

April 24, 2007

Mr. Charles J. Klein
Department of Human Resources
City of Bismarck
221 North Fifth Street
P.O. Box 5503
Bismarck, ND 58502-5503

Re: The City of Bismarck Employees' Pension Plan

Dear Chuck:

Enclosed is the January 1, 2007 Actuarial Valuation report for the City of Bismarck Employee's Pension Plan.

The report reflects several changes from last year. The changes include the following:

1. The reports were reformatted to improve the general appearance. Most of the content from the previous report has remained. However, some charts have been converted to graphs and some new graphs for asset performance were added. We believe that this report is an improvement over previous reports. We welcome any comments that you have regarding additional improvements that will provide you with the information you desire.
2. GASB No. 25 and No. 27 requirements were added to Section IV. Also, some terminology was changed such that it is more consistent with GASB. For example, the Recommended Contribution is now referred to as the Annual Required Contribution (ARC).
3. The actuarial cost method was changed to better reflect how past employer contributions were applied to the Unfunded Actuarial Accrued Liability (UAAL). The change also makes the cost method used for this plan more consistent with other public sector plans and is generally considered easier to understand. This change did not have a significant impact on either the UAAL or the ARC for this plan.
4. Additional commentary was added throughout the report. Please let me know if you find that any of this commentary is not clear.

Mr. Charles J. Klein

April 24, 2007

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5. We have eliminated the retiree and terminated vested participant listing from the report with the intent to provide that to you with the Participant Report Supplements. Please let me know if you would like for those exhibits to be added back into the report.

The Participant Report Supplements (for Active, Retired, and Vested Terminated Participants) will be provided separately via email.

If you have any questions, please feel free to call Scott Syverson at (763) 278-4116, or myself at (763) 278-4010.

Sincerely,



Douglas A. Anderson, A.S.A., M.A.A.A., E.A.
Actuarial Consultant
Stanton Group

enclosures

cc: Scott E. Syverson, Stanton Group
Ben Holle, Stanton Group

The City of Bismarck Employees' Pension Plan

Actuarial Valuation

January 1, 2007



3405 Annapolis Lane North
Minneapolis, MN 55447
Tel: 800-754-9867 or 763-278-4000
www.stanton-group.com

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GROUP |

The City of Bismarck Employees' Pension Plan

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The City of Bismarck Employees' Pension Plan

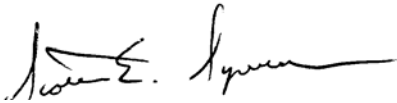
Actuarial Certification

In our opinion, the following report presents fairly the January 1, 2007 Actuarial Valuation of the City of Bismarck Employees' Pension Plan in accordance with generally accepted actuarial principles and practices.

Our Actuarial Valuation has been conducted with reliance upon participant information and financial information provided to us by the City of Bismarck. The accuracy of the information in this report is dependent on the quality and completeness of the information provided to us. We have reviewed the information provided to us for general reasonableness. The valuation was performed on the basis of the participant data, plan provisions, actuarial assumptions, and actuarial methods stated in this report.

The actuarial assumptions used in this report were selected by the City of Bismarck, with the agreement of Stanton Group. The assumptions were modified effective January 1, 2006 to reflect the results of an Experience Study for the period from January 1, 1998 through December 31, 2004. In our opinion, the actuarial assumptions used (a) each, and in the aggregate, are reasonably related to the experience of the plan and to reasonable expectations, and (b) in the aggregate, represent our best estimate of anticipated experience under the plan.

To the best of our knowledge, the information contained in this report is complete and accurate.



Scott E. Syverson, E.A.
Enrollment Number 05-07135

4/24/2007

Date



Douglas A. Anderson, A.S.A., M.A.A.A., E.A.
Enrollment Number 05-05012

4/24/2007

Date

The City of Bismarck Employees' Pension Plan

Commentary

In this report we present the results of the January 1, 2007 Actuarial Valuation of the City of Bismarck Employees' Pension Plan. There were no changes in actuarial assumptions or plan provisions since the last report. The actuarial cost method was changed effective January 1, 2007 to better reflect the impact of all past employer contributions on the Unfunded Actuarial Accrued Liability. Please see the Actuarial Assumptions and Cost Methods section for further details of this change. This report reflects a 2.6% Cost of Living Adjustment for retirees effective January 1, 2007.

Annual Required Contribution

It is recommended that the City contribution be at least equal to the Annual Required Contribution developed under the entry age normal actuarial cost method. On this basis, a contribution of \$1,068,130 (7.7% of covered payroll) is recommended for the 2007 plan year. The calculation of this contribution is illustrated in Section III.

Expected City Contribution

The City Commission has approved that the City contribution to the Employees' Pension Plan for the five year period beginning January 1, 2004, will be in the amount of 10.4% of salary with an additional \$819,791 to be contributed each year toward payment of the Unfunded Actuarial Accrued Liability. The expected contribution for 2007 on this basis is \$2,264,638 (16.3% of covered payroll).

Contribution Requirements

The valuation results are shown on page 3 in a comparison between 2006 and 2007. The 2006 calculation, developed in the first column, shows an Unfunded Actuarial Accrued Liability (UAAL) of \$6,035,320 and, with a City payment of \$2,182,903 for 2006 and \$2,264,638 for 2007 plus future contributions of 10.4% of covered payroll plus \$819,791 per year for one additional year to be contributed toward payment of the UAAL, an amortization period of 9 years.

The calculation for 2007 shows an UAAL of \$1,671,906 and, with a City payment of \$2,264,638 for 2007 and \$2,307,983 for 2008 plus future contributions of 10.4% of payroll an amortization period of 2 years.

Funding Ratio

On a plan assumptions basis, plan assets cover 131% of the Present Value of Accumulated Plan Benefits. More detail is contained on page 19. Last year plan assets covered 123% of the Present Value of Accumulated Plan Benefits.

GASB No. 25 and No. 27

Information required by Statements No. 25 and No. 27 of the Governmental Accounting Standards Board is summarized in Section IV.

