental Accounting Standards Board (GASB) Statement No. 68 to participating employers of the County Employees' Retirement System Cash Balance Benefit Fund. GASB Statement No. 68 establishes accounting and financial reporting requirements for governmental employers who provide pension benefits to their employees through a trust. This report, which has been prepared as of December 31, 2017, and may be used by employers for financial reporting for fiscal years ending on or before December 31, 2018. The calculations in this report have been made on a basis that is consistent with our understanding of this accounting standard (GASB 68). Please note that the discount rate used to determine the Total Pension Liability (TPL) changed from $7.75 \%$ at the Prior Measurement Date to $7.50 \%$ at the current Measurement Date. In addition to the discount rate, many other assumptions have changed since the Prior Measurement Date and are detailed in Appendix C.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of January 1, 2018. The valuation was based upon data, furnished by the System's staff, concerning active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete, our results may be different and our calculations may need to be revised. Please see the actuarial valuation for additional details on the funding requirements for the System including actuarial assumptions and methods and the funding policy.

To the best of our knowledge, the information contained in this report is complete and accurate. Certain information about the Plan and where additional information can be found was provided by the Nebraska Public Employees Retirement System and used in this report. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the System, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the System. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 68.

## Board of Trustees

June 26, 2018
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These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

We, Patrice A. Beckham, FSA and Brent A. Banister, FSA, 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 this report or to provide explanations or further details as may be appropriate.

Respectfully submitted,


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


Brent A. Banister, PhD, FSA, EA, FCA, MAAA Chief Actuary

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NEBRASKA PUBLIC EMPLOYEES RETIREMENT SYSTEM

## COUNTY EMPLOYEES’ RETIREMENT SYSTEM CASH BALANCE BENEFIT FUND

## SECTION I - SUMMARY OF PRINCIPAL RESULTS

| Valuation Date (VD): | January 1, 2018 |
| :---: | :---: |
| Prior Measurement Date: | December 31, 2016 |
| Measurement Date (MD): | December 31, 2017 |
|  |  |
| Membership Data: |  |
| Retirees and Beneficiaries | 630 |
| Inactive Vested Members | 1,289 |
| Inactive Nonvested Members | 1,627 |
| Active Employees | 6,710 |
| Total | 10,256 |
|  |  |
| Single Equivalent Interest Rate (SEIR): |  |
| Long-Term Expected Rate of Return | 7.50\% |
| Municipal Bond Index Rate at Prior Measurement Date | 3.86\% |
| Municipal Bond Index Rate at Measurement Date | 3.43\% |
| Year in which Fiduciary Net Position is Projected to be Depleted | N/A |
| Single Equivalent Interest Rate at Prior Measurement Date | 7.75\% |
| Single Equivalent Interest Rate at Measurement Date | 7.50\% |
|  |  |
| Collective Net Pension Liability/(Asset): |  |
| Total Pension Liability (TPL) | \$457,424,951 |
| Fiduciary Net Position (FNP) | 511,530,924 |
| Net Pension Liability/(Asset) (NPL = TPL - FNP) | (\$54,105,973) |
| FNP as a percentage of TPL | 111.83\% |
|  |  |
| Collective Pension Expense: | \$11,006,680 |
| Collective Deferred Outflows of Resources: | \$19,051,436 |
| Collective Deferred Inflows of Resources: | \$45,076,161 |
|  | - |

## SECTION II - INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), "Accounting and Financial Reporting for Pensions" in June 2012. GASB 68’s effective date for employers is the first fiscal year beginning after June 15, 2014.

This report, prepared as of December 31, 2017 (the Measurement Date), presents information to assist the Nebraska Public Employees Retirement System in providing the required information under GASB 68 to participating employers of the County Employees’ Retirement System Cash Balance Benefit Fund (Plan). The County Employees’ Retirement System Cash Balance Benefit Fund of the Nebraska Public Employees Retirement System is a cost-sharing multiple employer plan, so the Net Pension Liability/(Asset) and Pension Expense are allocated among the participating employers. Those amounts, which are needed for the employers' financial statements, are provided in Appendix D. Employers may use the information in this report for fiscal years ending on or before December 31, 2018.

Much of the material provided in this report, including the Net Pension Liability/(Asset), is based on the results of the GASB 67 report for the County Employees’ Retirement System Cash Balance Benefit Fund of the Nebraska Public Employees Retirement System, which was issued June 26, 2018. See that report for more information on the member data, actuarial assumptions and methods used in developing the Net Pension Liability and other GASB 67 results.

GASB 68 requires the inclusion of a Net Pension Liability/(Asset) (NPL) on the employer's Statement of Net Position and a determination of a Pension Expense (PE) in the Notes to the Financial Statements, that may bear little relationship to the funding requirements for the County Employees' Retirement System Cash Balance Benefit Fund. In fact, it is possible in some years for the NPL to be an asset or the PE to be an income item. The NPL is set equal to the Total Pension Liability (TPL) minus the Fiduciary Net Position (FNP). The benefit provisions recognized in the calculation of the TPL are summarized in Appendix B.

PE includes amounts for Service Cost (the Normal Cost under Entry Age Normal (EAN) for the year), interest on the TPL, employee contributions, administrative expenses, other cash flows during the year, recognition of increases/decreases in the TPL due to changes in the benefit structure, actual versus expected experience, and actuarial assumption changes, and recognition of investment gains/losses. The actual experience and assumption change impacts are recognized over the average expected remaining service life of the Plan membership as of the beginning of the measurement period, while investment gains/losses are recognized equally over five years. The development of the PE is shown in Section III. The unrecognized portions of each year's experience, assumption changes and investment gains/losses are used to develop Deferred Inflows and Outflows of Resources, which also must be included on the employer's Statement of Net Position.

Among the items needed for the TPL calculation is a discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan provisions applicable to the membership and beneficiaries of the Plan on the Measurement Date. Future contributions were projected to be made at the
current levels set in statute. If the FNP is not projected to be depleted at any point in the future, the longterm expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted at a future measurement date, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the depletion date by a 20 -year tax-exempt municipal bond (rating AA/Aa or higher) rate (Municipal Bond Index Rate). The rate used, if necessary, for this purpose is the monthly average of the Bond Buyer General Obligation 20-year Municipal Bond Index (formerly published monthly by the Board of Governors of the Federal Reserve System).

Our calculations indicated that the FNP is not projected to be depleted, so the Municipal Bond Index Rate is not used in the determination of the SEIR. A SEIR of $7.75 \%$ for the Prior Measurement Date and a SEIR of $7.50 \%$ for the current Measurement Date both meet the requirements of GASB 67 and 68.

The FNP projections are based upon the System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 67 and 68. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

The System was effective on January 1, 1966 and consisted of a defined contribution plan that covered employees of the counties. Effective January 1, 2003, a cash balance benefit was added to the County Employees Retirement Act. Each member employed and participating in the retirement system prior to January 1, 2003 elected to either continue participation in the defined contribution plan or transfer their account balance to the cash balance plan and begin participation in the cash balance benefit plan. All new members of the System on or after January 1, 2003 participate in the cash balance benefit plan. There have been several subsequent election periods which permitted members in the defined contribution plan to elect to transfer to the cash balance benefit plan.

Members of the defined contribution plan may elect at retirement to receive an annuity (monthly benefits) rather than a lump sum. If so elected, they become members of the Cash Balance Benefit Fund at that time because their account balance is transferred to the County Employees' Retirement System Cash Balance Benefit Fund, increasing the FNP for that Plan, and a liability is reflected in the TPL equal to the present value of the expected future monthly benefit payments.

For purposes of GASB 68, the defined contribution plan is reported as a separate defined contribution plan and the Cash Balance Benefit Fund is reported as a defined benefit plan. Only GASB 68 information for the defined benefit plan is reflected in this report.

The sections that follow provide the results of all the required aggregate calculations, presented in the order laid out in GASB 68 for note disclosure and Required Supplementary Information (RSI). Some of this information was provided by the Nebraska Public Employees Retirement System for use in this report. These sections, not prepared by Cavanaugh Macdonald LLC, are: Paragraphs 74, 75, 76(a)-(d), 79, 80(f) and 82 .

## SECTION III - PENSION EXPENSE

As noted earlier, the Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost, which is the Normal Cost using the Entry Age Normal (EAN) actuarial funding method. The second item is interest on the TPL at 7.75\%, the SEIR in effect as of the Prior Measurement Date.

The next three items refer to any changes that occurred in the TPL due to:

- benefit changes,
- actual versus expected experience, or
- changes in actuarial assumptions or other inputs.

Benefit changes, which are reflected immediately, will increase PE if there is a benefit improvement for existing Plan members, or decrease PE if there is a benefit reduction. For the plan year ended December 31, 2017, there was one benefit change to be recognized, a dividend of 0.51\% granted by the PERB in 2017 (based on December 31, 2016 account balances).

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership at the beginning of the measurement period. The average expected remaining service life of active members is the average number of years the active members are expected to remain in covered employment. At the beginning of the measurement period this number is 10.90 years. The average expected remaining service life of the inactive members is zero. Therefore, the recognition period is the weighted average of these two amounts, or 7.34 years.

The last item under changes in TPL is changes in actuarial assumptions or other inputs. There were a number of changes in the actuarial assumptions or other inputs since the Prior Measurement Date. These changes are detailed in Appendix C of this report. The changes will be recognized over the average expected remaining service life of the entire Plan membership, using the same approach applied to experience gains and losses, as described in the prior paragraph.

Employee contributions for the year and projected earnings on the FNP at the long-term expected rate of return are subtracted from the amount determined thus far. One-fifth of the current-period difference between projected and actual earnings on the FNP is recognized in the PE.

The current year portions of previously determined experience, assumption changes and earnings amounts, recognized as Collective Deferred Outflows of Resources and Collective Deferred Inflows of Resources are included next. Collective Deferred Outflows of Resources are added to the PE while Collective Deferred Inflows of Resources are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included.

The calculation of the Collective PE for the year ended December 31, 2017 is shown in the following table.

## Collective Pension Expense

For the Year Ended

| December 31, 2017 |  |
| :--- | :---: |
| Service Cost at end of year | $\$ 25,927,269$ |
| Interest on the Total Pension Liability | $\$ 31,644,765$ |
| Benefit term changes (Dividend granted) | $\$ 1,838,521$ |
| Expensed portion of current-period difference between expected <br> and actual experience in the Total Pension Liability <br> Expensed portion of current-period assumption changes <br> Employee contributions <br> Projected earnings on plan investments <br> Expensed portion of current-period differences between projected <br> and actual earnings on plan investments <br> Administrative expenses <br> Other changes* <br> Recognition of beginning Deferred Outflows of Resources <br> Recognition of beginning Deferred Inflows of Resources <br> Total Pension Expense | $(\$ 985,065)$ |

[^0]Note: Average expected remaining service life for all members is 7.34.

## SECTION IV - NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference. Amounts are shown in the aggregate.

Paragraph 74: This information is available in the State CAFR online at:

http://das.nebraska.gov/accounting/financial_reports/cafrcon.html

Paragraph 75: The state of Nebraska is the plan sponsor for two cost-sharing multiple-employer defined benefit plans: the County Employees’ Retirement System Cash Balance Benefit Fund and the School Employees’ Retirement System. Information for paragraphs 76 to 80 for the County Employees’ Retirement System Cash Balance Benefit Fund can be found on the following pages. Similar information for the School Employees' Retirement System can be found in the GASB 68 report for that Plan.

Paragraph 76(a): The name of the pension plan is the County Employees’ Retirement System Cash Balance Benefit Fund and it is administered by the Nebraska Public Employees Retirement Board which was created in 1971 to administer the Nebraska retirement plans. The County Employees’ Retirement System Cash Balance Benefit Fund is a cost-sharing multiple-employer defined benefit plan.

The County Employees’ Retirement System Cash Balance Benefit Fund plan has been created in accordance with Internal Revenue Code Sections 401(a) and 414(h), and 414(k). Please refer to Neb. Rev. Stat. §§ 23-2301 through 23-2334 (Reissue 2012, Cum. Supp. 2016, Supp. 2017) for the County Employees’ Retirement Act. Benefit and contribution provisions are established by State law and may be amended only by the Nebraska Legislature.

## Paragraph 76(b):

(1) Classes of employees covered: Participation in the County Employees' Retirement System Cash Balance Benefit Fund is required of all full-time employees upon employment and of all full-time elected officials upon taking office. Prior to April 2011, all permanent part-time employees could elect voluntary participation upon reaching age 20. Effective April 2011, the age requirement for permanent part-time employees decreased to age 18. Part-time elected officials may exercise the option to join.
(2) Types of benefits: The main benefits provided are retirement benefits. However, the Plan also provides ancillary benefits in the event of pre-retirement death, disability, or termination of employment prior to meeting the eligibility requirements to retire.
(3) Key elements of the pension formulas: Upon attainment of age 55, regardless of service, the retirement allowance shall be equal to the accumulated employee and employer cash balance accounts, including interest credits, annuitized for payment in the normal form, a single life annuity with five-year certain, payable monthly. Members have the option to convert their cash balance accounts to a monthly annuity with an annual cost-of-living adjustment of $2.5 \%$. Additional forms of payment, which are actuarially equivalent to the normal form and include the option of a full or partial lump-sum, are also available under the Plan.
(4) Terms with respect to automatic postemployment benefit changes, including automatic COLAs and ad hoc COLAs: When selecting an annuity, the retiree must decide if they wish to purchase an annual cost-of- living adjustment (COLA) to offset inflation. If the retiree elects an annuity with no COLA, the monthly annuity amount will never change. If the retiree elects an annuity with the COLA, the monthly annuity amount increases $2.5 \%$ each year.
(5) Authority under which benefit terms are established or may be amended: Benefit and contribution provisions are established by State law (Neb. Rev. Stat. §§ 23-2301 through 23-2334 (Reissue 2012, Cum. Supp. 2016, Supp. 2017) and may be amended only by the Nebraska Legislature.

