## North Dakota Teachers'

Fund for Retirement
Governmental Accounting Standards Board (GASB)
Statement Nos. 67 and 68
Actuarial Valuation as of July 1, 2016

## K Legal Consulting

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November 4, 2016
Board of Trustees
North Dakota Teachers' Fund for Retirement
1930 Burnt Boat Drive, P.O. Box 7100
Bismarck, ND 58507-7100
Dear Trustees:
We are pleased to submit the following report intended to be used for satisfying certain reporting requirements by Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 as of June 30, 2016.

This report was prepared in accordance with generally accepted actuarial principles and practices. The census and financial information on which our calculations were based was supplied by the staff of the Retirement and Investment Office. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Matthew Strow, FSA, MAAA, Enrolled Actuary.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.
We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the Fund.
We look forward to reviewing this report with you and to answering any questions.
Sincerely,
Seal Consulting, a Member of The Segal Group, Inc.

By:


Kim Nicholl, FSA, EA, MAAA
Senior Vice President and Actuary


Matthew A. Strow, FSA, EA, MAAA
Vice President and Actuary
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## SECTION 1: Valuation Summary for the North Dakota Teachers' Fund for Retirement

## Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 as of June 30, 2016. This valuation is based on:
> The benefit provisions of the Fund, as administered by the Board;
> The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of July 1, 2016;
> The assets of the Fund as of June 30, 2016;
> Economic assumptions regarding future salary increases and investment earnings; and
> Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

## Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:
> Governmental Accounting Standards Board (GASB) Statements 67 and 68 contain rules for the reporting of pension liabilities for accounting purposes. Statement 67 was effective with the fiscal year ending June 30, 2014, for Plan reporting. Statement 68 was effective with the fiscal year ending June 30, 2015, for employer reporting. The information contained in this valuation is intended to be used (along with other information) in order to comply with both Statements 67 and 68
> It is important to note that the GASB rules only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Plans can still develop and adopt funding policies under current practices.
> When measuring pension liability for GASB purposes, the same actuarial cost method (Entry Age method) is used to determine the funded status of the Plan, the actuarially determined contribution rate, and the effective amortization period. In addition, the GASB blended discount rate calculation results in the same discount rate (expected return on assets) as used for funding purposes. This means that the total pension liability (TPL) measure for financial reporting shown in this report is determined on the same basis as the actuarial accrued liability (AAL) measure for funding.

## SECTION 1: Valuation Summary for the North Dakota Teachers' Fund for Retirement

> The net pension liability (NPL) is equal to the difference between the TPL and the plan fiduciary net position. The plan fiduciary net position is equal to the market value of assets and therefore, the NPL measure is very similar to an unfunded actuarial accrued liability (UAAL) on a market value basis. The NPL increased from $\$ 1.31$ billion as of June 30, 2015, to $\$ 1.47$ billion as of June 30, 2016. Changes in these values during the prior fiscal year ending June 30 , 2016, can be found in Exhibit 3.
> Changes were made effective with the July 1, 2016, actuarial valuation as a result of the independent review that Cavanaugh Macdonald Consulting performed in 2016. The changes had a minimal impact on the valuation and are as follows:

- The calculation of the death benefit liability for deferred vested members was modified.
- Dates of hire were adjusted for members who had a break in service.

Additional information is included in the July1, 2016 actuarial valuation report.
> The discount rate used to determine the TPL and NPL was $7.75 \%$ as of both June 30, 2016 and 2015. The detailed calculations used in this derivation were provided under separate cover. Various information that is required to be disclosed can be found throughout Section 2 and Section 3.

## Summary of Key Valuation Results

|  | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |
| :--- | ---: | ---: |
| Disclosure elements for fiscal year ending June 30: |  |  |
| Service cost | $\$ 68,239,440$ | $\$ 60,617,900$ |
| Total pension liability | $3,589,393,851$ | $3,449,775,982$ |
| Plan fiduciary net position | $2,124,335,288$ | $2,141,920,800$ |
| Net pension liability | $1,465,058,563$ | $1,307,855,182$ |
| Plan fiduciary net position as a percentage of total pension liability | $59.2 \%$ | $62.1 \%$ |
| Schedule of contributions for fiscal year ending June 30: |  |  |
| Actuarially determined contributions | $\$ 84,724,122$ | $\$ 71,167,632$ |
| Actual contributions | $82,839,932$ | $78,42,098$ |
| Contribution deficiency (excess) | $1,884,190$ | $\mathbf{7 , 2 5 4 , 4 6 6 )}$ |
| Demographic data as of July 1: | 8,249 | 8,025 |
| Number of retirees and beneficiaries | 1,601 | 1,607 |
| Number of inactive vested members | 779 | 660 |
| Number of inactive non-vested members | 10,813 | 10,514 |
| Number of active members |  |  |
| Key assumptions: | $7.75 \%$ |  |
| Single equivalent discount rate | $2.85 \%$ | $7.75 \%$ |
| Municipal bond index | $2.75 \%$ | $3.73 \%$ |
| Inflation rate | $4.25 \%$ to $14.50 \%$, | $2.75 \%$ |
| Projected salary increases | varying by service |  |

## SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

| EXHIBIT 1 |  |  |
| :--- | ---: | ---: |
| Membership Data | July 1, 2016 | July 1, 2015 |
|  |  |  |
| Retired members and beneficiaries | 8,249 | 8,025 |
| Vested inactive members | 1,601 | 1,607 |
| Non-vested inactive members | 779 | 660 |
| Active members: |  |  |
| Vested | 7,433 | 7,369 |
| Non-vested | $\underline{3,380}$ | $\underline{3,145}$ |
| Total active members | 21,413 | 10,514 |
| Total membership |  | 20,806 |

## Active Membership By Plan Eligibility

|  | July 1, 2016 | July 1, 2015 |
| :--- | :---: | :---: |
| Tier 1 Grandfathered | 2,559 | 2,869 |
| Tier 1 Non-grandfathered | 3,272 | 3,312 |
| Tier 2 | 4,982 | 4,333 |
| Total active membership | 10,813 | 10,514 |

## SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

## EXHIBIT 2

Net Pension Liability

|  | June 30, 2016 | June 30, 2015 |
| :--- | :---: | :---: |
| The components of the net pension liability are as follows: |  |  |
| Total pension liability | $\$ 3,589,393,851$ | $\$ 3,449,775,982$ |
| Plan fiduciary net position | $(2,124,335,288)$ | $\underline{(2,141,920,800)}$ |
| Net pension liability | $\$ 1,465,058,563$ | $\$ 1,307,855,182$ |
| Plan fiduciary net position as a percentage of the total pension liability | $59.2 \%$ | $62.1 \%$ |

Plan provisions. The plan provisions used in the measurement of the net pension liability are the same as those used in the actuarial valuation as of July 1, 2016.

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

| Inflation | $2.75 \%$ |
| :--- | :--- |
| Salary increases | $4.25 \%$ to $14.50 \%$, varying by service, including inflation and |
| productivity |  |
| Investment rate of return | $7.75 \%$, net of investment expenses |
| Cost-of-living adjustments | None |

For active and inactive members, mortality rates were based on the RP-2014 Employee Mortality Table, projected generationally using Scale MP-2014. For healthy retirees, mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by $50 \%$ for ages under 75 and grading up to $100 \%$ by age 80, projected generationally using Scale MP-2014. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Table set forward four years.

The actuarial assumptions used were based on the results of an experience study dated April 30, 2015. They are the same as the assumptions used in the July 1, 2016, funding actuarial valuation for TFFR.

## SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

The long-term expected investment rate of return assumption was determined using a building-block method in which bestestimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Fund's target asset allocation are summarized in the following table:

| Asset Class | Target <br> Allocation | Long-Term <br> Expected Real <br> Rate of Return |
| :--- | :---: | :---: |
| Global Equities | $58 \%$ | $7.30 \%$ |
| Global Fixed Income | $23 \%$ | $0.88 \%$ |
| Global Real Assets | $18 \%$ | $5.32 \%$ |
| Cash Equivalents | $\underline{1 \%}$ | $0.00 \%$ |
| Total | $100 \%$ |  |

Discount rate: The long-term expected rate of return on pension plan investments is $7.75 \%$. The high quality tax-exempt general obligation municipal bond rate (20-Bond GO Index) as of the closest date prior to the valuation date of June 30, 2016, is $2.85 \%$, as published by the Board of Governors of the Federal Reserve System.

The discount rate used to measure the total pension liability was $7.75 \%$ as of June 30, 2016. The projection of cash flows used to determine the discount rate assumes that member and employer contributions will be made at rates equal to those based on the July 1, 2016, Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members as of June 30, 2016. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2016.

## SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability as of June 30, 2016, and June 30, 2015, calculated using the discount rate of $7.75 \%$, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.75\%) or 1-percentage-point higher (8.75\%) than the current rate:

|  | Current <br> Net pension liability as of June 30, 2015 <br>  <br> Net pension liability as of June 30, 2016 |  |  |
| :--- | ---: | :--- | ---: |
| $\$ 1,728,392,470$ | $\$ 1,307,855,182$ | $\$ 957,135,967$ |  |
| 1\% | $\$ 1,900,291,033$ | $\$ 1,465,058,563$ | $\$ 1,102,551,032$ |

## EXHIBIT 3

Schedule of Changes in Net Pension Liability

|  | 2016 | 2015 |
| :---: | :---: | :---: |
| Total pension liability |  |  |
| Service cost | \$68,239,440 | \$60,617,900 |
| Interest | 265,439,909 | 249,063,837 |
| Change of benefit terms | 0 | 0 |
| Differences between expected and actual experience | $(8,092,800)$ | 2,209,258 |
| Changes of assumptions | 0 | 171,324,647* |
| Benefit payments, including refunds of employee contributions | (185,968,680) | $(172,239,433)$ |
| Net change in total pension liability | \$139,617,869 | \$310,976,209 |
| Total pension liability - beginning | 3,449,775,982 | 3,138,799,773 |
| Total pension liability - ending (a) | \$3,589,393,851 | \$3,449,775,982 |
| Plan fiduciary net position |  |  |
| Contributions - employer | \$82,839,932 | \$78,422,098 |
| Contributions - member | 76,342,685 | 72,268,451 |
| Contributions - purchased service credit | 2,768,245 | 1,600,739 |
| Contributions - other | 44,966 | 172,474 |
| Net investment income | 8,238,996 | 73,204,806 |
| Benefit payments, including refunds of employee contributions | $(185,968,680)$ | $(172,239,433)$ |
| Administrative expense | $(1,851,656)$ | $(1,923,392)$ |
| Net change in plan fiduciary net position | (\$17,585,512) | \$51,505,743 |
| Plan fiduciary net position - beginning | 2,141,920,800 | 2,090,415,057** |
| Plan fiduciary net position - ending (b) | \$2,124,335,288 | \$2,141,920,800 |
| Net pension liability - ending (a) - (b) | \$1,465,058,563 | \$1,307,855,182 |
| Plan fiduciary net position as a percentage of the total pension liability | 59.2\% | 62.1\% |
| Actual covered employee payroll | \$649,724,868 | \$615,104,860 |
| Plan net pension liability as percentage of covered employee payroll | 225.5\% | 212.6\% |

[^0]SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

## EXHIBIT 4

Schedule of Employer Contributions

|  |  | Contributions in <br> Relation to the |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Actuarially |  |  |  |  |  |
| Year Ended | Actuarially <br> Determined <br> June 30 | Determined <br> Contributions | Contribution | Actual <br> Covered Employee <br> Payroll | Contributions as <br> a Percentage of <br> Covered Employee <br> Payroll |
| 2013 | $\$ 52,396,153$ | $\$ 59,300,720$ | $\$(6,904,567)$ | $\$ 551,655,590$ | $10.75 \%$ |
| 2014 | $59,513,485$ | $62,355,146$ | $(2,841,661)$ | $580,053,235$ | $10.75 \%$ |
| 2015 | $71,167,632$ | $78,422,098$ | $(7,254,466)$ | $615,104,860$ | $12.75 \%$ |
| 2016 | $84,724,122$ | $82,839,932$ | $1,884,190$ | $649,724,868$ | $12.75 \%$ |

## Notes to Exhibit 4

| Valuation date | Actuarially determined contribution rates are calculated as of June 30, with appropriate <br> interest to the middle of the fiscal year. |
| :--- | :--- |
| Methods and assumptions used to establish <br> actuarially determined contribution rates: <br> Actuarial cost method <br> Amortization method <br> Remaining amortization period | Entry Age Actuarial cost method <br> Level percentage of pay, closed <br> 27 years as of July 1, 2016. <br> The amortization of unfunded actuarial accrued liability (UAAL) within the actuarially <br> determined contribution rate calculation is based on the level percentage of pay required to <br> amortize the UAAL over the 30-year closed period that began July 1, 2013. For this <br> calculation, payroll is assumed to increase 3.25\% per year. |
| The market value of assets with a five-year phase-in of actual return in excess of (or less than) <br> expected investment income. Expected investment income is determined using the assumed |  |
| investment return rate and the market value of assets (adjusted for receipts and disbursements |  |
| during the year). |  |

[^1]Changes in the collective net pension liability from the beginning of the year to the end of the year arise from the net difference between changes in the total pension liability and plan fiduciary net position that occurred during the year. Changes in net pension liability will be recognized immediately as pension expense, or reported as deferred outflows of resources related to pensions or deferred inflows of resources related to pensions, depending on the nature of the change.
Differences between actual and expected investment-related experience are recognized over a closed five-year period. Differences between actual and expected non-investment-related experience and changes of assumptions are recognized over the average of the expected remaining service lives of all members who are provided with pensions through the pension plan (active employees and inactive employees). The amounts below that are not included in pension expense for the current year are included in deferred outflows of resources or deferred inflows of resources related to pensions.

| EXHIBIT A |  |  |  |
| :---: | :---: | :---: | :---: |
| Reconciliation of Collective Net Pension Liability |  |  |  |
|  | Increase/(Decrease) <br> For Fiscal Year Ending June 30, 2016 |  |  |
|  | Total Pension Liability <br> (a) | Plan Fiduciary Net Position (b) | Net Pension Liability (a) - (b) |
| Balances at beginning of year | \$3,449,775,982 | \$2,141,920,800 | \$1,307,855,182 |
| Changes for the year |  |  |  |
| Service cost | 68,239,440 |  | 68,239,440 |
| Interest | 265,439,909 |  | 265,439,909 |
| Differences between expected and actual experience | $(8,092,800)$ |  | $(8,092,800)$ |
| Contributions - employer |  | 82,839,932 | $(82,839,932)$ |
| Contributions - member |  | 76,342,685 | $(76,342,685)$ |
| Contributions - purchased service credit |  | 2,768,245 | $(2,768,245)$ |
| Contributions - other |  | 44,966 | $(44,966)$ |
| Net investment income |  | 8,238,996 | $(8,238,996)$ |
| Benefit payments, including refunds of employee contributions | $(185,968,680)$ | $(185,968,680)$ | 0 |
| Administrative expense |  | $(1,851,656)$ | 1,851,656 |
| Changes of assumptions | -- |  | -- |
| Change of benefit terms |  |  | 0 |
| Net changes | 139,617,869 | (17,585,512) | 157,203,381 |
| Balances at end of year | \$3,589,393,851 | \$2,124,335,288 | \$1,465,058,563 |

As shown in Exhibit A, during the plan year that ended June 30, 2016, the changes in net pension liability due to differences between expected and actual demographic experience is a decrease of $\$ 8,092,800$. The average expected remaining service lives of all members is 7 years, determined as of July 1,2015 . Therefore, of the $\$ 8,092,800$ demographic gain, $\$ 1,156,114$ is recognized in pension expense in the current year and $\$ 6,936,686$ is reflected as a deferred inflow of resources related to pensions.

