# Des Moines Water Works Pension Plan 4-49122 

## Actuarial Valuation Report

For the plan year January 1, 2014 through
December 31, 2014
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This actuarial valuation report is for your defined benefit retirement plan. It gives you the amounts needed to fund the benefits described in your plan document. This report is based on employee data and other information you provide us.

Amounts in this report are not what you need for your financial statements. Upon request, we will prepare another report for your accounting disclosure.

## Funding Method

Defined benefit plans, as the name suggests, define the benefits given to employees. Your goal is to have enough funds to pay for these benefits. To do this, we use a funding method. It sets the yearly deposit needed to pay for your plan's benefits.

## Assumptions

We use assumptions to estimate how much funding you'll need for benefits. For instance:
$>$ How much interest will your funds earn?
> How many employees will leave the plan?
$>$ How many employees will become disabled?
Deposit levels change when actual events differ from what was assumed. To see the assumptions used for your plan, refer to Section VII of this report.

## Using This Report

We give you a minimum deposit level. Your deposit may have to be more than this to fund upcoming benefits. We'll advise you if you need to fund at a higher level. For a summary of these results refer to Section II. More detailed information is found in the remaining sections of this report.

## Actuarial Certification

To the best of my knowledge, this report is complete and accurate. It complies with all relevant pension actuarial standards and legal requirements.

In preparing this report, I have relied on (1) information provided by the plan sponsor and (2) plan documents and plan asset information on file with Principal Life Insurance Company. Appropriate tests of reasonableness and accuracy have been made.

In my opinion, each assumption used in combination represents my best estimate of anticipated experience under the plan. Each assumption used is reasonable (taking into account the experience of the plan and reasonable expectations), or would, in the aggregate, result in a total contribution equivalent to that which would be determined if each such assumption were reasonable.

I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.
Mania X. Cheastham

04/22/2014
Maria L. Cheatham, FSA, EA, MAAA
Date
Consulting Actuary
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## Section II-Summary of Actuarial Valuation Results

This summary is for Des Moines Water Works Pension Plan. It includes:
$>$ Annual required contribution for the plan year ending 12/31/2014
$>$ Deposit options
$>$ Changes recognized in this report
$>$ Analysis of results

## Deposit Information

A summary of the results of the actuarial valuation is as follows:
Total normal cost
$\$ 25,000$
Annual required contribution
906,542

## Deposit Options

The table below explains the effects of depositing at different levels. The impact on next year's costs is based on all actuarial assumptions being met. Costs will vary based on actual plan experience and timing of deposits.

| If you deposit | You will |
| :--- | :--- |
| Less than $\$ 906,542$ | $>$ Increase your next year's annual required contribution. |
| Exactly $\$ 906,542$ | $>$ Meet your annual required contribution. |
| More than $\$ 906,542$ | $>$Exceed your annual required contribution. <br> Decrease next year's annual required contribution. |
| Exactly $\$ 4,940,590$ | Fund the difference between the market value of assets and the <br> present value of all projected benefits at the beginning of the plan <br> year |

## Deposits Received

We have not yet received any deposits for the current plan year as of $04 / 15 / 2014$.

## Plan Changes

This report reflects changes in maximum benefit limits under Internal Revenue Code (IRC) Section 415 and in maximum compensation limits under IRC Section 401.

This report also reflects plan changes effective $12 / 31 / 2013$. The accrued benefit is frozen effective $12 / 31 / 2013$ and will not increase due to any changes in average compensation or continuous service after this date.

An Active participant's retirement benefit on his retirement date will be increased $5.5 \%$ per year from the later of (a) or (b) below:
(a) December 31, 2013
(b) The earlier of Normal Retirement Date or the date a participant attains age 55 and the sum of age and service is equal to 85 (or more).

Average compensation was frozen $12 / 31 / 2013$. The monthly compensation for December 2013 includes sick leave, vacation, and personal time accrued but not used as of $12 / 31 / 2013$.

The December, 2013 monthly compensation will not include unused sick leave if a participant terminates prior to the earlier of meeting the requirements for early retirement (age 55 with 5 years of service) or normal retirement (age 65).

With this change, the $01 / 01 / 2014$ Actuatial Accrued Liability becomes equal to the full present value of the frozen accrued benefits (including early retirement subsidies and late retirement increases for which the employee may later become eligible). Therefore, there are also no future normal costs for benefit accruals. See Section IX for the effects of these changes. Plan provisions are summarized in Section VIII of this report.

## Analysis

The Annual Required Contribution has decreased from $\$ 2,915,710$ in 2013 to $\$ 906,542$ in 2014. This decrease results from the benefit freeze effective 12/31/2013.

During the last year, your plan experienced an actuarial gain of $\$ 1,065,116$. This gain was due to greater than expected investment returns for 2013 and was offset slightly by a small census experience loss.

