# Metropolitan Water Reclamation District of Chicago 

December 31, 2011 Actuarial Valuation of Retiree Health Care Benefits under GASB 43

Prepared by PricewaterhouseCoopers, LLP

March 2012

## ACTUARIAL CERTIFICATION

We are pleased to present this report containing the results of the December 31, 2011 actuarial valuation of Metropolitan Water Reclamation District of Chicago’s Postretirement Retiree Health Care Benefit Plan, pursuant to our engagement letter with Metropolitan Water Reclamation District of Chicago dated October 15, 2009.

Metropolitan Water Reclamation District of Chicago retained PricewaterhouseCoopers LLP ("PwC") to perform an actuarial valuation of its Retiree Health Care Benefit Plan ("the Plan") for the purposes of calculating the necessary information for accounting and reporting requirements in accordance with Government Accounting Standards Board Statement No. 43 (GASB 43). This valuation has been conducted in accordance with the required Actuarial Standards of Practice as issued by the American Academy of Actuaries.

Actuarial calculations under GASB 43 are for purposes of fulfilling the Metropolitan Water Reclamation District of Chicago's financial accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB 43.

In preparing the results presented in this report, we have relied upon information Metropolitan Water Reclamation District of Chicago provided to us regarding plan provisions, plan participants, claims and premium data, unaudited plan assets and benefit payments. The census data, claims data and plan asset information used in calculating the results herein were collected as of December 31, 2011 for active members, retirees, survivors and dependents. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information.

GASB 43 requires that each significant assumption reflect the best estimate of the Plan's future experience solely with respect to that assumption. Metropolitan Water Reclamation District of Chicago has determined and taken responsibility for the actuarial assumptions and the accounting policies and methods employed in the valuation of obligations and costs under GASB 43.

A range of results, different from those presented in this report could be considered reasonable. Future actuarial measurements may differ significantly from the current measurement presented in this report due to a number of factors including but not limited to: plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methods used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), rounding conventions and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

This report was prepared for the internal use of Metropolitan Water Reclamation District of Chicago in connection with our actuarial valuation of the Plan and not for reliance by any other person. PwC disclaims any contractual or other responsibility or duty of care to others based upon the services or deliverables provided in connection with this report.

This report does not purport to comply with any other purposes not stated herein. Significantly different results from what is presented in this report may be needed for other purposes.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law.

The undersigned actuaries are members of the Society of Actuaries and the American Academy of Actuaries and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to postretirement medical and life insurance plans. To the best of our knowledge, the individuals involved in this engagement have no relationship that may impair, or appear to impair, the objectivity of our work.

We appreciate this opportunity to be of service to Metropolitan Water Reclamation District of Chicago. We are available to answer any questions with respect to our report.

Respectfully submitted,

## PRICEWATERHOUSECOOPERS LLP



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Fellow of the Society of Actuaries
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March 19, 2012

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## SECTION I: OVERVIEW

## GASB 43

GASB 43 provides the employer's responsibility for accounting and financial reporting for all postemployment benefits other than pensions. Such benefits are commonly referred to as "other postemployment benefits" (OPEB). This report contains the actuarial valuation of the retiree health care benefits as of December 31, 2011, which applies to the fiscal year ending December 31, 2011.

## Valuation Basis

This valuation covers the retiree health care benefits that MWRD provides to its members and their dependents. Plan benefits include:

- Medical benefits
- Prescription drug benefits

The valuation includes the following membership groups:

- Active members
- Retired members
- Survivors of retired members
- Dependents

This valuation is based upon the plan provisions in effect on July 1, 2011 as well as changes to the plan subsequent to this date that have been approved. We have collected the active, retiree, survivor, and dependent membership census data as of December 31, 2011.

The GASB 43 discount rate is the expected rate of return on the assets used to pay the benefits. If the retiree health care benefits are not pre-funded, GASB 43 specifies the use of a discount rate that reflects the expected return on the general assets of the plan sponsor. For plans with a contribution rate sufficient to cover the long term costs, the discount rate is equal to the long-term rate of return on plan assets. For plans that are pre-funded, but the contribution rate is below the long-term required rate (partially funded), the discount rate is a blend of the expected return on the sponsor's general assets and the plan assets.

For MWRD, the assumed rate of return on the sponsor's general assets is $3.0 \%$, and the assumed rate of return on the plan assets is $7.00 \%$. As of December 31, 2011, the contribution rate to fund the retiree health care benefits is greater than the GASB 43 Annual Required Contribution (ARC). Since the contribution rate is sufficient to cover long-term costs, the GASB 43 discount rate is the assumed rate of return on the plan assets. For the fiscal year ending December 31, 2011 the GASB 43 discount rate is 7.00\%.