The City of Bismarck Employees' Pension Plan

Summary of Results

| | 1/1/06 | 1/1/07 | Percent Change |
|---|----------------------------|---------------------------|----------------|
| 1. Number of Participants | | | |
| (a) Active | 339 | 346 | 2.1% |
| (b) Terminated Vested | 21 | 23 | 9.5% |
| (c) Retired | <u>117</u> | <u>121</u> | 3.4% |
| (d) Total Participants | 477 | 490 | 2.7% |
| 2. Annual Covered Salaries for Participants under Age 62 | \$ 13,106,843 | \$ 13,892,759 | 6.0% |
| 3. Actuarial Accrued Liability | | | |
| (a) Active Participants | \$ 33,970,343 | \$ 34,935,968 | 2.8% |
| (b) Terminated Vested Participants | 907,946 | 879,999 | (3.1%) |
| (c) Retired Participants | <u>13,993,419</u> | <u>15,009,614</u> | 7.3% |
| (d) Total Actuarial Accrual Liability (a + b + c) | \$ 48,871,708 ⁴ | \$ 50,825,581 | 4.0% |
| 4. Actuarial Value of Assets | \$ <u>42,836,388</u> | \$ <u>49,153,675</u> | 14.7% |
| 5. Unfunded Actuarial Accrued Liability (3d – 4) | \$ 6,035,320 | \$ 1,671,906 | (72.3%) |
| 6. Expected Annual Financial Support by Employer | \$ 2,182,903 ¹ | \$ 2,264,638 ¹ | 3.7% |
| 7. Annual Required Contribution | \$ 1,233,248 | \$ 1,068,130 | (13.4%) |
| 8. Amortization Period at Expected Level of Funding | 9 years ² | 2 years ³ | (77.8%) |

¹ 10.4% of salary with an additional \$819,791 each year for the five-year period beginning January 1, 2004 to be contributed toward payment of the unfunded liability.

² Amortization period based on \$2,182,903 contribution for 2006, increased to \$2,264,638 for 2007, and increasing due to total salary growth at the rate of 3.0% annually (including contribution of \$819,791 per year for one year thereafter).

³ Amortization period based on \$2,264,638 contribution for 2007, increased to \$2,307,983 for 2008, and \$1,532,838 in 2009 and increasing due to total salary growth at the rate of 3.0% annually thereafter (without further contributions of \$819,791 per year).

⁴ This amount is the Actuarial Accrued Liability under the Frozen Initial Liability Cost Method used for the January 1, 2006 Actuarial Valuation. The amount differs from what was shown on page 3 of last year's report. Last year's report contained the Actuarial Accrued Liability plus the Present Value of Future Normal Costs attributable to the City.

The City of Bismarck Employees' Pension Plan

Summary of Plan Provisions

The following summary has been prepared for valuation purposes only. It outlines the provisions found in Chapter 9-07 (City Employees' Pension) necessary to perform the actuarial valuation, as interpreted by Stanton Group.

Definitions

| | |
|--|---|
| Actuarial Equivalence Factors: | In calculating the actuarial equivalence of one form of benefit to another, the interest rate to be used shall be 7.0% and the mortality table to be used shall be the "applicable mortality table" as defined by Section 417(e)(3) of the Code (9-07-10). |
| Average Basic Monthly Compensation: | The average of the monthly base compensation of a Participant over the highest 36 month period of employment. Monthly base compensation excludes overtime, bonuses, severance payments, and other remuneration in excess of base compensation (9-07-15(1)). |
| Effective Date of the Plan: | January 1, 1966. |
| Early Retirement Date: | Participants who have completed 60 consecutive months of contributing service and have attained age 50 are eligible for a monthly pension benefit (9-07-15(2)). |
| Membership Fee: | Every full-time employee of the City of Bismarck except police officers and fire fighters shall be assessed and required to pay an amount of 5.0% of their basic salary (9-07-01). |
| Normal Form of Benefit: | Married Participants receive a Joint & Two-Thirds to Survivor annuity. Single Participants receive a Life Only annuity. |
| Normal Retirement Date: | Participants who have attained age 62 are eligible for a monthly pension benefit (9-07-15(1)). |
| Plan Year: | January 1 st through December 31 st (9-07-08). |

The City of Bismarck Employees' Pension Plan

Summary of Plan Provisions

Recognized Service: Full and fractional years of contributing service during which the employee contributed to the fund (9-07-23). Military service will be included as part of the period of service with the city provided that the period does not exceed 5 years and the employee pays into the fund 5.0% of the lesser of the last full year's salary paid by the city or military salary for each year of military service (9-07-05).

Plan Provisions

Eligibility: Every full-time employee, other than members of the police department who are sworn officers, members of the firefighter's relief association, and employees who perform fire suppression duties. (9-07-11).

Normal Retirement Benefit: Participants serving until the Normal Retirement Date are eligible for a monthly pension benefit computed by multiplying his or her highest 36 months of Average Basic Monthly Compensation times 1.75% times his or her number of full and fractional years of Recognized Service prior to January 1, 2005 plus 2.25% times his or her number of full and fractional years of Recognized Service after December 31, 2004. (9-07-15(1)).

Early Retirement Benefit: The monthly pension benefit shall be equal to the Normal Retirement Benefit actuarially reduced for payments commencing prior to age 62 (9-07-15(2)). The reduction factors are as follows:

| Age | Factor | Age | Factor |
|-----|--------|-----|--------|
| 50 | .4287 | 57 | .6841 |
| 51 | .4567 | 58 | .7353 |
| 52 | .4870 | 59 | .7918 |
| 53 | .5199 | 60 | .8542 |
| 54 | .5557 | 61 | .9233 |
| 55 | .5947 | 62 | 1.000 |
| 56 | .6373 | | |

Termination Benefit: After 60 consecutive months of contributing service and termination of employment, a Participant may elect a deferred retirement benefit to commence at an elected age 50 to 62. The Participant's deferred benefit shall equal the Normal Retirement Benefit (based on service and compensation to the date of termination) actuarially reduced for early commencement (9-07-15(3)).

The City of Bismarck Employees' Pension Plan

Summary of Plan Provisions

Death Benefit:

The surviving spouse (while unmarried) receives 2/3 of the actuarially reduced pension to which the Participant would have been entitled, but not less than \$65 per month provided the Participant served at least 60 consecutive months of contributing service (9-07-15(4)).

The surviving spouse has the option to elect a refund of contributions in lieu of the above-mentioned benefit (9-07-15(5)).

If there is no surviving spouse, the Participant's contributions are paid to the Participant's estate (9-07-15(6)).

Refund of Contributions:

Any Participant who has contributed to the plan and terminates employment before being entitled to a pension shall be entitled to a refund of all contributions made by him to the pension system with accumulated interest. Interest of 5% per year will be credited on such contributions made after July 1, 1972. Interest of 2.5% per year will be credited on such contributions made prior to July 1, 1972.

Any Participant electing a refund of contributions forfeits all rights to any other form of benefit under this plan (9-07-14).