Based on the assumed investment return of $7.75 \%$, the expected net investment income for the year was $\$ 164,998,162$. As shown in Exhibit A, the actual net investment income for the year was $\$ 8,238,996$. The difference between actual and expected investment experience is an increase in net pension liability of $\$ 156,759,166$, which is recognized over a 5 -year period. Of this amount, $\$ 31,351,833$ is reflected in the current year and $\$ 125,407,333$ is reflected as a deferred outflow of resources related to pensions.

## EXHIBIT B

Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

|  | Year Established | Original Balance | Original Amortization Period | Amortization Amount | Outstanding Balance at June 30, 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Outflows |  |  |  |  |  |
| Demographic | 2014 | \$9,347,346 | 7 years | \$1,335,335 | \$5,341,341 |
| Demographic | 2015 | 2,209,258 | 7 years | 315,608 | 1,578,042 |
| Assumptions | 2015 | 171,324,647 | 7 years | 24,474,950 | 122,374,747 |
| Investment | 2015 | 93,160,436 | 5 years | 18,632,087 | 55,896,262 |
| Investment | 2016 | 156,759,166 | 5 years | 31,351,833 | 125,407,333 |
| Total outflows |  |  |  | \$76,109,813 | \$310,597,725 |
| Inflows |  |  |  |  |  |
| Investment | 2014 | \$148,793,866 | 5 years | \$29,758,773 | \$59,517,547 |
| Demographic | 2016 | 8,092,800 | 7 years | 1,156,114 | 6,936,686 |
| Total inflows |  |  |  | \$30,914,887 | \$66,454,233 |

## SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

| EXHIBIT B (continued) |  |  |
| :---: | :---: | :---: |
| Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions |  |  |
| At June 30, 2016, deferred outflows of resources and deferred inflows of resources related to pensions are: |  |  |
|  | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Difference between expected and actual experience | \$6,919,383 | \$6,936,686 |
| Changes of assumptions | 122,374,747 | 0 |
| Net difference between projected and actual earning on pension plan investments | 121,786,048 | 0 |
| Total | $\underline{\mathbf{\$ 2 5 1 , 0 8 0 , 1 7 8}}$ | \$6,936,686 |

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:
Year Ended June 30:

| 2017 | $\$ 45,194,926$ |
| :---: | ---: |
| 2018 | $45,194,925$ |
| 2019 | $74,953,700$ |
| 2020 | $56,321,614$ |
| 2021 | $23,634,443$ |
| Thereafter | $(1,156,116)$ |

## SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

Exhibit C below shows the individual components of collective pension expense, which totaled $\$ 136,571,873$ for the fiscal year that ended June 30, 2016.

Annual pension expense for the year can also be viewed as the change in net pension liability, plus employer contributions for the year, less the change in outstanding balances of deferred outflows and deferred inflows of resources from the end of the prior fiscal year to end of the current fiscal year. From Exhibit A, the change in net pension liability during the year was $\$ 157,203,381$ and employer contributions were $\$ 82,839,932$. The net value of deferred outflows and deferred inflows of resources as of the end of the current fiscal year is $\$ 244,143,492$ compared to the net value as of the end of the prior fiscal of $\$ 140,672,052$ for a change of $\$ 103,471,440$. Therefore, the pension expense for the fiscal year that ended June 30,2016 , is \$157,203,381 + \$82,839,932 - \$103,471,440, or \$136,571,873.

## EXHIBIT C <br> Collective Pension Expense

|  | Fiscal Year Ending June 30, 2016 | Fiscal Year Ending June 30, 2015 |
| :---: | :---: | :---: |
| Components of pension expense |  |  |
| Service cost | \$68,239,440 | \$60,617,900 |
| Interest on the total pension liability | 265,439,909 | 249,063,837 |
| Projected earnings on plan investments | $(164,998,162)$ | $(166,365,242)$ |
| Contributions - member | $(76,342,685)$ | $(72,268,451)$ |
| Contributions - purchased service credit | $(2,768,245)$ | $(1,600,739)$ |
| Contributions - other | $(44,966)$ | $(172,474)$ |
| Administrative expense | 1,851,656 | 1,923,392 |
| Current year recognition of: |  |  |
| Changes of assumptions | 24,474,950 | 24,474,950 |
| Difference between expected and actual experience | 494,829 | 1,650,943 |
| Difference between projected and actual earnings on pension plan investments | 20,225,147 | $(11,126,686)$ |
| Change of benefit terms | 0 | 0 |
| Restatement of Plan Fiduciary Net Position | N/A | 561,999 |
| Total pension expense | \$136,571,873 | \$86,759,429 |

## SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

TFFR is classified as a cost-sharing multiple-employer defined benefit pension plan for GASB accounting purposes. As specified in GASB 68, employers that participate in TFFR are required to recognize their proportionate share of the collective pension amounts for all benefits provided through the Fund. Pension amounts to be recognized by employers include the net pension liability, deferred outflows of resources related to pensions, deferred inflows of resources related to pensions, and pension expense. In addition, the effects of (1) a change in the employer's proportion of the collective net pension liability and (2) differences during the measurement period between the employer's contributions and its proportionate share of the total of contributions from employers included in the collective net pension liability are required to be determined and recognized.

The basis of an employer's allocation of the collective pension amounts should be consistent with the manner in which contributions to the plan are determined. Since contributions to TFFR are collected as a percentage of payroll, covered employee payroll for the fiscal year ending June 30, 2016, is used as the proportionate share allocation basis. Retirement and Investment Office staff supplied covered employee payroll for each employer.
The net effect of the change on an employer's proportionate share of the collective net pension liability and collective deferred outflows of resources and deferred inflows of resources is recognized over the average of the expected remaining service lives of all members who are provided with pensions through TFFR.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended June 30, 2016, is recognized over the same period. However, since TFFR contributions are collected on the same basis as the proportionate share allocation, there is no difference between the actual employer contributions and the proportionate share of the employer contributions. If employers no longer report to TFFR, they will continue to remain on the schedule until their deferral balances are depleted.

Exhibits D and E that follow show the proportionate share information for employers of TFFR for the fiscal year ending June 30, 2016.

| Employer Name | Covered Employee Payroll | Employer's Proportionate Share Allocation |
| :---: | :---: | :---: |
| Alexander School | 1,174,850 | 0.18082264\%/ |
| Anamose School | 721,897 | 0.11110816\% |
| Apple Creek Elem School | 345,214 | 0.05313226\% |
| Ashley School- | 990,933 | -0.14639340\% |
|  |  |  |
| Barnes County North | 1,557,049 | \% |
| Beach School | 2,138,290 | ${ }^{0.3291070404 \%}$ |
| Belcourtschol Beifiel Pulic Schiol |  | ${ }^{1.2}$ |
| Beulah School | ${ }_{3,422.543}$ | 0.52676803\% |
| Billings Co. School Dist. | 758,055 | 0.11667315\% |
| Bismarck Public Schools | 69.21, 1.21 | \% |
| Bismarck State College |  |  |
| Blessed John Paul II Cath |  | 000000\% |
| Botineau School | 3,759,574 | 0.57884088\% |
| Bowbells School | . 55 | 20072\% |
|  | 2,78,100 |  |
| Burke Central School | 954,834 | 0.14695981\% |
| Burreigh County Spec. Ed. | 85,938 | 0.01322889\% |
| Carington schoo | 2, 2.263 .661 | $1{ }^{\text {a }}$ |
| Cavaier School | ${ }^{2,332,972}$ |  |
| Center Stanton School | ${ }^{\text {1,443,696 }}$ |  |
| Central Cass School | 3,458,213 | 0.53225833\% |
| Centra lementary School | 62P19 | -0.0068390\% |
| Daknal praire school |  |  |
|  | $1.066,318$ 10,31555 | 0.158760361\% |
| Dickinson School | 18,43,992 | 2.83719976\% |
| Divide School |  | 0.35851646\% |
| Drake School | 504,034 | 0.07556565\% |
| Drayton School | 1,238,308 | 0.190589595\% |
|  | 2.919,917 | $\frac{0.44940822^{2} \%}{0 . i 1896866 \% \%}$ |
| Earl Elem. School | ${ }^{31,500}$ | 0.00488820\% |
| Edgeley School | 1,281,117 | 0.19717837\% |
| Eddmore Scchool |  | 22\%. |
| Eightire schoor | 1,543,356 |  |
| Elgn-New Leipzig School | ${ }^{1,1,70}$ |  |
| Elendale School | - $1,731,685$ | 0.26651659\% |
| Emerado Elementary School | -568, ${ }^{\text {a }}$ | - $0.088744740 \% \%$ |
| Fairmount Scho | 971.080 | 0.14946017\% |
| Fargo Public Schools | 69,044,120 | 10.62667033\% |
| Fessenden-Bowdon Sol | 1.036,712 | O. $0.159561686 \%$ |
| -riey-Staron school |  |  |
| Flashers schoor | 1,073,725 | 0.1652535\%\% |
| Foravile Lankin School |  |  |
|  | ${ }^{1.561,022}$ | -0.02478304\%\% |
| Fort Yates Sch | 1,155,786 | 0.17788847\% |
| Gackle-Streeter Puu Sch | ${ }^{777,812}$ | 0.119721402\% |
| $\frac{\text { Garrison School }}{\text { Cien }}$ |  | - |
| Glenbur School | 1,888,386 | 0.28756569\% |
| Goodrich School | 289,211 | 0.04451287\% |
| $\frac{\text { Gratton School }}{\text { Grand }}$ | ${ }^{4.4 .477,799}$ | - |
| Great North West Coooerative | 1178220 | 仿 |
|  | 1,138,249 | 0.17518945\% |
| Grigs Count Central sch | ${ }_{1}^{1,586.343}$ | 0.24415605\% |
| - | 1,595, 234 |  |
| ankinson School | ${ }_{1}^{1,442,217}$ | 0.02199335\%\% |
| rey Schoo |  |  |
| aton Eielson Psd | ,131,3,39 | 0.17413199\% |
| zelton - Moftit School | 830,095 | 0.1276106\% |
| zen School | 2,881,712 | 0.44352889\%\% |
| Heboron School | 1,153, 32 | -.1750965\%. |


| Employer Name | Covered Employee Payroll | Employer's Proportionate Share Allocation |
| :---: | :---: | :---: |
| Hettinger School | 1,432,947 | 0.22054668\% |
| Hillsboro School | 2,456,998 | 0.37815974\% |
| Hope School | 671,562 | 0.10336098\% |
| Horse Creek Elem. School | 26,250 | 0.00404017\%, |
|  | 1,336,061 | 0.205633488\% |
| Jamestown School | 13,078,614 | 2.01294651\% |
| Kenmare School | 1,730,269 | 0.26630798\% |
| Kensal School | 449,639 | 0.06920446\% |
| Kidder County School District | 2,169,113 | 0.33385103\% |
| Killdeer School | 2,636,155 | 0.40573407\% |
| Kindred School | 3,117,666 | 0.47984406\% |
| Kulm School | 1,066,482 | 0.16414361\% |
| Lâke Region Spec Ed | 1,676,065 | $0.25796530 \%$ |
| Lakota School | 1,151,669 | 0.17725483\% |
| Lamoure School | 1,557,013 | 0.23964192\% |
| Langdon Area School | 1,756,152 | 0.27029165\% |
| Lárimore S School | 2,107,946 | 0. $\mathbf{3} \mathbf{2} 4 \overline{4} \overline{3} \overline{6} 70 \%$ |
| Leeds School | 1,065,298 | 0.16396137\% |
| Lewis And Clark School | 2,631,930 | 0.40508382\% |
| Lidgerwood School | 1,168,186 | 0.17979704\% |
| Linton Śchool | 1,651,466 | 0.25417932\% |
| Lisbon School | 3,480,999 | 0.53576506\% |
| Litchville-Marion School | 854,113 | 0.13145766\% |
| Little Heart Elem. School | 101,500 | $0.01562197 \%$ |
| Logan County | 4,079 | 0.00062785\% |
| Lone Tree Elem. School | 256,697 | 0.03950858\% |
| Lonetree Spec Ed Unit | 158,056 | 0.02432653\% |
| Maddock School | 983,360 | 0.15135015\% |
| Mandan Public Schools | 19,302,655 | 2.97089678\% |
| Mandaree School | 1,666,376 | 0.25647410\% |
| Manning Elem School | 84,820 | 0.01305475\% |
| Manvel Elem. School | 803,290 | 0.12363539\% |
| Maple Valley School | 1,585,477 | 0.24402277\% |
| Mapleton Elem. School | 674,068 | 0.10374674\% |
| Marmarth Elem. School | 179,428 | 0.02761603\% |
| Max School | 1,184,279. | 0.18227395\% |
| May-Port C-G-G School | 2,747,734 | 0.42290734\% |
| Mcclusky School | 742,177 | 0.11422947\% |
| Mckenzie County | 40,223 | 0.00619078\% |
| Mckenzie County School | 6,556,916 | 1.00918344\%, |
| Medina School | 1,035,829 | 0.15942583\% |
| Menoken Elem School | 156,600 | 0.02410251\% |
| Midkota | 975,732 | 0.15017616\% |
| Midway School | 1,467,239 | 0.22582465\% |
| Milinor School | 1,374,805 | 0.2i1159804\% |
| Minnewaukan School | 1,709,119 | 0.26305272\% |
| Minot School | 43,566,502 | 6.70537700\% |
| Minto School | 1,160,831 | 0.77866504\% |
| M Mohalil Lansford S̄̄̄erwood | 2,162,738 | 0.33286989\% |
| Montpelier School | 762,833 | 0.11740855\% |
| Morton County | 30,550 | 0.00470195\% |
| Mott-Regent School | 1,543,257. | 0.23752476\% |
| $\overline{\text { Mit Pleasant Sch }}$ - ${ }^{\text {a }}$ | 1,648,775 | $0.25376515 \%$ |
| Munich School | 936,292 | 0.14410593\% |
| N Central Area Career And Tech Center | 145,350 | 0.02237102\% |
| Napoleon S School | 1,484,611 | 0.22849835\% |
| Naughton Rural school | 74,133 | 0.01140988\% |
| Nd Center For Distance Education | 1,319,021 | 0.20301221\% |
| Nd Dept Of Public Instruction | 185,860 | 0.02860595\% |
| Nd School For Blind | 713,194 | 0.10976865\% |
| N N S School For Deat | 882,660 | 0.13585i31\% |
| Nd United | 312,194 | 0.04805011\% |
| Nd Youth Correctional Cnt | 1,228,635 | 0.18910081\% |
| Nedrose S School | 2,454,896 | 0.37783627\% |
| Nelson County | 12,233 | 0.00188281\% |
| Nesson School | 1,628,018 | 0.25057042\% |
| New England School | 1,373,415 | 0.21138408\% |
| New Public School | 2,032,789 | 0.31286915\% |