## SECTION I: OVERVIEW

## Annual Required Contribution (ARC)

The ARC is the employer's periodic required contribution to an OPEB plan determined in accordance with the plan provisions, demographic data, actuarial assumptions, actuarial cost method, and other actuarial methods prescribed by GASB 43. The ARC represents the employer contribution that would be needed each year to fund the retiree health care benefits over a period not exceeding 30 years. The ARC in the valuation contained herein is based upon amortizing the unfunded liability over a period of 30 years as a level percentage of payroll. The ARC will generally increase with payroll growth, and is subject to gains/losses resulting from demographic and/or assumption changes.

The ARC for the fiscal year ending December 31, 2012 is $16.16 \%$ of projected payroll, or $\$ 27$ million. This amount consists of $5.13 \%$ to fund the normal cost, and $11.03 \%$ to fund the amortization of unfunded past liabilities over 30 years. This compares with an ARC of $22.57 \%$ of projected payroll for fiscal year ending December 31, 2010, or $\$ 40$ million.

## Changes From Prior Valuation

The following outlines the changes since the prior valuation:

- The mortality assumption was updated to include projected mortality improvements on a fully generational basis.
- The retiree and spouse participation assumptions were changed from $100 \%$ and $60 \%$ to $90 \%$ and $76 \%$, respectively.
- The average age of spouses was changed from males 4 years older than females to males 3 years older than females.
- The assumed distribution of future benefit recipients among the individual health plans has been revised based on actual 2011 retiree elections.
- The per capita claims costs have been updated based on premiums in effect as of July 1, 2011 and historical claims data.
- The medical trend rates have been updated to better reflect anticipated medical cost inflation.
- The plan was changed to increase the required retiree contributions from the 2011 rate (approximately 20\%) to ultimately reach $50 \%$ of expected plan costs by 2021.
- For participants hired on or after April 1, 1986, the percentage assumed to enroll in Medicare upon reaching eligibility was changed from $90 \%$ to $100 \%$. For participants hired prior to April 1, 1986, the percentage assumed to enroll in Medicare upon reaching eligibility was changed from $90 \%$ to $93 \%$.


## SECTION I: OVERVIEW

## Excise Tax

The December 31, 2011 valuation reflects the impact of the $40 \%$ excise tax on high cost plans as a result of the Patient Protection and Affordable Care Act ("PPACA") signed into law on March 23, 2010. The impact of this provision is estimated to increase the accrued liability as of December 31, 2011 by $2.6 \%$.

## SECTION II: VALUATION RESULTS

## Exhibit I

Summary of Valuation Results (\$ in thousands)

Valuation as of

Membership Data

| Active members | 1,893 | 2,095 |
| :--- | ---: | ---: |
| Retirees and survivors receiving coverage | 1,977 | 1,900 |
| Dependent spouses receiving coverage | 912 | 876 |


| Projected Membership Payroll ${ }^{1}$ | \$ | 168,716 | \$ | 176,527 |
| :---: | :---: | :---: | :---: | :---: |
| GASB 43 Discount Rate |  | 7.00\% |  | 6.30\% |
| Accrued Liability |  |  |  |  |
| Active members | \$ | 152,267 | \$ | 253,693 |
| Retirees, survivors, and dependents |  | 242,409 |  | 272,783 |
| Total | \$ | 394,676 | \$ | 526,476 |
| Retiree Healthcare Trust Assets | \$ | 54,996 | \$ | 47,891 |
| Unfunded Liability | \$ | 339,680 | \$ | 478,585 |
| Funded Ratio |  | 13.93\% |  | 9.1\% |


| Annual Required Contribution (as percentage of projected payroll) ${ }^{2}$ |  |  |
| :--- | ---: | ---: |
| Normal cost | $5.13 \%$ | $8.96 \%$ |
| Amortization of unfunded liability | $\underline{11.03 \%}$ | $\frac{13.61 \%}{22.57 \%}$ |
| Total | $16.16 \%$ | 22.5 |

Annual Required Contribution

| Normal cost | $\$$ | 8,651 | $\$$ | 15,822 |
| :--- | ---: | ---: | ---: | ---: |
| Amortization of unfunded liability |  | $\underline{18,613}$ |  | $\underline{24,025}$ |
| Total | $\$$ | 27,264 | $\$$ | 39,847 |

Contribution to Fund Retiree Health Care Benefits
Scheduled contribution
Expected net pay-as-you-go claims costs ${ }^{3}$
Total contribution

| \$ | 12,400 | $\$$ | 0 |
| ---: | ---: | ---: | ---: |
|  | $\underline{22,130}$ |  | $\underline{20,114}$ |
| \$ | 34,530 | $\$$ | 20,114 |

## SECTION II: VALUATION RESULTS

${ }^{1}$ Payroll is shown on a calendar year basis. The December 31, 2011 figure is based on the actual payroll for the year ending December 31, 2011, projected forward 12 months with the assumed rate of payroll growth. The December 31, 2009 figure is based on the actual payroll for the year ending December 31, 2009, projected forward 12 months with the assumed rate of payroll growth.
${ }^{2}$ The ARC is shown as a percentage of the projected payroll for the upcoming year.
${ }^{3}$ The contribution for the year ending December 31, 2012 includes net expected benefit payments of $\$ 22$ million as benefits are not paid from plan assets. The contribution for the year ending December 31, 2010 includes the actual benefit payments of \$20 million made during 2010.