In addition there was an additional gain of $\$ 63,794$. This gain is equal to actual 2013 contributions plus interest ( $2,915,710$ contributions $+63,794$ interest) less expected 2013 contributions plus interest (2013 ARC of $\$ 2,915,710$ ).

This results in a total gain of $\$ 1,128,910$ for the 2013 plan year.

## Section II-Summary of Actuarial Valuation Results

## Funded Status

This report shows you an annual required contribution. Another important measure is how well the Vested Benefits and Accumulated Benefits are funded.

The chart below compares the market value of assets in your plan as of 01/01/2014 (represented by the solid line in the chart below) to the Present Value of:
$>$ Vested Benefits: benefits that cannot be taken away, even if the participant terminates employment
Accumulated Benefits: benefits already earned to the valuation date.
The Present Value of Vested Benefits excludes the future $5.5 \%$ annual actuarial increases for benefits for which a participant is not yet eligible. For purposes of this report, these increases are considered to be already accrued, but not yet vested since a participant must continue employment to receive them.


Please note that this display does not represent the cost to terminate your plan. Upon request, we can prepare a separate study to value that cost using different assumptions.

## Section II-Summary of Actuarial Valuation Results

## Considerations

As you make decisions about your contributions to the plan, take into account your plan's funded status. Since your plan does not have enough assets to cover the benefits already earned, you might want to consider:
$>$ Ways to increase cash flow into the plan

- Increase your organization's contributions
$>$ Making the annual required contribution, and continuing to monitor funded status in future years
$>$ A review of your asset allocation strategy and how it can impact both funded status and contribution volatility. An analysis of investment allocations may help you decide whether your plan's assets are allocated in a way that matches your risk comfort level.
- Riskier investments may reduce cash flow into the plan temporarily, but may cause contribution levels and funded status to fluctuate.
- More conservative investments may require increased contributions, but provide a more solid base for planning and budgeting
Forecasts of alternate contribution policies and resulting funded status can help with decision making.

As changes to your organization occur, be sure to keep us informed so that we can advise you on the impact these situations have on your retirement program. Early communication can help us help you plan for changes.

Wherever your evaluation leads, we have the experience and expertise to assist you every step of the way. In addition, The Principal can also help you with your total retirement program including defined contribution plans, nonqualified plans, and more.

## For Additional Information

If you have any questions about any of the services we can provide, contact a member of your team at The Principal. For questions about the material in this report, contact your Pension Actuarial Analyst, Connie Huntrod, by:
$>$ Phone - 1-800-543-4015 extension 75856, or 515-247-5856
$>$ Email-huntrod.connie@principal.com
You may also contact your local Principal Financial Group Retirement Services sales office.

## Section III-Deposit Information

## Normal Cost

01/01/2014
$01 / 01 / 2013$

Total normal cost*
$\$ 25,000$
\$1,187,107

* Since the plan was frozen on $12 / 31 / 2013$, all benefits are fully accrued, and the Normal Cost is only the estimated plan expenses.

Past experience continues to be amortized over a fixed period, as shown below.

## Deposit Levels

|  |  | $\underline{01 / 01 / 2014}$ | $\underline{01 / 01 / 2013}$ |
| :--- | :--- | :---: | ---: |
| Annual <br> Required <br> Contribution | a) Employer normal cost | $\$ 25,000$ | $\$ 1,187,107$ |
|  | b) Amortization amounts | 826,213 | $1,550,649$ |
|  | c)Valuation interest to the end of the <br> plan year on a and b | 55,329 | 177,954 |
|  | d)Annual required contribution <br> $(a+b+c)$ | $\$ 906,542$ | $\$ 2,915,710$ |

[^0]
## Principal Life Insurance Company Accounts

Flexible Pension Investment (FPI)
grouped accounts

## Actuarial Value

Market Value
\$46,749,763
$\$ 49,788,262$

The actuarial value of assets for the Flexible Pension Investment (FPI) grouped accounts is determined on a combined basis. See the following page for the development of this value.

This valuation includes the retired lives under the benefit index option of your contract. The market value of assets for this retired life liability is $\$ 7,633,203$.