| Employer Name | Covered Employee Payroll | Employer's Proportionate Share Allocation |
| :---: | :---: | :---: |
| New Rockford Sheyenne School | 1,706,324 | 0.26262259\% |
| New Salem-Almont | 1,698,527 | 0.26142243\% |
| New Town School | 4,303,882 | 0.66241609\% |
| Newburg United District | 657.869 | 0.10125347\%. |
| North Börder School | 2,889,141 | $0 . \overline{4} \overline{467142 \%}$ |
| North Sargent School | 1,514,698 | 0.23312921\% |
| North Star | 1,678,868 | 0.25839675\% |
| North Valley Area Career | 513,027. | 0.07896064\%. |
| Northern Cass School Dist | 2,784,812 | 0.42861399\% |
| Northern Plains Spec Ed | 265,629 | 0.04088332\% |
| Northwood School | 1,534,870 | 0.23623388\% |
| Oakes School | 2,016,337 | 0.31033702\%. |
| Oberon Elem School | 279,029-- | 0.04294572\% |
| Oliver - Mercer Spec Ed | 997,173 | 0.15347626\% |
| Page School | 678,436 | 0.10441896\% |
| Park River Area School District | 2,036,594 | 0.31345477\%. |
| Parshall School | 1,694,763 | 0.26084321\% |
| Peace Garden Spec Ed | 534,749 | 0.08230387\% |
| Pembina Spec Ed Coop | 106,000 | 0.01631460\% |
| Pingree - Buchanan School | 824,499 | 0.12689965\% |
| P̄ieasant Valley Elem |  | 0.00000000\% |
| Powers Lake School | 1,128,303 | 0.17365859\% |
| Richardton-Taylor | 1,715,144 | 0.26397999\% |
| Richland School | 1,448,543 | 0.22294717\%. |
| Robinson School |  | 0.000000000\% |
| Rolette County |  | 0.00000000\% |
| Rolette School | 1,204,811 | 0.18543398\% |
| Roosevelt School | 425,487 | 0.06548723\% |
| Roughrider Area Career And Tech Center | 95,425 | 0.01468699\% |
| Roughrider Service Program | 302,882 | 0.04661696\% |
| Rugby School | 3,216,322 | 0.49502824\% |
| Rural Cass Spec Ed | 1,083,147 | 0.16670854\% |
| Sargent Central School | 1,432,224 | $0.2 \overline{2043540 \%}$ |
| Sawyer School | 876,443 | 0.13489443\% |
| Scranton School | 1,084,034 | 0.16684501\% |
| Se Region Career And Tech | 1.428,830 | 0.21991312\%. |
| Selifridge School | 874,264 | $0.13 \overline{455905 \%}$ |
| Sheyenne Valley Area Voc | 744,005 | 0.11451072\% |
| Sheyenne Valley Spec Ed | 1,491,949 | 0.22962775\% |
| Slope County | 24,651 | 0.00379406\% |
| Soolen-C'annonbāil Schōoul | 1,543,013 | 0.23748720\% |
| Souris Valley Spec Ed | 1,492,745 | 0.22975038\% |
| South Cent. Prairie Sp Ed | 100,291 | 0.01543586\% |
| South Heart School | 1,540,194 | 0.23705334\%. |
| South Prairie Elem School | 1,999,849 | 0.30779943\% |
| South Valley Spec Ed | 434,031 | 0.06680222\% |
| Southwest Special Education Unit | 63,336 | $0.00974813 \%$ |
| St. John's School | 2,492,018 | 0.38354979\% |
| St. Thomas School | 645,774 | 0.09939188\% |
| Stanley School | 3,242,061 | 0.49898983\% |
| Starkweather School | 572,884 | 0.08817332\% |
| Sterling School | 249,520 | 0.03840395\% |
| Strasburg School District | 810,454 | 0.124773803\% |
| Surrey School | 2,377,864 | 0.36598010\% |
| Sweet Briar Elem School | 83,760 | 0.01289161\% |
| Tgu School District | 2,703,863 | 0.41615506\%. |
| TThompson Şchool | 2,085,482 | 0.3i2097929\% |
| Tioga School | 3,021,747 | 0.46508097\% |
| Turtle Lake-Mercer School | 1,149,145 | $0.17686637 \%$ |
| Twin Buttes Elem. School | 401,385 | 0.06177770\% |
| Uunderwood School | 1,532,169 | 0.235581820\% |
| United School | 2,928,781 | 0.45077245\% |
| Upper Valley Spec Ed | 2,414,953 | 0.37168858\% |
| Valley - Edinburg School | 1,703,831 | 0.26223887\% |
| Valley City School | 6,035,942- | 0.92899971\% |
| Velva School | 2,480,059 | 0.38170909\% |
| Wahpeton School | 6,702,203 | 1.03154471\% |
| Ward County - | 28,267 | 0.00435064\% |


| Employer Name | Covered Employee Payroll | Employer's Proportionate Share Allocation |
| :---: | :---: | :---: |
| Warwick School | 1,722,089 | 0.26504901\% |
| Washburn School | 1,656,329 | 0.25492780\% |
| West Fargo School | 53,554,062 | 8.24257540\% |
| West River Student Services. | 691,314 | 0.10640107\% |
| Westhope School | 1,067,860 | 0.16435580\% |
| White Shield School | 1,403,919 | 0.21607894\% |
| Wililiston School | 18,388,340 | 2.83017340\% |
| Wilmac Special Education | 3,327,347 | 0.51216632\% |
| Witoon School | 1,286,438 | 0.19799737\% |
| Wing School | 659,051 | 0.10143541\% |
| Wishek School | 1,208,061 | 0.18593429\% |
| Wolfordschool | . 517.855 | 0.07970381\% |
| W-yndmere Se school | 1,405,123 | 0.21 $2 \overline{26} \overline{6} 30 \%$ |
| Yellowstone Elem. School | 504,704 | 0.07767971\% |
| zeeland School | 375,113 | 0.05773417\% |
| Grand Totals: | 649,724,868 | 100\% |