## SECTION II: VALUATION RESULTS

## Exhibit II

## Reconciliation of the Change in Unfunded Liability (\$ inthousands)

| Unfunded liability as of December 31, 2009 | \$ | 478,585 |
| :---: | :---: | :---: |
| Expected unfunded liability as of December 31, 2011 | \$ | 532,210 |
| Decrease in unfunded liability due to investment return greater than expected |  | (881) |
| Increase in unfunded liability due to changes in census ${ }^{1}$ |  | 25,289 |
| Increase in unfunded liability due to change in mortality assumption ${ }^{2}$ |  | 44,545 |
| Decrease in unfunded liability due to participation and spousal assumptions ${ }^{3}$ |  | $(3,754)$ |
| Decrease in unfunded liability due to net claims lower than expected |  | $(26,247)$ |
| Increase in unfunded liability due to increase in healthcare trend rates |  | 6,252 |
| Decrease in unfunded liability due to changes in contributions ${ }^{4}$ |  | $(179,916)$ |
| Decrease in unfunded liability due to Medicare election assumption change ${ }^{5}$ |  | $(31,766)$ |
| Decrease in unfunded liability due to change in discount rate |  | $(36,169)$ |
| Increase in unfunded liability due to impact of Excise Tax ${ }^{6}$ |  | 10,117 |
| Total increase/(decrease) in unfunded liability | \$ | $(192,530)$ |
| Unfunded liability as of December 31, 2011 | \$ | 339,680 |

${ }^{1}$ Change due to census assumes Medicare enrolment for all post-65 retirees unchanged from fiscal year 2010.
${ }^{2}$ The mortality assumption was updated to include projected mortality improvements on a fully generational basis.
${ }^{3}$ Change due to the retiree participation assumption ( $100 \%$ to $90 \%$ ), spouse participation assumption ( $60 \%$ to $76 \%$ ), and spouse age assumption (+/-4 yrs to +/- 3 yrs ), and PPO election \% (based on current retiree enrollment).
${ }^{4}$ Change due to increasing retiree contributions from the 2011 rate (approximately $20 \%$ ) up to $50 \%$ in 2021.
${ }^{5}$ Change due to $100 \%$ Medicare enrollment of all actives and pre-65 retirees hired on or after April 1, 1986 upon attaining age 65.
${ }^{6}$ The December 31, 2011 valuation reflects the impact of the $40 \%$ excise tax on high cost plans as a result of the Patient Protection and Affordable Care Act ("PPACA") signed into law on March 23, 2010.

## SECTION II: VALUATION RESULTS

## Exhibit III

## Retiree Healthcare Trust Assets <br> (\$ in thousands)

|  |  | 2011 |  | 2010 |  | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance as of January 1 | \$ | 52,153 |  | \$ 47,891 |  | 47,797 |
| Contributions |  |  |  |  |  |  |
| Employer | \$ | 18,020 |  | \$ 15,517 |  | 14,592 |
| Retirees |  | 5,577 |  | 4,597 |  | 4,210 |
| Medicare Part D subsidies |  | $\underline{0}$ |  | $\underline{0}$ |  | $\underline{0}$ |
| Total | \$ | 23,597 |  | \$ 20,114 |  | 18,802 |
| Payments |  |  |  |  |  |  |
| Benefit payments and administrative fees | \$ | 20,627 |  | \$ 20,144 |  | 18,821 |
| Investment Return |  |  |  |  |  |  |
| Asset earnings | \$ | (82) | \$ | 4,338 | \$ | 159 |
| Investment expenses |  | (45) |  | (46) |  | (46) |
| Total | \$ | (127) | \$ | 4,292 | \$ | 113 |
| Balance as of December 31 | \$ | 54,996 |  | \$ 52,153 | \$ | 47,891 |
| Rate of Investment Return (net of administrative expenses) |  | -0.2\% |  | 9.0\% |  | 0.2\% |

## SECTION II: VALUATION RESULTS

## Exhibit IV

Required Supplementary Information - Schedule of Employer Contributions (\$ in thousands)

| Fiscal Year <br> Ended December 31 | Annual Required <br> Contributions | Actual <br> Contributions | Percentage <br> Contributed |
| :---: | :---: | :---: | :---: |
| 2007 | $\$ 44,739$ | $\$ 37,334$ | $83 \%$ |
| 2008 | $\$ 44,739$ | $\$ 35,819$ | $80 \%$ |
| 2009 | $\$ 39,847$ | $\$ 14,592$ | $37 \%$ |
| 2010 | $\$ 39,847$ | $\$ 15,517$ | $39 \%$ |
| 2011 | $\$ 27,264$ | $\$ 18,020$ | $66 \%$ |