## Deposits Received for the 01/01/2013 Plan Year

The following employer deposits were made for the prior plan year and are reflected in the total assets above.

| Amount |  |
| ---: | :--- |
|  | Date Received |
| $\$ 825,000.00$ | $06 / 12 / 2013$ |
| $825,000.00$ | $07 / 17 / 2013$ |
| $633,000.00$ | $10 / 03 / 2013$ |
| $632,710.00$ | $12 / 30 / 2013$ |
|  |  |
| $\$ 2,915,710.00$ | Total |

## Development of Actuarial Value of Principal FPI Grouped Accounts

To determine the actuarial value of the Principal FPI grouped accounts we have adjusted the market value by:
$>$ Subtracting any remaining deferred appreciation in excess of expected investment earnings.
$>$ Adding any remaining deferred appreciation short of expected investment earnings (shortfall).
Of the total excess appreciation or shortfall for any one plan year, $25 \%$ is allocated to the current plan year and each of the next three plan years.

| a) | Market value of assets as of 01/01/2013 | \$43,020,117 |
| :---: | :---: | :---: |
| b) | Contributions/transfers | 2,915,710 |
| c) | Benefit payments | $(2,475,814)$ |
| d) | Expenses | $(24,683)$ |
| e) | Expected interest on (a, b, c, and d) | 2,773,742 |
| f) | Expected value of assets as of 01/01/2014 $(a+b+c+d+e)$ | \$46,209,072 |
| g) | Market value of assets as of 01/01/2014 | \$49,788,262 |
| h) | Current year excess appreciation/(shortfall) $(\mathrm{g}-\mathrm{f})$ | 3,579,190 |
| i) | Adjustment to market value (sum of deferred amounts) | 3,038,499 |
| j) | Actuarial value of assets (g-i) | \$46,749,763 |

## Allocation of Deferred Appreciation

|  | Plan Year |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Allocation |  |  |  |  |
| Year | 2011 | $\underline{2012}$ | $\underline{2013}$ | $\underline{2014}$ |
| 2011 | \$511,889 |  |  |  |
| 2012 | 511,889 | \$(700,040) |  |  |
| 2013 | 511,888 | $(700,039)$ | \$527,073 |  |
| , 2014 | 511,888 | (000039) | 522, 173 | \$894,798 |
| 2015 |  | $(700,039)$ | 527,073 | 894,798 |
| 2016 |  |  | 527,073 | 894,797 |
| 2017 |  |  |  | 894,797 |
| Total | \$2,047,554 | \$(2,800,157) | \$2,108,292 | \$3,579,190 |
| Deferred | \$0 | \$(700,039) | \$1,054,146 | \$2,684,392 |
| Adjustment to | lue (sum of d | amounts) |  | \$3,038,499 |

## Section V-Development of Deposit Information

## $\therefore$

## Development of Normal Cost

Benefits were frozen $12 / 31 / 2013$. Therefore, all benefits expected to be paid are considered fully accrued, and recognized in the Actuarial Accrued Liability. There is no normal cost from benefit accruals, only expenses expected to be paid from plan assets during the valuation year.
a) Normal cost $\$ 0$
b) Estimated expenses 25,000
c) Total normal cost $(a+b) \quad \$ 25,000$

Normal cost shown on line a) above is $\$ 0$ this year since benefits were frozen on 12/31/2013.

## Schedule of Amortization Bases

Your cost method allocates a portion of plan funding to be amortized in equal annual installments, tather than to be paid through future normal costs. The minimum period over which the bases are amortized are described by law or regulations.

| Date Created | Reason | Remaining Period (Years) | Outstanding Balance | Minimum Annual Amortization. |
| :---: | :---: | :---: | :---: | :---: |
| 01/01/2013 | Initial unfunded actuarial liability | 14.00 | \$14,885,831 | \$1,550,649 |
| 01/01/2014 | Experience gain/loss | 10.00 | $(1,128,910)$ | $(147,452)$ |
| 01/01/2014 | Benefit change | 15.00 | $(5,777,832)$ | $(576,984)$ |
|  | Total |  | \$7,979,089 | \$826,213 |

The 01/01/2014 experience gain has been shown here amortized over 10 years, which is our recommended period for experience, since the plan is now frozen. If you instead desire to spread all experience gains and losses over 15 years, this amortization would be ( $\$ 112,735$ ), and the total annual amortization of all bases would be $\$ 860,930$, for a total Annual Required Contribution of $\$ 943,515$.

In any event, once you choose an amortization period for experience gains and losses, this period should be applied consistently to all future experience gains and losses.

## Unfunded Actuarial Accrued Liability

a) Unfunded actuatial accrued liability (as of $01 / 01 / 2013$ ) ..... $\$ 15,527,955$
b) Changes made during the plan year ..... 0
c) Employer normal cost (as of $01 / 01 / 2013$ ) ..... 1,187,107
d) Interest on the above items ..... 1,086,479
e) Total $(a+b+c+d)$ ..... $\$ 17,801,541$
f) Employer contributions ..... \$2,915,710
g) Interest on employer contributions ..... 63,794
h) Total ( $£+\mathrm{g}$ ) ..... \$2,979,504
i) Expected unfunded actuatial accrued liability ..... \$14,822,037 (as of $01 / 01 / 2014$ ) (e-h)
i) Actuarial accrued liability before benefit changes ..... \$60,506,684
k) Actuarial value of assets ..... 46,749,763