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

| Employer Name | Employer's Proportionate Share Allocation | Net PensionLiability | Covered Employee Payroll | Discount Rate Sensitivity |  |  | Schedule of Contributions |  |  |  | Pension Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { 1\% Decrease } \\ (6.75 \%) \end{gathered}$ | $\begin{gathered} \text { Current } \\ \text { Discount Rate } \\ (7.75 \%) \end{gathered}$ | 1\% Increase $(8.75 \%)$ | Statutory Contribution | Contributions In Relation to the Statutory Required Contribution | Contribution Deficiencyl (Excess) | Contributions as a Percentage of Covered Employee Payroll | Proportionate Share of Plan Pension Expense | Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions | Total Employer Pension Expense |
|  | ${ }^{(1)}$ | ${ }^{(2)}$ | (3) | (4) | (5) | (6) | (7) | (8) | ${ }^{(9)}$ | (10) | (11) | (12) | (13) |
| Alexander School | 0.18082264\% | 2,649,158 | 1,174,850 | 3,436,156 | 2,649,158 | 1,993,662 | 149,793 | $(149,793)$ | \$ - | 12.75\% | 246,953 | 62,539 | 309,492 |
| Anamoose School | 0.11110816\% | 1,627,800 | 721,897 | 2,111,378 | 1,627,800 | 1,225,024 | 92,042 | (92,042) |  | 12.75\% | 151,742 | 7,307 | 159,049 |
| Apple Creek Elem School | 0.05313226\% | 778,419 | 345,214 | 1,009,668 | 778,419 | 585,810 | 44,015 | $(44,015)$ |  | 12.75\% | 72,564 | (8,627) | 63,937 |
| Ashley School | 0.14635934\% | 2,144,250 | 950,933 | 2,781,253 | 2,144,250 | 1,613,686 | 121,244 | (121,24) |  | 12.75\% | 199,886 | (8,121) | 191,765. |
| Bâker Elem School | $0.0053099949 \%$ | 77,794 | 34,500 | 100,904 | 777,794 | 58,545 | 4,399 | (4,399) |  | 12.75\% | 7,252 | (774) | 6,478 |
| Barnes County North | 0.24226476\% | 3,578,622 | 1,587,049 | 4,641,741 | 3,578,622 | 2,693,144 | 202,349 | $(202,349)$ |  | 12.75\% | 333,597 | (75,773) | 257,824 |
| Beach School | 0.32910704\% | 4,821,611 | 2,138,290 | 6,253,992 | 4,821,611 | 3,628,573 | 272,632 | $(272,632)$ |  | 12.75\% | 449,468 | $(42,234)$ | 407,234 |
| Belcourt School -- | -1.27913029\% | 18,740,008 | 8,310,828 | 24,307, 198 | 18,740,008 | 14,103,064 | 1,059, 631 | (1,059, 6312$)$ |  | 12.75\% | ,746,932 | (104,202). | ,642,730. |
| Beifield Public School | 0.22790756\% | 3,338,979 | 1,480,772- | 4,330,907 | 3,338,979 | 2,512,797 | 188,798 | $(188,798)$ |  | 122.75\% | 311,258 | 14,646 | 325,904 |
| Beulah School | 0.52676803\% | 7,717,460 | 3,422,543 | 10,010,126 | 7,717,460 | 5,807,886 | 436,374 | $(436,374)$ |  | 12.75\% | 719,417 | (51,022) | 668,395 |
| Billings Co. School Dist. | 0.11667315\% | 1,709,330 | 758,055 | 2,217,129 | 1,709,330 | 1,286,381 | 96,652 | $(96,652)$ |  | 12.75\% | 159,343 | $(15,170)$ | 144,173 |
| . Bismarck Public Schools | -10.65403601\% | 156,087,867 | 69,221,921 | 202,457,691 | 156,087,867 | 117,466,184 | 8,825,796 | (8,825,796) |  | 12.75\% | 14,5550,416 | 18,369 | 14,568,785. |
| Bismarck State College | 0.000000000\% |  |  |  |  |  |  |  |  | 12.75\% |  | (8,930) |  |
| Blessed John Paul II Catholic Sch Network | 0.00000000\% |  | - |  |  | - |  |  |  | 12.75\% |  | $(8,788)$ | (8,788) |
| Bottineau School | 0.57864088\% | 8,477,428 | 3,759,574 | 10,995,861 | 8,477,428 | 6,379,811 | 479,346 | $(479,346)$ |  | 12.75\% | 790,261 | $(46,198)$ | 744,063 |
| Bowbells School | 0.08520072\% | 1,248,240 | 553,570 | 1,619,062 | 1,248,240 | 939,381 | 70,580 | (70,580) |  | 12.75\% | 116,360 | (3,521) | 112,839. |
| Boowmán School | $0 . \overline{24} 451206 \%$ | 6,219,350 | 2,758,160 | 8,066,965 | 6,219,350 | 4,680,462- | 351,666 | (351,666) |  | 12.75\% | 579,76̄ | (36,128) | $543,636$. |
| Burke Central School | 0.14695981\% | 2,153,047 | 954,834 | 2,792,664 | 2,153,047 | 1,620,307 | 121,741 | (121,741) |  | 12.75\% | 200,706 | 5,322 | 206,028 |
| Burleigh County Spec. Ed. | 0.01322689\% | 193,782 | 85,938 | 251,349 | 193,782 | 145,833 | 10,957 | $(10,957)$ |  | 12.75\% | 18,064 | 2,642 | 20,706 |
| , Carrington School- | 0.45614091\% | 6,682,731 | 2,963,661 | 8,668,005 | 6,682,731 | 5,029,186 | 377,867 | (377,867) |  | .12.75\% | 622,960 | (1,944) | 621,016. |
| Cavalier School | 0.343679667\% | 5,035,108 | 2,232,972 | 6,530,914 | 5,035,108 | 3,789,244 | 284,704 | (284,704) |  | 12.75\% | 469,370 | 5,128 | 474,498 |
| Center Stanton School | 0.22374025\% | 3,277,926 | 1,453,696 | 4,251,716 | 3,277,926 | 2,466,850 | 185,346 | $(185,346)$ |  | 12.75\% | 305,566 | $(6,088)$ | 299,478 |
| Central Cass School | 0.53225813\% | 7,797,893 | 3,458,213 | 10,114,454 | 7,797,893 | 5,868,418 | 440,922 | $(440,922)$ |  | 12.75\% | 726,915 | $(66,339)$ | 660,576 |
| Central Elementary School | 0.00968396\% | 141,876 | -62,919 | 184,023 | 14181876 | 106,771 | 8,022 | (8,022) |  | .12.75\% | -13,226 | (1, 293) | 11,933. |
| Central Valley School | 0.189885599\% | 2,776,081 | 1,231,138 | 3,600,785 | 2,777,081- | 2,089,180 | 156,970 | (156,970) |  | 12.75\% | 258,785 | (32,790) | 225,995 |
| Dakota Prairie School | 0.28724742\% | 4,208,343 | 1,866,318 | 5,458,537 | 4,208,343 | 3,167,049 | 237,956 | $(237,956)$ |  | 12.75\% | 392,299 | 6,904 | 399,203 |
| Devils Lake School | 1.58760361\% | 23,259,323 | 10,315,055 | 30,169,089 | 23,259,323 | 17,504,140 | 1,315,170 | $(1,315,170)$ |  | 12.75\% | 2,168,220 | $(203,896)$ | 1,964,324 |
| Dickinson School | 2.83719976\% | 41,566,638 | 18,433,992 | 53,915,053 | 41,566,638 | 31,281,575 | 2,350,334 | (2,350,334) |  | 12.75\% | 3,874,817 | 400,987 | 4,275,804. |
| Divide School | 0.35851646\% | 5,252,476 | 2,329,371 | 6,812,856 | 5,252,476 | 3,952,827 | 296,995 | (296,995) |  | - $12.75 \%$ | 489,633 | (21,187) | 468,446 |
| Drake School | 0.07757658\% | 1,136,542 | 504,034 | 1,474,181 | 1,136,542 | 855,321 | 64,264 | $(64,264)$ |  | 12.75\% | 105,948 | $(23,327)$ | 82,621 |
| Drayton School | 0.19058956\% | 2,792,249 | 1,238,308 | 3,621,756 | 2,792,249 | 2,101,347 | 157,884 | $(157,884)$ |  | 12.75\% | 260,292 | 9,073 | 269,365 |
| . Dunseith School - | 0.44940822\% | 6,584,094 | 2,919,917 | 8,540,064 | 6,584,094 | 4,954,955- | 372,289 | (372,289) |  | .12.75\% | 613,765 | 54,335 | 668,100. |
| E Central Ctri Exc Childn | 0.11896896\% | 1,742,965 | 772,971 | 2,260,756 | 1,742,965 | 1,311,693 | 98,554 | $(98,554)$ |  |  | 162,478 |  | 144,317 |
| Earl Elem. School | 0.00488820\% | 71,029 | 31,500 | 92,130 | 71,029 | 53,454 | 4,016 | $(4,016)$ |  | 12.75\% | 6,621 | ${ }^{(681)}$ | 5,940 |
| Edgeley School | 0.19717837\% <br> 0.111660820 | 2,888,779 1635896 | $\begin{array}{r}1,281,117 \\ \hline 725.488\end{array}$ | 3,746,963 $2,121,881$ | 2,888,779 | 2,173,992 $1,231,118$ | 163,342 92.500 | $\underset{(163,342)}{(92.500})$ |  | 12.75\% | 269,290 152,497 | ${ }_{(4,229)}$ | 264,775 155,726 |
| Eight Mile School | -0.237 $\overline{69386 \%}$ | 3, $3,482,3545$ | - $7,544,4856$ | 4,51216,875 | 1,6,482, 354 | $\frac{1,231,118}{2,620,696}$ | ${ }^{196,905}$ | (196,905) |  | - $12.75 \%$ | ${ }_{3}^{1524,492}$ | 52, ${ }^{3,569}$ - | 155,726. |
| Elgin-New Leipzig School | 0.17402614\% | 2,549,585 | 1,130,691 | 3,307,003 | 2,549,585 | 1,918,727 | 144,163 | $(144,163)$ |  | 12.75\% | 237,671 | 15,195 | 252,866 |
| Ellendale School | 0.26651659\% | 3,904,624 | 1,731,625 | 5,064,591 | 3,904,624 | 2,938,481 | 220,782 | $(220,782)$ |  | 12.75\% | 363,987 | $(45,514)$ | 318,473 |
| Emerado Elementary School | 0.08744740\% | 1,281,156 | 568,168 | 1,661,755- | 1,281,156 | -964,152 | - 22.4241 | -(72,412) |  | 12.75\% | 119,429 | -(7,304) | 112,125. |
| Enderiin Area School District | 0.31052838\% | 4,549,423 | 2,017,580 | 5,900,943 |  | 3,423,734 | 257,241 | (257,241) |  | 12.75\% | 424,094 | 812 | 424,906 |
| Fairmount School | ${ }^{0.14946017 \%}$ | 2,189,679 | 971,080 | ${ }^{2,840,178}$ | 2,189,679 | 1,647,875 | 123,813 | (123,813) |  | 12.75\% | 204,121 | (20,519) | 183,602 |
| Fargo Public Schools | 10.62667033\% | 155,686,944 | 69,043,120 | 201,937,663 | 155,686,944 | 117,164,463 | 8,803,126 | (8,803,126) |  | 12.75\% | 14,513,043 | (443,216) | 14,069,827 |
| Fessenden-Bowdon School | 0.15956168\% | 2,337,672 | 1,036,712 | 3,032,136 | 2,337,672 | 1,759,249 | 132,181 | (132,181) |  |  | 217,916 | 10,125 | 228,041. |
| Finley-Sharon School | 0.15183640\% | 2,224,492 | 986,519 | 2,885,333 | 2,224,492 | 1,674,074 | 125,781 | $(125,781)$ |  | 12.75\% | 207,366 | (59,951) | 147,415 |
| Flasher School | 0.16525835\% | 2,421,132 | 1,073,725 | 3,140,390 | 2,421,132 | 1,822,058 | 136,900 | $(136,900)$ |  | 12.75\% | 225,696 | $(26,485)$ | 199,211 |
| Fordville Lankin School | 0.09001321\% | 1,318,746 | 584,838 | 1,710,513 | 1,318,746 | 992,442 | 74,567 | $(74,567)$ |  | 12.75\% | 122,933 | $(6,002)$ | 116,931 |
| Fort Ransom Elem School | 0.02478304\% | 363,086 | 161,022 | 470,950 | 363,086 | 273,246 | 20,530 | (20,530) |  | 12.75\% | 33,847 | ( 2,340$)$ - | 31,507. |
| Fort Totten School | 0.23559199\% | 3,451,561 | 1,530,700 | 4,476,933 | 3,451,561 | 2,597,522 | 195,164 | $(195,164)$ |  | ${ }^{12.755 \%}$ | 321,752 | (46,229) | 275,523 |
| Fort Yates School | 0.17788847\% | 2,606,170 | 1,155,786 | 3,380,399 | 2,606,170 | 1,961,311 | 147,363 | $(147,363)$ | - | 12.75\% | 242,946 | 4,392 | 247,338 |
| Gackle-Streeter Pub Sch | 0.11971402\% | 1,753,881 | 777,812 | 2,274,915 | 1,753,881 | 1,399,908 | 99,171 | (99,171) | - | 12.75\% | 163,496 | $(5,707)$ | 157,789 |
| Garrison School | 0.35394570\% | 5,185,512- | 2,299,673 | 6,725,998 | 5,185,5,12- | 3,902,432 | 293,208 | (293,208) |  | 12.75\% | 483,390 | 4.349 | 487.739. |
| Glen Ullin School | 0.17979002\% | 2,634,029 | 1,168,141 | 3,416,534 | 2,634,029 | 1,982,277 | 148,938 | (148,938) |  | 12.75\% | 245,543 | 15,638 | 261,181 |
| Glenburn School | 0.28756569\% | 4,213,006 | 1,868,386 | 5,464,585 | 4,213,006 | 3,170,558 | 238,219 | $(238,219)$ |  | 12.75\% | 392,734 | 51,022 | 443,756 |
| Goodrich School | 0.04451287\% | 652,140 | 289,211 | 845,874 | 652,140 | 490,777 | 36,874 | (36,874) |  | 12.75\% | 60,792 | (5,314) | 55,478 |
| Gratton School | 0.68918388\% | 10,096,947 | 4,477,799 | 13,096,499- | 10,096,947 | 7,598,604 | 570,919 | (570,919) |  | 12.75\% | 941,231 | 1,105 | 942, 336. |
| GGrand Forks School | $7.06285618 \%$ | 103,474,979 | 45,889,133 | 134,214,823 | 103,474,979 | 77,871,594 | 5,850,865 | (5,850,865) |  | 122.75\% | 9,645,875 | (218,616) | 9,427,259 |
| Great North West Coooperative | 0.02743007\% | 401,867 | 178,220 | 521,251 | 401,867 | 302,431 | 22,723 | (22,723) | - | 12.75\% | 37,462 | 8,910 | 46,372 |
| Grenora School | 0.17518945\% | 2,566,628 | 1,138,249 | 3,329,109 | 2,566,628 | 1,931,553 | ${ }^{145,127}$ | (145,127) | - | 12.75\% | 239,260 | 13,203 | 252,463 |
| Griggs County Central Sch | 0.24415605\% | 3,577,029 | 1,586,343 | 4,639,676 | 3,577,029 | 2,691,945 | 202,259 | (202,259) |  | 12.75\% | 333,428 | (77,940) | 255.508. |
| Gst Educational Services | 0.24553228\% | 3,597,192 | 1,595,284 | 4,665,828 | 3,597,192 | 2,707,119 | 203,399 | $(203,399)$ |  | - 12.75 | 335,328 | $(5,640)$ | 329,688 |
| Halliday School | 0.06866837\% | 1,006,032 | 446,155 | 1,304,899 | 1,006,032 | 757,104 | 56,885 | $(56,885)$ |  | 12.75\% | 93,782 | (4,673) | 89,109 |
| Hankinson School | 0.22197355\% | 3,252,043 | 1,442,217 | 4,218,143 | 3,252,043 | 2,447,372 | 183,883 | $(183,883)$ |  | 12.75\% | 303,153 | $(76,180)$ | 226,973 |
| Harvey School | 0.35991541\% | 5,272,972 | 2,338,460- | 6,839,440 | 5,272,972 | 3,968,251- | 298,154 | (298,154) |  | -12.75\% | 491,543 | -198 | 491,741. |
| Hatton Eielson Psd | 0.17413199\% | 2,551,136 | 1,131,379 | 3,309,015 | 2,551,136 | 1,919,894 | 144, 251 | (144,251) |  | 12.75\% | 237,815 | (12,971) | 224,844 |
| Hazelton - Moffit School | 0.12776106\% | 1,871,774 | 830,095 | 2,427,832 | 1,871,774 | $1,408,631$ 4,890124 | 105,837 367418 | ${ }^{(105,837)}$ |  |  | 174,486 605735 | ${ }_{(1,753)}^{(6,629)}$ | 167,857 603,982 |
| Hazen School Hebron School | 0.0.44352809\% | 6,497,946 $2,600,620$ | $2,881,712$ $1,153,324$ | $8,428,325$ $3,373,200$ | 6,497,946 $2,600,620$ | 4,890,124 $1,957,134$ | 367,418 147,049 | $(367,418)$ $(147,049)$ |  | 12.75\% | 605,735 242,428 | ${ }_{(17,524)}^{(1,753)}$ | 603,982 224,904 |