## Exhibit V

## Required Supplementary Information - Schedule of Funding Progress

(\$ in thousands)

| Valuation as of December 31 | Actuarial Value of Assets <br> (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded/ (Overfunded) AAL (UAAL) (b) - (a) | Funded Ratio $\text { (a) } \div(b)$ | Covered Payroll ${ }^{1}$ <br> (c) | UAAL as a Percentage of Covered Payroll [(b) - (a)] $\div$ (c) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2007 | 25,025 | 442,683 | 417,658 | 5.7\% | 158,832 | 263.0\% |
| 2008 | 47,797 | 487,820 | 440,023 | 9.8\% | 167,865 | 262.1\% |
| 2009 | 47,891 | 526,476 | 478,585 | 9.1\% | 170,392 | 280.9\% |
| 2010 | 52,153 | 555,679 | 503,526 | 9.4\% | 172,273 | 292.3\% |
| 2011 | 54,996 | 394,676 | 339,680 | 13.9\% | 162,853 | 208.6\% |

${ }^{1}$ Covered payroll for the calendar year ending on the valuation date.

## SECTION II: VALUATION RESULTS

## Exhibit VI

## Annual OPEB Cost and Net OPEB Obligation (\$ in thousands)

Annual required contribution for 2011
Interest on net OPEB obligation
Adjustment to annual required contribution
Annual OPEB cost
Contributions made during 2011
Increase in net OPEB obligation
Net OPEB obligation as of December 31, 2010
Net OPEB obligation as of December 31, 2011
\$ 27,264
4,643
(3,636)
28,271
(18,020)
10,251
$\begin{array}{r}66,329 \\ \hline 76,580\end{array}$

## Exhibit VII

Required Supplementary Information - Summary of Key Actuarial Methods and Assumptions

| Valuation date | December 31, 2011 |
| :--- | :--- |
| Actuarial cost method | Projected unit credit |
| Amortization method | 30 years, open, level percent of pay |
| Asset valuation method | Fair market value |

## Actuarial assumptions:

Discount rate $\quad$ 7.00\% per annum
Inflation rate
Projected payroll growth rate
3.00\% per annum

Heath care cost trend rates

| Initial Rate |  |  |
| ---: | ---: | ---: |
| $8.5 \%$ | $\frac{\text { Ultimate Rate }}{5.0 \%}$ | Ultimate Year |
| 2018 |  |  |

## SECTION III: CENSUS DATA

## Exhibit VIII

Summary of Membership Data
(\$ in thousands)

| Valuation as of December 31 | 2011 | 2009 |
| :---: | :---: | :---: |
| Active Members |  |  |
| Eligible for retiree healthcare benefits | 479 | 493 |
| Not yet eligible for retiree healthcare benefits | 1,414 | 1,602 |
| Total | 1,893 | 2,095 |
| Projected payroll ${ }^{1}$ | \$ 168,716 | \$ 176,527 |
| Retired Members and Survivors, and Dependents Enrolled in Health Care |  |  |
| Retirees | 1,471 | 1,382 |
| Survivors | 506 | 518 |
| Dependent spouses | $\underline{912}$ | $\underline{876}$ |
| Total | 2,889 | 2,776 |
| Active Participant Characterisitics |  |  |
| Average age | 49.40 | 49.10 |
| Average past service | 13.59 | 13.21 |
| Average age of inactive participants | 73.12 | 73.10 |

${ }^{1}$ Payroll is shown on a calendar year basis. The December 31, 2011 figure is based on the actual payroll for the year ending December 31, 2011, projected forward 12 months with the assumed rate of payroll growth. The December 31, 2009 figure is based on the actual payroll for the year ending December 31, 2009, projected forward 12 months with the assumed rate of payroll growth.

## SECTION III: CENSUS DATA

Exhibit IX
Schedule of Active Member Valuation Data

| Fiscal Year | Members in Service | \% Change | Covered Payroll | \% Change | Average Salary | \% Change | Payroll Growth Assumption |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2007 | 1,964 | - | 158,831,772 | - | 80,872 | - | - |
| 2009 | 2,095 | 6.7\% | 170,392,445 | 7.3\% | 81,333 | 0.6\% | 3.6\% |
| 2011 | 1,893 | (9.6\%) | 162,853,163 | (4.4\%) | 86,029 | 5.8\% | 3.6\% |

