# ACTUARIAL VALUATION REPORT 

## CITY OF NEW ORLEANS

## EMPLOYEES' RETIREMENT SYSTEM

Annual Actuarial Valuation as of January 1, 2013

## INTRODUCTION

We present in this report the results of our actuarial valuation of the City of New Orleans Employees' Retirement System as of January 1, 2013. The plan is intended to be actuarially funded, and we have performed this actuarial valuation using conventional and generally accepted actuarial methods, assumptions, and principles as would typically be applied to a qualified defined benefit pension plan subject to the funding standards of the Employee Retirement Income Security Act of 1974 (ERISA), but applied, of course, in the context of governmental plans within the meaning of the Internal Revenue Code and Regulations. We have performed the actuarial valuation using the Entry Age Normal Cost Method. A full description of the funding method is contained beginning on page 4 of the report. There were changes made in the actuarial assumptions involving healthy and disabled mortality, turnover, disability incidence and expected time of retirement as a result of the 2006-2010 Actuarial Experience Study. Full details of the revised assumptions are contained in Exhibit II of the Appendix.

The Summary of Plan Provisions presented in the Appendix is intended to describe the principal benefits provided by the plan, particularly from the perspective of their significance in affecting the actuarial liability and cost of the plan. The summary is not, of course, intended to be a comprehensive or complete description of all benefits payable under all circumstances under the pension plan.

## SUMMARY

I. FINANCIAL AND ACTUARIAL STATUS as of January 1, 2013

| Market Value of Assets | $\$ 338,607,461$ | Page 4 |
| :--- | :--- | :--- |
| Actuarial Value of Assets | $\$ 372,049,545$ | Page 6 |

II. EMPLOYER AND EMPLOYEE CONTRIBUTIONS for the Plan Year Beginning January 1, 2013

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Contribution (As \% of Payroll) $\$ 25,801,019$ (27.778\%) Page 10
Expected Total Employee
Contributions (As \% of Payroll) \$ 5,572,890 (6.000\%) Page 10
Recommended Employer
Contribution (As \% of Payroll) $\$ 20,228,129$ (21.778\%) Page 10
III. NET ACTUARIAL EXPERIENCE for the Plan Year Ending December 31, 2012
1.323\%

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## CERTIFICATION

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## I. FINANCIAL AND ACTUARIAL STATUS as of January 1, 2013

We have conducted this actuarial valuation using employee data and asset information furnished by the plan administrator and the auditors. This section of the report presents a summary of the assets of the plan at Fair Market Value. The funding method used to determine the actuarial liabilities is described in Section II and the actuarial assumptions upon which the liabilities are based are summarized in Exhibit II of the report.

## ASSETS

The following table showing the composition of the assets as of December 31, 2012 is based on information supplied by the auditors through the System administrative staff.

## Table 1

## Statement of Assets at Fair Market Value

as of December 31, 2012
Assets $\quad \underline{\text { Market Value }}$

Bonds and Fixed Income Type Securities . \$ 12,131,702
Stocks and Equity Type Securities 279,945,531
Cash \& Equivalents $\quad 16,629,371$
Alternative Investments
Accrued Interest \& Dividends 28,810,228

Accounts Receivable (Net)
124,879
Net of Accounts Payable and Other Liabilities
2,542,699

Net Assets Available for Benefits
\$338,607,461 ${ }^{*}$

* The actuarial value of assets used in this valuation is Adjusted Market Value as determined in Table 3.


## COST OF LIVING RESERVE

Historically, the Board of Trustees had adopted the policy of maintaining a "Cost of Living Account" representing a "reserve" to provide for cost of living payments to retirees and beneficiaries from excess realized investment earnings. In the January 1, 1996 and prior actuarial valuations, this reserve was used as an offset to assets in developing the actuarial value of assets. Beginning with the January 1, 1997 and in subsequent actuarial valuations, this reserve was included with other actuarial liabilities in Table 5, item (1). Effective with the January 1, 2007 actuarial valuation, the Board eliminated the inclusion of this "reserve" in system actuarial liabilities in favor of the direct demonstration of the amount available for cost of living payments as described below.