## Paragraph 76(c):

(1) Basis for determining the employer's contributions to the plan: Pursuant to state statute, an actuarial valuation is performed each year to determine the actuarial required contribution. To the extent member and County payroll-related contributions are insufficient to meet the full actuarial required contribution, the remainder is paid by the State.
(2) Identification of the authority under which contribution requirements of the employer and employees are established or may be amended: contribution provisions are established by State law (Neb. Rev. Stat. §§ 23-2301 through 23-2334 (Reissue 2012, Cum. Supp. 2016, Supp. 2017)) and may be amended only by the Nebraska Legislature.
(3) The contribution rates (in dollars or as a percentage of covered payroll) of those entities for the reporting period:

Members: Each member contributes $4.50 \%$ of annual compensation. In addition, commissioned law enforcement personnel contribute an extra $1.00 \%$ of annual compensation if their county's population is less than 85,000 and an extra $2.00 \%$ of annual compensation if their county's population is more than 85,000 .

County contributions: The Counties contribute $150 \%$ of the member contribution rate. The participating counties will also match the additional contributions made by commissioned law enforcement personnel at a rate of $100 \%$.

State contributions: State statutes require the State to make a contribution if the regular, payroll-related contributions by employees and the counties are insufficient to meet the actuarial required contribution for the plan year.

Amount of contributions recognized by the pension plan from the employer during the reporting period (only the total amounts recognized as additions to the plan's fiduciary net position are reflected here): For the reporting period ending December 31, 2017 the plan received $\$ 17,752,388$ in employer contributions.

Paragraph 76(d): Whether the pension plan issues a stand-alone financial report (or the pension plan is included in the report of a public employee retirement system or another government) that is available to the public and, if so, how to obtain the report: Annually, the Nebraska Public Employees Retirement System prepares stand-alone financial statements for the County Employees' Retirement Plans. The audited financial statement reports can be found at:
http://www.nebraska.gov/auditor/FileSearch/entityresults.cgi?id=Retirement\ Systems\%2C\ Public \%20Employees\%20(Retirement)

Paragraph 77: This paragraph requires information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TPL. The complete set of actuarial assumptions and other inputs utilized in developing the TPL are outlined in Appendix C. The TPL, as of December 31, 2017, was determined by an actuarial valuation prepared as of January 1, 2018, using the following key actuarial assumptions and other inputs:

| Price Inflation | 2.75 percent |
| :--- | :--- |
| Wage Inflation | 3.50 percent |
| Salary increases, including wage <br> inflation | 3.80 to 8.00 percent |
| Long-term Rate of Return, net of <br> investment expense, including <br> price inflation | 7.50 percent |
| Municipal Bond Index Rate | 3.43 percent |
| Year FNP is Projected to be <br> Depleted | $\mathrm{N} / \mathrm{A}$ |
| Single Equivalent Interest Rate, <br> net of investment expense, <br> including price inflation | 7.50 percent |
| Interest crediting rate, including <br> dividends | 6.25 percent |

Mortality Pre-retirement mortality rates were based on the RP-2014 White Collar Table for Employees ( $100 \%$ of male rates for males, $55 \%$ of female rates for females), projected generationally with MP2015.

Post-retirement mortality rates were based on the RP-2014 White Collar Table for Employees, set back two years, scaled (males: under 80, 1.008; over 80, 1.449; females: under 85, .924; over 85, 1.5855; geometrically blended), projected generationally from 2013 with a SOA projection scale tool using a $0.5 \%$ ultimate 2035 rate in 2035.

Mortality for Annuitizing
Cash Balance Accounts

1994 Group Annuity Mortality Table, with 50\% Male, 50\%
Female blending for members hired before January 1, 2018 (set statutorily).

The actuarial assumptions used in the valuation are based on the results of the actuarial experience study, which covered the four-year period ending June 30, 2015. The experience study report is dated November 17, 2016.

## Paragraph 78

(a): Discount rate (SEIR). The discount rate used to measure the TPL at December 31, 2017 was 7.50 percent. The discount rate used to measure the TPL at December 31, 2016 was $7.75 \%$.
(b): Projected cash flows. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 67 and 68 . We assumed that contributions from members and the State of Nebraska will be made at the statutory rates in law:
a. Employee contribution rate: 4.5\% of annual compensation. In addition, commissioned law enforcement personnel contribute an extra $1.00 \%$ of annual compensation if their county's population is less than 85,000 and an extra $2.00 \%$ of annual compensation if their county's population is more than 85,000 .
b. County contribution rate: $150 \%$ of the employee contribution rate. The participating counties will also match the additional contributions made by commissioned law enforcement personnel at a rate of $100 \%$.
c. State of Nebraska contributions: State statutes require the State to make a contribution if the regular, payroll related contributions by employees and the counties are insufficient to meet the actuarial required contribution for the plan year. No additional State contributions were assumed to be made.
d. Administrative expenses in the prior year were projected forward with price inflation as an estimate for administrative expenses in the current and future years. The portion of expenses in future years allocated to the current members was based on the proportionate
share of covered payroll in each year for the remainder of the existing members to the total covered payroll for all members.

Based on those assumptions, the Plan's FNP was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments of $7.50 \%$ was applied to all periods of projected benefit payments to determine the TPL.

The FNP projections are based upon the Plan's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 68. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan's ability to make benefit payments in future years.
(c): Long-term rate of return. The long-term expected rate of return on pension plan investments is reviewed regularly as part of the experience study. The experience analysis was performed and results provided in a report dated November 17, 2016. Generally, several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations for each asset class, were developed by the System's investment consultant. These ranges were combined to develop the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by investment consultants are often intended for use over a 10 -year investment horizon and are not always useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The longterm rate of return assumption is intended to be a long-term assumption ( 30 to 50 years) and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.
(d): Municipal bond rate. A municipal bond rate was not used in determining the discount rate. If it were required, the rate would be $3.43 \%$ on the Measurement Date.
(e): Period of projected benefit payments. Projected future benefit payments for all current plan members were projected through 2117.
(f): Assumed asset allocation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class as of the most recent experience study, as provided by the System's investment consultant, Aon Hewitt Investment Consulting, Inc., are summarized in the following table:

Asset Class

## Target Allocation

Long-Term Expected Real Rate of Return*

Large Cap U.S. Equity
Small Cap U.S. Equity
Global Equity
International Developed Equity

| $26.1 \%$ | $5.83 \%$ |
| ---: | ---: |
| $2.9 \%$ | $7.56 \%$ |
| $15.0 \%$ | $6.51 \%$ |
| $10.8 \%$ | $6.80 \%$ |
| $2.7 \%$ | $10.55 \%$ |
| $20.0 \%$ | $1.63 \%$ |
| $3.5 \%$ | $5.22 \%$ |
| $5.0 \%$ | $2.78 \%$ |
| $1.5 \%$ | $1.41 \%$ |
| $5.0 \%$ | $9.70 \%$ |
| $7.5 \%$ | $5.18 \%$ |
| $100.0 \%$ |  |

*Arithmetic mean, net of investment expenses
(g): Sensitivity analysis. This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents the NPL of the System, calculated using the discount rate of 7.50 percent, as well as the System's NPL calculated using a discount rate that is 1-percentage-point lower ( 6.50 percent) or 1-percentage-point higher ( 8.50 percent) than the current rate.

|  | $1 \%$ Decrease <br> $(6.50 \%)$ | Current Discount <br> Rate (7.50\%) | $1 \%$ Increase <br> $(8.50 \%)$ |
| :---: | :---: | :---: | :---: |
| Net Pension Liability/(Asset) | $(\$ 10,431,379)$ | $(\$ 54,105,973)$ | $(\$ 91,030,122)$ |

Paragraph 79: The Plans’ financial statements were prepared on the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded when a liability is incurred. Employee and employer contributions are recognized in the period in which employee services are performed. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Investments as reported in the financial statements include long-term investments. Law or legal instruments may restrict these investments. All investments are stated at fair value, based on quoted market prices. For investments where no readily ascertainable fair value exists, management has received an estimate of fair value from the investment fund manager based, in part, on real estate appraisals. The State Treasurer is the custodian of all funds; however, investment of funds is under the responsibility of the Nebraska Investment Council.

There have been no changes since the Measurement Date that would materially alter the Plan's financial report. However, the Board granted a $8.42 \%$ dividend for the calendar year 2017 for all eligible County Cash Balance members to be received by September 1, 2018, or as soon as administratively possible. The estimated dividend is $\$ 34,058,428$ as of the Valuation Date.

This information can be found in the published financials online at: http://npers.ne.gov/SelfService/. Go to ‘Related Links’ and click on ‘Retirement Plan Audits’.

## Paragraph 80:

(a)-(b): Although the state of Nebraska could potentially be a non-employer contributing entity based on state statutes, the state did not made any contributions to the County Employees' Retirement System Cash Balance Benefit Fund and, therefore, has no proportionate share of the Collective NPL. The detailed information for each participating employer is provided in Appendix D of this report.
(c): The Measurement Date of the Collective NPL is December 31, 2017. The TPL as of December 31, 2017 was determined based on the annual actuarial funding valuation report prepared as of January 1, 2018.
(d): There were a number of changes in the actuarial assumptions since the Prior Measurement Date. These changes are detailed in Appendix C of this report.
(e): There was one benefit change in the benefit terms since the Prior Measurement Date. The PERB granted a dividend of $0.51 \%$ in 2017 which was credited to the December 31, 2016 account balance of members.
(f): Based on the available information, the Nebraska Public Employees Retirement System believes that there are no changes between the Measurement Date of the NPL (December 31, 2017) and the employer's reporting date (typically June 30, 2018) that are expected to have a significant effect on the NPL.
(g): Please see Section III for the development of the Collective PE. The proportionate share of Collective PE for each participating employer is provided in Appendix D.
(h)(1)-(3): Since certain expense items are recognized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce PE they are labeled

Deferred Inflows of Resources. If they will increase PE they are labeled Deferred Outflows of Resources. The recognition of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are recognized over the average expected remaining service life of the active and inactive Plan members at the beginning of the measurement period. Investment gains and losses are recognized equally over a five-year period.

The following tables provide the amounts of the Collective Deferred Outflows of Resources and Collective Deferred Inflows of Resources as of the Measurement Date (December 31, 2017) for the Plan. Per GASB 68, reporting of the differences between projected and actual earnings should be on a net basis, with only one Deferred Outflow or Inflow. This information is provided in the following table. Detail by participating employer is provided in Appendix D of this report.

|  | Deferred Outflows <br> of Resources | Deferred Inflows <br> of Resources | Net Deferred <br> Outflows/(Inflows) <br> of Resources |
| :--- | ---: | ---: | ---: |
| Differences between expected <br> and actual experience <br> Changes of assumptions <br> Differences between projected <br> and actual earnings <br> Changes in proportion | $\$ 522,980$ | $\$ 11,858,234$ | $(\$ 11,335,254)$ |
| Total | $6,721,492$ | 0 | $6,721,492$ |

The following tables show the Collective Deferred Outflows of Resources and Collective Deferred Inflows of Resources separately to provide additional detail. Detail by participating employer is provided in Appendix D of this report.

| Deferred Outflows of Resources |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { December 31, } \\ 2016 \end{gathered}$ |  | Additions |  | Recognition |  | $\begin{gathered} \hline \text { December 31, } \\ 2017 \end{gathered}$ |  |
| Differences between expected and actual experience |  |  |  |  |  |  |  |  |
| 2014 Base | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 |
| 2015 Base |  | 637,168 |  | 0 |  | 114,188 |  | 522,980 |
| 2016 Base |  | 0 |  | 0 |  | 0 |  | 0 |
| 2017 Base |  | $\underline{0}$ |  | $\underline{0}$ |  | $\underline{0}$ |  | $\underline{0}$ |
| Total | \$ | 637,168 | \$ | 0 | \$ | 114,188 | \$ | 522,980 |
| Changes of assumptions |  |  |  |  |  |  |  |  |
| 2014 Base | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 |
| 2015 Base |  | 0 |  | 0 |  | 0 |  | 0 |
| 2016 Base |  | 0 |  | 0 |  | 0 |  | 0 |
| 2017 Base |  | $\underline{0}$ |  | 7,781,664 |  | 1,060,172 |  | 6,721,492 |
| Total | \$ | 0 | \$ | 7,781,664 | \$ | 1,060,172 | \$ | 6,721,492 |
| Differences between projected and actual earnings |  |  |  |  |  |  |  |  |
| 2014 Base | \$ | 1,540,349 | \$ | 0 | \$ | 770,174 | \$ | 770,175 |
| 2015 Base |  | 14,968,140 |  | 0 |  | 4,989,380 |  | 9,978,760 |
| 2016 Base |  | 0 |  | 0 |  | 0 |  | 0 |
| 2017 Base |  | $\underline{0}$ |  | $\underline{0}$ |  | $\underline{0}$ |  | $\underline{0}$ |
| Total | \$ | 16,508,489 | \$ | 0 | \$ | 5,759,554 | \$ | 10,748,935 |
| Changes in proportion |  |  |  |  |  |  |  |  |
| 2014 Base | \$ | 213,734 | \$ | 0 | \$ | 44,619 | \$ | 169,115 |
| 2015 Base |  | 482,641 |  | 0 |  | 86,494 |  | 396,147 |
| 2016 Base |  | 272,993 |  | 0 |  | 43,264 |  | 229,729 |
| 2017 Base |  | $\underline{0}$ |  | 304,527 |  | 41,489 |  | 263,038 |
| Total | \$ | 969,368 | \$ | 304,527 | \$ | 215,866 | \$ | 1,058,029 |
| Total | \$ | 18,115,025 | \$ | 8,086,191 | \$ | 7,149,780 | \$ | 19,051,436 |

Deferred Inflows of Resources

(h)(4): Changes in each employer's proportionate share are shown on Exhibit 2 in Appendix D. The determination of proportionate share is based on individual employer contribution information, provided by the Nebraska Public Employees Retirement System (see Exhibit 1 in Appendix D).
(h)(5): Employer contributions subsequent to the Measurement Date are considered Deferred Outflows of Resources. These amounts, if any, will be provided by each participating employer.
(i): The following table provides the Collective Deferred Outflows of Resources and Collective Deferred Inflows of Resources as of the Measurement Date (December 31, 2017) for the Plan that will be recognized in PE in future fiscal years. These amounts do not reflect the deferred recognition of changes in proportionate share, recognition of actual contributions that differ from the proportionate share, or employer contributions subsequent to the Measurement Period.