## Exhibit X

Summary of Active Members by Age and Service

| Age | Years of Service |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | $\underline{40+}$ |  | Total |
| Under 25 | 5 | - | - | - | - | - | - | - |  | - | 5 |
| 25 to 29 | 51 | 8 | - | - | - | - | - | - |  | - | 59 |
| 30 to 34 | 63 | 50 | 12 | - | - | - | - | - |  | - | 125 |
| 35 to 39 | 59 | 43 | 50 | 6 | - | - | - | - |  | - | 158 |
| 40 to 44 | 48 | 38 | 88 | 30 | 29 | - | - | - |  | - | 233 |
| 45 to 49 | 47 | 49 | 83 | 62 | 83 | 19 | 1 | - |  | - | 344 |
| 50 to 54 | 51 | 46 | 80 | 48 | 114 | 41 | 7 | - |  | - | 387 |
| 55 to 59 | 34 | 33 | 75 | 52 | 91 | 34 | 7 | 3 |  | - | 329 |
| 60 to 64 | 13 | 31 | 46 | 21 | 38 | 7 | 5 | 4 |  | - | 165 |
| 65 to 69 | 1 | 11 | 24 | 12 | 13 | 4 | 2 | 1 |  | - | 68 |
| 70 \& up | $\underline{0}$ | 1 | 8 | $\underline{3}$ | $\underline{3}$ | $\underline{2}$ | $\underline{1}$ | 1 |  | 1 | $\underline{20}$ |
| Total | 372 | 310 | 466 | 234 | 371 | 107 | 23 | 9 |  | 1 | 1,893 |

## SECTION III: CENSUS DATA

## Exhibit XI

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

| Fiscal | Beginning <br> of Year <br> Year <br> Balance | Number <br> Added <br> to Rolls | Number <br> Removed <br> from Rolls | End <br> of Year <br> Balance | Health Care <br> Annual Benefit <br> Amounts | Average <br> Annual <br> Benefit | \% Change <br> in Average <br> Benefit |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2007 | 1,850 | 150 |  | $\underline{ }$ |  |  |  |  |
| 2009 | 1,873 | 183 | 156 | 1,873 | $\$ 16,159,127$ | $\$ 8,627$ | - |  |
| 2011 | 1,900 | 221 | 144 | 1,900 | $\$ 18,802,036$ | $\$ 9,896$ | $14.7 \%$ |  |

## Exhibit XII

Breakdown of Benefit Plan Enrolment

|  | Benefit Plan |  |  |
| :--- | :---: | :---: | :---: |
| Enrollee Group | PPO | HMO | Total |
| Benefit Recipient | 1,571 |  |  |
| Spouse |  | 406 | 1,977 |
| Grand Total | $\underline{689}$ | $\underline{223}$ | $\underline{912}$ |

SECTION IV: ACTUARIAL ASSUMPTIONS AND METHODS

| Valuation Date | December 31, 2011 |  |
| :--- | :--- | :--- |
| Discount Rate | 7.00\% per annum |  |
| Payroll Increase Rate | 3.6\% per annum |  |
| Inflation Rate |  |  |
| Health Care Trend Rates |  |  |
|  | $\underline{\text { Year }}$ | $\underline{\text { Medical }}$ |
|  | 2012 | 8.5 |
|  | 2013 | 7.9 |
|  | 2014 | 7.3 |
|  | 2015 | 6.7 |
|  | 2016 | 6.1 |
|  | 2017 | 5.5 |
|  | $2018+$ | 5.0 |

Member Participation
For the December 31, 2011 valuation, $90 \%$ of future eligible service retirees are assumed to elect coverage. 76\% of these members are assumed to have a spouse who elects coverage with males assumed to be 3 years older than females.

For the December 31, 2009 valuation, 100\% of future eligible service retirees were assumed to elect coverage. $60 \%$ of these members were assumed to have a spouse who elects coverage with males assumed to be 4 years older than females

Future enrollees are assumed to elect medical plans in the same proportion as the 2011 elections for the current enrollees. The current breakdown is $21.8 \% \mathrm{HMO}, 78.2 \%$ PPO.

## Medicare Status

For the December 31, 2011 valuation, 100\% of members are assumed to enroll in Medicare if eligible and hired on or after April 1, 1986. 93\% of members are assumed to enroll in Medicare if eligible and hired prior to April 1, 1986.

For the December 31, 2009 valuation, 90\% of members were assumed to enroll in Medicare if eligible.

## SECTION IV: ACTUARIAL ASSUMPTIONS AND METHODS

| Annual Per Capita Claims | We have developed the claims tables for the 2011 valuation <br> using the 2011 premium rates (including administration costs) <br> and historical claims data. The following tables summarize the <br> assumed per capita claims (medical and prescription drugs) at <br> illustrative ages: |
| :--- | :--- |

PPO Plans

| Age | Enrolled in <br> Medicare | Not Enrolled in |
| :--- | :---: | :---: |
| 40 | $\$ 4,882$ | Medicare |
| 45 | 6,447 | $\$ 4,882$ |
| 50 | 8,909 | 6,447 |
| 55 | 11,877 | 8,909 |
| 60 | 14,893 | 11,877 |
| 64 | 17,081 | 14,893 |
| 65 | 6,356 | 17,081 |
| 70 | 6,906 | 14,568 |
| 75 | 7,364 | 17,461 |
| 80 | 7,589 | 20,103 |
| 85 | 7,530 | 21,935 |
| 90 | 7,165 | 22,585 |
| 95 | 6,498 | 21,899 |
|  |  | 19,843 |