Cost of Living Adjustments:

Persons receiving pension payments shall be eligible for cost of living adjustments in an amount determined by the board of trustees. The adjustment may not exceed the lesser of the city employees' salary adjustment or 3% (9-07-16).

The City of Bismarck Employees' Pension Plan

Participant Summary

| Active Participants | January 1, 2006 | January 1, 2007 | Percentage Change |
|---|--------------------|--------------------|----------------------|
| • Number of Participants | | | |
| ➤ Fully Vested | 256 | 251 | (2.0%) |
| ➤ Non-Vested | <u>83</u> | <u>95</u> | 14.6% |
| ➤ Total | 339 | 346 | 2.1% |
| • Average Age | 47.6 | 47.7 | 0.2% |
| • Average Service | 14.0 | 13.6 | (2.9%) |
| • Average Salary | \$ 39,468 | \$ 40,740 | 3.2% |
| Terminated Vested Participants | | | |
| • Number of Participants | 21 | 23 | 9.5% |
| • Average Age | 49.2 | 48.7 | (1.0%) |
| • Average Years Since Termination | 5.2 | 5.2 | 0.0% |
| • Average Monthly Benefit at Normal Retirement | \$ 652.75 | \$ 670.66 | 2.7% |
| Retired Participants | | | |
| • Number of Participants | 117 | 121 | 3.4% |
| • Average Age | 73.5 | 73.4 | (0.1%) |
| • Average Years Since Retirement | 10.8 | 10.6 | (1.9%) |
| • Average Monthly Benefit | \$ 1,111.83 | \$ 1,151.30 | 3.6% |

The City of Bismarck Employees' Pension Plan

Participant Reconciliation

The following information provides the reconciliation from January 1, 2006 to January 1, 2007 of plan participants.

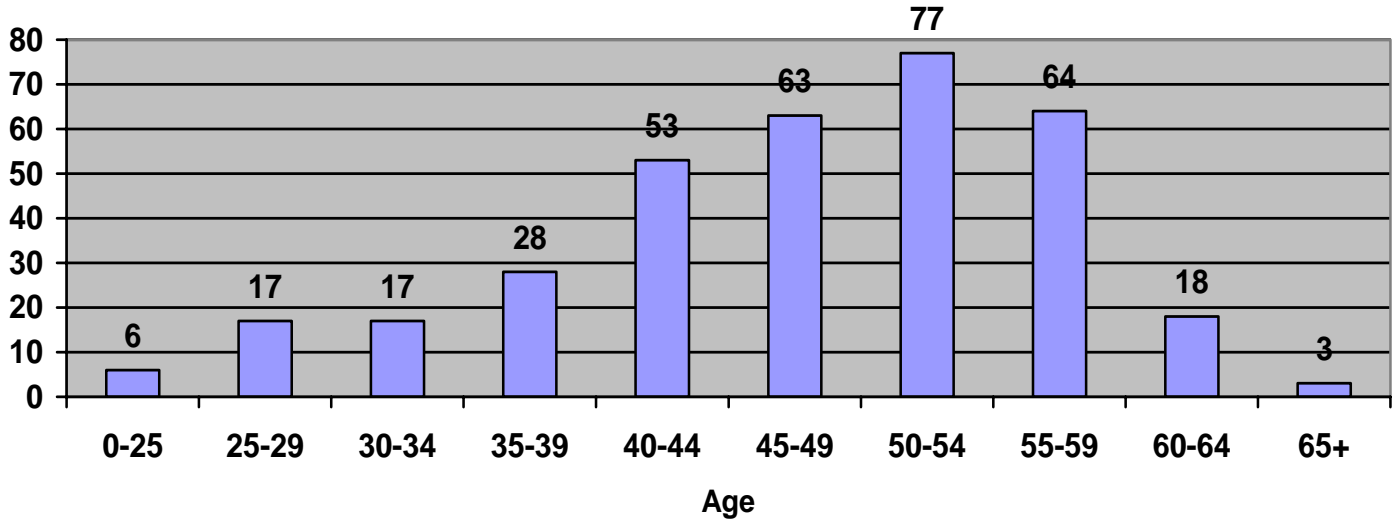
| | Active | Terminated Vested | Retired | Disabled | Benefi- ciaries | Total |
|-----------------------|--------|----------------------|---------|----------|--------------------|-------|
| 1/1/2006 Participants | 339 | 21 | 85 | 1 | 31 | 477 |
| New Participants | 40 | - | - | - | - | 40 |
| Terminated vested | (5) | 5 | - | - | - | 0 |
| Terminated non-vested | (15) | - | - | - | - | (15) |
| Retired | (8) | (2) | 10 | - | - | 0 |
| Disabled | - | - | - | - | - | 0 |
| Died with beneficiary | - | - | (2) | - | 2 | 0 |
| Died w/o beneficiary | - | - | (2) | (1) | (3) | (6) |
| Benefit stopped | - | - | - | - | - | 0 |
| Paid-out lump sum | (4) | (1) | - | - | - | (5) |
| Data correction | (1) | - | - | - | - | (1) |
| 1/1/2007 Participants | 346 | 23 | 91 | 0 | 30 | 490 |

During 2006 the total participant count increased by 13 due to 40 new participants offset by 20 participants that terminated employment and received a return of their employee contributions, 6 participant deaths without a beneficiary and 1 data correction. There were 5 participants that moved from Active to Terminated Vested status and 10 participants retired during the year. There were 2 participant deaths during 2006 with continued benefits to beneficiaries.