Appendix D contains the schedule, by participating employer, of the recognition of all amounts except for employer contributions subsequent to the Measurement Date.

| Year Ending: | Deferred Outflows <br> of Resources | Deferred Inflows <br> of Resources | Net Deferred <br> Outflows/(Inflows) <br> of Resources |
| :---: | ---: | ---: | ---: |
| 2019 | $\$ 6,933,915$ | $\$ 10,333,442$ | $(\$ 3,399,527)$ |
| 2020 | $6,163,740$ | $10,333,442$ | $(4,169,702)$ |
| 2021 | $1,174,360$ | $10,333,442$ | $(9,159,082)$ |
| 2022 | $1,174,360$ | $9,739,972$ | $(8,565,612)$ |
| 2023 | $1,126,400$ | $1,727,649$ | $(601,249)$ |
| Thereafter | $1,420,632$ | $1,550,185$ | $(129,553)$ |

(j): There were no contributions by non-employer contributing entities during the measurement period.

## SECTION V - REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the Plan's financial statements:

Paragraphs 81(a): Information under 81(a)(1) (a)-(b), which is determined as of the Measurement Date of the Collective NPL, is provided in Appendix D of this report.

Paragraphs 81(b): This information is to be determined as of the employer's most recent fiscal year-end. Therefore, each participating employer should have the information available to populate the Schedule of Employer Contributions.

Paragraph 82: Based on the available information, the Nebraska Public Employees Retirement System believes that there are no significant trends in the amounts reported in the schedules required by paragraph 81.

Changes of benefit and funding terms: The following changes to the plan provisions were made by the Nebraska Legislature and reflected in the valuation performed as of January 1 listed below:

2018: The Board granted a dividend of $0.51 \%$ in 2017 that was first reflected in the January 1, 2018 valuation.

2017: None

2016: The Board granted a dividend of $5.81 \%$ in 2015 that was first reflected in the January 1, 2016 valuation.

2015: The Board granted a dividend of $0.29 \%$ in 2014 that was first reflected in the January 1, 2015 valuation.

## Changes in actuarial assumptions:

1/1/2018 valuation:

- Investment return assumption was lowered from 7.75\% to 7.50\%.
- Price inflation assumption was lowered from 3.25\% to $2.75 \%$.
- General wage growth was lowered from $4.00 \%$ to $3.50 \%$.
- Covered payroll growth assumption decreased from $4.00 \%$ to $3.50 \%$.
- Individual salary increase assumption was lowered by $0.50 \%$ in order to remain consistent with the general wage growth assumption.
- Assumed cash balance interest crediting rate was lowered from 6.75\% to 6.25\%.
- Mortality assumption was changed to the RP-2014 While Collar Mortality Table, with adjustments made to better reflect observed experience. Generational mortality improvements are modeled using a System-specific projection scale.
- Termination rates were changed to a service-based assumption.

1/1/2017 valuation: None

1/1/2016 valuation: None

1/1/2015 valuation: None

## APPENDIX A

## ADDITIONAL INFORMATION

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY/(ASSET)
Reporting Year Ended December 31

|  | Total Pension Liability <br> (a) | Plan Fiduciary Net Position <br> (b) | Net Pension Liability/(Asset) (a) - (b) |
| :---: | :---: | :---: | :---: |
| Balances at December 31, 2016 Changes for the year: | \$418,778,262 | \$431,768,012 | (\$12,989,750) |
| Service Cost at end of year | 25,927,269 |  | 25,927,269 |
| Interest on TPL | 31,644,765 |  | 31,644,765 |
| Benefit term changes (Dividend granted) | 1,838,521 |  | 1,838,521 |
| Differences between expected and actual experience | (7,230,377) |  | $(7,230,377)$ |
| Assumption changes | 7,781,664 |  | 7,781,664 |
| Employer contributions |  | 17,752,388 | $(17,752,388)$ |
| Employee contributions |  | 12,000,061 | $(12,000,061)$ |
| Net investment income |  | 72,075,672 | $(72,075,672)$ |
| Benefit payments, including member refunds | $(21,934,437)$ | $(21,934,437)$ | 0 |
| Administrative expenses |  | $(750,056)$ | 750,056 |
| Transfers | 619,284 | 619,284 | 0 |
| Net changes | 38,646,689 | 79,762,912 | $(41,116,223)$ |
| Balances at December 31, 2017 | \$457,424,951 | \$511,530,924 | (\$54,105,973) |

## APPENDIX B

## SUMMARY OF MAIN BENEFIT PROVISIONS

## Membership

All permanent full-time employees of a participating County who work one-half or more of the regularly scheduled hours during each pay period shall begin immediate participation in the County Employees’ Retirement System as of January 1, 2007 or date of hire, if later. Participation is voluntary for permanent, part-time employees who are age 18 or older and permanent part-time seasonable employees age 18 or older. Full-time elected officials shall begin participation upon taking office.

Existing members of the County Employees' Retirement System could have elected, during the period beginning September 1, 2012 and ending October 31, 2012 to participate in the Cash Balance Benefit Fund. If no election was made by October 31, 2012, the member was treated as though he or she elected to continue participating in the Defined Contribution plan as provided in the County Employees' Retirement Act.

Existing members of the County Employees' Retirement System could have elected, during the period beginning November 1, 2007 and ending December 31, 2007 to participate in the Cash Balance Benefit Fund. If no election was made by December 31, 2007, the member was treated as though he or she elected to continue participating in the Defined Contribution plan as provided in the County Employees' Retirement Act.

Existing members of the County Employees' Retirement System could have elected, during the period beginning October 1, 2002, and ending December 31, 2002, to participate in the Cash Balance Benefit Fund. If no election was made by January 1, 2003, the member was treated as though he or she elected to continue participating in the Defined Contribution plan as provided in the County Employees' Retirement Act. For a member who first participates in the retirement system on or after January 1, 2003, he or she shall automatically participate in the Cash Balance Benefit Fund subject to plan eligibility requirements.

## Compensation Considered

Compensation means gross wages or salaries payable to the member for personal services performed during the plan year, overtime pay, member retirement contributions, and amounts contributed by the member to plans under sections 125, 403(b) and 457 of the Internal Revenue Code or any other section of the code which defers or excludes such amounts from income.

## Member Contributions

Members of the County Employees' Retirement System shall contribute an amount equal to four and onehalf percent ( $4.5 \%$ ) of annual compensation to the fund. The member contribution shall be credited to the employee cash balance account. In addition, commissioned law enforcement personnel shall contribute an extra amount equal to one percent (1\%) of annual compensation if their county's population is less than 85,000 and an extra two percent ( $2 \%$ ) of annual compensation if their county's population is more than 85,000.

## Employer Contributions

The County shall contribute at a rate of $150 \%$ of the members’ contributions to the fund. The County contribution shall be credited to the employer cash balance account. The participating counties will also match the additional contribution made by commissioned law enforcement personnel at a rate of $100 \%$.

## Interest Credit Rate

Interest credit rate means the greater of (a) five percent or (b) the applicable federal mid-term rate as published by the Internal Revenue Service as of the first day of the calendar quarter for which interest credits are credited, plus one and one-half percent, such rate to be compounded annually.

## Interest Credits

Interest credits means the amount credited to the employee cash balance account and the employer cash balance account daily. Such interest credit for each account shall be determined by applying the daily portion of the interest credit rate to the account balance at the end of the previous day.

## Retirement Age

A member is eligible for retirement after attaining age 55.

## Service

Service is defined to mean the actual total length of employment with a participating County and is not interrupted by a) temporary or seasonal suspension of service that does not terminate the member's employment, b) leave of absence authorized by the County for no longer than twelve months, c) leave of absence due to disability or d) leave due to military service.

## Retirement Allowance

Upon attainment of age 55, regardless of service, the retirement allowance shall be equal to the accumulated employee and employer cash balance accounts including interest credits, annuitized for payment in the normal form. Also available are additional forms of payment allowed under the plan which are actuarially equivalent to the normal form including the option of a full lump sum or partial lump sum.

## Normal Form of Payment

The normal form of payment under the Plan is a single life annuity with five-year certain, payable monthly. Members will have the option to convert their cash balance account to a monthly annuity with built in cost-of-living adjustments of $2.5 \%$ annually. This monthly benefit and all other options allowed under the Plan will be of actuarial equivalence to the accumulated employee and employer cash balance accounts including interest credits.

## Optional Form of Payment

Optional forms of payment include a lump sum and the following annuities (with or without a $2.5 \%$ COLA): life annuity, modified cash refund, certain and life annuity ( 5,10 or 15 years), certain only annuity ( 5,10 , 15 or 20 years) and joint and survivor annuity ( $50 \%, 75 \%$ or $100 \%$ ).

## Deferred Vested Allowance

A member who terminates with at least 3 years of participation in the system, including eligibility and vesting credit, may choose to leave his employee and employer cash balance accounts in the Plan and be eligible to receive a vested monthly allowance at retirement age or request a distribution of his employee and employer cash balance accounts plus interest credits, with no future benefit payable from the Plan.

## Severance Benefits

A member who terminates with less than 3 years of participation in the system, including eligibility and vesting credit, may elect to receive a distribution of his/her employee cash balance account including interest credits, with no future benefit payable from the plan.

## Disability Allowance

If a member becomes disabled prior to retirement, the member shall receive the total amount of his/her accumulated employee and employer cash balance accounts including interest credits, as a lump sum or converted into a monthly annuity, as defined under the retirement allowance.

## Pre-retirement Death Allowance

If a member dies prior to retirement, the surviving spouse, designated beneficiary (if different), or estate shall receive the total amount of his/her accumulated employee and employer cash balance accounts including interest credits, as a lump sum or converted into a monthly annuity, as defined under the retirement allowance.

## Defined Contribution Transfers at Retirement

Upon retirement, members participating in the Defined Contribution Plan may elect to annuitize their accumulated account balance and receive a monthly benefit payment. This benefit is paid from the Cash Balance Benefit Fund so the member's DC account balance amount is transferred to the Cash Balance Benefit Fund upon the retirement of a Defined Contribution member electing an annuity. The actuarial assumptions used to convert the accumulated account balance are (i) the 1994 Group Annuity Mortality Table with a $50 \%$ male / $50 \%$ female mix, and (ii) the interest rate in accordance with Nebraska State Statute 23-2317.

## Benefit Improvements

In accordance with Section 23-2317 of the Nebraska State Statutes, the Public Employees' Retirement Board may grant benefit improvements if the unfunded actuarial accrued liability is less than zero, but in no event will such improvement result in an actuarially required contribution rate in excess of $90 \%$ of the total statutory contribution rate.

## Dividend Policy

Under Nebraska Statutes, the Board may grant a dividend in addition to the regular interest credit if the UAAL is less than $\$ 0$ (i.e. a surplus exists) and the actuarial contribution after the extra dividend is no more than $90 \%$ of the scheduled contribution rate. Additionally, the Board has adopted a policy that also requires that the Accumulated Obligation be completely funded.

| Year Issued | Dividend \% | For Time Period |
| :---: | ---: | :---: |
|  |  |  |
| 2017 | $0.510 \%$ | $1 / 1 / 2016-12 / 31 / 2016$ |
| 2016 | $0.000 \%$ | $1 / 1 / 2015-12 / 31 / 2015$ |
| 2015 | $5.810 \%$ | $1 / 1 / 2014-12 / 31 / 2014$ |
| 2014 | $0.290 \%$ | $1 / 1 / 2013-12 / 31 / 2013$ |
| 2013 | $0.000 \%$ | $1 / 1 / 2012-12 / 31 / 2012$ |
| 2012 | $0.000 \%$ | $1 / 1 / 2011-12 / 31 / 2011$ |
| 2011 | $0.000 \%$ | $1 / 1 / 2010-12 / 31 / 2010$ |
| 2010 | $0.000 \%$ | $1 / 1 / 2009-12 / 31 / 2009$ |
| 2009 | $0.000 \%$ | $1 / 1 / 2008-12 / 31 / 2008$ |
| 2008 | $5.340 \%$ | $1 / 1 / 2007-12 / 31 / 2007$ |
| 2007 | $2.730 \%$ | $1 / 1 / 2006-12 / 31 / 2006$ |
| 2006 | $16.400 \%$ | $1 / 1 / 2005-12 / 31 / 2005$ |
| 2005 | $2.800 \%$ | $1 / 1 / 2004-12 / 31 / 2004$ |
| 2004 | $3.088 \%$ | $1 / 1 / 2003-12 / 31 / 2003$ |

## Changes in Plan Provisions Since the Prior Year

The 2017 Nebraska State Legislature passed Legislative Bill 415 (LB 415), which changes the actuarial basis used to calculate annuity rates for cash balance members hired on or after January 1, 2018. This change had no impact on the current valuation results.