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

| Employer Name | Employer's Proportionate Share Allocation | Net PensionLiability | Covered Employee Payroll | Discount Rate Sensitivity |  |  | Schedule of Contributions |  |  |  | Pension Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { 1\% Decrease } \\ (6.75 \%) \\ \hline \end{gathered}$ | $\begin{gathered} \text { Current } \\ \text { Discount Rate } \\ (7.75 \%) \\ \hline \end{gathered}$ | 1\% Increase $\qquad$ | $\begin{gathered} \text { Statutory } \\ \text { Required } \\ \text { Contribution } \\ \hline \end{gathered}$ | Contributions in Relation to the Statutory Required Contribution | Contribution Deficiencyl (Excess) | $\begin{gathered} \text { Contributions as } \\ \text { a Percentage of } \\ \text { Covered } \\ \text { Employee } \\ \text { Payroll } \\ \hline \end{gathered}$ | Proportionate Share of Plan Pension Expense | Net Amortization of <br> Deferred Amounts <br> from Changes in <br> Proportion and Differences Between <br> Employer <br> Contributions and <br> Proportionate Share <br> of Contributions | Total Employer Pension Expense |
|  | ${ }^{(1)}$ | ${ }^{(2)}$ | (3) | (4) | (5) | (6) | (7) | (8) | ${ }^{(9)}$ | (10) | (11) | (12) | (13) |
| Hettinger School | 0.22054668\% | 3,231,138 | 1,432,947 | 4,191,029 | 3,231,138 | 2,431,640 | 182,701 | $(182,701)$ | - | 12.75\% | 301,205 | $(73,189)$ | 228,016 |
| Hillsboro School | 0.37815974\% | 5,540,262 | 2,456,998 | 7,186,136 | 5,540,262 | 4,169,404 | 313,267 | (313,267) |  | 12.75\% | 516,460 | 20,917 | 537,377 |
| Hope School | 0.10336098\% | 1,514,299 | 671,562 | 1,964,159 | 1,514,299 | 1,139,608 | 85,624 | (85,624) |  | 12.75\% | 141,162 | 3,023 | 144,185 |
| Horse Creek Elem. School | 0.00404017\% | 59,191 | 26,250 | 76,775 | 59,191 | 44,545 | 3,347 | ( 3,347$)$ |  | 122.75\% | 5,518 | ( 3,177$)$ ) | $2,341$. |
| James River Multidistrict Spec Ed Unit | 0.20563488\% | 3,012,671 | 1,336,061 | 3,907,661 | 3,012,671 | 2,267,229 | 17-17,348 | (170,348) |  | 12.75\% | 2880,839 | -17,097 | 297,936 |
| Jamestown School | 2.01294651\% | 29,490,845 | 13,078,614 | 38,251,842 | 29,490,845 | 22,193,763 | 1,667,524 | $(1,667,524)$ |  | 12.75\% | 2,749,119 | $(261,072)$ | 2,488,047 |
| Kenmare School | 0.26630798\% | 3,901,568 | 1,730,269 | 5,060,627 | 3,901,568 | 2,936,181 | 220,609 | $(220,609)$ |  | 12.75\% | 363,702 | $(45,564)$ | 318,138 |
| Kensal School ---- | 0.06920446\% | 1,013,886 | -499,639 | 1,315,086 | 1,013,886 | 763,014- | -57,329 | ( 57,3229$)$ |  | 12.75\% | 94,514 | 7.664 | 102, 2178. |
| Kíder Cóounty Schōoo Disistrict | -0.33385103\% | 4,891,113- | 2,169,113- | 6,344,141- | 4,891,113 | 3,680, 878 | 276,562 | (276,562) |  | 12.75\% | 455,947 | (55,132) | $400,815{ }^{\circ}$ |
| killdeer School | 0.40573407\% | 5,944,242 | 2,636,155 | 7,710,128 | 5,944,242 | 4,473,425 | 336,110 | $(336,110)$ |  | 12.75\% | 554,119 | 8,748 | 562,867 |
| Kindred School | 0.47984406\% | 7,029,996 | 3,117,666 | 9,118,434 | 7,029,996 | 5,290,526 | 397,502 | $(397,502)$ |  | 12.75\% | 655,332 | $(41,273)$ | 614,059 |
| Kulm School | 0.16414361\% | 2,404,800 | 1,066,482 | 3,119,206 | 2,404,800 | 1,809,767 | 135,976 | (135,976) |  | 122.75\% | 224,174 | (21,082) | $203,092$. |
| Lâke Region Spec Ed | $0.257965530 \%$ | 3,779,343 | 1,676,065 | 4,902,091- | 3,779, 343 | 2,844,199 | 213,698 | (213,698) |  | 12.75\% | 352,308 | (51,591) | 300,717 |
| Lakota School | 0.17725483\% | 2,596,887 | 1,151,669 | 3,368,358 | 2,596,887 | 1,954,325 | 146,838 | $(146,838)$ |  | 12.75\% | 242,080 | $(31,060)$ | 211,020 |
| Lamoure School | 0.23964192\% | 3,510,894 | 1,557,013 | 4,553,894 | 3,510,894 | 2,642,174 | 198,519 | $(198,519)$ |  | 12.75\% | 327,283 | $(2,561)$ | 324,722 |
| Langdon Area School | 0.27029165\% | 3,959,931 | 1,756,152 | 5,136,328 | 3,959,931 | 2,980,103 | 223,909 | (223,909) |  | 12.75\% | 369,142 | (111,062) | 258,080. |
| Larimore S School | 0.32443670\% | 4,753,188 | 2,107,946 | 6,165,242 | 4,753,188 | 3,577,080 | 268,763 | (268,763) |  | 12.75\% | 443,089 | (52,998) | 390,091 |
| Leeds School | 0.16396137\% | 2,402,130 | 1,065,298 | 3,115,743 | 2,402,130 | 1,807,758 | 135,825 | $(135,825)$ |  | 12.75\% | 223,925 | $(14,198)$ | 209,727 |
| Lewis And Clark School | 0.40508382\% | 5,934,715 | 2,631,930 | 7,697,772 | 5,934,715 | 4,466,256 | 335,571 | $(335,571)$ |  | 12.75\% | 553,231 | $(1,712)$ | 551,519 |
| Lidgerwood School | 0.17979704\% | 2,634,132 | 1,168,186 | 3,416,667 | 2,634,132 | 1,982,354 | 148,944 | $(148,944)$ |  | .12.75\% | 245,552 | (11,875) | 233,677. |
| Liniton Šchool | ${ }^{0.254 i 7932 \%}$ | 3,723,8776 | 1,651,466 | 4,830,147 | 3,723,876 | 2,802,457 | 210,562 | (210,562) |  | 12.75\% | 347,137 | (30,187) | 316,950 ${ }^{\text {² }}$ |
| Lisbon School | 0.53576506\% | 7,849,272 | 3,480,999 | 10,181,095 | 7,849,272 | 5,907,083 | 443,827 | (443,827) |  | 12.75\% | 731,704 | (31,024) | 700,680 |
| Litchville-Marion School | 0.13145766\% | 1,925,932 | 854,113 | 2,498,078 | 1,925,932 | 1,449,388 | 108,899 | $(108,899)$ |  | 12.75\% | 179,534 | $(12,665)$ | 166,869 |
| Little Heart Elem. School | 0.01562197\% | 228,871 | 101,500 | 296,863 | 228,871 | 172,240 | 12,941 | (12,941) |  | 12.75\% | 21,335 | (941) | 20,394. |
| Logan County | 0.000662785\% | 9,198 | 4,079 | 11,931 | 9,198 | 6,922 | 520 | (520) |  | 12.75\% | 857 | (101) | 756 |
| Lone Tree Elem. School | 0.03950858\% | 578,824 | 256,697 | 750,778 | 578,824 | 435,602 | 32,729 | $(32,729)$ |  | 12.75\% | 53,958 | 10,023 | 63,981 |
| Lonetree Spec Ed Unit | 0.02432653\% | 356,398 | 158,056 | 462,275 | 356,398 | 268,212 | 20,152 | $(20,152)$ |  | 12.75\% | 33,223 | 869 | 34,092 |
| Maddock School | 0.15135015\% | 2,217,368 | 983,360 | 2,876,093 | 2,217,368 | 1,668,713 | 125,378 | (125,378) |  | .12.75\% | 206,702 | (11,180) | 195,522. |
| Mandan Pubiic Schools | 2.97089678\% | 43,555,378 | 19,302,655 | 56,455,685 | 43,525,378 | 32,755,653 | 2,461,089 | (2,461,089) |  | 12.75\% | 4,057,4099 | 248,823 | 4,306,232 |
| Mandaree School | 0.25647410\% | 3,757,496 | 1,666,376 | 4,873,754 | 3,757,496 | 2,827,758 | 212,463 | $(212,463)$ |  | 12.75\% | 350,271 | $(32,855)$ | 317,416 |
| Manning Elem School | 0.01305475\% | 191,260 | 84,820 | 248,078 | 191,260 | 143,935 | 10,815 | $(10,815)$ |  | 12.75\% | 17,829 | 2,267 | 20,096 |
| Manvel Elem. School | 0.12363539\% | 1,811,331 | - 803.2900 | 2,349,432 | 1,811,331 | 1,363,143 | 102.419 | ( 102,419$)$ |  | -12.75\% | 168,851- |  | 164,049. |
| Maple Valley school | $0.244022777 \%$ | 3,575,076 | 1,585,477 | 4,637,143 | 3,555,076 | 2,690,476 | 202,148 | $(202,148)$ |  | 12.75\% | 333,266 | (34,246) | 299,020 |
| Mapleton Elem. School | 0.10374674\% | 1,519,950 | 674,068 | 1,971,490 | 1,519,950 | 1,143,861 | 85,944 | $(85,944)$ |  | 12.75\% | 141,689 | $(6,655)$ | 135,034 |
| Marmarth Elem. School | 0.02761603\% | 404,591 | 179,428 | 524,785 | 404,591 | 304,481 | 22,877 | $(22,877)$ |  | 12.75\% | 37,716 | 2,319 | 40,035 |
| Max School | 0.18227395\% | 2,670,420 | 1,184,279 | 3,463,736 | 2,670,420 | 2,009,663 | 150,996 | (150,996) |  | 12.75\% | 248,935 | (2,015) | 246,920. |
| May-Port C-G School | 0.42290734\% | 6,195,840 | 2,747,734 | 8,036,470 | 6,195,840 | 4,662,769 | 350,336 | (350,336) |  | 12.75\% | 577,572 | 9,628 | 587,200 |
| Mcclusky School | 0.11422947\% | 1,673,529 | 742,177 | 2,170,692 | 1,673,529 | 1,259,438 | 94,628 | $(94,628)$ |  | 12.75\% | 156,005 | $(19,180)$ | 136,825 |
| Mckenzie County | 0.00619078\% | 90,699 | 40,223 | 117,643 | 90,699 | 68,257 | 5,128 | $(5,128)$ |  | 12.75\% | 8,455 | $(4,614)$ | 3,841 |
| Mckenzie County School | 1.00918344\% | 14,785, 128 | 6,556,916 | 19,177,422 | 14,785,128 | 11,126,762 | 836,007 | (836,007) |  | -12.75\% | 1,378,261- | 401,444- | 1,779,705. |
| Medina School | 0.15942583\% | 2,335,682 | 1,035,829 | 3,029,555 | 2,355,682 | 1,757,751 | 132,068 | $(132,068)$ |  |  |  | 2,880 |  |
| Menoken Elem School | 0.02410251\% | 353,116 | 156,600 975732 | 458,018 285384 | $\begin{array}{r}353,116 \\ \hline 200169\end{array}$ | 265,742 | 19,967 | (12,967) |  | $12.75 \%$ 12750 | 32,917 205098 | 6,864 $(37076)$ | 39,781 168022 |
| Midkota | 0.150177616\% | 2,200,169 | 975,732 | 2,853,784 | 2,200,169 | 1,655,769 | 124,406 | (124,406) |  | 12.75\% | 205,098 | $(37,076)$ | 168,022 |
| Midway School | 0.2258246\%\% | 3,308,463 | 1,467,239 | 4,291,326 | 3,308,463 | 2,489,832 | 187,073 | (187,073) |  | -12.75\% | 308,413 | (6,606) | $\frac{301.807}{24.18 .}$ |
| Milinor School | 0.21159804\% | 3,100,035 | 1,374,805 | 4,020,979 | 3,100,035 | 2,332,976 | 175,288 | (175,288) |  | 12.75\% | 288,983 | $(47,994)$ | 241,189 |
| Minnewaukan School | 0.26305272\% | 3,853,876 | 1,709,119 | 4,998,767 | 3,853,876 | 2,900,290 | 217,913 | $(217,913)$ | - | 12.75\% | 359,256 | $(25,082)$ | 334,174 |
| Minot School | 6.70537700\% | 98,237,700 | 43,566,502 | 127,421,678 | 98,237,700 | 73,930,203 | 5,554,730 | $(5,554,730)$ | - | 12.75\% | 9,157,659 | $(342,986)$ | 8,814,673 |
| Minto School - - - | 0.17866504\% | 2,617.547- | 1,160,831- | 3,395,156 | 2,617.547 | 1,969,873- | 148,006 | $-(128,006)$ |  | -12.75\% | 244,006 | - $(8,318)$ ) | ${ }^{235}, 688$. |
| Mohall Lanstord Sherwood Montpelier School | 0.0.33286989\% ${ }^{0}$ | 4,876,739 $1,720,104$ | 2,162,738 762,833 | 6,325,497 2,231,104 | $4,876,739$ $1,720,104$ | 3,670,060 1,294489 | 275,749 97,261 | (275,749) |  | 12.75\% | 454,607 160,347 | $\underset{\substack{(81,583) \\ 6,455}}{ }$ | 166,802 |
| Morton County | 0.00470195\% | 1,68,886 | 30,550 | 89,351 | 1,68,886 | 1,21,841 | 3,895 | $(3,895)$ |  | 12.75\% | 6,422 | 399 | 6,821 |
| Mott-Regent School | 0.23752476\% | 3,479,877 | 1,543,257 | 4,513,662 | 3,479,877 | 2,618,832 | 196,765 | (196,765) |  | 12.75\% | 324,392 | (17, 480) | 306,912. |
| Mt Pleasant Sthool | 0.25376515\% | 3,717,808 | 1,648,775 | 4,822,276 | 3,717,808 | 2,797,890 | 210,219 | (210,219) |  | 12.75\% | 346,572 | 9,427 | 355,999 |
| Munich School | 0.14410593\% | 2,111,236 | 936,292 | 2,738,432 | 2,111,236 | 1,588,841 | 119,377 | (119,377) | - | 12.75\% | 196,808 | 24,464 | 221,272 |
| N Central Area Career And Tech Center | 0.02237102\% | 327,749 | 145,350 | 425,114 | 327,749 | 246,652 | 18,532 | $(18,532)$ | - | 12.75\% | 30,553 | $(2,311)$ | 28,242 |
| Napoleon School | 0.22849835\% | 3,347,635 | 1,484,611 | 4,342,134 | 3,347,635 | 2,519,311 | 189,288 | (189,288) |  | 12.75\% | 312,064 | (18,656) | 293,408. |
| Naughton Rüral Schooi | 0.01140998\% | 167,161 | 74,133 | 216,821 | 167,161 | 125,800 | 9,452 | $(9,452)$ |  | 12.75\% | 15,583 | 195 | 15,778 |
| Nd Center For Distance Education | 0.20301221\% | 2,974,248 | 1,319,021 | 3,857,823 | 2,974,248 | 2,238,313 | 168,175 | (168,175) | - | 12.75\% | 277,258 | 84,381 | 361,639 |
| Nd Dept Of Public Instruction | 0.02860595\% | 419,094 | 185,860 | 543,596 | 419,094 | 315,395 | 23,697 | $(23,697)$ | - | 12.75\% | 39,068 | 16,029 | 55,097 |
| №d School For Bind | 0.10976865\% | 1,608,175 | 713,194 | 2,085,924 | 1,608,175 | 1,210,255 | 90,932 | (90,932) |  | .12.75\% | 149,913 | (1,415) | 148,498. |
| Nd School For Deaf | ${ }^{0.1355851312 \%}$ | 1,990,301 | 882,660 | 2,581,570 | 1,990,301 | 1,497,830 | 112,539 | (112,539) |  | 12.75\% | 185,535 | (6,858) | 178,677 |
| Nd United | ${ }^{0.04805011 \%}$ | 703,962 | 312,194 | 913,092 | 703,962 | 529,777 | 39,805 | (39,805) |  | 12.75\% | 65,623 | $(4,228)$ | 61,395 |
| Nd Youth Correctional Cnt | 0.18910081\% | 2,770,438 | 1,228,635 | 3,593,466 | 2,770,438 | 2,084,933 | 156,651 | (156,651) |  | 12.75\% | 258,259 | $(9,815)$ 255781 | 248,444 |
| Nedrose School | -0.37783627\% | 5,535,523 | 2, 1 , $124,8,896$ | 7, , 179,989 35.779 | 5,535,523 | - $4.1655,838$ | 312,999 | $-\frac{(312,999)}{(1,560)}$ |  | $-12.75 \%$ | - $-\frac{16,018}{2,571}$ | 255, $\frac{781}{89}-$ | ${ }^{771,799}$ 2,660 |
| Nesson School | 0.25057042\% | 3,671,003 | 1,628,018 | 4,761,567 | 3,671,003 | 2,762,667 | 207,572 | $(207,572)$ | - | 12.75\% | 342,209 | 31,481 | 373,690 |
| New England School | 0.21138408\% | 3,096,901 | 1,373,415 | 4,016,913 | 3,096,901 | 2,330,617 | 175,110 | $(175,110)$ | - | 12.75\% | 288,691 | 39,687 | 328,378 |
| New Public School | 0.31286915\% | 4,583,716 | 2,032,789 | 5,945,424 | 4,583,716 | 3,449,542 | 259,181 | (259,181) |  | 12.75\% | 427,291 | (51,640) | 375,251. |