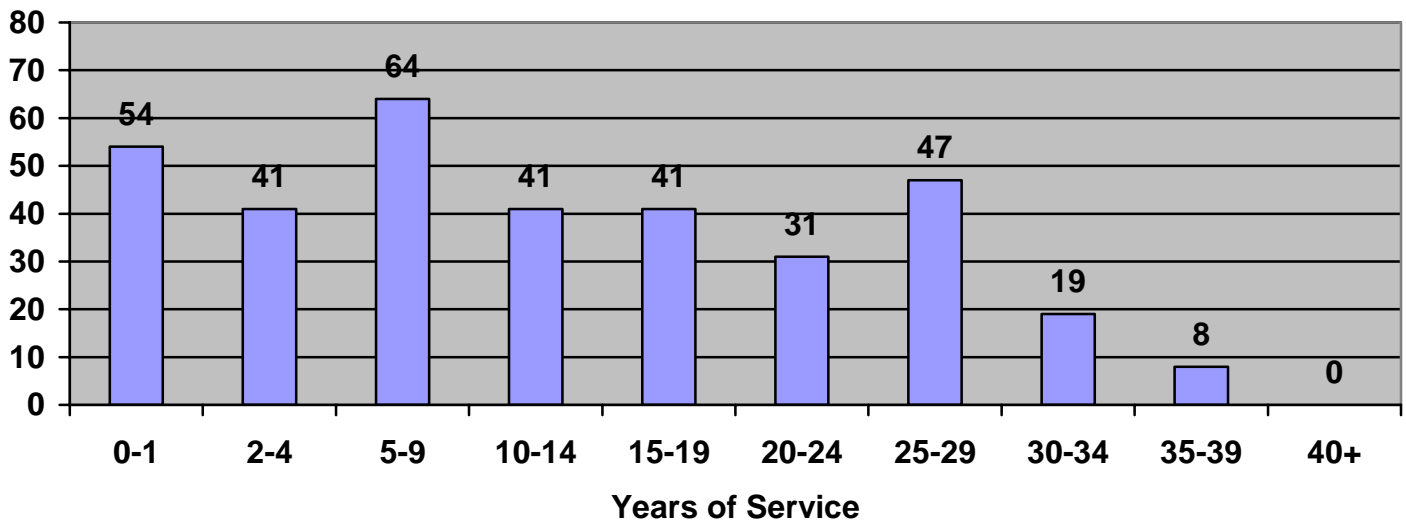
The City of Bismarck Employees' Pension Plan

Active Participant Data

Distribution of Active Participants by Age as of January 1, 2007



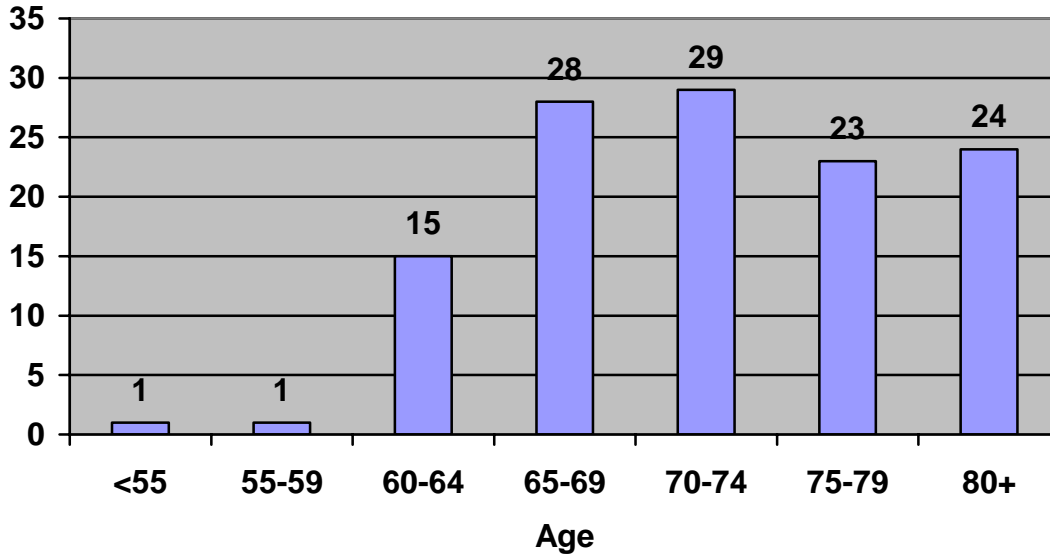
Distribution of Active Participants by Service as of January 1, 2007



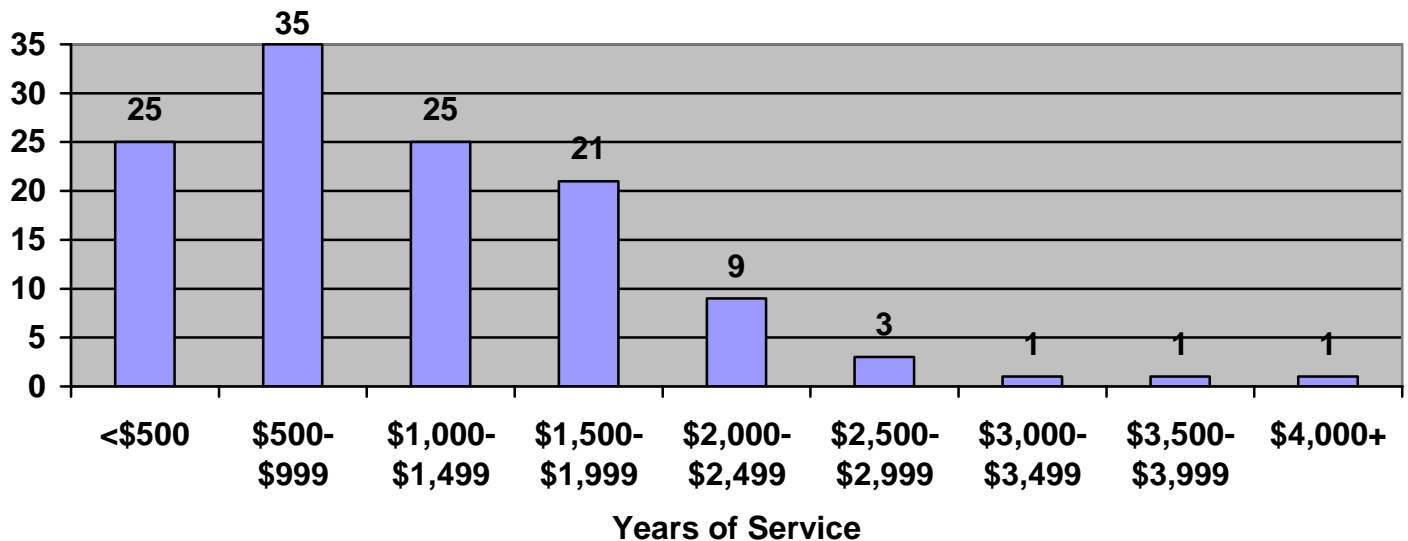
The City of Bismarck Employees' Pension Plan

Retired Participant Data

Distribution of Retirees by Age as of January 1, 2007



Distribution of Retirees by Monthly Benefit Amount as of January 1, 2007



Retirees include those on service retirement, disability retirement and beneficiaries with survivor benefits.