## $\underline{\text { HMO Plans }}$

| Age | Enrolled in <br> Medicare | Not Enrolled in <br> Medicare |
| :--- | :---: | :---: |
| 40 | $\$ 3,405$ | $\$ 3,405$ |
| 45 | 4,424 | 4,424 |
| 50 | 6,011 | 6,011 |
| 55 | 7,907 | 7,907 |
| 60 | 9,826 | 9,826 |
| 64 | 11,219 | 11,219 |
| 65 | 7,228 | 10,305 |
| 70 | 7,928 | 12,378 |
| 75 | 8,520 | 14,261 |
| 80 | 8,839 | 15,556 |
| 85 | 8,775 | 15,975 |
| 90 | 8,444 | 15,484 |
| 95 | 7,708 | 13,985 |

## SECTION IV: ACTUARIAL ASSUMPTIONS AND METHODS

## Annual Member Premiums ${ }^{1}$

|  | PPO Plans |  | HMO Plans |  |
| :---: | :---: | :---: | :---: | :---: |
| Benefit Recipient without Medicare |  |  |  |  |
| Pre-65 | \$ | 3,426 | \$ | 2,260 |
| Post-65 |  | 3,426 |  | 2,260 |
| Benefit Recipient with Medicare |  |  |  |  |
| Pre-65 | \$ | 3,426 | \$ | 2,260 |
| Post-65 |  | 1,642 |  | 1,903 |
| Spouse without Medicare |  |  |  |  |
| Pre-65 | \$ | 3,426 | \$ | 1,976 |
| Post-65 |  | 3,426 |  | 1,976 |
| Spouse with Medicare |  |  |  |  |
| Pre-65 | \$ | 3,426 | \$ | 1,976 |
| Post-65 |  | 1,644 |  | 1,903 |

${ }^{1}$ The required retiree contributions are scheduled to increase from the 2011 rate (approximately $20 \%$ ) up to $50 \%$ in 2021. The contributions as shown above for 2012 reflect the increase in the contribution percentage from 2011 to 2012.

## SECTION IV: ACTUARIAL ASSUMPTIONS AND METHODS

## Retirement Rates

Employees are assumed to retire according to the following illustrative schedule:

| Age | Rate | Age <br> R9 | $0.0 \%$ |
| :---: | :---: | :---: | :--- | | Rate |
| :--- |
| 50 |

Mortality
For the December 31, 2011 valuation, RP-2000 Mortality
Table with fully generational mortality improvements projected using Scale AA.

For the December 31, 2009 valuation, the UP-94 Mortality Table was used with males set back one year and females set forward one year.

## SECTION IV: ACTUARIAL ASSUMPTIONS AND METHODS

Withdrawal Rates Employees are assumed to terminate based on age, entry age, and gender. The following tables summarize these rates:

| $\frac{7}{\text { Males }}$ | Entry Age |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | $16-24$ | $25-29$ | $30-34$ | $35-39$ | $40-44$ | $45-49$ | $50-54$ | $55-59$ | $60+$ |
| 20 | $10.6 \%$ | - | - | - | - | - | - | - | - |
| 25 | 8.0 | $7.7 \%$ | - | - | - | - | - | - | - |
| 30 | 4.2 | 5.8 | $6.1 \%$ | - | - | - | - | - | - |
| 35 | 1.9 | 3.3 | 4.3 | $5.6 \%$ | - | - | - | - | - |
| 40 | 0.7 | 1.6 | 2.3 | 4.0 | $5.4 \%$ | - | - | - | - |
| 45 | 0.2 | 0.6 | 1.3 | 2.1 | 3.7 | $4.8 \%$ | - | - | - |
| 50 | 0.0 | 0.2 | 0.4 | 0.6 | 1.0 | 3.5 | $5.4 \%$ | - | - |
| 55 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 3.4 | $3.2 \%$ | - |
| 60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.3 | $2.2 \%$ |
| 65 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| 67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |


| Females | Entry Age |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | $16-24$ | $25-29$ | $30-34$ | $35-39$ | $40-44$ | $45-49$ | $50-54$ | $55-59$ | $60+$ |
| 20 | $10.6 \%$ | - | - | - | - | - | - | - | - |
| 25 | 8.8 | $8.3 \%$ | - | - | - | - | - | - | - |
| 30 | 5.8 | 6.0 | $5.8 \%$ | - | - | - | - | - | - |
| 35 | 3.1 | 3.1 | 4.4 | $4.2 \%$ | - | - | - | - | - |
| 40 | 1.4 | 1.6 | 2.6 | 3.4 | $3.2 \%$ | - | - | - | - |
| 45 | 0.5 | 0.7 | 1.5 | 2.1 | 2.2 | $2.0 \%$ | - | - | - |
| 50 | 0.2 | 0.2 | 0.5 | 0.6 | 0.6 | 1.8 | $2.2 \%$ | - | - |
| 55 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 1.7 | $2.2 \%$ | - |
| 60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.9 | $1.9 \%$ |
| 65 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| 67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## Disability Incidence Rates No disability incidence rates are used