## APPENDIX C

## STATEMENT OF ACTUARIAL ASSUMPTIONS

## ECONOMIC ASSUMPTIONS

1. Long-term Assumed Investment Return
2. Inflation
3. Interest Crediting Rate on Cash Balance Accounts
4. Annuitization Rate of Member \& Employer Accumulated Balances
5. Salary Scale
7.50\% per annum, compounded annually, net of expenses.
2.75\% per annum, compounded annually.
$6.25 \%$ per annum, compounded annually.
7.75\% per annum, compounded annually, for members hired before January 1, 2018 (set statutorily).

Graduated rates by service.

| Service | Annual <br> Increase |
| :---: | :---: |
| 0 | $8.00 \%$ |
| 1 | 6.70 |
| 2 | 5.50 |
| 3 | 4.70 |
| 4 | 4.20 |
| 5 | 4.00 |
| 6 | 3.85 |
| 7 | 3.80 |
| 8 | 3.80 |
| 9 | 3.80 |
| $10+$ | 3.80 |

## DEMOGRAPHIC ASSUMPTIONS

1. Mortality
a. Healthy lives - Active members
b. Healthy lives - Retired members and beneficiaries
c. Disabled lives

RP-2014 White Collar Table for Employees (100\% of male rates for males, $55 \%$ of female rates for females), projected generationally with MP-2015.

RP-2014 White Collar Table for Employees, set back two years, scaled (males: under 80, 1.008; over 80, 1.449; females: under 85, .924; over 85, 1.5855 ; geometrically blended), projected generationally from 2013 with a SOA projection scale tool using a $0.5 \%$ ultimate 2035 rate in 2035.

Not applicable
d. Healthy mortality rates and projection scale are shown below at sample ages:

|  | Pre-retirement Mortality <br> Mortality Rate <br> Females |  |
| :---: | :---: | :---: |
| Sample Age |  |  |
|  | $0.03 \%$ | $0.01 \%$ |
| 20 | 0.03 | 0.01 |
| 30 | 0.04 | 0.02 |
| 40 | 0.12 | 0.05 |
| 50 | 0.33 | 0.11 |


|  | Post-retirement Mortality <br> Mortality Rate <br> Females |  |
| :---: | :---: | :---: |
| Sample Age | Males |  |
|  | $0.23 \%$ | $0.17 \%$ |
| 50 | 0.47 | 0.31 |
| 60 | 1.03 | 0.82 |
| 70 | 3.65 | 2.28 |
| 80 | 14.57 | 12.63 |
| 90 |  |  |


|  | Projection Scale - Post-retirement Mortality |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Scale (2020) |  | Scale (2030) |  | Scale (2040) |  |
| Sample Age | Males | Females | Males | Females | Males |  |
|  |  |  |  |  |  |  |
| 50 | 0.0252 | 0.0144 | 0.0080 | 0.0052 | 0.0050 | 0.0050 |
| 60 | 0.0083 | 0.0051 | 0.0066 | 0.0059 | 0.0050 | 0.0050 |
| 70 | 0.0088 | 0.0121 | 0.0061 | 0.0057 | 0.0050 | 0.0050 |
| 80 | 0.0114 | 0.0104 | 0.0057 | 0.0058 | 0.0050 | 0.0050 |
| 90 | 0.0109 | 0.0104 | 0.0057 | 0.0057 | 0.0046 | 0.0046 |

e. Mortality for Annuitization of Employee and Employer Cash Balance Accounts

1994 Group Annuity Mortality Table, with 50\% Male, 50\% Female blending, for members hired before January 1, 2018 (set statutorily).

| Sample Age | Mortality Rate | Life Expectancy <br> (Years) |
| :---: | :---: | :---: |
| 55 | $0.34 \%$ | 28.0 |
| 60 | $0.62 \%$ | 23.5 |
| 65 | $1.16 \%$ | 19.4 |
| 70 | $1.87 \%$ | 15.7 |
| 75 | $2.99 \%$ | 12.2 |
| 80 | $5.07 \%$ | 9.3 |

2. Retirement
3. Termination
4. Disability

OTHER ASSUMPTIONS

1. Payment Assumptions

Graduated rates by retirement age.

| Age | Annual Rates |
| :---: | :---: |
| $55-60$ | $4.5 \%$ |
| 61 | $5.0 \%$ |
| $62-64$ | $10.0 \%$ |
| $65-66$ | $20.0 \%$ |
| $67-69$ | $15.0 \%$ |
| $70-79$ | $20.0 \%$ |
| 80 | $100.0 \%$ |

Graduated rates by service.

| Service | Rate |
| :---: | :---: |
| $<1$ | $25.00 \%$ |
| 1 | 20.00 |
| 5 | 11.50 |
| 10 | 6.00 |
| 15 | 4.75 |
| 20 | 3.50 |
| 25 | 2.25 |
| $26+$ | 2.00 |

None.

As shown in the table below, $40 \%$ of all members eligible for retirement are assumed to be paid in the form of an annuity and the other $60 \%$ in the form of a lump sum, and $100 \%$ of members eligible for all other types of benefits are assumed to be paid in the form of a lump sum. Deferred vested and non-vested members are assumed to take a refund of their account balance as of the valuation date.

|  | Assumed Form of |
| :---: | :---: |
| Payment |  |

*Five-year certain and life annuity.
2. Cost of Living Adjustment

None assumed, except $2.5 \%$ per year is used for retirees electing annuity payments with a COLA feature.

## Changes in Assumptions Since the Prior Year

At their meeting on October 17, 2016, the Board adopted a new set of actuarial assumptions, as recommended in the experience study. Although adopted in 2016, this is the first valuation report that utilizes the new set of assumptions. Below is a summary of the key assumption changes:

- Investment return assumption was lowered from 7.75\% to 7.50\%.
- Price inflation assumption was lowered from $3.25 \%$ to $2.75 \%$.
- General wage growth was lowered from $4.00 \%$ to $3.50 \%$.
- Covered payroll growth assumption decreased from $4.00 \%$ to $3.50 \%$.
- Individual salary increase assumption was lowered by $0.50 \%$ in order to remain consistent with the general wage growth assumption.
- Assumed cash balance interest crediting rate was lowered from $6.75 \%$ to $6.25 \%$.
- Mortality assumption was changed to the RP-2014 While Collar Mortality Table, with adjustments made to better reflect observed experience. Generational mortality improvements are modeled using a System-specific projection scale.
- Termination rates were changed to a service-based assumption.


## APPENDIX D

## DETAILED INFORMATION FOR PARTICIPATING EMPLOYERS

## Exhibit 1

County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Employer Allocations
For the Years Ended 12/31/2016 and 12/31/2017

| Employer | Year Ended December 31, 2016 |  | Year Ended December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Employer Contributions | Employer Allocated Proportion | Actual Employer Contributions | Employer Allocated Proportion |
| Total | \$16,938,314.96 |  | \$17,752,388.88 |  |
| 2032 - Gosper County | 49,362.93 | 0.291428\% | 50,124.88 | 0.282356\% |
| 2034 - Hall County | 750,817.74 | 4.432659\% | 832,105.95 | 4.687290\% |
| 2036 - Scotts Bluff County | 563,884.19 | 3.329045\% | 568,564.27 | 3.202748\% |
| 2040 - Cheyenne County | 205,916.57 | 1.215685\% | 212,200.04 | 1.195332\% |
| 2042 - Banner County | 31,542.39 | 0.186219\% | 32,669.54 | 0.184029\% |
| 2044 - Dodge County | 220,095.15 | 1.299392\% | 252,732.76 | 1.423655\% |
| 2046 - Jefferson County | 160,115.14 | 0.945284\% | 168,964.81 | 0.951786\% |
| 2048 - Platte County | 412,208.97 | 2.433589\% | 424,130.72 | 2.389147\% |
| 2050 - Dawson County | 371,606.97 | 2.193884\% | 398,021.68 | 2.242074\% |
| 2052 - Seward County | 279,466.82 | 1.649909\% | 311,209.68 | 1.753058\% |
| 2054 - Morrill County | 133,124.84 | 0.785939\% | 141,037.39 | 0.794470\% |
| 2056 - Buffalo County | 543,919.32 | 3.211177\% | 572,268.71 | 3.223615\% |
| 2058 - Saunders County | 371,008.10 | 2.190348\% | 372,647.96 | 2.099143\% |
| 2060 - Washington County | 340,489.61 | 2.010174\% | 353,627.60 | 1.992000\% |
| 2062 - Kimball County | 102,414.61 | 0.604633\% | 103,983.03 | 0.585741\% |
| 2089 - Saline County | 212,221.82 | 1.252910\% | 240,199.40 | 1.353054\% |
| 2090 - Adams County | 327,701.20 | 1.934674\% | 326,401.38 | 1.838634\% |
| 2091 - Box Butte County | 128,235.91 | 0.757076\% | 124,877.04 | 0.703438\% |
| 2119 - Madison County | 333,382.90 | 1.968218\% | 348,338.71 | 1.962208\% |
| 2121 - York County | 255,499.28 | 1.508410\% | 267,342.78 | 1.505954\% |
| 2123 - Custer County | 203,375.89 | 1.200685\% | 211,323.13 | 1.190393\% |
| 2125 - Sarpy County | 2,197,704.70 | 12.974759\% | 2,266,215.21 | 12.765688\% |
| 2126 - Cuming County | 112,259.57 | 0.662755\% | 111,902.91 | 0.630354\% |
| 2152 - Harlan County | 81,050.19 | 0.478502\% | 85,578.11 | 0.482065\% |
| 2164 - Gage County | 224,990.46 | 1.328293\% | 235,537.68 | 1.326794\% |
| 2165 - Richardson County | 142,194.60 | 0.839485\% | 156,533.41 | 0.881760\% |
| 2167 - Hitchcock County | 62,158.75 | 0.366971\% | 63,231.36 | 0.356185\% |
| 2168 - Red Willow County | 134,372.64 | 0.793306\% | 145,678.15 | 0.820612\% |
| 2232 - Polk County | 102,894.10 | 0.607464\% | 109,802.72 | 0.618524\% |
| 2234 - Lincoln County | 407,262.76 | 2.404388\% | 419,714.34 | 2.364270\% |

## Exhibit 1

County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Employer Allocations
For the Years Ended 12/31/2016 and 12/31/2017

| Employer | Year Ended December 31, 2016 |  | Year Ended December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Employer Contributions | Employer Allocated Proportion | Actual Employer Contributions | Employer Allocated Proportion |
| 2240 - Cedar County | 152,418.66 | 0.899845\% | 163,416.56 | 0.920533\% |
| 2242 - Holt County | 184,601.67 | 1.089847\% | 192,827.59 | 1.086206\% |
| 2243 - Frontier County | 63,099.59 | 0.372526\% | 61,657.73 | 0.347321\% |
| 2244 - Webster County | 93,869.35 | 0.554184\% | 97,026.94 | 0.546557\% |
| 2245 - Kearney County | 102,803.78 | 0.606930\% | 110,313.71 | 0.621402\% |
| 2246 - Nemaha County | 139,512.57 | 0.823651\% | 147,958.70 | 0.833458\% |
| 2247 - Franklin County | 94,075.58 | 0.555401\% | 97,536.14 | 0.549425\% |
| 2248 - Dundy County | 61,490.55 | 0.363026\% | 65,188.24 | 0.367208\% |
| 2249 - Phelps County | 176,654.31 | 1.042927\% | 178,901.88 | 1.007762\% |
| 2775 - Antelope County | 141,077.10 | 0.832887\% | 138,076.42 | 0.777791\% |
| 2776 - Arthur County | 8,484.04 | 0.050088\% | 9,819.31 | 0.055313\% |
| 2777 - Blaine County | 18,613.74 | 0.109891\% | 19,655.96 | 0.110723\% |
| 2778 - Boone County | 115,411.72 | 0.681365\% | 119,298.85 | 0.672016\% |
| 2779 - Boyd County | 36,231.53 | 0.213903\% | 39,061.85 | 0.220037\% |
| 2780 - Brown County | 77,070.94 | 0.455009\% | 80,677.72 | 0.454461\% |
| 2781 - Burt County | 116,120.16 | 0.685547\% | 120,774.10 | 0.680326\% |
| 2782 - Butler County | 184,306.84 | 1.088106\% | 195,955.94 | 1.103829\% |
| 2783 - Cass County | 473,878.32 | 2.797671\% | 495,207.16 | 2.789524\% |
| 2784 - Chase County | 95,957.92 | 0.566514\% | 106,133.73 | 0.597856\% |
| 2785 - Cherry County | 133,582.55 | 0.788641\% | 143,573.03 | 0.808753\% |
| 2786 - Clay County | 142,508.04 | 0.841335\% | 149,442.47 | 0.841816\% |
| 2787 - Colfax County | 145,404.65 | 0.858436\% | 152,675.39 | 0.860027\% |
| 2788 - Dakota County | 283,884.76 | 1.675992\% | 284,829.00 | 1.604454\% |
| 2789 - Dawes County | 129,764.78 | 0.766102\% | 137,957.37 | 0.777120\% |
| 2790 - Deuel County | 57,316.45 | 0.338383\% | 61,260.55 | 0.345083\% |
| 2791 - Dixon County | 98,088.17 | 0.579090\% | 105,412.54 | 0.593794\% |
| 2792 - Fillmore County | 145,857.96 | 0.861113\% | 154,137.14 | 0.868261\% |
| 2793 - Furnas County | 89,313.40 | 0.527286\% | 90,362.82 | 0.509018\% |
| 2794 - Garden County | 81,013.75 | 0.478287\% | 86,386.77 | 0.486621\% |
| 2795 - Garfield County | 36,907.59 | 0.217894\% | 36,282.51 | 0.204381\% |
| 2796 - Grant County | 14,394.29 | 0.084981\% | 15,090.58 | 0.085006\% |
| 2797 - Greeley County | 48,558.48 | 0.286678\% | 49,601.45 | 0.279407\% |
| 2798 - Hamilton County | 174,908.89 | 1.032623\% | 180,439.77 | 1.016425\% |