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

| Employer Name | Employer's Proportionate Share Allocation | $\begin{gathered} \text { Net Pension } \\ \text { Liability } \\ \hline \end{gathered}$ | CoveredEmployee Payroll | Discount Rate Sensitivity |  |  | Schedule of Contributions |  |  |  | Pension Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { 1\% Decrease } \\ \text { (6.75\%) } \end{gathered}$ | $\begin{gathered} \text { Current } \\ \text { Discount Rate } \\ (7.75 \%) \\ \hline \end{gathered}$ | $\begin{gathered} \text { 1\% Increase } \\ (8.75 \%) \\ \hline \end{gathered}$ | Statutory Required Contribution | Contributions In Relation to the Statutory Required Contribution | Contribution Deficiencyl (Excess) | Contributions as a Percentage of Covered Employee Payroll | Proportionate Share of Plan Pension Expense | Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions | Total Employer Pension Expense |
|  | ${ }^{(1)}$ | ${ }^{(2)}$ | (3) | (4) | (5) | (6) | (7) | (8) | ${ }^{(9)}$ | (10) | (11) | (12) | (13) |
| New Rockford Sheyenne School | 0.26262259\% | 3,847,575 | 1,706,324 | 4,990,594 | 3,847,575 | 2,895,548 | 217,556 | $(217,556)$ |  | 12.75\% | 358,669 | $(30,072)$ | 328,597 |
| New Salem-Almont | 0.26142243\% | 3,829,992 | 1,698,527 | 4,967,787 | 3,829,992 | 2,882,316 | 216,562 | $(216,562)$ |  | 12.75\% | 357,030 | $(8,980)$ | 348,050 |
| New Town School | 0.66241609\% | 9,704,784 | 4,303,882 | 12,587,834 | 9,704,784 | 7,303,475 | 548,745 | $(548,745)$ |  | 12.75\% | 904,674 | 18,014 | 922,688 |
| Newburg United District | 0.10125347\% | 1,483,423 | 657,869 | 1,924,111 | 1,483,423 | 1,116,371 | 83,878 | (83,878) |  | 12.75\% | 138,284 | 1,812 | 140,096 |
| Nörth Border Schiool | $0.444 \overline{67142 \%}$ | 6,514,697 | 2,889,141- | 8,450,051 | 6,514,697 | 4,902,729 | 368,366 | (368,366) |  | 12.75\% | 607,296 | (19,622) | 587,674 |
| North Sargent School | 0.23312921\% | 3,415,479 | 1,514,698 | 4,430,133 | 3,415,479 | 2,570,369 | 193,124 | (193,124) |  | 12.75\% | 318,389 | 46,979 | 365,368 |
| North Star | 0.25839675\% | 3,785,664 | 1,678,868 | 4,910,290 | 3,785,664 | 2,848,956 | 214,056 | $(214,056)$ |  | 12.75\% | 352,897 | 20,097 | 372,994 |
| North Valley Area Career | 0.07896064\% | 1,1566,820 | 513,027- | 1,500,482 | 1,156,820 | 870,581 | 65,411 | (65,411) |  | 12.75\% | 107.838 | (37, 067 ) | 70,771. |
| Northern Cass School Dist | 0.42861399\% | 6,279,446 | 2,784,812 | 8,144,913 | 6,279,446 | 4,725,688 | 355,064 | (355,064) |  | 122.75\% | 585,366 | 31,260 | 616,626 |
| Northern Plains Spec Ed | 0.04088332\% | 598,965 | 265,629 | 776,902 | 598,965 | 450,759 | 33,868 | $(33,868)$ |  | 12.75\% | 55,835 | 14,006 | 69,841 |
| Northwood School | 0.23623388\% | 3,460,965 | 1,534,870 | 4,489,131 | 3,460,965 | 2,604,599 | 195,696 | (195,696) |  | 12.75\% | 322,629 | 22,024 | 344,653 |
| Oakes School | 0.31033702\% | 4,546,619 | 2,016,337 | 5,897,307 | 4,546,619 | 3,421,624 | 257,083 | (257,083) |  | 12.75\% | 423.833 | (28,708) | 395,125. |
| Oberon Elem School | 0.042994572\% | 629,180 | 279,029 | 816,094 | 629,180 | 473,498 | 35,576 | (35,576) |  | 12.75\% | 58,652 | (54,121) | 4,531 |
| Oliver - Mercer Spec Ed | 0.15347626\% | 2,248,517 | 997,173 | 2,916,496 | 2,248,517 | 1,692,154 | 127,140 | $(127,140)$ |  | 12.75\% | 209,605 | 10,466 | 220,071 |
| Page School | 0.10441896\% | 1,529,799 | 678,436 | 1,984,264 | 1,529,799 | 1,151,272 | 86,501 | $(86,501)$ |  | 12.75\% | 142,607 | $(17,547)$ | 125,060 |
| Park River Area School District | 0.31345477\% | 4,592,296 | 2,036,594 | 5,956,553 | 4,592,296 | 3,455,999 | 259,666 | (259,666) |  | 12.75\% | 428,091 | (50,679) | 377,412. |
| Parshâlil School | 0.26084321\% | 3,821,506 | 1,694,763 | 4,956,780 | 3,821,506 | 2,875,930 | 216,082 | (216,082) |  | 12.75\% | 356,238 | (38,941) | 317,297 |
| Peace Garden Spec Ed | 0.08230387\% | 1,205,800 | 534,749 | 1,564,013 | 1,205,800 | 907,442 | 68,180 | $(68,180)$ |  | 12.75\% | 112,404 | 11,284 | 123,688 |
| Pembina Spec Ed Cooop | 0.01631460\% | 239,018 | 106,000 | 310,025 | 239,018 | 179,877 | 13,515 | $(13,515)$ |  | 12.75\% | 22,281 | $(20,919)$ | 1,362 |
| Pingree-Buchanan School | -0.12889965\% | 1,859,154 | 824,499 | 2,411,463 | 1,859,154 | 1,399,133 | -105,124 | (105,124) |  | - $12.72 \%$ | 173,309 | $-(6,630)$ | 166, 679. |
| Pleasant Valley Elem | ${ }^{0.017360000 \% \% \%}$ | 25 |  | 3300019 | 2544200 | 1914675 | 143859 | (143,859) |  | 12.75\% | 237169 |  | (4,753) |
| Richardton-Taylor | $0.26397999 \%$ | 3,867,461 | 1,715,144 | 5,016,388 | 3,867,461 | 2,910,514 | 218,681 | (218,681) |  | 12.75\% | 360,522 | $(3,586)$ | 256,894 356,936 |
| Richland School | 0.22294717\% | 3,266,307 | 1,448,543 | 4,236,645 | 3,266,307 | 2,458,106 | 184,689 | (184,689) |  | 12.75\% | 304,483 | (6,826) | 243,657. |
| Robinson School | 0.00000000\% |  |  |  |  |  |  |  |  | 122.75\% |  | (20,228) | $(20,228)$ |
| Rolette County | 0.00000000\% |  | - | - |  |  |  | - |  | 12.75\% |  | $(1,137)$ | $(1,137)$ |
| Rolette School | 0.18543398\% | 2,716,716 | 1,204,811 | 3,523,785 | 2,716,716 | 2,044,504 | 153,613 | (153,613) |  | 12.75\% | 253,251 | 13,591 | 266,842 |
| Roosevelt School ----------- | $0.06548723 \%$ | 9599,426 | 425,487 | 1,244,448 | 959,426 | -722,030 | 54,250 | (54,250) |  | 12.75\% | 89,437 | (737) | 88,700. |
| Roughrider Area Career And Tech Center | 0.01468699\% | 215,173 | 95,425 | 279,096 | 215,173 | 161,932 | 12,167 | $(12,167)$ |  | 12.75\% | 20,058 | (21,413) | $(1,355)$ |
| Roughrider Service Program | 0.04661696\% | 682,966 | 302,882 | 885,858 | 682,966 | 513,976 | 38,617 | $(38,617)$ |  | 12.75\% | 63,666 | 52,492 | 116,158 |
| Rugby School | 0.49502824\%\% | 7,252,454 | 3,216,322 | 9,406,977 | 7,252,454 | 5,457,939 | 410,081 | (410,081) |  | 12.75\% | ${ }^{676,069}$ | $(9,483)$ | 666,586 |
| .Rural Cass Spec Ed | 0.16670854\% | 2,442,378 | 1,083,147 | 3,167,947 | 2,442,378 | 1,838,047 | 138,101 | (138,101) |  | 12.75\% | 227.677 | (0,389) | 218,288. |
| S'argent Central Śchool | 0.22043540\% | 3,229,508 | 1,432,224 | 4,188,914 | 3,229,508 | 2,430,413 | 182,609 | (182,609) |  | 12.75\% | 301,053 | (12,925) | 288,128 |
| Sawyer School | 0.13489443\% | 1,976,282 | 876,443 | 2,563,387 | 1,976,282 | 1,487,280 | 111,746 | (111,746) |  | 12.75\% | 184,228 | $(3,869)$ | 180,359 |
| Scranton School | $0.16684501 \%$ | 2,444,377 | 1,084,034 | 3,170,541 | 2,444,377 | 1,839,551 | 138,214 | (138,214) |  | 12.75\% | 227,863 | $(9,635)$ | 218,228 |
| Se Region Career And Tech | 0.21991312\% | 3,221,856 | 1,428,830 | 4,178,989 | 3,221,856 | 2,424,654 | 182,176 | (182,176) |  | 12.75\% | 300,339 | 5,174 | ${ }^{305.513} 18.402$. |
| Selfridge School | ${ }^{0.13455905 \%}$ | $1,971,369$ 1,677649 | ${ }_{7}^{874,264}$ | 2,557,014 | $1,971,369$ 1677649 | $1,483,582$ <br> 1,26259 | 111,469 94861 | ${ }_{(111,469)}^{(9861)}$ |  | ${ }^{12.75 \%}$ | 183,770 <br> 156389 | (1,368) | 182,402 <br> 153629 |
| Sheyenne Valley Spec Ed | 0.22962775\% | ${ }_{3,364,181}^{1,67,649}$ | 1,491,949 | 4,363,596 | 3,364,181 | ${ }_{2,531,763}^{1,2363}$ | 190,223 | ( 190,223 ) |  | 12.75\% | 313,607 | (42,709) |  |
| Slope County | 0.00379406\% | . 55.585 | 24,651 | .72,098 | 55,585 | 41,831 | 3,143 | (3,143) |  | 12.75\% | 5,182 | . 224 ) | 4,958. |
| Solen- Cannoonbali School | 0.23748720\% | 3,479,327 | 1,543,013 | 4,512,948 | 3,4799,327 | 2,618,4118 | 196,734 | (196,734) |  | 12.75\% | 324,341 | (75,902) | 248,439 |
| Souris Valley Spec Ed | 0.22975038\% | 3,365,978 | 1,492,745 | 4,365,926 | 3,365,978 | 2,533,115 | 190,325 | (190,325) |  | 12.75\% | 313,774 | $(37,795)$ | 275,979 |
| South Cent. Prairie Sp Ed | $0.01543586 \%$ | 226,144 | 100,291 | 293,326 | ${ }^{266,144}$ | 170,188 | 12,787 | (12,787) |  | 12.75\% | 21,081 | (877) | 20,204 |
| South Heart School | 0.23705334\% | 3,472,970 | 1,540,194 | 4,504,703 | 3,472,970 | 2,613,634 | 196,375 | (196,375) |  | -12.75\% | 323,748 | 40,724- | 364,472. |
| south Prairie Elem School | 0.30779943\% | 4,509,442 | 1,999,849 | 5,849,085 | 4,509,442 | 3,393,646 | 254,981 | (254,981) |  | 12.75\% | 420,367 | 170,400 | 590,767 |
| South Valley Spec Ed | 0.06680222\% | 978,692 | 434,031 | 1,269,437 | 978,692 | 736,529 | 55,339 | $(55,339)$ |  | 12.75\% | 91,233 | $(69,342)$ | 21,891 |
| Southwest Special Education Unit | 0.00974813\% | 142,816 | 63,336 | 185,243 | 142,816 | 107,478 | 8,075 | (8,075) |  | 12.75\% | 13,313 | $(1,078)$ | 12,235 |
| St. John'S S Shool | 0.38354979\% | 5,619,229 | 2.492,018 | 7,288,562 | 5,619,229 | 4,228,832 | 317,732 | (317,732) |  | .12.75\% | 523,821 | (13,100) | 510,721. |
| St. Thomas School | 0.09939188\% | 1,456,149 | 645,774 | 1,888,735 | 1,456,149 | 1,095,846 | 82,336 | $(82,336)$ |  | 12.75\% | 135,741 | $(16,749)$ | 118,992 |
| Stanley School | 0.49898983\% | 7,310,493 | 3,242,061 | 9,482,259 | 7,310,493 | 5,501,618 | 413,363 | $(413,363)$ |  | 12.75\% | 681,480 | 23,948 | 705,428 |
| Starkweather School | ${ }^{0.088817332 \%}$ | 1,291,791 | 572,884 | 1,675,550 | 1,291,791 | 972,156 | 73,043 | (73,043) |  | 12.75\% | 120,420 | (12,489) | 107,931 |
| Sterling School | 0.03840395\% | 562,640 | 24,520 | 729,787- | 562,640 | - 423.423 23 | 31,814 | ( 31.814 ) |  | . $12.75 \%$ | - 52.449 | - 5.048 | 57.497. |
| Strasburg School District | 0.12473803\% | 1,827,485 | 810,454 | 2,370,386 | 1,827,485 | 1,375,300 | 103,333 | (103,333) |  | 12.75\% | 170,357 | $(25,301)$ | 145,056. |
| Surrey School | 0.36598010\% | 5,361,823 | 2,377,864 | 6,954,687 | 5,361,823 | 4,035,117 | 303,178 | (303,178) |  | 12.75\% | 499,826 | $(3,291)$ | 496,535 |
| Sweet Briar Elem School | 0.01289161\% | 188,870 | 83,760 | 244,978 | 188,870 | 142,137 | 10,679 | $(10,679)$ |  | 12.75\% | 17,606 | 797 | 18,403 |
| Tgu School District | 0.41615506\% | 6,096,915 | 2,703,863 | 7,908,157- | 6,0966,915 | 4,588,322 | 344,743 | (344,743) |  | 12.75\% | 568,351 | (23, 625 ) | 544,726. |
| Thompson School | 0.32099929\% | 4,702,535 | 2,085,482 | 6,099,541 | 4,702,535 | 3,538,960 | 265,899 | (265,899) |  | 12.75\% | 438,367 | (238) | 438,129 |
| Tioga School | 0.46508097\% | 6,813,709 | 3,021,747 | 8,837,892 | 6,813,709 | 5,127,755 | 385,273 | $(385,273)$ |  | 12.75\% | 635,170 | 100,765 | 735,935 |
| Turtie Lake-Mercer School | 0.17686637\% | 2,591,196 | 1,149,145 | 3,360,976 | 2,591,196 | 1,950,042 | 146,516 | (146,516) |  | 12.75\% | 241,550 | (51,433) | 190,117 |
| Twin Buttes Elem. School | -0.06177770\% | - 9.4554 .079 | - $1.5101,385$ | $\frac{1,173,956}{4,481,232}$ | - $9.454,079$ | - $2.681,131$ | - $51.1,177$ | -(51,177) |  | - $12.75 \%$ | - 824.371. | $\frac{(23,634)}{(16,253)}$ | ${ }^{60,737} 3$. |
| United School | 0.45077245\% | 6,604,080 | 2,928,781 | 8,565,988 | 6,604,080 | 4,969,996 | 373,420 | (373,420) |  | 12.75\% | 615,628 | (44,615) | 571,013 |
| Upper Valley Spec Ed | 0.37168858\% | 5,445,455 | 2,414,953 | 7,063,165 | 5,445,455 | 4,098,056 | 307,907 | $(307,907)$ | - | 12.75\% | 507,622 | 12,773 | 520,395 |
| Valley-Edinburg School | 0.26223887\% | 3,841,953 | 1,703,831 | 4,983,302 | 3,841,953 | 2,891,317 | 217,239 | (217,239) |  | 12.75\% | 358,145 | 34,371 | 392,516. |
| Valley City School | 0.92899971\% | 13,610,390 | 6,035,942 | 17,653,698 | 13,610,390 | 10,242,696 | 769,583 | (769,583) |  | 12.75\% | 1,268,752 | (124,205) | 1,144,547 |
| Velva School | 0.38170909\% | 5,592,262 | 2,480,059 | 7,253,584 | 5,592,262 | 4,208,538 | 316,208 | $(316,208)$ |  | 12.75\% | 521,307 | $(29,147)$ | 492,160 |
| Wahpeton School | 1.03154471\% | 15,112,734 | 6,702,203 | 19,602,352 | 15,112,734 | 11,373,307 | 854,531 | (854,531) | - | 12.75\% | 1,408,800 | (71,926) | 1,336,874 |
| Ward County - | 0.00435064\% | . 63.739 | 28,267- | 82,675 | -63,739 | -. - -7.968 |  | -(3,604) |  | 12.75\%- | -- 5.942 | ( 2229 ) | -5.713. |