The City of Bismarck Employees' Pension Plan

Reconciliation of Assets

2006 Reconciliation of Actuarial Value of Assets

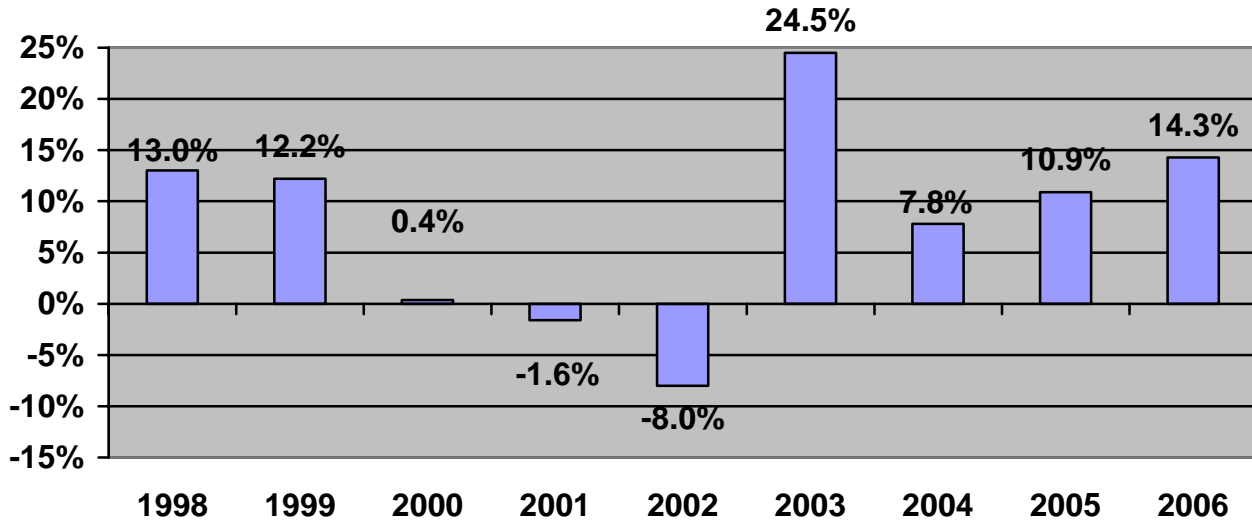
| | | |
|--|------------------|-----------------------------|
| Beginning Balance as of January 1, 2006 | | \$ 42,836,388 |
| Revenue | | |
| Employer's Contribution | | |
| General Property Tax | \$ 837,353 | |
| Mobile Home Tax | 11,104 | |
| Homestead Credit | 3,119 | |
| State Payment in Lieu of Tax | 82,618 | |
| Park & Rec. Contribution | <u>211,214</u> | |
| Subtotal | \$ 1,145,408 | |
| Employee's Contribution | 703,594 | |
| Investment Income (Loss) | <u>6,129,580</u> | |
| Total Revenue | | \$ 7,978,582 |
| Expenditure | | |
| Pension Benefit Payments | \$ 1,626,558 | |
| Legal & Audit Fees | 532 | |
| Management Consulting | 14,320 | |
| Investment Expense | 676,500 | |
| Miscellaneous Investment Expense | 53,831 | |
| Pension Refund | 274,702 | |
| Postage | <u>623</u> | |
| Total Expenditure | | \$ <u>2,647,065</u> |
| Total Operating Income (Loss) | | \$ 5,331,516 |
| Other Financing Sources (Uses) | | |
| Transfer from General Fund | \$ 228,483 | |
| Transfer from Special Revenue | 37,314 | |
| Transfer from Capital Projects Fund | 8,203 | |
| Transfer from Enterprise funds | 678,494 | |
| Transfer from Internal Service Fund | 49,458 | |
| Transfer to General Fund | <u>(16,181)</u> | |
| Total Other Financing Uses | | \$ <u>985,771</u> |
| Net Income (Loss) | | \$ <u>6,317,287</u> |
| Ending Balance as of December 31, 2006 | | \$ <u>49,153,675</u> |

Total assets increased \$6,317,287 during 2006. This increase was from net cash flow (total contributions less expenditures) of \$187,708 and investment income of \$6,129,580. Transfers from General Fund, Special Revenue, Capital Projects and Enterprise Funds are considered to be Employer Contributions for GASB purposes. Some components were rounded up or down to ensure that the totals would add correctly. The net rate of return after expenses was 14.3%.

The City of Bismarck Employees' Pension Plan

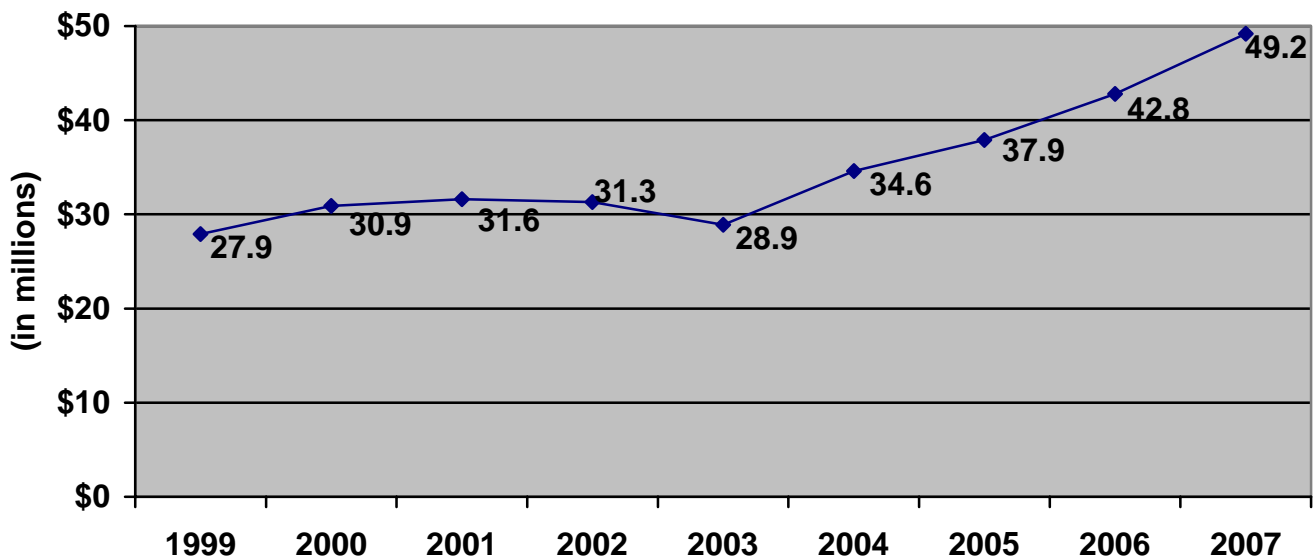
Historical Asset Information

Annual Rate of Return on Assets



Rates of return are determined after expenses. Calculations prior to 2004 exclude the employee accumulation fund (Kemper Account).