1) Actual unfunded actuarial accrued liability before benefit changes (as of ..... $\$ 13,756,921$ 01/01/2014) (actuarial accrued liability less actuarial value of assets) ( $j-k$ )
m) Actuarial (gain) or loss ..... $\$(1,065,116)$
(actual less expected unfunded actuarial accrued liability) (1-i)
n) Expected 2013 contributions plus interest (2013 ARC) ..... \$2,915,710
o) Additional (gain) or loss from actual contributions plus interest ..... $(63,794)$ (expected contributions plus interest less actual) ( $\mathrm{n}-\mathrm{h}$ )
p) Total (gain) or loss ..... \$(1,128,910)
(actuarial gain or loss plus additional gain loss due to contributions plus interest) ( $\mathrm{m}+\mathrm{o}$ )
q) Actuarial accrued liability after benefit changes ..... $\$ 54,728,852$
r) Actuarial value of assets ..... 46,749,763
s) Redetermined unfunded actuarial accrued liability after benefit changes (as of ..... $\$ 7,979,089$ $01 / 01 / 2014$ ) (actuarial accrued liability less actuarial value of assets) ( $q-1$ r)
t) Decrease due to benefit changes (s-l) ..... $(5,777,832)$

## Census Data

The census data is based on data supplied by the plan sponsor.

## Active Participants

## Inactive Participants

Age
Group

Number
Projected
Monthly Pension ${ }^{1}$
Number
Monthly Pension

| Under 25 | 1 | $\$ 178$ |  |  |
| :--- | ---: | ---: | ---: | ---: |
| $25-29$ | 2 | 345 |  |  |
| $30-34$ | 12 | 8,175 | 1 | $\$ 402$ |
| $35-39$ | 10 | 8,975 | 4 | 1,991 |
| $40-44$ | 23 | 25,145 | 7 | 2,036 |
| $45-49$ | 26 | 47,079 | 78 | 2,605 |
| $50-54$ | 42 | 84,161 | 18 | 14,072 |
| $55-59$ | 28 | 62,552 | 11 | 10,775 |
| $60-64$ | 14 | 28,841 | 2 | 7,267 |
| $65 \&$ over | 2 | 3,058 | 379 |  |
|  |  | $\$ 268,509$ | 65 | $\$ 39,527$ |

${ }^{1}$ Projected monthly pension was calculated based on $12 / 31 / 2013$ frozen retirement benefits. Benefit amounts are based on an assumed retirement age of the later of meeting the rule of 85 , or age 58 , but not later than age 65 (includes the annual $5.50 \%$ increase, if any), and recognizes average compensation that includes sick leave, vacation, and personal time accrued but not used as of 12/31/2013.

Included in the inactive participants are 5 disabled participants who are currently receiving total monthly disability benefits of $\$ 4,940$.

## Retired Participants ${ }^{2}$

| Retired Participants ${ }^{2}$ |  |  |
| :--- | :---: | ---: |
| Age |  |  |
| $\quad$ Group | Number | Monthly Benefit |
| Under 55 | 2 | $\$ 740$ |
| $55-59$ | 10 | 17,394 |
| $60-64$ | 37 | 72,182 |
| $65-69$ | 35 | 56,90 |
| $70-74$ | 23 | 21,136 |
| $75-79$ | 17 | 22,465 |
| $80-84$ | 12 | 12,292 |
| $85 \&$ over | 8 | 6,362 |
|  |  | $\$ 209,471$ |

[^1]
## Section VII-Actuarial Assumptions and Methods

## Actuarial Valuation Assumptions

01/01/2014
$01 / 01 / 2013$

| Valuation Interest (net of investment expenses) |  |  |
| :---: | :---: | :---: |
| Preretirement | 6.50\% | 6.50\% |
| Postretirement | 6.50\% | 6.50\% |
| Mortality* |  |  |
| Preretirement | 2014 IRS Mortality- Static Nonannuitant, male and female. | 2013 IRS Mortality- Static Nonannuitant, male and female. |
| Postretirement | 2014 IRS Mortality-Static Annuitant, male and female. | 2013 IRS Mortality-Static Annuitant, male and female. |
| Expenses | A dollar estimate of administrative expenses is included in normal cost. | A dollar estimate of administrative expenses is included in normal cost. |
| Salary Scale | N/A | $5.00 \%$ increase each year until retirement. |
| Retirement Age | The later of the rule of 85 or age 58 (maximum age 65). The present value of vested benefits is valued at age 65 for participants who are either not yet age 55 or have not met the rule of 85 . | The later of the rule of 85 or age 58 (maximum age 65). The present value of vested benefits is valued at age 65 for participants who aren't age 58 or have not met the rule of 85 . |
| Disability | 1987 Commissioner's Group Disability Table, six month elimination period, male and female. | 1987 Commissioner's Group <br> Disability Table, six month elimination period, male and female. |
| Marriage | $75 \%$ married; male is 3 years older than the female. | $75 \%$ married; male is 3 years older than the female. |

[^2]
## Withdrawal

Cost of Living (used to project compensation and benefit limits)

V Table from August 1992 Pension Forum published by the Society of Actuaries, multiplied by 0.40 .