| Employer Name | Employer's Proportionate Share Allocation | Net Pension | Covered Employee Payroll | Discount Rate Sensitivity |  |  | Schedule of Contributions |  |  |  | Pension Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1\% Decrease $(6.75 \%)$ | $\begin{gathered} \text { Current } \\ \text { Discount Rate } \\ (7.75 \%) \\ \hline \end{gathered}$ | 1\% Increase $(8.75 \%)$ | $\begin{aligned} & \text { Statutory } \\ & \text { Required } \\ & \text { Contribution } \end{aligned}$ |  | Contribution Deficiencyl (Excess) | Contributions as a Percentage of Covered Employee Payroll | Proportionate Share of Plan Pension Expense | Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions | Total Employer Pension Expense |
|  | ${ }^{(1)}$ | ${ }^{(2)}$ | (3) | (4) | (5) | (6) | (7) | (8) | ${ }^{(9)}$ | (10) | (11) | (12) | (13) |
| Warwick School | 0.26504901\% | 3,883,123 | 1,722,089 | 5,036,703 | 3,883,123 | 2,922,301 | 219,566 | $(219,566)$ |  | 12.75\% | 361,982 | 4,026 | 366,008 |
| Washburn School | 0.25492780\% | 3,734,842 | 1,656,329 | 4,844,370 | 3,734,842 | 2,810,709 | 211,182 | (211,182) |  | 12.75\% | 348,160 | 14,338 | 362,498 |
| West Fargo School | 8.24257540\% | 120,758,557 | 53,554,062 | 156,632,921 | 120,758,557 | 90,878,600 | 6,828,144 | $(6,888,144)$ |  | 12.75\% | 11,257,040 | 1,241,183 | 12,498,223 |
| West River Student Services | 0.10640107\% | 1,558,838 | 691,314 | 2,021,930 | 1,558,838 | 1,173,126 | 88,143 | (88,143) |  | 12.75\% | 145,314 | 11,363 | 156,677. |
| Westhope School | $0.16435580 \%$ | 2,407,909 | 1,067,860 | 3,123,239 | 2,407,909 | 1,812,107 | 136,152 | (136,152) |  | 12.75\% | 224,464 | 4,948 | 229,412 |
| White Shield School | 0.21607894\% | 3,165,683 | 1,403,919 | 4,106,129 | 3,165,683 | 2,382,381 | 179,000 | $(179,000)$ |  | 12.75\% | 295,103 | $(33,654)$ | 261,449 |
| Williston School | 2.83017340\% | 41,463,698 | 18,388,340 | 53,781,531 | 41,463,698 | 31,204,106 | 2,344,514 | $(2,344,514)$ |  | 12.75\% | 3,865,221 | 724,655 | 4,589,876 |
| Wilmac Special Education | 0.51211632\% | 7,502,804 | 3,327,347 | 9,731,701 | 7,502,804 | 5,646,344 | 424,237- | ( 424,2377$)$ |  |  | 699,407- | 144,484 | 843,891. |
| Wiliton Śchool | 0.19799737\% | 2,900,777 | 1,286,438 | 3,762,526 | 2,900,777 | 2,183,022 | 164,021 | (164,021) |  | 12.75\% | 270,409 | 4,224 | 274,633. |
| Wing School | 0.10143541\% | 1,486,088 | 659,051 | 1,927,568 | 1,486,088 | 1,118,377 | 84,029 | $(84,029)$ |  | 12.75\% | 138,532 | $(11,680)$ | 126,852 |
| Wishek School | 0.18593429\% | 2,724,046 | 1,208,061 | 3,533,293 | 2,724,046 | 2,050,020 | 154,028 | $(154,028)$ | - | 12.75\% | 253,934 | $(3,511)$ | 250,423 |
| Wolford School | 0.07970381\% | 1,167,707 | 517,855 | 1,514,604 | 1,167,707 | 878.775 | 66,027 | (66,027) |  | 12.75\% | 108,853 | 1,143 | 109,996. |
| Wy ${ }^{\text {ndamere School }}$ | 0.21626 ¢330\% | 3,168,399 | 1,405,123 | 4,109,651 | 3,168,399 | 2,384,424 | 179,153 | (179,153) |  | 12.75\% | 295,356 | (31,646) | 263,710 |
| Yellowstone Elem. School | 0.07767971\% | 1,138,053 | 504,704 | 1,476,141 | 1,138,053 | 856,458 | 64,350 | $(64,350)$ | - | 12.75\% | 106,089 | $(2,960)$ | 103,129 |
| Zeeland School | 0.05773417\% | 845,839 | 375,113 | 1,097,117 | 845,839 | 636,549 | 47,827 | $(47,827)$ | . | 12.75\% | 78,849 | $(32,073)$ | 46,776 |
| Grand Totals: | 100\% | 1,465,058,563 | 649,724,868 | 1,900,291,033 | 1,465,058,563 | 1,102,551,032 | 82,839,932 | (82,839,932) |  | 12.75\% | 136,571,873 |  | $\underline{136,571,873}$ |

