

DUDA ACTUARIAL CONSULTING



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Fort Cherry School District GASB 45 Actuarial Valuation as of July 1, 2016

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January 19, 2018

Ms. Jessica Drylie
Business Manager
Fort Cherry School District
110 Fort Cherry Road
McDonald, PA 15057

Dear Jessica:

As requested, we have prepared a July 1, 2016 GASB 45 Actuarial Valuation for the Fort Cherry School District Postretirement Benefits Plan. The purpose of the Valuation was to measure the Annual Required Contribution (as set forth under GASB 45).

It should be noted that all of the calculations were based on the following actuarial assumptions and methods:

- Interest rate of 4%, per annum
- Medical inflation of 10% in the first year, 7% in the second year, gradually decreasing by 0.5% per year, to an ultimate rate of 5%.
- RP-2000 Combined Healthy Annuitants Mortality Table with generational projection using Scale BB
- Sarason T-3 turnover rates
- 1964 OASDI disability rates were assumed
- Retirement was assumed to occur at the earlier of age 57 and 30 years of service or age 62 and 20 years of service.
- Entry Age Normal cost method expressed as a level dollar
- It was assumed that no money has been set aside by the School District to offset the initial GASB 45 liability

Please be advised that the economic assumptions stated above (interest and inflation rates) are consistent with those used by several large Fortune 100 companies in their accounting of their post retirement medical benefits as mandated by Statement No. 132 of the Financial Accounting Standards Board.

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In addition, we developed (per ASOP 6) and used the following sample claim rates for teachers based on the blended premiums of the consortium for cost purposes:

- Age 55 – Single: \$ 713.19 per month
- Age 55 – Married: \$1,964.83 per month
- Age 60 – Single: \$ 848.68 per month
- Age 60 – Married: \$2,338.11 per month
- Age 62 – Single: \$ 916.16 per month
- Age 62 – Married: \$2,524.02 per month
- Single Retiree: \$ 581.31 per month
- Married Retiree: \$1,601.51 per month

The results of our July 1, 2016 GASB 45 Actuarial Valuation are contained in the attached Exhibit which discloses the Annual Required Contribution on a 4% interest rate. GASB 45 indicates that the discount rate to be used in the actuarial projections should be the expected rate of return on the assets. If the District decides not to fund their GASB 45 liability, then a short-term rate such as a 4% interest rate should be used.

Please be advised that for purposes of calculating the age-adjusted rates and the Annual Required Contribution (“ARC”), we used the demographic data supplied for the 131 full-time active employees and 11 retired employees. In addition, we have amortized the Unfunded Actuarial Accrued Liability over 30 years, the maximum period set forth under GASB 45.

RESULTS

In the first column of the attached Exhibit entitled “4% Totals”, we have calculated the Annual Required Contribution (“ARC”) under GASB 45 to be \$260,997 based on a 4% interest rate. Furthermore, the postretirement benefits plan’s Unfunded Actuarial Accrued Liability was determined to be \$3,066,569.

In addition to the above-mentioned calculations, we have also attached additional relevant information per this engagement. This information is included in Sections I through VI in the back of our report and include a 15-year net claim and actuarial accrued liability projection (based on a closed group), benefit eligibility conditions from the collective bargaining agreements, a listing of the actuarial assumptions and methods employed in the Valuation, an age/service scatter for the active employees, and a listing containing the expected 2016 average benefit payouts by age group.

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Finally, please be advised that our July 1, 2016 Actuarial Valuation focused solely on the actuarial cost impact of the current postretirement medical benefits and compliance with the GASB 45 statement.

Jessica, we would like to thank you for your assistance and the opportunity to be of service on this most important project. If there are any questions pertaining to the Actuarial Valuation, please feel free to call us at (412) 255-3746.