Selected rates of withdrawal are shown below:

Rate of Rate of Age withdrawal Age withdrawal

V Table from August 1992 Pension Forum published by the Society of Actuaries, multiplied by 0.40 .

Selected rates of withdrawal are shown below:

Rate of
Rate of Age withdrawal Age withdrawal

| 20 | $7.44 \%$ | 40 | $2.60 \%$ | 20 | $7.44 \%$ | 40 | $2.60 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 25 | $5.44 \%$ | 45 | $2.20 \%$ | 25 | $5.44 \%$ | 45 | $2.20 \%$ |
| 30 | $4.04 \%$ | 50 | $1.80 \%$ | 30 | $4.04 \%$ | 50 | $1.80 \%$ |
| 35 | $3.16 \%$ | 55 | $0.00 \%$ | 35 | $3.16 \%$ | 55 | $0.00 \%$ |

$2.25 \%$ inflation rate.

All participants in the plan are included in this report.

Eligible part-time employees with less than five years of vesting service are excluded from this report.

The actuarial valuation assumptions used in this report differ from those used in the previous report. A salary scale and cost of living assumptions are no longer needed since benefits were frozen as of $12 / 31 / 2013$. In addition we are valuing all participants who are currently participants in the plan. These assumptions were changed due to the benefit freeze and to better reflect the anticipated experience of your plan.

## Section VII-Actuarial Assumptions and Methods

## Actuarial Methods

## 01/01/2014

Actuarial cost method
$01 / 01 / 2013$
Entry age normal

## Actuarial value of assets

Principal Life Insurance Company accounts

FPI grouped accounts Market value is adjusted by spreading the expected value minus the actual value over four years.

Deposits received in the current plan year, but applied to the prior plan year, are included in assets at their face value.

## Retirees

Assets and liabilities for retirees who receive monthly (guaranteed and nonguaranteed) benefits from plan assets are included in your valuation.

Market value is adjusted by spreading the expected value minus the actual value over four years.

Deposits received in the current plan year, but applied to the prior plan year, are included in assets at their face value.

Assets and liabilities for retirees who receive monthly (guaranteed and nonguaranteed) benefits from plan assets are included in your valuation.

# Description of Actuarial Cost Method <br> Entry Age Normal 

## Ultimate Cost

The ultimate cost of your pension plan is:
$>$ Benefit payments
$>$ Plus expenses
$>$ Less investment income
This cost can't be determined until the last benefit has been paid. Regardless of which actuarial cost method is used, the ultimate cost remains the same.

## Cost Methods

A cost method is a budgeting tool. It helps to ensure that your pension plan is adequately and systematically funded. Cost methods differ based on how they assign an annual cost to the current year and how they treat gains and losses.

## Normal Cost

Under Entry Age Normal, each individual participant's Present Value of Future (projected) Benefits are spread over the period during which benefits are expected to accrue, as a level percentage of expected pay. (For example, from entry into the plan, until the final retirement age, for an ongoing plan.) The portion of cost assigned to each year is called the normal cost. The sum of all individuals' normal costs is the plan normal cost for the year. Since plan benefits were frozen at $12 / 31 / 2013$, the accrual period ended at $12 / 31 / 2013$, and all benefits are now considered fully accrued. Therefore, future normal costs for benefit accruals are $\$ 0$.

## Actuarial Accrued Liability

Because the plan is frozen, the actuarial accrued liability (AAL) is the present value of all future benefits payable, including potential actuarial increases for deferral as all benefits are fully accrued at $12 / 31 / 2013$. Each year the unfunded actuarial accrued liability (UAAL) is the total AAL less the actuarial value of assets, but not less than zero. The UAAL is adjusted when there are plan or assumption changes (a liability base is created).

## Actuarial Gains/Losses

An actuarial gain or loss occurs when actual plan experience differs from what was assumed. The actuarial gain or loss is calculated separately and is amortized over the number of years specified in your funding policy.

The following is a summary of plan provisions and does not alter the intent or meanings of the provisions contained in the contract or plan document. This report reflects the provisions of the 12/31/2013 plan restatement signed 09/24/2013.

## Plan Eligibility

## Class:

Plan entry:

Age:
Form:

Amount (accrued benefit):

## Normal Retirement Benefit

Any full-time employee or any employee who works at least 1,040 hours in a calendar year or works during two consecutive calendar quarters.