## Exhibit 1

County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Employer Allocations
For the Years Ended 12/31/2016 and 12/31/2017

| Employer | Year Ended December 31, 2016 |  | Year Ended December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Employer Contributions | Employer Allocated Proportion | Actual Employer Contributions | Employer Allocated Proportion |
| 2799 - Hayes County | 31,547.15 | 0.186247\% | 34,225.02 | 0.192791\% |
| 2800 - Hooker County | 22,079.37 | 0.130352\% | 22,015.78 | 0.124016\% |
| 2801 - Howard County | 104,333.68 | 0.615963\% | 107,218.83 | 0.603968\% |
| 2802 - Johnson County | 81,858.56 | 0.483275\% | 89,648.00 | 0.504991\% |
| 2803 - Keith County | 148,473.11 | 0.876552\% | 153,414.03 | 0.864188\% |
| 2804 - Keya Paha County | 21,918.93 | 0.129404\% | 22,352.85 | 0.125915\% |
| 2805 - Knox County | 131,056.92 | 0.773731\% | 137,055.79 | 0.772041\% |
| 2806 - Logan County | 23,120.70 | 0.136499\% | 26,209.69 | 0.147640\% |
| 2807 - Loup County | 23,338.76 | 0.137787\% | 23,177.93 | 0.130562\% |
| 2808 - McPherson County | 21,237.20 | 0.125380\% | 21,528.67 | 0.121272\% |
| 2809 - Merrick County | 116,914.60 | 0.690237\% | 132,680.98 | 0.747398\% |
| 2810 - Nance County | 95,644.73 | 0.564665\% | 102,837.57 | 0.579289\% |
| 2811 - Nuckolls County | 73,327.08 | 0.432907\% | 80,085.10 | 0.451123\% |
| 2812 - Otoe County | 228,943.35 | 1.351630\% | 245,355.89 | 1.382101\% |
| 2813 - Pawnee County | 53,276.83 | 0.314534\% | 54,864.85 | 0.309056\% |
| 2814 - Perkins County | 111,696.01 | 0.659428\% | 114,873.37 | 0.647087\% |
| 2815 - Pierce County | 100,113.14 | 0.591045\% | 99,816.17 | 0.562269\% |
| 2816 - Rock County | 55,135.50 | 0.325508\% | 56,697.88 | 0.319382\% |
| 2817 - Sheridan County | 107,490.56 | 0.634600\% | 120,866.91 | 0.680849\% |
| 2818 - Sherman County | 82,492.23 | 0.487016\% | 87,272.04 | 0.491607\% |
| 2819 - Sioux County | 43,458.40 | 0.256569\% | 50,718.13 | 0.285697\% |
| 2820 - Stanton County | 83,111.20 | 0.490670\% | 87,478.56 | 0.492771\% |
| 2821 - Thayer County | 127,384.17 | 0.752047\% | 132,693.77 | 0.747470\% |
| 2822 - Thomas County | 21,216.80 | 0.125259\% | 24,296.80 | 0.136865\% |
| 2823 - Thurston County | 109,455.91 | 0.646203\% | 121,855.81 | 0.686419\% |
| 2824 - Valley County | 85,965.02 | 0.507518\% | 90,238.16 | 0.508316\% |
| 2825 - Wayne County | 98,468.54 | 0.581336\% | 101,400.34 | 0.571193\% |
| 2826 - Wheeler County | 33,019.09 | 0.194937\% | 33,572.19 | 0.189114\% |
| 2833 - Four Corners Health Department | 21,627.23 | 0.127682\% | 20,063.91 | 0.113021\% |
| 2834 - Loup Basin Public Health Department | 20,550.70 | 0.121327\% | 21,882.40 | 0.123265\% |
| 2835 - Panhandle Public Health Department | 46,113.03 | 0.272241\% | 45,470.38 | 0.256137\% |
| 2836 - South Heartland District Health Department | 26,823.65 | 0.158361\% | 29,222.17 | 0.164610\% |
| 2837 - Two Rivers Public Health Department | 27,733.67 | 0.163733\% | 29,518.72 | 0.166280\% |

## Exhibit 1

## County Employees' Retirement System Cash Balance Benefit Fund <br> Schedule of Employer Allocations

For the Years Ended 12/31/2016 and 12/31/2017

| Employer | Year Ended December 31, 2016 |  | Year Ended December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Employer Contributions | Employer Allocated Proportion | Actual Employer Contributions | Employer Allocated Proportion |
| 2838 - Three Rivers Public Health Department | 31,750.26 | 0.187446\% | 34,602.43 | 0.194917\% |
| 2839 - Elkhorn Logan Valley Public Health Department | 38,466.89 | 0.227100\% | 34,701.75 | 0.195477\% |
| 2840 - Northeast Nebraska Public Health Department | 20,967.50 | 0.123787\% | 13,808.94 | 0.077786\% |
| 2841 - Southwest Nebraska Public Health Department | 23,107.06 | 0.136419\% | 20,542.20 | 0.115715\% |
| 2842 - West Central District Health Department | 49,188.13 | 0.290396\% | 54,576.18 | 0.307430\% |
| 2843 - Sandhills District Health Department (dissolved) 7/1/2014 | - | 0.000000\% | - | 0.000000\% |
| 2844 - Southeast District Health Department | 22,012.10 | 0.129954\% | 22,311.88 | 0.125684\% |
| 2845 - Public Health Solutions | 56,326.68 | 0.332540\% | 53,363.60 | 0.300600\% |
| 2846 - Sarpy/Cass Department of Health and Wellness | 39,030.61 | 0.230428\% | 37,436.04 | 0.210879\% |
| 2847 - Stuhr Museum | 35,741.72 | 0.211011\% | 37,065.48 | 0.208792\% |
| 2848 - Western Nebraska Regional Airport | 18,351.02 | 0.108340\% | 18,359.33 | 0.103419\% |
| 2849 - Saunders Medical Center | 565,120.14 | 3.336342\% | 623,691.89 | 3.513284\% |
| 2850 - Nemaha County Hospital | 280,866.78 | 1.658174\% | 287,415.20 | 1.619023\% |

Exhibit 2
County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Deferred Resources
Measurement Date: 12/31/2017

|  |  |  | Deferred Outflows of Resources |  |  |  |  | Deferred Inflows of Resources |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer | 12/31/16 Net Pension Liability (NPL) | 12/31/17 Net Pension Liability (NPL) | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Outflows of Resources | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Inflows of Resources |
| Total | (\$12,989,750) | (\$54,105,973) | \$522,980 | \$10,748,935 | \$6,721,492 | \$1,058,029 | \$19,051,436 | \$11,858,234 | \$32,159,898 | \$0 | \$1,058,029 | \$45,076,161 |
| 2032 - Gosper County | $(37,856)$ | $(152,771)$ | 1,477 | 30,350 | 18,979 | 8,272 | 59,078 | 33,482 | 90,805 | 0 | 5,149 | 129,436 |
| 2034 - Hall County | $(575,791)$ | $(2,536,104)$ | 24,514 | 503,834 | 315,056 | 0 | 843,404 | 555,830 | 1,507,428 | 0 | 117,139 | 2,180,397 |
| 2036 - Scotts Bluff County | $(432,435)$ | $(1,732,878)$ | 16,750 | 344,261 | 215,272 | 43,383 | 619,666 | 379,789 | 1,030,000 | 0 | 7,257 | 1,417,046 |
| 2040 - Cheyenne County | $(157,914)$ | $(646,746)$ | 6,251 | 128,485 | 80,344 | 5,648 | 220,728 | 141,745 | 384,418 | 0 | 15,500 | 541,663 |
| 2042 - Banner County | $(24,189)$ | $(99,571)$ | 962 | 19,781 | 12,369 | 3,984 | 37,096 | 21,823 | 59,184 | 0 | 0 | 81,007 |
| 2044 - Dodge County | $(168,788)$ | $(770,282)$ | 7,445 | 153,028 | 95,691 | 15,719 | 271,883 | 168,820 | 457,846 | 0 | 28,377 | 655,043 |
| 2046 - Jefferson County | $(122,790)$ | $(514,973)$ | 4,978 | 102,307 | 63,974 | 3,317 | 174,576 | 112,865 | 306,093 | 0 | 8,166 | 427,124 |
| 2048 - Platte County | $(316,117)$ | $(1,292,671)$ | 12,495 | 256,808 | 160,586 | 33,933 | 463,822 | 283,311 | 768,347 | 0 | 0 | 1,051,658 |
| 2050 - Dawson County | $(284,980)$ | $(1,213,096)$ | 11,726 | 240,999 | 150,701 | 8,719 | 412,145 | 265,870 | 721,049 | 0 | 13,565 | 1,000,484 |
| 2052 - Seward County | $(214,319)$ | $(948,509)$ | 9,168 | 188,435 | 117,832 | 7,827 | 323,262 | 207,882 | 563,782 | 0 | 52,012 | 823,676 |
| 2054 - Morrill County | $(102,092)$ | $(429,856)$ | 4,155 | 85,397 | 53,400 | 3,816 | 146,768 | 94,210 | 255,501 | 0 | 15,865 | 365,576 |
| 2056 - Buffalo County | $(417,124)$ | $(1,744,168)$ | 16,859 | 346,504 | 216,675 | 2,580 | 582,618 | 382,264 | 1,036,711 | 0 | 23,420 | 1,442,395 |
| 2058 - Saunders County | (284,521) | $(1,135,762)$ | 10,978 | 225,636 | 141,094 | 35,079 | 412,787 | 248,921 | 675,082 | 0 | 3,816 | 927,819 |
| 2060 - Washington County | $(261,117)$ | $(1,077,791)$ | 10,418 | 214,119 | 133,892 | 16,783 | 375,212 | 236,216 | 640,625 | 0 | 6,226 | 883,067 |
| 2062 - Kimball County | $(78,540)$ | $(316,921)$ | 3,063 | 62,961 | 39,371 | 12,199 | 117,594 | 69,459 | 188,374 | 0 | 1,191 | 259,024 |
| 2089 - Saline County | $(162,750)$ | $(732,083)$ | 7,076 | 145,439 | 90,945 | 6,971 | 250,431 | 160,448 | 435,141 | 0 | 23,554 | 619,143 |
| 2090 - Adams County | (251,309) | $(994,811)$ | 9,616 | 197,634 | 123,584 | 20,376 | 351,210 | 218,030 | 591,303 | 0 | 35,821 | 845,154 |
| 2091 - Box Butte County | $(98,342)$ | $(380,602)$ | 3,679 | 75,612 | 47,282 | 23,558 | 150,131 | 83,415 | 226,225 | 0 | 7,081 | 316,721 |
| 2119 - Madison County | $(255,667)$ | $(1,061,672)$ | 10,262 | 210,916 | 131,890 | 1,530 | 354,598 | 232,683 | 631,044 | 0 | 13,637 | 877,364 |
| 2121 - York County | $(195,939)$ | $(814,811)$ | 7,876 | 161,874 | 101,223 | 18,329 | 289,302 | 178,580 | 484,313 | 0 | 0 | 662,893 |
| 2123 - Custer County | $(155,966)$ | $(644,074)$ | 6,226 | 127,955 | 80,012 | 5,119 | 219,312 | 141,160 | 382,829 | 0 | 13,205 | 537,194 |
| 2125 - Sarpy County | $(1,685,388)$ | $(6,907,000)$ | 66,755 | 1,372,172 | 858,044 | 181,047 | 2,478,018 | 1,513,785 | 4,105,431 | 0 | 29,792 | 5,649,008 |
| 2126 - Cuming County | $(86,090)$ | $(341,059)$ | 3,297 | 67,756 | 42,369 | 10,560 | 123,982 | 74,749 | 202,721 | 0 | 135 | 277,605 |
| 2152 - Harlan County | $(62,156)$ | $(260,826)$ | 2,521 | 51,817 | 32,402 | 4,231 | 90,971 | 57,164 | 155,032 | 0 | 4,208 | 216,404 |
| 2164 - Gage County | $(172,542)$ | $(717,875)$ | 6,939 | 142,616 | 89,180 | 15,819 | 254,554 | 157,334 | 426,696 | 0 | 9,717 | 593,747 |
| 2165 - Richardson County | $(109,047)$ | $(477,085)$ | 4,611 | 94,780 | 59,267 | 760 | 159,418 | 104,561 | 283,573 | 0 | 23,085 | 411,219 |
| 2167 - Hitchcock County | $(47,669)$ | $(192,717)$ | 1,863 | 38,286 | 23,941 | 6,681 | 70,771 | 42,237 | 114,549 | 0 | 3,128 | 159,914 |
| 2168 - Red Willow County | $(103,048)$ | $(444,000)$ | 4,292 | 88,207 | 55,157 | 7,320 | 154,976 | 97,310 | 263,908 | 0 | 15,031 | 376,249 |
| 2232 - Polk County | $(78,908)$ | $(334,658)$ | 3,235 | 66,485 | 41,574 | 6,856 | 118,150 | 73,346 | 198,917 | 0 | 8,076 | 280,339 |
| 2234 - Lincoln County | $(312,324)$ | $(1,279,211)$ | 12,365 | 254,134 | 158,914 | 20,990 | 446,403 | 280,361 | 760,347 | 0 | 2,330 | 1,043,038 |
| 2240 - Cedar County | $(116,888)$ | $(498,063)$ | 4,814 | 98,947 | 61,874 | 606 | 166,241 | 109,159 | 296,042 | 0 | 11,250 | 416,451 |
| 2242 - Holt County | $(141,568)$ | $(587,702)$ | 5,681 | 116,756 | 73,009 | 671 | 196,117 | 128,805 | 349,323 | 0 | 17,652 | 495,780 |
| 2243 - Frontier County | $(48,390)$ | $(187,921)$ | 1,816 | 37,333 | 23,345 | 9,216 | 71,710 | 41,186 | 111,698 | 0 | 6,700 | 159,584 |
| 2244 - Webster County | $(71,987)$ | $(295,720)$ | 2,858 | 58,749 | 36,737 | 4,032 | 102,376 | 64,812 | 175,772 | 0 | 2,601 | 243,185 |
| 2245 - Kearney County | $(78,839)$ | $(336,216)$ | 3,250 | 66,794 | 41,767 | 11,894 | 123,705 | 73,687 | 199,842 | 0 | 3,707 | 277,236 |
| 2246 - Nemaha County | $(106,990)$ | $(450,951)$ | 4,359 | 89,588 | 56,021 | 6,259 | 156,227 | 98,833 | 268,039 | 0 | 8,076 | 374,948 |
| 2247 - Franklin County | $(72,145)$ | $(297,272)$ | 2,873 | 59,057 | 36,930 | 4,176 | 103,036 | 65,152 | 176,695 | 0 | 1,956 | 243,803 |
| 2248 - Dundy County | $(47,156)$ | $(198,681)$ | 1,920 | 39,471 | 24,682 | 0 | 66,073 | 43,544 | 118,094 | 0 | 14,266 | 175,904 |
| 2249 - Phelps County | $(135,474)$ | $(545,259)$ | 5,270 | 108,324 | 67,737 | 12,472 | 193,803 | 119,503 | 324,095 | 0 | 9,545 | 453,143 |
| 2775 - Antelope County | $(108,190)$ | $(420,831)$ | 4,068 | 83,604 | 52,279 | 20,325 | 160,276 | 92,232 | 250,137 | 0 | 17,069 | 359,438 |
| 2776 - Arthur County | $(6,506)$ | $(29,928)$ | 289 | 5,946 | 3,718 | 2,339 | 12,292 | 6,559 | 17,789 | 0 | 1,731 | 26,079 |
| 2777 - Blaine County | $(14,275)$ | $(59,908)$ | 579 | 11,902 | 7,442 | 137 | 20,060 | 13,130 | 35,608 | 0 | 2,496 | 51,234 |
| 2778 - Boone County | $(88,508)$ | $(363,601)$ | 3,515 | 72,235 | 45,170 | 11,533 | 132,453 | 79,689 | 216,120 | 0 | 2,390 | 298,199 |
| 2779 - Boyd County | $(27,785)$ | $(119,053)$ | 1,151 | 23,652 | 14,790 | 1,677 | 41,270 | 26,093 | 70,764 | 0 | 5,427 | 102,284 |
| 2780 - Brown County | $(59,105)$ | $(245,891)$ | 2,377 | 48,850 | 30,547 | 2,163 | 83,937 | 53,891 | 146,154 | 0 | 3,249 | 203,294 |
| 2781 - Burt County | $(89,051)$ | $(368,097)$ | 3,558 | 73,128 | 45,728 | 4,040 | 126,454 | 80,675 | 218,792 | 0 | 6,774 | 306,241 |
| 2782 - Butler County | $(141,342)$ | $(597,237)$ | 5,773 | 118,650 | 74,194 | 7,610 | 206,227 | 130,895 | 354,990 | 0 | 11,087 | 496,972 |
| 2783 - Cass County | $(363,410)$ | $(1,509,299)$ | 14,589 | 299,844 | 187,498 | 9,848 | 511,779 | 330,788 | 897,108 | 0 | 32,959 | 1,260,855 |