In accordance with professional standards, I, Joseph W. Duda am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Sincerely yours,



Joseph W. Duda, FSA FCA EA MAAA
President

**FORT CHERRY SCHOOL DISTRICT POSTRETIREMENT BENEFITS PLAN
GASB 45 ACTUARIAL VALUATION AS OF JULY 1, 2016**

| | 4% Totals |
|---|------------------|
| Normal Cost | 80,440 |
| Amortization Requirement (30 year) | 170,519 |
| Interest to End of Year | 10,038 |
| Annual Required Contribution | 260,997 |
| | |
| Number of Actives | 131 |
| Number of Retirees | 11 |
| Total Participants | 142 |
| | |
| Present Value of Benefits - Actives | 3,353,268 |
| Present Value of Benefits - Retirees | 436,678 |
| Total Present Value of Benefits | 3,789,946 |
| | |
| Actuarial Accrued Liability - Actives | 2,629,891 |
| Actuarial Accrued Liability - Retirees | 436,678 |
| Total Actuarial Accrued Liability | 3,066,569 |
| Actuarial Value of Assets | 0 |
| Unfunded Actuarial Accrued Liability | 3,066,569 |

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SUPPLEMENTARY EXHIBITS

| <u>Section</u> | <u>Title</u> | <u>Page</u> |
|----------------|--|-------------|
| I | Expected Net Payments in the Future | 1 |
| II | Expected Actuarial Accrued Liability in the Future at 4% | 2 |
| III | Benefit Eligibility | 3 |
| IV | Actuarial Assumptions and Funding Method | 5 |
| V | Active Employee Age/ Service Scatter | 6 |
| VI | Expected Average Annual Payout Scatter | 7 |

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SECTION I

EXPECTED NET CLAIMS IN FUTURE

| <u>For plan year beginning in:</u> | | <u>Payments</u> |
|------------------------------------|----|-----------------|
| 2016 | \$ | 187,713 |
| 2017 | | 197,175 |
| 2018 | | 216,930 |
| 2019 | | 204,546 |
| 2020 | | 214,351 |
| 2021 | | 244,069 |
| 2022 | | 235,384 |
| 2023 | | 208,113 |
| 2024 | | 191,681 |
| 2025 | | 179,067 |
| 2026 | | 143,599 |
| 2027 | | 141,915 |
| 2028 | | 106,040 |
| 2029 | | 108,177 |
| 2030 | | 154,444 |

Note: The amounts shown above are the present values at the valuation date, and its anniversaries, of the age-adjusted claims expected to be paid during the plan year less the retiree contributions.

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SECTION II

EXPECTED ACTUARIAL ACCRUED LIABILITY IN FUTURE AT 4%

| <u>For plan year beginning in:</u> | | <u>Liability</u> |
|------------------------------------|----|------------------|
| 2016 | \$ | 3,066,568 |
| 2017 | | 3,077,667 |
| 2018 | | 3,072,501 |
| 2019 | | 3,041,809 |
| 2020 | | 3,019,233 |
| 2021 | | 2,979,604 |
| 2022 | | 2,903,399 |
| 2023 | | 2,830,845 |
| 2024 | | 2,781,259 |
| 2025 | | 2,743,556 |
| 2026 | | 2,712,978 |
| 2027 | | 2,715,896 |
| 2028 | | 2,716,914 |
| 2029 | | 2,752,397 |
| 2030 | | 2,785,338 |

Note: The amounts shown above represent the estimated accrued liability of the Fund based on a closed group population.

SECTION III

Teacher and Administrators Eligibility Requirements

Teachers and administrators who are fifty (50) years of age or older and who have completed thirty (30) years of credited service with PSERS qualify for participation in the Early Retirement Incentive Program. During the period between retirement and attaining age 65, the eligible retired employee may continue participation in the District's hospitalization program, with the District paying up to \$650 (\$600 for administrators) per month and the retired employee paying the remainder of the premium.

SECTION III (Continued)

Support Personnel Eligibility Requirements

Support personnel retiring prior to being Medicare eligible shall have the right to remain in the medical insurance group, at no cost to the District, until such time as they become eligible for Medicare benefits.

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SECTION IV

ACTUARIAL ASSUMPTIONS AND FUNDING METHODS

A summary of the actuarial assumptions used in the valuation is presented below:

Investment Return - The assumed rates used to discount obligations are as follows:

| | |
|------------|--------|
| Non-Funded | 4.000% |
|------------|--------|

Salary Scale – None assumed.