Entry into the plan is frozen September 26, 2012. After that date no employee or former employee will become an active participant, and no inactive participant or former participant will again become an active participant.

Attained age 65.
Monthly annuity payable for life (optional forms may be elected in advance of retirement).
$1.5 \%$ of Average Compensation times service. The accrued benefit shall not be less than the accrued benefit as of December 31, 1988.

The accrued benefit is frozen effective $12 / 31 / 2013$ and will not increase due to any changes in average compensation or continuous service after this date.

An Active participant's retirement benefit on his retirement date will be increased $5.5 \%$ per year from the later of (a) or (b) below:
(a) December 31, 2013
(b) The earlier of Normal Retirement Date or the date a participant attains age 55 and the sum of age and service is equal to 85 (or more).

## Early Retirement Benefit

Age:
Service:
Form:
Amount:

Attained age 55.
Five or more years of service.
Same as Normal Retirement Benefit.
If the sum of age and service is at least 85 (rule of 85 ), a participant will receive his accrued benefit unreduced for early retirement on his early retirement date. If the sum of age and service is less than 85 , the benefit will be the accrued benefit reduced by $3 \%$ for each year his early retirement date precedes his normal retirement date.

## Section VIII-Summary of Plan Provisions

## Late Retirement Benefit

## Age:

Form:
Amount:

## Termination Benefit

Vesting percentage:
Form:

## Amount:

## Disability Benefit

Service:
Form:

Amount:

## Preretirement Death Benefit

A. Survivor annuity death benefit

Age:
Form:
Amount:

No maximum age.
Same as normal retirement benefit.
Accrued benefit on late retirement date, increased by $5.5 \%$ for each year after the later of $12 / 31 / 2013$, or the earlier of Normal Retirement Date and the date attained both rule of 85 and age 55 .
$100 \%$ after five years of vesting service.
Same as normal retirement benefit with income deferred until normal retirement date.

Accrued benefit on date of termination multiplied by the vesting percentage.

Ten years of service.
Monthly income payable until normal retirement, death, or tecovery and a deferred annuity payable at normal retirement date.

Accrued benefit on date of disability.
The greater of A . or B . below for an active participant:

## Attained age 55.

Monthly annuity payable to spouse.
The amount that would have been received had the participant elected a joint and $662 / 3 \%$ survivorship benefit option and early retired the day before death.
B. Lump sum death benefit

> Service:

Form:
Amount:

Five years of service.
Lump sum payable to beneficiary.
$\$ 5,000$ for the first year of service plus $\$ 1,000$ for each additional year of service.

## Postretirement Death Benefit

## Eligibility:

Form:

Amount:

## Definitions

Average Compensation:

Cost of living increase:
Discretionary payment:
Optional Forms of Benefit Payments

Participant who was active at time of retirement.
Lump sum payable to beneficiary.
$\$ 10,000$.

The average of monthly compensation received for the 60 consecutive calendar months out of the latest 120 months which gives the highest average. Average compensation was frozen $12 / 31 / 2013$.

The monthly compensation for December 2013 includes sick leave, vacation, and personal time accrued but not used as of $12 / 31 / 2013$.

The December, 2013 monthly compensation will not include unused sick leave if a participant terminates prior to the earlier of meeting the requirements for early retirement (age 55 with 5 years of service) or normal retirement (age 65).

None
None
The optional forms of benefit payments are:
$>$ Monthly annuity payable for life, or 5 or 10 years certain and life
$>$ Monthly annuity payable as a survivorship life annuity with survivorship percentages of $50,662 / 3$, or 100

## Present Value of Accumulated Plan Benefits

Present value of vested and non-vested accrued benefits are based on the valuation assumptions shown in Section VII of this report. The present value of non-vested benefits includes the future $5.5 \%$ annual actuarial increases for benefits for which a participant is not yet eligible. For purposes of this report, these increases are considered to be already accrued, but not yet vested since a participant must continue employment to receive them.

The liabilities for retirees under the benefit index option of the plan's funding atrangement are also included below. This information may be used for Plan Accounting (ASC 960). These amounts should not be used for other purposes such as estimating plan termination sufficiency.

|  | $\underline{01 / 01 / 2014}$ | $\underline{01 / 01 / 2013}$ |
| :--- | ---: | ---: |
| Present Value of Vested Benefits | $\$ 27,192,963$ | $\$ 24,321,369$ |
| $\quad$ Retired members | $2,851,400$ | $2,398,104$ |
| Inactive members | $16,935,006$ | $16,524,592$ |
| Active members | $\$ 46,979,369$ | $\$ 43,244,065$ |
| $\quad$ Total |  |  |
|  |  | $\$ 0$ |
| Present Value of Nonvested Benefits | $7,749,483$ | $6,012,535$ |
| $\quad$ Inactive members | $\$ 7,749,483$ | $\$ 6,012,535$ |
| $\quad$ Active members |  |  |
| $\quad$ Total | $\$ 54,728,852$ | $\$ 49,256,600$ |