Deferred Outflows for contributions made after 12/31/17 are not reflected. Please consult GASB 68, Paragraph 89

Exhibit 2
County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Deferred Resources
Measurement Date: 12/31/2017

|  |  |  | Deferred Outflows of Resources |  |  |  |  | Deferred Inflows of Resources |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer | 12/31/16 Net Pension Liability (NPL) | $\begin{gathered} 12 / 31 / 17 \text { Net } \\ \text { Pension Liability } \\ (\mathrm{NPL}) \\ \hline \end{gathered}$ | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Outflows of Resources | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Inflows of Resources |
| 2784 - Chase County | $(73,589)$ | $(323,476)$ | 3,127 | 64,263 | 40,185 | 0 | 107,575 | 70,895 | 192,270 | 0 | 17,562 | 280,727 |
| 2785 - Cherry County | $(102,442)$ | $(437,584)$ | 4,230 | 86,932 | 54,360 | 16,291 | 161,813 | 95,904 | 260,094 | 0 | 17,705 | 373,703 |
| 2786 - Clay County | $(109,287)$ | $(455,473)$ | 4,403 | 90,486 | 56,583 | 3,824 | 155,296 | 99,825 | 270,727 | 0 | 4,112 | 374,664 |
| 2787 - Colfax County | $(111,509)$ | $(465,326)$ | 4,498 | 92,444 | 57,807 | 150 | 154,899 | 101,984 | 276,584 | 0 | 2,224 | 380,792 |
| 2788 - Dakota County | $(217,707)$ | $(868,105)$ | 8,391 | 172,462 | 107,843 | 16,505 | 305,201 | 190,260 | 515,991 | 0 | 10,950 | 717,201 |
| 2789 - Dawes County | $(9,515)$ | $(420,468)$ | 4,064 | 83,532 | 52,234 | 575 | 140,405 | 92,153 | 249,921 | 0 | 7,381 | 349,455 |
| 2790 - Deuel County | $(43,955)$ | $(186,711)$ | 1,805 | 37,093 | 23,195 | 4,448 | 66,541 | 40,921 | 110,978 | 0 | 2,840 | 154,739 |
| 2791 - Dixon County | $(75,222)$ | $(321,278)$ | 3,105 | 63,827 | 39,912 | 9,558 | 116,402 | 70,413 | 190,964 | 0 | 3,966 | 265,343 |
| 2792 - Fillmore County | $(111,856)$ | $(469,781)$ | 4,541 | 93,329 | 58,360 | 0 | 156,230 | 102,960 | 279,232 | 0 | 8,785 | 390,977 |
| 2793 - Furnas County | $(68,493)$ | $(275,409)$ | 2,662 | 54,714 | 34,214 | 4,369 | 95,959 | 60,361 | 163,700 | 0 | 3,883 | 227,944 |
| 2794 - Garden County | $(62,128)$ | $(263,291)$ | 2,545 | 52,307 | 32,708 | 2,701 | 90,261 | 57,705 | 156,497 | 0 | 6,894 | 221,096 |
| 2795 - Garfield County | $(28,304)$ | $(110,582)$ | 1,069 | 21,969 | 13,737 | 4,800 | 41,575 | 24,236 | 65,729 | 0 | 1,552 | 91,517 |
| 2796 - Grant County | $(11,039)$ | $(45,993)$ | 445 | 9,137 | 5,714 | 407 | 15,703 | 10,080 | 27,338 | 0 | 362 | 37,780 |
| 2797 - Greeley County | $(37,239)$ | $(151,176)$ | 1,461 | 30,033 | 18,780 | 7,529 | 57,803 | 33,133 | 89,857 | 0 | 0 | 122,990 |
| 2798 - Hamilton County | $(134,135)$ | $(549,947)$ | 5,316 | 109,255 | 68,319 | 14,102 | 196,992 | 120,530 | 326,881 | 0 | 0 | 447,411 |
| 2799 - Hayes County | $(24,193)$ | $(104,311)$ | 1,008 | 20,723 | 12,958 | 4,078 | 38,767 | 22,862 | 62,001 | 0 | 5,898 | 90,761 |
| 2800 - Hooker County | $(16,932)$ | $(67,100)$ | 649 | 13,330 | 8,336 | 2,338 | 24,653 | 14,706 | 39,883 | 0 | 429 | 55,018 |
| 2801 - Howard County | $(80,012)$ | $(326,783)$ | 3,159 | 64,920 | 40,596 | 5,973 | 114,648 | 71,620 | 194,235 | 0 | 2,272 | 268,127 |
| 2802 - Johnson County | $(62,776)$ | $(273,230)$ | 2,641 | 54,281 | 33,943 | 2,982 | 93,847 | 59,883 | 162,405 | 0 | 7,191 | 229,479 |
| 2803 - Keith County | $(113,862)$ | $(467,577)$ | 4,520 | 92,891 | 58,086 | 7,915 | 163,412 | 102,477 | 277,922 | 0 | 8,658 | 389,057 |
| 2804 - Keya Paha County | $(16,809)$ | $(68,128)$ | 659 | 13,535 | 8,463 | 1,241 | 23,898 | 14,931 | 40,494 | 0 | 438 | 55,863 |
| 2805 - Knox County | $(100,506)$ | $(417,720)$ | 4,038 | 82,986 | 51,893 | 4,338 | 143,255 | 91,550 | 248,288 | 0 | 14,254 | 354,092 |
| 2806 - Logan County | $(17,731)$ | $(79,882)$ | 772 | 15,870 | 9,924 | 4,769 | 31,335 | 17,507 | 47,481 | 0 | 2,593 | 67,581 |
| 2807 - Loup County | $(17,898)$ | $(70,642)$ | 683 | 14,034 | 8,776 | 1,984 | 25,477 | 15,482 | 41,989 | 0 | 71 | 57,542 |
| 2808 - McPherson County | $(16,287)$ | $(65,615)$ | 634 | 13,035 | 8,151 | 1,104 | 22,924 | 14,381 | 39,001 | 0 | 799 | 54,181 |
| 2809 - Merrick County | $(89,660)$ | $(404,387)$ | 3,909 | 80,337 | 50,236 | 14,272 | 148,754 | 88,628 | 240,362 | 0 | 31,134 | 360,124 |
| 2810 - Nance County | $(73,349)$ | $(313,430)$ | 3,030 | 62,267 | 38,937 | 7,636 | 111,870 | 68,693 | 186,299 | 0 | 5,593 | 260,585 |
| 2811 - Nuckolls County | $(56,234)$ | $(244,084)$ | 2,359 | 48,491 | 30,322 | 1,875 | 83,047 | 53,495 | 145,081 | 0 | 8,175 | 206,751 |
| 2812 - Otoe County | $(175,573)$ | $(747,799)$ | 7,228 | 148,561 | 92,898 | 24,670 | 273,357 | 163,893 | 444,482 | 0 | 25,999 | 634,374 |
| 2813 - Pawnee County | $(40,857)$ | $(167,218)$ | 1,616 | 33,220 | 20,773 | 2,653 | 58,262 | 36,649 | 99,392 | 0 | 905 | 136,946 |
| 2814 - Perkins County | $(85,658)$ | $(350,113)$ | 3,384 | 69,555 | 43,494 | 11,554 | 127,987 | 76,733 | 208,103 | 0 | 8,244 | 293,080 |
| 2815 - Pierce County | $(76,775)$ | $(304,221)$ | 2,941 | 60,438 | 37,793 | 7,622 | 108,794 | 66,675 | 180,825 | 0 | 0 | 247,500 |
| 2816 - Rock County | $(42,283)$ | $(172,805)$ | 1,670 | 34,330 | 21,467 | 4,368 | 61,835 | 37,873 | 102,713 | 0 | 1,401 | 141,987 |
| 2817 -Sheridan County | $(82,433)$ | $(368,380)$ | 3,561 | 73,184 | 45,763 | 9,246 | 131,754 | 80,737 | 218,960 | 0 | 18,524 | 318,221 |
| 2818 - Sherman County | $(63,262)$ | $(265,989)$ | 2,571 | 52,843 | 33,043 | 1,709 | 90,166 | 58,296 | 158,100 | 0 | 8,241 | 224,637 |
| 2819 - Sioux County | $(33,328)$ | $(154,579)$ | 1,494 | 30,709 | 19,203 | 3,174 | 54,580 | 33,879 | 91,880 | 0 | 7,756 | 133,515 |
| 2820 - Stanton County | $(63,737)$ | $(266,619)$ | 2,577 | 52,968 | 33,122 | 10,831 | 99,498 | 58,434 | 158,475 | 0 | 7,436 | 224,345 |
| 2821 - Thayer County | $(97,689)$ | $(404,426)$ | 3,909 | 80,345 | 50,241 | 5,201 | 139,696 | 88,637 | 240,386 | 0 | 3,408 | 332,431 |
| 2822 - Thomas County | $(16,271)$ | $(74,052)$ | 716 | 14,712 | 9,199 | 80 | 24,707 | 16,230 | 44,016 | 0 | 4,247 | 64,493 |
| 2823 - Thurston County | $(83,940)$ | $(371,394)$ | 3,590 | 73,783 | 46,138 | 636 | 124,147 | 81,397 | 220,752 | 0 | 16,301 | 318,450 |
| 2824 - Valley County | $(65,925)$ | $(275,029)$ | 2,658 | 54,639 | 34,166 | 894 | 92,357 | 60,277 | 163,474 | 0 | 990 | 224,741 |
| 2825 - Wayne County | $(75,514)$ | $(309,050)$ | 2,987 | 61,397 | 38,393 | 1,869 | 104,646 | 67,733 | 183,695 | 0 | 15,771 | 267,199 |
| 2826 - Wheeler County | $(25,322)$ | $(102,322)$ | 989 | 20,328 | 12,711 | 2,778 | 36,806 | 22,426 | 60,819 | 0 | 1,051 | 84,296 |
| 2833 - Four Corners Health Department | $(16,586)$ | $(61,151)$ | 591 | 12,149 | 7,597 | 7,117 | 27,454 | 13,402 | 36,347 | 0 | 0 | 49,749 |
| 2834 - Loup Basin Public Health Department | $(15,760)$ | $(66,694)$ | 645 | 13,250 | 8,285 | 2,040 | 24,220 | 14,617 | 39,642 | 0 | 2,640 | 56,899 |
| 2835 - Panhandle Public Health Department | $(35,363)$ | $(138,585)$ | 1,340 | 27,532 | 17,216 | 4,009 | 50,097 | 30,373 | 82,373 | 0 | 4,503 | 117,249 |
| 2836 - South Heartland District Health Department | $(20,571)$ | $(89,064)$ | 861 | 17,694 | 11,064 | 2,672 | 32,291 | 19,520 | 52,938 | 0 | 5,573 | 78,031 |
| 2837 - Two Rivers Public Health Department | $(21,269)$ | $(89,967)$ | 870 | 17,873 | 11,176 | 0 | 29,919 | 19,718 | 53,475 | 0 | 4,922 | 78,115 |
| 2838 - Three Rivers Public Health Department | $(24,349)$ | $(105,462)$ | 1,019 | 20,952 | 13,101 | 7,630 | 42,702 | 23,114 | 62,685 | 0 | 1,377 | 87,176 |
| 2839 - Elkhorn Logan Valley Public Health Department | $(29,500)$ | $(105,765)$ | 1,022 | 21,012 | 13,139 | 10,275 | 45,448 | 23,180 | 62,865 | 0 | 3,657 | 89,702 |