Actuarial Cost Method
Actuarial Asset Method

Data

Projected Unit Cost
Fair Market Value

Active, retiree, survivor and dependent census data as of December 31, 2011 was supplied by MWRD

## SECTION V: SUMMARY OF PLAN PROVISIONS

Eligibility Requirements
Retirees and their dependents that fulfill the eligibility requirements can receive postretirement medical and prescription drug coverage. The eligibility requirements are the earlier of:

- Age 55 and 10 years of service;
- Age + service greater than or equal to 80

Benefits commence at retirement, provided the eligibility requirements are fulfilled and persist for the lifetime of the retirees and their spouses

## Healthcare Benefits

|  | HMO Illinois (Blue Cross HMO) | Blue Cross Blue Shield PPO |  |
| :---: | :---: | :---: | :---: |
|  |  | In Network PPO | Non-PPO Network |
| Annual Deductible | None | \$300 per person; $\$ 900$ per family | \$300 per person; \$900 family |
| Annual Out-of-Pocket Maximum | None | \$1,500 per person; <br> $\$ 4,000$ per family | $\begin{aligned} & \$ 3,000 \text { per person; } \\ & \$ 9,000 \text { per family } \end{aligned}$ |
| Outpatient Physician |  |  |  |
| Office Visits | \$20 copay | 90\% | 90\% of U\&C |
| Diagnostic Testing | Covered in full | 90\% | 80\% of U\&C |
| Outpatient Surgeon | Covered in full | 90\% | 70\% of U\&C |
| Routine Physical Exams | Covered in full | Not covered | Not covered |
| Routine Pediatric Exams | Covered in full | Not covered | Not covered |
| Immunizations | Covered in full | Not covered | Not covered |
| Allergy Shots | Covered in full | 90\% | 90\% of U\&C |
| Hearing Screening | Covered in full | Not covered | Not covered |
| Physical, Occupational, or Speech Therapy | 60 days per year | 90\% | 90\% of U\&C |
| Podiatry Care | Covered in full | 90\% | 90\% of U\&C |
| Cosmetic Surgery | Covered in full | 90\% | 90\% of U\&C |
| Oral Surgery | Covered in full | $\begin{aligned} & 90 \% \\ & \text { (Limited services) } \end{aligned}$ | $90 \%$ of U\&C <br> (Limited services) |
| Hospital |  |  |  |
| Room and Board | Covered in full | 90\% | 80\% of U\&C |
| Number of Days | Unlimited | Unlimited, subject to medical necessity | Unlimited, subject to medical necessity |
| Intensive Care | Covered in full | 90\% | 80\% of U\&C |
| Inpatient Surgery | Covered in full | 90\% | 80\% of U\&C |
| Outpatient Surgery | Covered in full | 90\% | 70\% of U\&C |
| Skilled Nursing Facility | 120 days per year | 90\% | 80\% of U\&C |
| Emergency Treatment | $\$ 50$ copay (waived if admitted to ER) | 90\% | 90\% of U\&C |
| Physicians Visits | Covered in full | 90\% | 90\% of U\&C |
| Specialist Visits | Covered in full | 90\% | 90\% of U\&C |
| Anesthesiologist | Covered in full | 90\% | 90\% of U\&C |