Schedule of Pension Amounts by Employer as of June 30, 2016


## Y Segal Consulting

Schedule of Pension Amounts by Employer as of June 30, 2016

̌. Segal Consulting

Schedule of Pension Amounts by Employer as of June 30, 2016

| Employer Name | Deferred Outflows of Resources |  |  |  |  | Deferred Inflows of Resources |  |  |  | Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30): |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Changes of Assumptions | Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions | Total Deferred Outflows of Resources | Between Expected and Actual Experience | Changes of Assumptions |  | Total Deferred Inflows of Resources | 2017 | 2018 | 2019 | 2020 | 2021 | Thereatte |
|  | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) |
| New Rockford Sheyenne School | 18,172 | 319,838 | 321,384 | 4,668 | 664,062 | 18,217 |  | 186,036 | 204,253 | 88,620 | 88,620 | 166,773 | 117,841 | 31,995 | $(34,042)$ |
| New Salem-Almont | 18,089 | 318,376 | 319,915 | 138,482 | 794,862 | 18,134 |  | 220,063 | 238,197 | 109,170 | 109,169 | 186,965 | 138,256 | 52,807 | (39,700) |
| New Town School | 45,835 | 806,730 | 810,630 | 274,298 | 1,937,493 | 45,950 |  | 221,077 | 267,027 | 317,392 | 317,392 | 514,519 | 391,097 | 174,570 | $(44,505)$ |
| Newburg United District | 7,006 | 123,313 | 123,909 | 21,354 | 275,582 | 7,024 |  |  | 15,756 | 47,573 | 47,574 | 77,706 | 58,841 | 25,742 |  |
| North Border Sechiool | 30,769 | 541,548 | 544,166 | 308,961 | 1,425,444 | 30,845 |  | 355,575 | 386,420 | 181,348 | 181,348 | 313,677 | 230,825 | 85,475 | 46,350 |
| North Sargent School | 16,131 | 283,919 | 285,291 | 279,268 | 864,609 | 16,171 |  |  | 16,171 | 152,342 | 152,342 | 221,718 | 178,281 | 102,076 | 41,680 |
| North Star | 17,879 | 314,691 | 316,212 | 113,399 | 762,181 | 17,924 |  |  | 17,924 | 136,879 | 136,878 | 213,774 | 165,629 | 81,169 | 9,930 |
| North Valley Area Career | 5,464 | -96,163 | 96,628 |  | 198,255 | 5,477 |  | 195,116 | 200,593 | (1,381) | (1,381) | -22.117- | 7,405 | (18,406) | (10,693). |
| Northern Cass School Dist | 29,657 | 521,992 | 524,515 | 181,143 | 1,257,307 | 29,732 |  |  | 29,732 | 224,972 | 224,971 | 352,521 | 272,661 | 132,562 | 19,891 |
| Northern Plains Spec Ed | 2,829 | 49,790 | 50,031 | 82,841 | 185,491 | 2,836 |  | 15,374 | 18,210 | 32,483 | 32,483 | 44,650 | 37,032 | 23,670 | $(3,037)$ |
| Northwood School | 16,346 | 287,700 | 289,091 | 131,112 | 724,249 | 16,387 |  |  | 16,387 | 128,791 | 128,790 | 199,090 | 155,075 | 77,859 | 18,259 |
| Oakes School | 21,473 | -377,947 | 379,774 |  | 779,194 | -21,527 |  | 156,980 | 178,507 | 111,549 | -111,549 | 203,901 | -146,079 | 44,638 | (17,028) |
| Oberon Elem School | 2,972 | 52,302 |  |  | 107,829 | 2,979 |  | 314,281 | 317,260 | (34,713) | (34,712) | (21,932) | (29,933) | (43,973) | (44,171) |
| Oliver - Mercer Spec Ed | 10,620 | 186,913 | ${ }^{187,816}$ | 52,460 | 437,809 | 10,646 |  |  | 10,646 | 79,829 | 79,829 | 125,502 | 96,906 | ${ }^{46,736}$ | (1,641) |
| Page School | 7,225 | 127,168 | 127,782 |  | 262,175 | 7,243 |  | 101,880 | 109,123 | 29,645 | 29,646 | 60,720 | 41,264 | 7,131 | $(15,355)$ |
| Park River Area School District | 21,689 | 381,744 | 383,589 |  | 787,022 | 21,743 |  | 274,946 | 296,689 | 90,987 | 90,987 | 184,267 | 125,864 | 23,407 | (25,178). |
| Parshall School | 18,049 | 317,671 | 319,206 |  | 654,926 | 18,094 |  | 204,583 | 222,677 | 78,947 | 78,947 | 156,571 | 107,970 | 22,709 | (12,895) |
| Peace Garden Spec Ed | 5,695 | 100,235 | 100,719 | 57,042 | 263,691 | 5,709 |  |  | 5,709 | 48,481 | 48,480 | 72,973 | 57,638 | 30,737 | (327) |
| Pembina Spec Ed Coop | 1,129 | 19,869 | 19,965 |  | 40,963 | 1,132 |  | 104,928 | 106,060 | $(13,546)$ | (13,546) | $(8,691)$ | (11,730) | $(17,061)$ | (524) |
| Pingree- Buchanan School | 8,781 | 154.546 | 155,293. | 15,623 | 334,243 | 8,803 |  | 46,172 | $\frac{54,975}{23,764}$ | - $\frac{50,722}{(4,753)}$ | $\frac{50,722}{(4,753)}$ | $-88,486$ | (64.842 | -23,360 | 1,136. |
| Powers Lake School | 12,016 | 211,492 | 212.514 | 111,818 | 547.840 | 12.046 |  |  | 12,046 | 98,210 | 98,210 | 149,889 | 117.532 | 60,765 | 11.188 |
| Richardton-Taylor | 18,266 | 321,491 | 323,045 | 78,644 | 741,446 | 18,311 |  | 115,892 | 134,203 | 115,720 | 115,720 | 194,277 | 145,092 | 58,803 | $(22,369)$ |
| Richland School | 15,427 | 271,519 | 272.831 |  | 559,777 | 15,465 |  | 357.582 | 373,047 | 39,935 | 39,935 | 106,281 | 64.741 | (8,131) | (56,033). |
| Robinson School |  | 0 |  |  |  |  |  | 111,232 | 111,232 | (20,228) | (20,228) | (20,228) | (20,228) | (20,228) | $(10,092)$ |
| Rolette County | - | , | - |  | - | - | - | 5,687 | 5,687 | $(1,137)$ | $(1,137)$ | $(1,137)$ | $(1,137)$ | $(1,139)$ |  |
| Rolette School | 12,831 | 225,833 | 226,924 | 86,591 | 552,179 | 12,863 |  | 22,360 | 35,223 | 97,398 | 97,398 | 152,581 | 118,030 | 57,418 | $(5,869)$ |
| Roosevelt School | - 4.531 | -79,754 | 80,140 | 36,598 | 201,023 | -4.543 |  | 34,186 | 38,729 | 28.860 | 28,860 | 48,348 | 36,146 | 14.740 | 5,341. |
| Roughtider Area Career And Tech Center | 1,016 | 17,887 | 17,973 |  | 36,876 | 1,019 |  | 125,986 | 127,005 | (14,775) | (14,775) | (10,405) | (13,141) | (17,943) | (19,090) |
| Roughrider Service Program | 3,226 | 56,773 | 57,047 | 288,326 | 405,372 | 3,234 |  |  | 3,234 | 73,561 | 73,561 | 87,433 | 78,747 | 63,508 | 25,329 |
| Rugby School | 34,253 | 602,875 | 605,790 |  | 1,242,918 | 34,339 |  | 55,762 | 90,101 | 214,245 | 214,246 | 361,560 | 269,326 | 107,513 | $(1,073)$ |
| Rural Cass Spec Ed | -11,535 | $-203,028$ | 204,009 |  | 418.572 | -11,564- |  | 47.111 | 58,675 | -65,955 | 65,955 | 115,565 | -84,504. | $-3.3011$ | (2,092) |
| Sargent School | ${ }_{9}^{15,334}$ | ${ }_{1}^{264,283}$ | 165,077 | 48.597 | 387,291 | ${ }_{\text {9, }}^{1} \times 57$ |  | ${ }_{81,531}$ | ${ }_{90,888}$ | 57,096 | ${ }_{5} 57.095$ | 157, ${ }^{938}$ | 72,105 | 28,014 | (15,146) |
| Scranton School | 11,545 | 203,194 | 204,176 | 22,217 | 441,132 | 11,574 |  | 84,467 | 96,041 | 65,770 | 65,770 | 115,422 | 84,335 | 29,800 | $(16,006)$ |
| Se Region Career And Tech | 15,217 | 267,823 | 269,118 | 29,369 | 581,527 | 15,255 |  |  | 15,255 | 104,564 | 104,564 | 170,007 | 129,033 | 57,147 | 959. |
| Selffiridge Śchool | 9,311 | 163,874 | 164,666 | 19,399 | 357,250 | 9,334 |  | 23,002 | 32,336 | 59,446 | 59,446 | 99,489 | 74,418 | 30,437 | 1,678 ${ }^{-}$ |
| Sheyenne Valley Area Voc | 7,923 | 139,458 | 140,132 | 16,155 | 303,668 | 7,943 |  | 27,257 | 35,200 | 48,994 | 48,995 | 83,072 | 61,736 | 24,304 | 1,366 |
| Sheyenne Valley Spec Ed | 15,889 | 279,655 | 281,006 | 50,724 | 627,274 | 15,929 | - | 317,123 | 333,052 | 61,071 | 61,071 | 129,405 | 86,621 | 11,561 | $(55,508)$ |
| Slope County | 263 | -4,621 | 4.643 |  | -9,527 | 263 |  | 1,221 | 1.484 | 1,491 | 1.491 | 2.620 | 1,913 | 672 | (144) |
| Solen - Cannonball School | 16,433 | 289,226 | 290,624 |  | 596,283 | 16,474 |  | 385,230 | 401,704 | 31,430 | 31,430 | 102,103 | 57,855 | (19,775) | $(8,464)$ |
| Souris Valley Spec Ed | 15,897 | 279,804 | 281,156 |  | 576,857 | 15,937 |  | 223,603 | 239,540 | 66,041 | 66,041 | 134,411 | 91,604 | 16,505 | $(37,284)$ |
| South Cent. Prairie Sp Ed | 1,068 | 18,799 | 18,890 |  | 38,757 | 1,071 |  | 4,659 | 5,730 | 6,099 | 6,099 | 10,693 | 7,817 | 2,774 | (455) |
| South Heart School | 16,403 | - 288,698 | 290,093 | 220,134 | 815,328 | - 1 16,444 |  |  | $\frac{16,444}{21351}$ | 147,860 | 147,860 | 218,404 | 174,236. | 96,752- |  |
| South Prairie Elem School South Valley Spec Ed | 21,298 | 374,857 | 376,669 | 996,750 | 1,769,574 | 21,351 4,634 |  |  | 21,351 474,650 | 309,510 | 309,510 |  | 343,758 $(31718)$ 4,41 |  |  |
| Southwest Special Education Unit | 675 | 11,872 | 11,929 |  | 24,476 | 676 |  | 5,487 | 6,163 | 3,327 | 3,327 | 6,228 | 4,411 | 1,227 | (207) |
| St. John's School | 26,539 | 467,110 | 469,368. | 29,294 | 992,311 | -26,606 |  | 113,752 | 140,.358 | 160,245 | -160,245 | 274,385- | 202,921 | 77,549 | (23,391). |
| S't. Thomas School | 6,877 | 121,045 | 121,631 | 596 | 250,149 | 6,895 |  | 101,206 | 108,101 | 28,171 | 28,171 | 57,749 | उ9, 230 | 6,743 | (18,015) |
| Stanley School | 34,527 | 607,700 | 610,638 | 169,606 | 1,422,471 | 34,613 |  | 59,838 | 94,451 | 249,466 | 249,466 | 397,959 | 304,987 | 141,882 | (15,742) |
| Starkweather School | 6,101 | 107,383 | 107,902 |  | 221,386 | 6,116 |  | 70,126 | 76,242 | 27,361 | 27,361 | 53,600 | 37,172 | 8,351 | (8,701) |
| Stering School. | 2,657 | . 46,771 | 46,997 | 25,838 | 122,263 | 2,664 |  |  | 2,664 | 22.405 | 22,405 | 33,833 | 26,678. | 14,127 | -152. |
| Strasburg School District | 8,631 | 151,914 | 152,648 | 19,219 | 332,412 | 8,653 |  | 142,522 | 151,175 | 31,074 | 31,074 | 68,195 | 44,953 | 4,178 |  |
| Surrey School | 25,324 | 445,713 | 447,867 | 19,998 | 938,902 | 25,387 |  | 43,749 | 69,136 | 162,112 | 162,112 | 271,024 | 202,834 | 83,203 | $(11,520)$ |
| Sweet Briar Elem School | 892 | 15,700 | 15,776 | 4,607 | 36,975 | 894 |  |  | 894 | 6,623 | 6,623 | 10,460 | 8,058 | 3,843 | 474 |
| Thu School District | 28,795 | 506,819 | 509,269 |  | 1,044,883 | 28,867 |  | 128,378 | 157,245 | 164,456 | 164,456 | 288,299 | 210,760 | 74,734 | (15,067). |
| Thompson School | 22,210 | 390,908 | 392,798 | 101,127 | 907,043 | 22,265 |  | 85,465 | 107,730 | 144,828 | 144,828 | 240,348 | 180,543 | 75,624 | 13,141 |
| Tioga School | 32,181 | 566,404 | 569,142 | 528,153 | 1,695,880 | 32,261 |  |  | 32,261 | 310,958 | 310,958 | 449,360 | 362,706 | 210,683 | 18,952 |
| Turtle Lake-Mercer School | 12,238 | 215,399 | 216,440 |  | 444,077 | 12,269 | - | 276,050 | 288,319 | 28,501 | 28,501 | 81,134 | 48,180 | (9,631) | (20,927) |
| Twin Buttes Elem. School | - 1,275 | - 75.237 | -75.600 |  | 155.112 | - 1,285 |  | 136, 1833. | -140,918 | 4, 4.286 | 4, 4.286 | 22,671- | $\frac{11,160}{11,563}$ | - 9.0344$)$ | (19.276) |
| Uniterwoon School | 31,191 | ${ }^{2848978}$ | 288,582 551,632 | 1.055 | -1, | 16,258 |  | 223,955 | 108,248 255224 | 159,111 | -90,324 | 160,500 2936 | ${ }_{209}$ | ${ }^{39,482}$ | $\underset{(5036)}{ }$ |
| Upper Valley Spec Ed | 25,719 | 452,665 | 454,853 | 109,867 | 1,043,104 | 25,783 | - | 55,209 | 80,992 | 180,756 | 180,755 | 291,365 | 222,112 | 100,620 | $(13,496)$ |
| Valley-Edinburg School | 18,145- | 319,370_ | 320,914 | 272,379 | -930,808 | - 18,191 |  | 55,127 | 73,318 | 152.890 | -152,890 | 230,929 | -182,068 | -96,353 | -42, 362. |
| Valley City School | 64,281 | 1,131,392 | 1,146,861 | 142,270 | 2,474,804 | 64,442 |  | 739,583 | 804,025 | ${ }^{295,656}$ | 295,656 | 572,115 | 399,023 | ${ }^{95,361}$ |  |
| Wahpeton School | ${ }_{71,377}^{26,42}$ | +1,256,278 | 1,262,350 |  | 2,590,005 | 71,555 | - | 414,685 | 486,240 | 143,360 3942 | 143,360 394,280 | ${ }_{7} \mathbf{2 5 1 , 2 5 5}$ | 180, ${ }_{\text {cos7 }}$ | 171,873 | $(8,889)$ $(8)$ |
| Ward County | -301 | . 5,298 | . 5.324 |  | 10,923 | -302 |  | . 1.335 | -1, 1337 | 1,737 | 1.737 | - 3,032 | 2,221 | 798 | - (239). |


| Employer Name | Deferred Outflows of Resources |  |  |  |  | Deferred Inflows of Resources |  |  |  | Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30): |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments | Changes of Assumptions | Changes in <br> Proporion and <br> Differences <br> Between <br> Employer <br> Contributions <br> and <br> and <br> Shartionate <br> Share of <br> Contributions | Total Deferred Outtiows of Resources | Differences Between Expected and Actual Experience | Changes of Assumptions | Changes in Proportion and Differences Between Employer and Proportionate Share of Contributions | Total Deferred Inflows of Resources | 2017 | 2018 | 2019 | 2020 | 2021 | Thereafter |
|  | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) |
| Warwick School | 18,340 | 322,793 | 324,353 | 223,997 | 889,483 | 18,386 |  | 244,638 | 263,024 | 123,815 | 123,815 | 202,690 | 153,306 | 66,671 | $(4,837)$ |
| Washburn School | 17,639 | 310,466 | 311,967 | 104,595 | 744,667 | 17,684 |  | 15,471 | 33,155 | 129,553 | 129,553 | 205,417 | 157,918 | 74,589 | 14,483 |
| West Fargo School | 570,335 | 10,038,307 | 10,086,831 | 6,902,055 | 27,597,528 | 571,762 | - |  | 571,762 | 4,966,410 | 4,966,410 | 7,419,299 | 5,883,536 | 3,189,273 | 600,839 |
| West River Student Services | 7,362 | 129,582 | 130,208 | 85,167 | 352.319 | 7,381 |  | 34,024 | 41,405 | 59,451 | 59,450 | 91.114 | 71,289 | 36,511 | (6,899) |
| Westhope School | 11,372 | 200,162 | 201,130 | 89,712 | 502,376 | 11,401 |  | 77,967 | 89,368 | 79, 227 | 79,227 | 128,138 | 97,515 | ${ }^{43,794}$ | $(14,892)$ |
| White Shield School | 14,951 | 263,154 | 264,426 |  | 542,531 | 14,989 |  | 186,781 | 201,770 | 64,003 | 64,003 | 128,305 | 88,045 | 17,414 | $(21,088)$ |
| Wililiston School | 195,831 | 3,446,756 | 3,463,418 | 3,884,063 | 10,990,068 | 196,320 | - | - | 196,320 | 2,003,751 | 2,003,751 | 2,845,976 | 2,318,655 | 1,393,553 | 228,062 |
| Wilmac Special Education | 35,435 |  | $\frac{626-701}{22-729}$ | 791,504 |  |  |  |  |  | 375,936 |  |  |  | 265,518 | 63, 161. |
| Wilton School | 13,700 | 241,133 | 242,299 | 24,013 | 521,145 | 13,734 |  |  | 13,734 | 93,709 | 93,708 | 152,629 | 115,738 | 51,021 | 607 |
| Wing School | 7,019 | 123,534 | 124,131 | - | 254,684 | 7,036 | - | 65,918 | 72,954 | 34,164 | 34,164 | 64,350 | 45,450 | 12,297 | $(8,694)$ |
| Wishek School | 12,866 | 226,442 | 227,537 | 17,151 | 483,996 | 12,898 | - | 41,645 | 54,543 | 80,522 | ${ }^{80,522}$ | 135,854 | 101,210 | 40,435 | $(9,090)$ |
| Wolford School | 5,515 | 97,068 | 97,537. | 33,333 | 233,453 | 5,529 | , | 33,147 | 38,676 | 37.164 | 37,164 | 60.883 | 46,032 | 19,978 | (6,443). |
| W̄yndmere School | 14,964 | 26\%3,380 | 264,653 |  | 542,997 | 15,002 |  | 172,056 | 187,058 | 66,094 | 66,095 | 130,453 | 90,159 | 19,46' | (16,329) |
| Yellowstone Elem. School | 5,375 | 94,603 | 95,060 | 41,826 | 236,864 | 5,388 | - | 67,953 | 73,341 |  |  |  | 40,789 | 15,399 | (12,221) |
| zeeland School | 3,995 | 70,312 | 70,652 |  | 144,959 | 4,005 |  | 185,337 | 189,342 | (5,981) | ( 5,980 ) | 11,201 | 444 | (18,430) | (25,637) |
| Grand Totals: | 6,999,383 | 121,786,048 | 122,374,747 | 32,631,925 | 283,712,103 | 6,936,686 | . | 32,631,925 | 39,568,611 | 45,194,926 | 45,194,925 | 74,953,700 | 56,321,614 | 23,634,443 | $(1,156,116)$ |


[^0]:    * Increase in net pension liability due to changes in assumptions resulted primarily from a decrease in the investment return assumption and an updated mortality improvement scale.
    ** Restated due to GASB implementation

[^1]:    * The mortality rates were based on historical and current demographic data, as used in the experience study dated April 30, 2015. The underlying tables reasonably reflect the mortality experience of the Fund as of the measurement date.