Exhibit 2
County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Deferred Resources
Measurement Date: 12/31/2017

|  |  |  | Deferred Outflows of Resources |  |  |  |  | Deferred Inflows of Resources |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer | 12/31/16 Net Pension Liability (NPL) | $\begin{aligned} & \text { 12/31/17 Net } \\ & \text { Pension Liability } \end{aligned}$ (NPL) | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Outflows of Resources | Differences <br> Between Expected and Actual Experience | Net Difference Between Projected and Actual Earnings on Pension Plan Investments | Changes of Assumptions | Changes in Proportion | Total Deferred Inflows of Resources |
| 2840 - Northeast Nebraska Public Health Department | $(16,080)$ | $(42,087)$ | 407 | 8,361 | 5,228 | 12,116 | 26,112 | 9,224 | 25,016 | 0 | 449 | 34,689 |
| 2841 - Southwest Nebraska Public Health Department | $(17,720)$ | $(62,609)$ | 605 | 12,438 | 7,778 | 8,842 | 29,663 | 13,722 | 37,214 | 0 | 1,901 | 52,837 |
| 2842 - West Central District Health Department | $(37,722)$ | $(166,338)$ | 1,608 | 33,045 | 20,664 | 16,557 | 71,874 | 36,456 | 98,869 | 0 | 12,709 | 148,034 |
| 2843 - Sandhills District Health Department (dissolved) 7/1/2014 | 0 | - | 0 | 0 | 0 | 11,658 | 11,658 | 0 | 0 | 0 | 0 | 0 |
| 2844 - Southeast District Health Department | $(16,881)$ | $(68,003)$ | 657 | 13,510 | 8,448 | 5,558 | 28,173 | 14,904 | 40,420 | 0 | 2,360 | 57,684 |
| 2845 - Public Health Solutions | $(43,196)$ | $(162,643)$ | 1,572 | 32,311 | 20,205 | 9,479 | 63,567 | 35,646 | 96,673 | 0 | 25,757 | 158,076 |
| 2846 - Sarpy/Cass Department of Health and Wellness | $(29,932)$ | $(114,098)$ | 1,103 | 22,667 | 14,174 | 7,841 | 45,785 | 25,007 | 67,818 | 0 | 0 | 92,825 |
| 2847 - Stuhr Museum | $(27,410)$ | $(112,969)$ | 1,092 | 22,443 | 14,034 | 3,943 | 41,512 | 24,759 | 67,147 | 0 | 109 | 92,015 |
| 2848 - Western Nebraska Regional Airport | $(14,073)$ | $(55,956)$ | 541 | 11,116 | 6,951 | 907 | 19,515 | 12,264 | 33,259 | 0 | 2,152 | 47,675 |
| 2849 - Saunders Medical Center | $(433,382)$ | $(1,900,896)$ | 18,374 | 377,641 | 236,145 | 53,975 | 686,135 | 416,613 | 1,129,869 | 0 | 48,507 | 1,594,989 |
| 2850 - Nemaha County Hospital | $(215,393)$ | $(875,988)$ | 8,467 | 174,028 | 108,823 | 19,957 | 311,275 | 191,988 | 520,676 | 0 | 0 | 712,664 |

Deferred Outflows for contributions made after 12/31/17 are not reflected. Please consult GASB 68, Paragraph 89.

## Exhibit 3

# County Employees' Retirement System Cash Balance Benefit Fund Schedule of Pension Amounts by Employer <br> Measurement Date: 12/31/2017 



## Exhibit 3

## County Employees' Retirement System Cash Balance Benefit Fund Schedule of Pension Amounts by Employer <br> Measurement Date: 12/31/2017



## Exhibit 3

## County Employees' Retirement System Cash Balance Benefit Fund Schedule of Pension Amounts by Employer <br> Measurement Date: 12/31/2017



## Exhibit 3

## County Employees' Retirement System Cash Balance Benefit Fund Schedule of Pension Amounts by Employer <br> Measurement Date: 12/31/2017



## Exhibit 3

## County Employees' Retirement System Cash Balance Benefit Fund Schedule of Pension Amounts by Employer <br> Measurement Date: 12/31/2017

| Employer | Pension Expense |  |  |
| :---: | :---: | :---: | :---: |
|  | Net Recognition of Deferred Amounts from |  |  |
|  | Proportionate Share of Plan Pension Expense | Changes in Proportionate Share | Total Employer Pension Expense |
| 2822 - Thomas County | 15,064 | (780) | 14,284 |
| 2823 - Thurston County | 75,552 | $(2,907)$ | 72,645 |
| 2824 - Valley County | 55,949 | 15 | 55,964 |
| 2825 - Wayne County | 62,869 | $(3,147)$ | 59,722 |
| 2826 - Wheeler County | 20,815 | 403 | 21,218 |
| 2833 - Four Corners Health Department | 12,440 | 1,425 | 13,865 |
| 2834 - Loup Basin Public Health Department | 13,567 | (266) | 13,301 |
| 2835 - Panhandle Public Health Department | 28,192 | (376) | 27,816 |
| 2836 - South Heartland District Health Department | 18,118 | (500) | 17,618 |
| 2837 - Two Rivers Public Health Department | 18,302 | (995) | 17,307 |
| 2838 - Three Rivers Public Health Department | 21,454 | 1,322 | 22,776 |
| 2839 - Elkhorn Logan Valley Public Health Department | 21,516 | 1,008 | 22,524 |
| 2840 - Northeast Nebraska Public Health Department | 8,562 | 1,971 | 10,533 |
| 2841 - Southwest Nebraska Public Health Department | 12,736 | 1,195 | 13,931 |
| 2842 - West Central District Health Department | 33,838 | 533 | 34,371 |
| 2843 - Sandhills District Health Department (dissolved) 7/1/2014 | 0 | 2,743 | 2,743 |
| 2844 - Southeast District Health Department | 13,834 | 434 | 14,268 |
| 2845 - Public Health Solutions | 33,086 | $(4,039)$ | 29,047 |
| 2846 - Sarpy/Cass Department of Health and Wellness | 23,211 | 1,571 | 24,782 |
| 2847 - Stuhr Museum | 22,981 | 824 | 23,805 |
| 2848 - Western Nebraska Regional Airport | 11,383 | (385) | 10,998 |
| 2849 - Saunders Medical Center | 386,696 | 1,229 | 387,925 |
| 2850 - Nemaha County Hospital | 178,201 | 4,035 | 182,236 |

## Exhibit 4

## County Employees' Retirement System Cash Balance Benefit Fund

Schedule of Recognition Amounts by Employer
Measurement Date: 12/31/2017

| Employer | NPL Sensitivities |  |  | Schedule of Recognition of Deferred Outflows/(Inflows) of Resources for Fiscal Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { 1\% Decrease } \\ (6.50 \%) \\ \hline \end{gathered}$ | $\qquad$ Discount Rate (7.50\%) | $\begin{gathered} \text { 1\% Increase } \\ (8.50 \%) \\ \hline \end{gathered}$ | 2019 | 2020 | 2021 | 2022 | 2023 | Thereafter |
| Total | (\$10,431,379) | (\$54,105,973) | (\$91,030,122) | (\$3,399,527) | (\$4,169,702) | (\$9,159,082) | (\$8,565,612) | (\$601,249) | (\$129,553) |
| 2032 - Gosper County | $(29,454)$ | $(152,771)$ | $(257,029)$ | $(8,998)$ | $(11,172)$ | $(25,260)$ | $(23,485)$ | $(1,235)$ | (209) |
| 2034 - Hall County | $(488,949)$ | $(2,536,104)$ | $(4,266,846)$ | $(182,104)$ | $(218,205)$ | $(452,071)$ | $(423,657)$ | $(44,060)$ | $(16,895)$ |
| 2036 - Scotts Bluff County | $(334,091)$ | $(1,732,878)$ | $(2,915,465)$ | $(102,459)$ | $(127,126)$ | $(286,923)$ | $(268,320)$ | $(14,076)$ | 1,524 |
| 2040 - Cheyenne County | $(124,690)$ | $(646,746)$ | $(1,088,112)$ | $(42,836)$ | $(52,042)$ | $(111,681)$ | $(104,689)$ | $(8,751)$ | (935) |
| 2042 - Banner County | $(19,197)$ | $(99,571)$ | $(167,522)$ | $(5,401)$ | $(6,818)$ | $(16,000)$ | $(14,960)$ | (642) | (90) |
| 2044 - Dodge County | $(148,507)$ | $(770,282)$ | $(1,295,955)$ | $(50,402)$ | $(61,367)$ | $(132,398)$ | $(123,642)$ | $(9,405)$ | $(5,948)$ |
| 2046 - Jefferson County | $(99,284)$ | $(514,973)$ | $(866,412)$ | $(33,529)$ | $(40,859)$ | $(88,348)$ | $(82,412)$ | $(5,812)$ | $(1,589)$ |
| 2048 - Platte County | $(249,221)$ | $(1,292,671)$ | $(2,174,843)$ | $(74,362)$ | $(92,762)$ | $(211,966)$ | $(197,976)$ | $(9,812)$ | (958) |
| 2050 - Dawson County | $(233,879)$ | $(1,213,096)$ | $(2,040,963)$ | $(76,940)$ | $(94,208)$ | $(206,074)$ | $(192,519)$ | $(13,806)$ | $(4,789)$ |
| 2052 - Seward County | $(182,868)$ | $(948,509)$ | $(1,595,811)$ | $(67,345)$ | $(80,847)$ | $(168,314)$ | $(158,347)$ | $(18,513)$ | $(7,047)$ |
| 2054 - Morrill County | $(82,874)$ | $(429,856)$ | $(723,207)$ | $(29,145)$ | $(35,264)$ | $(74,903)$ | $(70,396)$ | $(7,302)$ | $(1,798)$ |
| 2056 - Buffalo County | $(336,267)$ | $(1,744,168)$ | $(2,934,461)$ | $(114,499)$ | $(139,327)$ | $(300,165)$ | $(280,518)$ | $(20,758)$ | $(4,508)$ |
| 2058 - Saunders County | $(218,970)$ | $(1,135,762)$ | $(1,910,852)$ | $(66,007)$ | $(82,174)$ | $(186,909)$ | $(174,525)$ | $(7,248)$ | 1,828 |
| 2060 - Washington County | $(207,793)$ | $(1,077,791)$ | $(1,813,320)$ | $(65,027)$ | $(80,369)$ | $(179,758)$ | $(168,665)$ | $(12,182)$ | $(1,854)$ |
| 2062 - Kimball County | $(61,101)$ | $(316,921)$ | $(533,201)$ | $(17,840)$ | $(22,351)$ | $(51,576)$ | $(48,031)$ | $(1,733)$ | 103 |
| 2089 - Saline County | $(141,142)$ | $(732,083)$ | $(1,231,687)$ | $(48,036)$ | $(58,457)$ | $(125,966)$ | $(118,314)$ | $(11,985)$ | $(5,952)$ |
| 2090 - Adams County | $(191,795)$ | $(994,811)$ | $(1,673,711)$ | $(66,500)$ | $(80,660)$ | $(172,397)$ | $(161,631)$ | $(13,474)$ | 718 |
| 2091 - Box Butte County | $(73,378)$ | $(380,602)$ | $(640,340)$ | $(20,383)$ | $(25,801)$ | $(60,898)$ | $(57,113)$ | $(3,162)$ | 767 |
| 2119 - Madison County | $(204,685)$ | $(1,061,672)$ | $(1,786,200)$ | $(69,171)$ | $(84,284)$ | $(182,186)$ | $(170,421)$ | $(13,727)$ | $(2,980)$ |
| 2121 - York County | $(157,092)$ | $(814,811)$ | $(1,370,872)$ | $(47,417)$ | $(59,016)$ | $(134,154)$ | $(125,267)$ | $(6,350)$ | $(1,388)$ |
| 2123 - Custer County | $(124,174)$ | $(644,074)$ | $(1,083,616)$ | $(42,500)$ | $(51,668)$ | $(111,062)$ | $(103,929)$ | $(7,772)$ | (953) |
| 2125 - Sarpy County | $(1,331,635)$ | $(6,907,000)$ | $(11,620,621)$ | $(402,806)$ | $(501,122)$ | $(1,138,051)$ | $(1,062,001)$ | $(57,198)$ | $(9,809)$ |
| 2126 - Cuming County | $(65,755)$ | $(341,059)$ | $(573,812)$ | $(19,533)$ | $(24,388)$ | $(55,838)$ | $(52,092)$ | $(2,240)$ | 469 |
| 2152 - Harlan County | $(50,286)$ | $(260,826)$ | $(438,824)$ | $(16,493)$ | $(20,206)$ | $(44,258)$ | $(41,368)$ | $(2,594)$ | (515) |
| 2164 - Gage County | $(138,403)$ | $(717,875)$ | $(1,207,782)$ | $(44,379)$ | $(54,598)$ | $(120,797)$ | $(112,388)$ | $(5,658)$ | $(1,371)$ |
| 2165 - Richardson County | $(91,980)$ | $(477,085)$ | $(802,667)$ | $(34,081)$ | $(40,872)$ | $(84,866)$ | $(79,517)$ | $(8,910)$ | $(3,555)$ |
| 2167 - Hitchcock County | $(37,155)$ | $(192,717)$ | $(324,236)$ | $(11,389)$ | $(14,133)$ | $(31,904)$ | $(29,940)$ | $(1,851)$ | 74 |
| 2168 - Red Willow County | $(85,601)$ | $(444,000)$ | $(747,004)$ | $(29,571)$ | $(35,892)$ | $(76,835)$ | $(71,869)$ | $(5,404)$ | $(1,700)$ |
| 2232 - Polk County | $(64,521)$ | $(334,658)$ | $(563,043)$ | $(20,720)$ | $(25,484)$ | $(56,344)$ | $(53,001)$ | $(5,058)$ | $(1,582)$ |
| 2234 - Lincoln County | $(246,626)$ | $(1,279,211)$ | $(2,152,198)$ | $(76,591)$ | $(94,800)$ | $(212,762)$ | $(199,145)$ | $(12,194)$ | $(1,142)$ |
| 2240 - Cedar County | $(96,024)$ | $(498,063)$ | $(837,962)$ | $(33,191)$ | $(40,281)$ | $(86,210)$ | $(80,723)$ | $(7,393)$ | $(2,415)$ |
| 2242 - Holt County | $(113,306)$ | $(587,702)$ | $(988,775)$ | $(40,701)$ | $(49,067)$ | $(103,262)$ | $(96,573)$ | $(8,462)$ | $(1,596)$ |
| 2243 - Frontier County | $(36,230)$ | $(187,921)$ | $(316,167)$ | $(11,649)$ | $(14,324)$ | $(31,653)$ | $(29,610)$ | $(1,412)$ | 776 |
| 2244 - Webster County | $(57,013)$ | $(295,720)$ | $(497,532)$ | $(18,504)$ | $(22,714)$ | $(49,983)$ | $(46,596)$ | $(2,666)$ | (345) |
| 2245 - Kearney County | $(64,821)$ | $(336,216)$ | $(565,663)$ | $(19,350)$ | $(24,135)$ | $(55,140)$ | $(51,396)$ | $(2,389)$ | $(1,122)$ |
| 2246 - Nemaha County | $(86,941)$ | $(450,951)$ | $(758,698)$ | $(28,565)$ | $(34,984)$ | $(76,568)$ | $(71,801)$ | $(5,519)$ | $(1,286)$ |
| 2247 - Franklin County | $(57,313)$ | $(297,272)$ | $(500,142)$ | $(18,195)$ | $(22,427)$ | $(49,840)$ | $(46,694)$ | $(3,192)$ | (420) |
| 2248 - Dundy County | $(38,305)$ | $(198,681)$ | $(334,270)$ | $(15,701)$ | $(18,529)$ | $(36,851)$ | $(34,383)$ | $(3,559)$ | (807) |
| 2249 - Phelps County | $(105,123)$ | $(545,259)$ | $(917,367)$ | $(34,197)$ | $(41,958)$ | $(92,239)$ | $(86,254)$ | $(5,111)$ | 417 |