Retirement Rates – The earlier of age 57 and the completion of 30 years of service or age 62 and the completion of 20 years of service.

Termination – Sarason T-3.

Pre-retirement Mortality – RP-2000 Combined Healthy Annuitant Mortality Table for males and females with generational improvement using Scale BB.

Post-retirement Mortality - RP-2000 Combined Healthy Annuitant Mortality Table for males and females with generational improvement using Scale BB.

Rates of Disablement – 1964 OASDI disability rates were used.

Administrative Expenses - None assumed.

Percent Married – 20% of retirees were assumed to elect married coverage. Overall, a 90% utilization rate was used for teachers and administrators. Support employees were assumed to buy single coverage at a 15% utilization.

Age of Spouse – The female spouse was assumed to be three years younger than the male spouse for future retirees.

Medical Inflation – 10% in the first year (actual), 7% in the second year, gradually decreasing by 0.5% per year, to an ultimate rate of 5%.

ACTUARIAL METHODS

Valuation of Obligations - The Entry Age Normal Method was used.

Valuation of Assets - Market value of assets was used.

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SECTION V

ACTIVE EMPLOYEE AGE/ SERVICE SCATTER AS OF 7/1/2016

| Service | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-40 | 40+ | Totals |
|---------|-----|-----|-------|-------|-------|-------|-------|-------|-----|--------|
| Age | | | | | | | | | | |
| 0-19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 25-29 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 30-34 | 6 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 35-39 | 2 | 3 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 19 |
| 40-44 | 2 | 2 | 4 | 5 | 1 | 0 | 0 | 0 | 0 | 14 |
| 45-49 | 4 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 17 |
| 50-54 | 2 | 2 | 4 | 6 | 1 | 3 | 1 | 0 | 0 | 19 |
| 55-59 | 2 | 2 | 0 | 2 | 2 | 5 | 7 | 0 | 0 | 20 |
| 60-64 | 0 | 0 | 2 | 0 | 2 | 3 | 2 | 1 | 0 | 10 |
| 65-69 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 4 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 75+ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 26 | 23 | 27 | 20 | 9 | 12 | 11 | 2 | 1 | 131 |

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SECTION VI

EXPECTED AVERAGE ANNUAL PAYOUTS FOR 2016

Status A - Active

| Age | Number | Average Annual Net Payout |
|---------|--------|---------------------------|
| 20 - 24 | 1 | 0.00 |
| 25 - 29 | 7 | 0.00 |
| 30 - 34 | 17 | 0.00 |
| 35 - 39 | 19 | 0.00 |
| 40 - 44 | 14 | 0.00 |
| 45 - 49 | 17 | 0.00 |
| 50 - 54 | 19 | 0.00 |
| 55 - 59 | 20 | 1430.60 |
| 60 - 64 | 10 | 3723.36 |
| 65 - 69 | 4 | 0.00 |
| 70 - 74 | 3 | 0.00 |
| 75+ | 0 | 0.00 |
| Total | 131 | 502.64 |

Average Age: 46.44

Status R - Retired

| Age | Number | Average Annual Net Payout |
|---------|--------|---------------------------|
| 20 - 24 | 0 | 0.00 |
| 25 - 29 | 0 | 0.00 |
| 30 - 34 | 0 | 0.00 |
| 35 - 39 | 0 | 0.00 |
| 40 - 44 | 0 | 0.00 |
| 45 - 49 | 0 | 0.00 |
| 50 - 54 | 0 | 0.00 |
| 55 - 59 | 3 | 13764.43 |
| 60 - 64 | 7 | 11510.62 |
| 65 - 69 | 1 | 0.00 |
| 70 - 74 | 0 | 0.00 |
| 75 - 79 | 0 | 0.00 |
| 80 - 84 | 0 | 0.00 |
| 85 - 89 | 0 | 0.00 |
| 90 - 94 | 0 | 0.00 |
| 95 - 99 | 0 | 0.00 |
| 100 + | 0 | 0.00 |
| Total | 11 | 11078.87 |

Average Age: 61.86