The following changes have had these effects, on an annual basis, as of the valuation date:

| Plan Amendment | $\begin{aligned} & \text { Normal } \\ & \text { Cost } \\ & \$(1,115,524) \end{aligned}$ | Unfunded <br> Actuarial Accrued Liability $\$(5,777,832)$ | Annual Required Contribution $\$(1,802,521)$ | Present Value of Vested Benefits \$1,148,221 | Present Value of Nonvested Benefits \$1,683,863 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$(1,115,524) | \$(5,777,832) |  |  |  |
| Change in Present Value of Accumulated Plan Benefits |  |  |  |  |  |
| Present Value of Accumulated Plan Benefits as of 01/01/2013 |  |  |  |  | \$49,256,600 |
| Increase (decrease) during the yeat due to: |  |  |  |  |  |
| Increase for int | rest due to de | crease in the discount | period |  | 3,201,679 |
| Benefits paid |  |  |  |  | $(2,475,814)$ |
| Benefits accum | lated and pla | experience |  |  | 1,914,303 |
| Change in assu | ptions |  |  |  | 0 |
| Plan amendme |  |  |  |  | 2,832,084 |
| Method change |  |  |  |  | 0 |

## Carryforward of Net Pension Obligation:

a) Annual required contribution for 2013 plan year ..... \$2,915,710
b) Interest on net pension obligation ..... 6,148
c) Adjustment to annual required contribution ..... 11,592
d) Annual pension cost for 2013 plan year ( $a+b-c$ ) ..... 2,910,266
e) Actual contributions made ..... 2,915,710
f) Increase/(decrease) in net pension obligation ..... $(5,444)$
g) 2013 beginning of year net pension obligation ..... 94,580
h) 2013 end of year net pension obligation ..... $\$ 89,136$
Annual Pension Cost for 2014 Plan Year:
a) Normal cost with interest ..... $\$ 26,625$
b) Amortization with interest ..... 879,917
c) Annual required contribution ( $a+b$ ) but not less than zero ..... 906,542
d) Interest on net pension obligation ..... 5,794
e) Adjustment to annual required contribution ..... 11,593
f) Annual pension cost (c+d-e) ..... \$900,743