Exhibit 4
County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Recognition Amounts by Employer
Measurement Date: 12/31/2017

| Employer | NPL Sensitivities |  |  | Schedule of Recognition of Deferred Outflows/(Inflows) of Resources for Fiscal Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current |  |  |  |  |  |  |  |  |
|  | $\begin{gathered} \text { 1\% Decrease } \\ (6.50 \%) \\ \hline \end{gathered}$ | $\begin{gathered} \text { Discount Rate } \\ (7.50 \%) \end{gathered}$ | $\begin{gathered} \text { 1\% Increase } \\ (8.50 \%) \\ \hline \end{gathered}$ | 2019 | 2020 | 2021 | 2022 | 2023 | Thereafter |
| 2775 - Antelope County | $(81,134)$ | $(420,831)$ | $(708,024)$ | $(26,158)$ | $(32,148)$ | $(70,955)$ | $(66,104)$ | $(4,192)$ | 394 |
| 2776 - Arthur County | $(5,770)$ | $(29,928)$ | $(50,351)$ | $(1,674)$ | $(2,100)$ | $(4,859)$ | $(4,525)$ | (317) | (312) |
| 2777 - Blaine County | $(11,550)$ | $(59,908)$ | $(100,791)$ | $(4,255)$ | $(5,107)$ | $(10,632)$ | $(9,986)$ | $(1,004)$ | (189) |
| 2778 - Boone County | $(70,101)$ | $(363,601)$ | $(611,737)$ | $(20,437)$ | $(25,613)$ | $(59,142)$ | $(55,696)$ | $(4,213)$ | (644) |
| 2779 - Boyd County | $(22,953)$ | $(119,053)$ | $(200,300)$ | $(8,120)$ | $(9,814)$ | $(20,793)$ | $(19,583)$ | $(2,110)$ | (593) |
| 2780 - Brown County | $(47,407)$ | $(245,891)$ | $(413,696)$ | $(15,862)$ | $(19,362)$ | $(42,037)$ | $(39,157)$ | $(2,411)$ | (527) |
| 2781 - Burt County | $(70,967)$ | $(368,097)$ | $(619,302)$ | $(23,641)$ | $(28,880)$ | $(62,825)$ | $(58,962)$ | $(4,797)$ | (683) |
| 2782 - Butler County | $(115,145)$ | $(597,237)$ | $(1,004,817)$ | $(37,741)$ | $(46,243)$ | $(101,317)$ | $(94,911)$ | $(8,012)$ | $(2,522)$ |
| 2783 - Cass County | $(290,986)$ | $(1,509,299)$ | $(2,539,307)$ | $(99,124)$ | $(120,608)$ | $(259,788)$ | $(243,698)$ | $(21,659)$ | $(4,201)$ |
| 2784 - Chase County | $(62,365)$ | $(323,476)$ | $(544,229)$ | $(23,751)$ | $(28,356)$ | $(58,185)$ | $(54,627)$ | $(6,114)$ | $(2,120)$ |
| 2785 - Cherry County | $(84,364)$ | $(437,584)$ | $(736,209)$ | $(27,966)$ | $(34,195)$ | $(74,546)$ | $(69,153)$ | $(4,007)$ | $(2,022)$ |
| 2786 - Clay County | $(87,813)$ | $(455,473)$ | $(766,306)$ | $(28,801)$ | $(35,285)$ | $(77,286)$ | $(72,279)$ | $(4,834)$ | (886) |
| 2787 - Colfax County | $(89,713)$ | $(465,326)$ | $(782,884)$ | $(29,666)$ | $(36,290)$ | $(79,200)$ | $(74,104)$ | $(5,458)$ | $(1,173)$ |
| 2788 - Dakota County | $(167,367)$ | $(868,105)$ | $(1,460,536)$ | $(53,935)$ | $(66,292)$ | $(146,344)$ | $(137,004)$ | $(9,046)$ | 622 |
| 2789 - Dawes County | $(81,064)$ | $(420,468)$ | $(707,413)$ | $(27,719)$ | $(33,704)$ | $(72,478)$ | $(67,899)$ | $(5,745)$ | $(1,504)$ |
| 2790 - Deuel County | $(35,997)$ | $(186,711)$ | $(314,129)$ | $(11,447)$ | $(14,105)$ | $(31,322)$ | $(29,267)$ | $(1,609)$ | (448) |
| 2791 - Dixon County | $(61,941)$ | $(321,278)$ | $(540,531)$ | $(18,782)$ | $(23,355)$ | $(52,982)$ | $(49,442)$ | $(2,976)$ | $(1,404)$ |
| 2792 - Fillmore County | $(90,572)$ | $(469,781)$ | $(790,379)$ | $(31,598)$ | $(38,285)$ | $(81,605)$ | $(76,156)$ | $(5,698)$ | $(1,405)$ |
| 2793 - Furnas County | $(53,098)$ | $(275,409)$ | $(463,360)$ | $(17,536)$ | $(21,456)$ | $(46,853)$ | $(43,652)$ | $(2,505)$ | 19 |
| 2794 - Garden County | $(50,761)$ | $(263,291)$ | $(442,972)$ | $(17,516)$ | $(21,264)$ | $(45,543)$ | $(42,568)$ | $(3,143)$ | (802) |
| 2795 - Garfield County | $(21,320)$ | $(110,582)$ | $(186,048)$ | $(6,422)$ | $(7,996)$ | $(18,194)$ | $(16,923)$ | (636) | 229 |
| 2796 - Grant County | $(8,867)$ | $(45,993)$ | $(77,381)$ | $(2,857)$ | $(3,511)$ | $(7,753)$ | $(7,266)$ | (559) | (132) |
| 2797 - Greeley County | $(29,146)$ | $(151,176)$ | $(254,345)$ | $(7,884)$ | $(10,036)$ | $(23,977)$ | $(22,452)$ | (867) | 31 |
| 2798 - Hamilton County | $(106,027)$ | $(549,947)$ | $(925,253)$ | $(31,713)$ | $(39,541)$ | $(90,255)$ | $(84,248)$ | $(4,131)$ | (533) |
| 2799 - Hayes County | $(20,111)$ | $(104,311)$ | $(175,498)$ | $(6,875)$ | $(8,360)$ | $(17,979)$ | $(16,929)$ | $(1,484)$ | (367) |
| 2800 - Hooker County | $(12,937)$ | $(67,100)$ | $(112,892)$ | $(3,869)$ | $(4,824)$ | $(11,012)$ | $(10,301)$ | (486) | 126 |
| 2801 - Howard County | $(63,002)$ | $(326,783)$ | $(549,793)$ | $(19,899)$ | $(24,551)$ | $(54,685)$ | $(51,154)$ | $(3,039)$ | (152) |
| 2802 - Johnson County | $(52,678)$ | $(273,230)$ | $(459,694)$ | $(17,852)$ | $(21,742)$ | $(46,938)$ | $(43,861)$ | $(3,630)$ | $(1,609)$ |
| 2803 - Keith County | $(90,147)$ | $(467,577)$ | $(786,671)$ | $(29,623)$ | $(36,279)$ | $(79,396)$ | $(74,436)$ | $(5,432)$ | (479) |
| 2804 - Keya Paha County | $(13,135)$ | $(68,128)$ | $(114,621)$ | $(4,108)$ | $(5,078)$ | $(11,360)$ | $(10,640)$ | (725) | (53) |
| 2805 - Knox County | $(80,535)$ | $(417,720)$ | $(702,790)$ | $(28,420)$ | $(34,366)$ | $(72,886)$ | $(68,404)$ | $(5,959)$ | (800) |
| 2806 - Logan County | $(15,401)$ | $(79,882)$ | $(134,397)$ | $(4,444)$ | $(5,581)$ | $(12,947)$ | $(12,042)$ | (610) | (623) |
| 2807 - Loup County | $(13,619)$ | $(70,642)$ | $(118,851)$ | $(4,090)$ | $(5,095)$ | $(11,610)$ | $(10,858)$ | (539) | 125 |
| 2808 - McPherson County | $(12,650)$ | $(65,615)$ | $(110,394)$ | $(4,087)$ | $(5,021)$ | $(11,072)$ | $(10,370)$ | (713) | 6 |
| 2809 - Merrick County | $(77,964)$ | $(404,387)$ | $(680,357)$ | $(27,830)$ | $(33,586)$ | $(70,877)$ | $(67,212)$ | $(8,696)$ | $(3,168)$ |
| 2810 - Nance County | $(60,428)$ | $(313,430)$ | $(527,327)$ | $(19,064)$ | $(23,525)$ | $(52,428)$ | $(48,943)$ | $(3,317)$ | $(1,437)$ |
| 2811 - Nuckolls County | $(47,058)$ | $(244,084)$ | $(410,658)$ | $(16,387)$ | $(19,861)$ | $(42,369)$ | $(39,792)$ | $(3,931)$ | $(1,365)$ |
| 2812 - Otoe County | $(144,172)$ | $(747,799)$ | $(1,258,128)$ | $(47,429)$ | $(58,074)$ | $(127,032)$ | $(118,016)$ | $(7,156)$ | $(3,310)$ |
| 2813 - Pawnee County | $(32,239)$ | $(167,218)$ | $(281,334)$ | $(10,274)$ | $(12,655)$ | $(28,075)$ | $(26,195)$ | $(1,397)$ | (87) |
| 2814 - Perkins County | $(67,500)$ | $(350,113)$ | $(589,044)$ | $(21,868)$ | $(26,851)$ | $(59,137)$ | $(54,837)$ | $(2,190)$ | (208) |
| 2815 - Pierce County | $(58,652)$ | $(304,221)$ | $(511,834)$ | $(17,713)$ | $(22,043)$ | $(50,097)$ | $(46,837)$ | $(2,419)$ | 401 |
| 2816 - Rock County | $(33,316)$ | $(172,805)$ | $(290,734)$ | $(10,191)$ | $(12,651)$ | $(28,586)$ | $(26,826)$ | $(1,767)$ | (129) |

Exhibit 4
County Employees' Retirement System Cash Balance Benefit Fund
Schedule of Recognition Amounts by Employer
Measurement Date: 12/31/2017



[^0]:    * Other changes consist of $\$ 1$ from the difference between employer contributions reported on the FNP Statement and employer contributions reported on Schedule of Allocated Proportion by Employer.