Historical Market Value of Assets



The City of Bismarck Employees' Pension Plan

Actuarial Assumptions and Cost Methods

Economic Assumptions

Investment Return: The fund is assumed to earn 7.5% per year after expenses.

Salary Scale: Active Participant salaries are assumed to increase at rates according to the following table:

| Years of Service | Rate |
|------------------|------|
| 0-9 | 5.0% |
| 10+ | 4.0% |

Inflation: The amortization of the Unfunded Actuarial Accrued Liability is determined as a level percent of payroll using a 3.0% total payroll growth assumption.

Demographic Assumptions

Retirement: Active Participants are assumed to retire upon attainment of age 62.

Mortality: Mortality rates are based on the 1994 Group Annuity Mortality Table (See Illustrations on Page 14).

Disability: None.

Withdrawal: Active Participant termination rates are based on plan experience between 1/1/98 and 1/1/05 (See Illustrations on Page 14).

Spouse Age: Male Participants are assumed to be 3 years older than female spouses. Female Participants are assumed to be 3 years younger than male spouses.

Marriage Rate: 85% of Participants are assumed to be married.

The City of Bismarck Employees' Pension Plan

Actuarial Assumptions and Cost Methods

Cost Methods

- Form of Benefit:** Married Participants receive their benefit in the form of a Joint and Two Thirds to Survivor annuity. Single Participants receive their benefit in the form of a Life Only annuity.
- Actuarial Asset Value:** The Actuarial Value of Assets is equal to the market value of assets reserved for employee pension benefits.
- Expenses:** Plan expenses are paid from plan assets.
- Funding Method:** The contribution requirement is determined using the Entry Age Normal actuarial cost method. The cost method was changed from the Entry Age Normal – Frozen Initial Liability actuarial cost method effective January 1, 2007. The change was made to better reflect the impact of past employer contributions towards the Unfunded Actuarial Accrued Liability.

Illustrations

| Age | Rate of Mortality (per 1,000) | | Rate of Disability (per 1,000) | | Rate of Withdrawal (per 1,000) | |
|-----|----------------------------------|--------|-----------------------------------|--------|-----------------------------------|--------|
| | Male | Female | Male | Female | Male | Female |
| 25 | 0.66 | 0.29 | 0.00 | 0.00 | 40 | 200 |
| 30 | 0.80 | 0.35 | 0.00 | 0.00 | 40 | 50 |
| 35 | 0.85 | 0.48 | 0.00 | 0.00 | 30 | 50 |
| 40 | 1.07 | 0.71 | 0.00 | 0.00 | 25 | 40 |
| 45 | 1.58 | 0.97 | 0.00 | 0.00 | 20 | 20 |
| 50 | 2.58 | 1.43 | 0.00 | 0.00 | 10 | 20 |
| 55 | 4.43 | 2.29 | 0.00 | 0.00 | 0 | 0 |

The City of Bismarck Employees' Pension Plan

Development of Unfunded Actuarial Accrued Liability

| | January 1, 2007 |
|--|-------------------|
| 1. Actuarial Accrued Liability | |
| (a) Participants Receiving Benefits | \$ 14,629,254 |
| (b) Terminated Vested Participants | 879,999 |
| (c) Active Participants | <u>34,935,968</u> |
| (d) Total Participants (a + b + c) | \$ 50,445,221 |
| 2. Actuarial Value of Assets | <u>49,153,675</u> |
| 3. Balance Before Adjustments (1)(d) – (2) not less than zero | \$ 1,291,546 |
| 4. Adjustment for Cost of Living Adjustments | 380,360 |
| 5. Adjustment for Assumption Changes | <u>0</u> |
| 6. Unfunded Actuarial Accrued Liability as of January 1, 2007 (3) + (4) + (5) | \$ 1,671,906 |

Under the Entry Age Normal actuarial cost method, the Unfunded Actuarial Accrued Liability is redetermined each year. The Actuarial Accrued Liability is valued using participant data, plan provisions and assumptions as of the valuation date. Past demographic or economic experience different than assumed is called an actuarial gain or loss and is reflected in the Unfunded Actuarial Accrued Liability. A breakdown of actuarial gains and losses from the past year is shown on the next page.

The Unfunded Actuarial Accrued Liability is amortized over a fixed period of time. The amortization period was reset at 20 years as of January 1, 2002. Therefore, there are 15 years remaining in the amortization period. The resulting amortization payment is a component of the Annual Required Contribution.

The Unfunded Actuarial Accrued Liability is scheduled to be reduced to \$0 over the amortization period. However, this schedule is met only if all assumptions are met and the actual employer contribution equals the Annual Required Contribution each year. If assumptions are not met, an actuarial gain or loss will either decrease or increase the UAAL. Also, if the employer contribution exceeds the recommended contribution, the UAAL will be reduced more rapidly. Alternatively, if the employer contribution is less than the recommended contribution, the UAAL will reduce more slowly or even increase.

The City of Bismarck Employees' Pension Plan

Development of Actuarial (Gain) or Loss

Development of Liability (Gain) or Loss

| | | |
|--|--------------------|----------------------------|
| Actual Actuarial Liability as of January 1, 2006 | | \$ 48,054,647 ¹ |
| Expected changes | | |
| ➤ Normal cost | \$ 1,435,999 | |
| ➤ Interest at 7.5% | 3,711,798 | |
| ➤ Benefit payments with interest to year end | <u>(1,972,557)</u> | |
| ➤ Total expected changes | | <u>3,175,240</u> |
| Expected Actuarial Liability as of January 1, 2007 | | \$ 51,229,887 |
| Actual Actuarial Liability as of January 1, 2007 | | <u>50,825,581</u> |
| Actuarial Liability (Gain) or Loss | | <u><u>\$ (404,306)</u></u> |