Section X - Accounting Disclosure Information for SGAS 27

Calculation of Net Pension Obligation

| (a) | (b) | (c). | (d) |  |  |  | (h) | (i) |  | (k) | (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Interest | ARC | Amort. |  |  | Loss/ | Change | NPO |
|  | Val'n | Amort. |  | On NPO | Adjust. | Factor | APC | Actual | (Gain) | In NPO | Balance |
| Year | Rate | Period | ARC | (1 py $\times$ b) | ( $\mathrm{py} / \mathrm{g}$ ) | (cyrs@b\%) | $(d+e-f)$ | Deposit | (d-i) | (h-i) | $(\mathrm{l} y+\mathrm{k})$ |
| 1987 | 8.00\% | 24 | 0 | - - | - | - | 0 | 292,039 | $(292,039)$ | $(292,039)$ | $(292,039)$ |
| 1988 | 8.00\% | 25 | 0 | $(23,363)$ | $(27,358)$ | 10.6748 | 3,995 | 398,000 | $(398,000)$ | $(394,005)$ | $(686,044)$ |
| 1989 | 8.00\% | 25 | 0 | $(54,884)$ | $(64,268)$ | 10.6748 | 9,384 | 444,000 | $(444,000)$ | $(434,616)$ | $(1,120,660)$ |
| 1990 | 8.00\% | 22 | 396,154 | $(89,653)$ | $(109,861)$ | 10.2007 | 416,362 | 480,000 | $(83,846)$ | $(63,638)$ | $(1,184,298)$ |
| 1991 | 8.00\% | 22 | 456,220 | $(94,744)$ | $(116,100)$ | 10.2007 | 477,576 | 510,300 | $(54,080)$ | $(32,724)$ | $(1,217,022)$ |
| 1992 | 8.00\% | 22 | 521,613 | $(97,362)$ | $(119,308)$ | 10.2007 | 543,559 | 360,000 | 161,613 | 183,559 | $(1,033,463)$ |
| 1993 | 7.50\% | 22 | 801,018 | $(77,510)$ | $(97,339)$ | 10.6172 | 820,847 | 360,000 | 441,018 | 460,847 | $(572,616)$ |
| 1994 | 7.50\% | 21 | 363,815 | $(42,946)$ | $(54,988)$ | 10.4135 | 375,857 | 360,000 | 3,815 | 15,857 | (556,759) |
| 1995 | $7.50 \%$ | 21 | 337,501 | $(41,757)$ | $(53,465)$ | 10.4135 | 349,209 | 360,000 | $(22,499)$ | $(10,791)$ | $(567,550)$ |
| 1996 | $7.50 \%$ | 21 | 409,172 | $(42,566)$ | $(54,501)$ | 10.4135 | 421,107 | 380,000 | 29,172 | 41,107 | $(526,443)$ |
| 1997 | 7.50\% | 20 | 426,741 | $(39,483)$ | $(51,640)$ | 10.1945 | 438,898 | 434,000 | $(7,259)$ | 4,898 | $(521,545)$ |
| Transition |  |  |  |  |  |  |  |  |  |  |  |
| 1998 | 7.50\% | 18 | 474,673 | $(39,116)$ | $(53,734)$ | 9.7060 | 489,291 | 378,000 | 96,673 | 111,291 | $(410,254)$ |
| 1999 | 7.50\% | 16 | 536,683 | $(30,769)$ | $(44,878)$ | 9.1415 | 550,792 | 536,000 | 683 | 14,792 | $(395,462)$ |
| 2000 | 7.50\% | 16 | 629,754 | $(29,660)$ | $(43,260)$ | 9.1415 | 643,354 | 547,000 | 82,754 | 96,354 | $(299,108)$ |
| 2001 | $7.50 \%$ | 16 | 793,691 | $(22,433)$ | $(32,720)$ | 9.1415 | 803,978 | 478,000 | 315,691 | 325,978 | 26,870 |
| 2002 | 7.50\% | 16 | 735,168 | 2,015 | 2,939 | 9.1415 | 734,244 | 466,000 | 269,168 | 268,244 | 295,114 |
| 2003 | 7.50\% | 16 | 931,470 | 22,134 | 32,283 | 9.1415 | 921,321 | 735,317 | 196,153 | 186,004 | 481,118 |
| 2004 | 7.50\% | 15 | 896,193 | 36,084 | 54,505 | 8.8271 | 877,772 | 800,000 | 96,193 | 77,772 | 558,890 |
| 2005 | 7.50\% | 15 | 941,548 | 41,917 | 63,315 | 8.8271 | 920,150 | 896,000 | 45,548 | 24,150 | 583,040 |
| 2006 | 7.50\% | 14 | 885,540 | 43,728 | 68,680 | 8.4892 | 860,588 | 885,990 | (450) | $(25,402)$ | 557,638 |
| 2007 | $7.50 \%$ | 14 | 679,631 | 41,823 | 65,688 | 8.4892 | 655,766 | 825,000 | $(145,369)$ | $(169,234)$ | 388,404 |
| 2008 | 7.50\% | 14 | 545,782 | 29,130 | 45,753 | 8.4892 | 529,159 | 800,000 | $(254,218)$ | $(270,841)$ | 117,563 |
| 2009 | 7.50\% | 13 | -1,023,319 | 8,817 | 14,468 | 8.1258 | 1,017,668 | 1,023,319 | 0 | $(5,651)$ | 111,912 |
| 2010 | 7.50\% | 12 | 1,541,866 | 8,393 | 14,468 | 7.7353 | 1,535,791 | 1,541,866 | 0 | $(6,075)$ | 105,837 |
| 2011 | 7.50\% | 12 | 2,204,886 | 7,938 | 13,682 | 7.7353 | 2,199,142 | 2,204,886 | 0 | $(5,744)$ | 100,093 |
| 2012 | 7.25\% | 12 | 2,782,486 | 7,257 | 12,770 | 7.8379 | 2,776,973 | 2,782,486 | 0 | $(5,513)$ | 94,580 |
| 2013 | 6.50\% | 12 | 2,915,710 | 6,148 | 11,592 | 8.1587 | 2,910,266 | 2,915,710 | 0 | $(5,444)$ | 89,136 |
| 2014 | 6.50\% | 11 | 906,542 | 5,794 | 11,593 | 7.6890 | 900,743 |  |  |  |  |


[^0]:    The amortization amount shown above is based on 15 year amortization of plan changes and 10 year amortization of experience gains and losses. See page V-2 for additional information.

[^1]:    ${ }^{2}$ Includes 144 retirees receiving monthly benefits of $\$ 149,704$ under the direct fund option of your contract and 57 retirees receiving monthly benefits of $\$ 59,767$ under the benefit index option of your contract ( 57 retirees are receiving benefits under both options since the 01/01/2007 cost of living increase was provided under the direct fund option for all retirees).

[^2]:    * Mortality is updated automatically each year in reference to the valuation date. These tables are the same as those prescribed for plans under ERISA that have more than 500 lives.