## SECTION V: SUMMARY OF PLAN PROVISIONS

| Surgery | Covered in full | 90\% | 90\% of U\&C |
| :---: | :---: | :---: | :---: |
|  | HMO Illinois | Blue Cross Blue Shield PPO |  |
|  | (Blue Cross HMO) | In Network PPO | Non-PPO Network |
| Maternity |  |  |  |
| Delivery, including pre/post-natal visits | \$20 copay for 1st visit | 90\% | 90\% of U\&C |
| Mental Health/Chemical Dependency |  |  |  |
| Outpatient Visits - Mental Health | \$20 copay per visit | $\begin{aligned} & 50 \% \text { of U\&C, \$2,000 } \\ & \text { annual max } \end{aligned}$ | $\begin{aligned} & 50 \% \text { of U\&C, } \$ 2,000 \\ & \text { annual max } \end{aligned}$ |
| Inpatient Care - Mental Health | 30 days per year | 90\%, 60 day max | 80\%, 60 day max |
| Outpatient Visits Chemical Dependency | \$20 copay per visit | $\begin{aligned} & 50 \% \text { of U\&C, } \$ 2,000 \\ & \text { annual max } \end{aligned}$ | $\begin{aligned} & \text { 50\% of U\&C, } \$ 2,000 \\ & \text { annual max } \end{aligned}$ |
| Inpatient Care - Chemical Dependency | 30 days per year | 90\%, 30 day max | 80\%, 30 day max |
| Emergency Care |  |  |  |
| Ambulance | Covered in full | 90\% | 90\% of U\&C |
| Prescriptions |  |  |  |
| Retail (30 days): <br> Generic <br> Formulary Brand <br> Non-Formulary Brand | \$9 copay <br> \$25 copay <br> \$45 copay | \$9 copay <br> \$25 copay <br> \$45 copay | \$9 copay <br> + 75\% after copay <br> \$25 copay <br> $+75 \%$ after copay <br> $\$ 45$ copay <br> $+75 \%$ after copay |
| Mail Order (90 days): Generic <br> Formulary Brand Non-Formulary | \$18 copay <br> \$50 copay <br> \$90 copay | \$18 copay <br> \$50 copay <br> $\$ 90$ copay | \$18 copay <br> $+75 \%$ after copay <br> \$50 copay <br> $+75 \%$ after copay <br> $\$ 90$ copay <br> $+75 \%$ after copay |
| Additional Services |  |  |  |
| Prosthetic Devices \& DME | Covered in full | 90\% | 90\% of U\&C |
| Blood | Covered in full | 90\% | 90\% of U\&C |
| Home Health Services | Covered in full | 90\% | 90\% of U\&C |
| Vision Services | \$20 copay | Not covered | Not covered |
| Wellness Care |  |  |  |
| Includes routine: <br> Adult and pediatric physical checkup Well baby care <br> Pre-School exams Immunizations including shingles vaccine Lab and x-ray Bone density testing Sleep study EKG | Covered in full | $100 \%$, \$600 annual max <br> (Services not subject to annual maximum: Routine mammogram, annual routine pap smear test, PSA and digital rectal exam) | $100 \%$, \$600 annual max <br> (Services not subject to annual maximum: Routine mammogram, annual routine pap smear test, PSA and digital rectal exam) |

## SECTION VI: GLOSSARY

## Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Present Value of Future Benefits (PVFB) and expenses which is not provided for by future Normal Costs. Generally this means the portion of the PVFB attributable to past service.

## Actuarial Assumptions

Assumptions as to the occurrence of future events affecting OPEB costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

## Actuarial Cost Method

A procedure for determining an actuarially equivalent allocation of the present value of future benefits (PVFB) to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

## Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for an OPEB plan.

## Actuarial Valuation Date

The date as of which an actuarial valuation is performed.

## Actuarial Value of Assets

The value of cash, investments and other property belonging to an OPEB plan, as used by the actuary for the purpose of an Actuarial Valuation.

## Annual Required Contributions (ARC)

The employer's periodic required contributions to a defined benefit OPEB plan, calculated in accordance with the plan provisions, actuarial assumptions, actuarial cost method and other actuarial method prescribed by GASB 43.

## Discount Rate

The rate equal to the expected return on invested assets relative to the assets that will be used to pay for the benefits specified by the OPEB plan.

## SECTION VI: GLOSSARY

## Funding Policy

The program for the amounts and timing of contributions to be made by plan members, employer, and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by an OPEB plan.

## Healthcare Cost Trend

The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

## Level Percentage of Projected Payroll Amortization Method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

## Normal Cost (NC)

That portion of the present value of future benefits which is allocated to a valuation year by the Actuarial Cost Method. The normal cost is specific to the cost method used.

## Other Postemployment Benefits (OPEB)

Postemployment benefits other than pension benefits. Other postemployment benefits (OPEB) include postemployment healthcare benefits, regardless of the type of plan that provides them, and all postemployment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits. Other types of OPEB benefits include postemployment life insurance, educational benefits, dues, discounts, and any other postemployment non-pension benefit.

## Pay-As-You-Go

A method of financing an OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

## Payroll Growth Rate

An actuarial assumption with respect to future increases in total covered payroll attributable to inflation; used in applying the level percentage of projected payroll amortization method.

## SECTION VI: GLOSSARY

## Per Capita Costs

Expected benefit cost for the valuation year on a per individual basis. Per capita costs represent the expected benefit payments specific to the characteristics of the plan participants; subsidies to or from another employee benefit group are not permitted.

## Plan Assets

Resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employer(s) or plan administrator, for the payment of benefits in accordance with the terms of the plan.

## Plan Members

The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

## Postemployment Healthcare Benefits

Medical and other health-related benefits and reimbursements provided to terminated or retired employees and their dependents and beneficiaries.

## Present Value of Future Benefits (PVFB)

Projected benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members upon retirement) as a result of their service through the valuation date and their expected future service. The actuarial present value of projected future benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment (taking into account mortality, turnover, probability of participating in plan retirement, etc.). Alternatively, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay the projected benefits when due. Generally the PVFB includes expenses associated with the plan (claims adjudication, investment, etc.).

## Substantive Plan

The terms of an OPEB plan as understood by the employer(s) and plan members. If administrative practices are different from the written plan benefits and are expected to continue, then the substantive plan is based on such administrative practices.