Breakdown of Actuarial Liability (Gain) or Loss by source

| | | |
|---|---------------|----------------------------|
| Active decrements | | |
| ➤ Retirement | \$ (37,434) | |
| ➤ Termination | (569,389) | |
| ➤ Death | <u>67,627</u> | |
| ➤ Total (gain)/loss due to active decrements | | \$ (539,196) |
| Inactive Mortality | | (356,931) |
| Salary increases other than expected | | (70,635) |
| New entrants | | 50,724 |
| Assumption Changes | | N/A |
| Cost of living adjustment | | 380,360 |
| Other amounts such as service accruals, data corrections, benefit amount and payment form different than expected | | <u>131,372</u> |
| Actuarial Liability (Gain) or Loss | | <u><u>\$ (404,306)</u></u> |

Development of Asset (Gain) or Loss

| | | |
|---|--|------------------------------|
| Market Value of Assets as of January 1, 2006 | | \$ 42,836,388 |
| ➤ Interest at 7.5% | | 3,212,729 |
| ➤ Actual contributions with interest to year-end | | 2,957,865 |
| ➤ Actual benefit payments with interest to year-end | | (1,972,557) |
| ➤ Actual expenses with interest to year-end | | <u>(790,560)</u> |
| Expected value of assets as of January 1, 2007 | | \$ 46,243,865 |
| Actual value of assets as of January 1, 2007 | | <u>49,153,675</u> |
| Asset (Gain) or Loss | | <u><u>\$ (2,909,810)</u></u> |

A gain/(loss) occurs when actual demographic or economic experience is different from the valuation assumptions. For example, if salary increases are greater (lower) than expected the liability will go up (down). During 2006, an actuarial liability gain of \$404,306 and an asset gain of \$2,909,810 resulted in a reduction in UAAL of about \$3,310,000 more than expected.

¹This is the Actuarial Accrued Liability (AAL) under the Entry Age Normal Cost Method. This amount differs from the AAL under the previous cost method of \$48,871,708 that is shown on page 3.

The City of Bismarck Employees' Pension Plan

Recommended Amortization Schedule

| Year | Unfunded Liability at Beginning of Year | Annual Amortization Payment | Unfunded Liability at End of Year |
|------|---|-----------------------------|-----------------------------------|
| 2007 | \$ 1,671,906 | \$ 147,820 | \$ 1,638,393 |
| 2008 | 1,638,393 | 152,254 | 1,597,599 |
| 2009 | 1,597,599 | 156,822 | 1,548,835 |
| 2010 | 1,548,835 | 161,527 | 1,491,356 |
| 2011 | 1,491,356 | 166,373 | 1,424,357 |
| 2012 | 1,424,357 | 171,364 | 1,346,968 |
| 2013 | 1,346,968 | 176,505 | 1,258,249 |
| 2014 | 1,258,249 | 181,800 | 1,157,182 |
| 2015 | 1,157,182 | 187,254 | 1,042,673 |
| 2016 | 1,042,673 | 192,871 | 913,537 |
| 2017 | 913,537 | 198,657 | 768,496 |
| 2018 | 768,496 | 204,617 | 606,169 |
| 2019 | 606,169 | 210,756 | 425,070 |
| 2020 | 425,070 | 217,078 | 223,591 |
| 2021 | 223,591 | 223,591 | 0 |

The Annual Amortization Payment is determined by amortizing the Unfunded Actuarial Accrued Liability (UAAL) over 15 years as a level percentage of total payroll. Total payroll is assumed to increase at 3% per year. Therefore, the UAAL of \$1,671,906 as of January 1, 2007 is scheduled to be fully amortized over a 15-year period with payments increasing from \$147,820 in 2007 by 3% per year.

This schedule is in accordance with Governmental Accounting Standards Board No. 27 guidelines. The City commission has approved that the City contribution for the five year period beginning January 1, 2004 will be 10.4% of salary with an additional \$819,791 to be contributed towards payment of the unfunded liability each year. The actual contribution available to reduce the UAAL will exceed the scheduled amount in 2007.

The City of Bismarck Employees' Pension Plan

Development of Annual Required Contribution

| Annual Required Contribution (Dollar Amounts) | | |
|---|------------------|------------------|
| | 2006 | 2007 |
| 1. Total Normal Cost | \$ 1,334,145 | \$ 1,576,341 |
| 2. Expected Employee Contribution | <u>(655,342)</u> | <u>(694,638)</u> |
| 3. Employer Normal Cost | \$ 678,803 | \$ 881,703 |
| 4. Amortization of Unfunded Actuarial Accrued Liability | <u>509,870</u> | <u>147,820</u> |
| 5. Total Annual Required Contribution | \$ 1,188,673 | \$ 1,029,523 |
| 6. Interest to Mid-Year at 7.5% | <u>44,575</u> | <u>38,607</u> |
| 7. Recommended Contribution, Mid-Year, (5 + 6) | \$ 1,233,248 | \$ 1,068,130 |

| Annual Required Contribution (As a Percent of Payroll) | | |
|---|---------------|---------------|
| | 2006 | 2007 |
| 1. Total Normal Cost | 10.2% | 11.3% |
| 2. Expected Employee Contribution | <u>(5.0%)</u> | <u>(5.0%)</u> |
| 3. Employer Normal Cost | 5.2% | 6.3% |
| 4. Amortization of Unfunded Actuarial Accrued Liability | <u>3.9%</u> | <u>1.1%</u> |
| 5. Total Annual Required Contribution | 9.1% | 7.4% |
| 6. Interest to Mid-Year at 7.5% | <u>0.3%</u> | <u>0.3%</u> |
| 7. Recommended Contribution, Mid-Year, (5 + 6) | 9.4% | 7.7% |

Percent of Payroll results are based on total expected covered payroll of \$13,106,843 in 2006 and \$13,892,759 in 2007. The expected city contribution of 10.4% of covered payroll plus an additional \$819,791 towards the UAAL is significantly larger than the 2007 Annual Required Contribution of 7.7%.

Based on the results of the January 1, 2007 actuarial valuation, the recommended contribution for the 2008 plan year is 7.7% of payroll. Based on assumed payroll of \$14,309,542 (2007 payroll increased by 3%), the recommended 2008 contribution is \$1,101,835.

The City of Bismarck Employees' Pension Plan

Accelerated Funding Amortization Schedule

| Year | Unfunded Liability at Beginning of Year | Annual Amortization Payment | Unfunded Liability at End of Year |
|------|---|-----------------------------|-----------------------------------|
| 2007 | \$ 1,671,906 | \$ 1,400,492 | \$ 396,807 |
| 2008 | 396,807 | 396,807 | 0 |
| 2009 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 |

The Annual Required Contribution is \$1,068,130. The City Commission has approved that the City contribution to the Employees' Pension Plan for the five year period beginning January 1, 2004, will be in the amount of 10.4% of salary with an additional \$819,791 to be contributed each year towards payment of the Unfunded Actuarial Accrued Liability. The expected contribution for 2007 on this basis is \$2,264,638 (16.3% of covered payroll). The accelerated amortization schedule results in the plan being fully funded in two years.

The City of Bismarck Employees' Pension Plan

Statement of Accumulated Plan Benefits

A measure of the degree of progress made in funding any plan is a comparison between the Accumulated Benefit Liability and the assets accumulated to date. The Accumulated Benefit Liability measures the present value of future benefit payments. However, benefit payments are based only on service and salaries earned as of the valuation date. This liability amount is less than the Actuarial Accrued Liability used to determine the Annual Required Contribution, because the AAL anticipates future salary increases for active participants. The liabilities are determined using the regular valuation assumptions. The table below shows the actuarial present value of the Accumulated Benefit Liability.

| Actuarial Present Value of Accumulated Plan Benefits (PVAB) | | |
|--|-------------------|-------------------|
| | 1/1/06 | 1/1/07 |
| Vested Accrued Benefits | | |
| > Participants Currently Receiving Payments | \$ 13,993,419 | \$ 15,009,614 |
| > Other Participants | <u>20,787,331</u> | <u>22,406,163</u> |
| Total Vested Accrued Benefits | \$ 34,780,750 | \$ 37,415,777 |
| Non-Vested Accrued Benefits | <u>183,733</u> | <u>152,112</u> |
| Total Accrued Benefits | \$ 34,964,483 | \$ 37,567,889 |

| Statement of Changes in Accumulated Plan Benefits | |
|---|--------------------|
| Beginning Value, January 1, 2006 | \$ 34,964,483 |
| Increases (Decreases) | |
| > Cost of Living Adjustment | \$ 380,360 |
| > Change in Actuarial Assumptions | 0 |
| > Benefits Accumulated and (Gain)/Loss | 1,501,970 |
| > Increase for Interest Due to Decrease in Discount Period | 2,622,336 |
| > Benefits Paid | <u>(1,901,260)</u> |
| > Net Increase (Decrease) | \$ 2,603,406 |
| Ending Value, January 1, 2007 | \$ 37,567,889 |

The ratio of assets to the above liabilities (known as the Funding Ratio) represents the degree to which Accumulated Benefit liability has been funded. As of January 1, 2007, the market value of assets was \$49,153,675. The table below outlines the Funding Ratios.

| Funding Ratio (Assets/PVAB) | |
|------------------------------------|------|
| • Vested Accrued Benefits | 131% |
| • Total Accrued Benefits | 131% |

The City of Bismarck Employees' Pension Plan

GASB Statement No. 25

Statement No. 25 requires disclosure of supplementary information in the form of two schedules, the Schedule of Funding Progress and the Schedule of Employer Contributions. The schedules are shown below.

Schedule of Funding Progress

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded Actuarial Accrued Liability (UAAL) (b - a) | Funded Ratio (a / b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll [(b - a) / c] |
|--------------------------|----------------------------------|--|--|-------------------------|------------------------|--|
| 1/1/2001 | \$ 31,609,400 | \$ 31,609,400 | \$ 0 | 100.0% | \$ 10,507,761 | 0.0% |
| 1/1/2002 | 31,269,380 | 34,499,048 | 3,229,668 | 90.6% | 11,114,003 | 29.1% |
| 1/1/2003 | 28,324,967 | 32,464,523 | 4,139,556 | 87.2% | 11,806,729 | 35.1% |
| 1/1/2004 | 34,646,791 | 39,088,399 | 4,441,608 | 88.6% | 12,441,844 | 35.7% |
| 1/1/2005 | 37,922,220 | 42,856,344 | 4,934,124 | 88.5% | 12,765,077 | 38.7% |
| 1/1/2006 | 42,836,388 | 48,871,708 | 6,035,320 | 87.7% | 13,106,843 | 46.0% |
| 1/1/2007 | 49,153,675 | 50,825,581 | 1,671,906 | 96.7% | 13,892,759 | 12.0% |

Schedule of Employer Contributions

| Year Ended | Annual Required Contribution (a) | Employer Contribution (b) | Percentage Contributed (b / a) |
|------------|-------------------------------------|------------------------------|-----------------------------------|
| 12/31/2001 | \$ 423,579 | \$ 371,374 | 87.7% |
| 12/31/2002 | 746,951 | 449,657 | 60.2% |
| 12/31/2003 | 1,531,586 | 906,670 | 59.2% |
| 12/31/2004 | 1,267,143 | 1,678,601 | 132.5% |
| 12/31/2005 | 1,414,021 | 2,113,743 | 149.5% |
| 12/31/2006 | 1,233,248 | 2,147,360 | 174.1% |
| 12/31/2007 | 1,068,130 | - | |

The City of Bismarck Employees' Pension Plan

GASB Statement No. 27

The GASB Statement No. 27 annual pension expense is defined as the Annual Required Contribution (ARC) plus one year's interest on the Net Pension Obligation (NPO) offset by an adjustment to the Annual Required Contribution (ARC). The NPO is defined as the cumulative difference, including interest, for the years prior to the transition date between (a) the employer's required contributions in accordance with the plan's actuarially determined funding requirements and (b) the contributions made by the employer in relation to the required contributions. The adjustment to the Annual Required Contribution is necessary to amortize past contribution deficiencies or excess contributions of the employer.

| | 2007 Plan Year |
|--|-------------------|
| Annual Required Contribution (ARC) | \$ 1,029,523 |
| Interest on Net Pension Obligation (asset) | (96,897) |
| Adjustment to Annual Required Contribution - Beginning of Year NPO amortized as a level percent of pay over a closed 20 year period beginning 1/1/2002 | <u>114,227</u> |
| Annual Pension Cost | \$ 1,046,853 |
| Contributions Made | <u>*</u> |
| Increase (decrease) in Net Pension Obligation (asset) | * |
| Net Pension Obligation (asset) beginning of year | (1,291,956) |
| Net Pension Obligation (asset) end of year | * |

* To be determined at end of year.

The Net Pension Obligation at transition (January 1, 2007) is the cumulative difference, including interest, between (a) the employer's required contributions in accordance with the plan's actuarially determined funding requirements and (b) the contributions made by the employer in relation to the required contributions. The cumulative difference was based on plan records dating back to January 1, 2001. Since the Unfunded Actuarial Accrued Liability as of that date was \$0, all actuarially determined required contributions prior to that date are assumed to have been made.