The "reserve" described above was intended to represent the amount available for such cost of living payments pursuant to Section 114-204 (7) of the New Orleans Code governing System benefits. After analysis of the language of the foregoing section, to wit that the Board ". . . shall be authorized to retain interest earnings in excess of an average 3.5 percent on investments of the system to be used to provide a cost of living increase in benefits for members who have retired in the past or who may retire in the future, in an amount not to exceed three percent of the original benefit for each year of retirement; . . .", the Board has adopted a revised policy of determining the amount available pursuant to the foregoing section as follows. The Board has made the interpretation that "interest earnings" represents cumulative market-to-market investment performance of the fund and that "in excess of an average 3.5 percent" means cumulative investment performance in excess of 3.5 percent compounded annually. Reference to Exhibit VI in the Appendix indicates that a cumulative investment performance of 3.5 percent compounded annually would have resulted in total system assets of $\$ 65,256,055$ as of December 31, 2012 based on the assumption that there had not been any "one time" cost of living payments during the 24 year period considered. Actual fund performance during the 24 year period considered resulted in a market value of $\$ 338,607,461$ after recognition of the "one time" cost of living payments actually made.

By reference to Exhibit V in the Appendix, it will be noted that the cumulative compound annual rate of return based on market values has been $7.21 \%$, compounded annually, for the period January 1, 1989 through December 31, 2012.

## ACTUARIAL VALUE OF ASSETS

Beginning with the January 1, 1997 actuarial valuation, the method of determining the actuarial value of assets was changed to adjusted market value from the former adjusted book value basis. This method reflects actual market value performance over a seven year period ending on the valuation date. The market value performance is averaged over the seven year period by reflecting the actual external cash flow and adjusting each prior year's market value to the current valuation date using the actuarial interest assumption in effect for each year.

The following table develops the Adjusted Market Value of Assets to be used as the Actuarial Value of Assets in the actuarial valuation.

Table 3
Actuarial Value of Assets
As of December 31, 2012

| Plan | Beginning | Net External Market Value |  | Ending | Market Value Adj. Market |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | Market | Cash Flow | Inv. Income | Market | Performance | Value |
| Ending | Value | For Year | For Year | Value | For Year | Component |
| 2006 | 392,146,264 | -29,263,702 | 41,708,472 | 404,591,034 | 11.0482\% | 479,177,297 |
| 2007 | 404,591,034 | -25,563,484 | 33,770,375 | 412,797,925 | 8.6191\% | 485,447,190 |
| 2008 | 412,797,925 | -24,565,671 | -120,890,979 | 267,341,275 | -30.1829\% | 283,863,112 |
| 2009 | 267,341,275 | -17,055,427 | 59,869,583 | 310,155,431 | 23.1323\% | 334,110,298 |
| 2010 | 310,155,431 | -18,232,506 | 42,485,923 | 334,408,848 | 14.1131\% | 357,102,178 |
| 2011 | 334,408,848 | -12,523,028 | -4,276,183 | 317,609,637 | -1.3031\% | 326,039,276 |
| 2012 | 317,609,637 | -14,844,479 | 35,842,303 | 338,607,461 | 11.5550\% | 338,607,461 |

Years Included: 7 -142,048,297 88,509,494
Average Adj. MV: \$372,049,545

## DESCRIPTION OF ACTUARIAL COST METHOD

Under the Entry Age Normal Cost Method, the normal cost of the plan is designed to be a level percentage of payroll, calculated on an individual basis, spread over the entire working lifetime of each participant. The future working lifetime is determined from each participant's hypothetical entry age into the plan assuming the plan had always been in existence, to his expected retirement date. The actuarial accrued liability is the amount of total liability not covered by future entry age normal costs. This amount is composed of the actuarial value of benefits already funded (assets) and those not yet funded (unfunded actuarial liability).

The plan's funding cost for the year is the sum of the Entry Age Normal Cost and the amount necessary to amortize the remaining unfunded actuarial liability as of the valuation date over the adopted amortization period as discussed below. Effective with the January 1, 2012 actuarial valuation, the investment return assumption was changed from $7.75 \%$ annually to $7.50 \%$ annually.

Governmental Accounting Standards Board (GASB) Statements 25 and 27 permit the amortization basis to be "open" (that is, a constant number of years) or "closed" (that is, with the remaining period reducing by one each year). GASB 25 and 27 further permit either a level dollar amortization method (more conservative) or a method based on increasing valuation payroll (less conservative). Beginning with the January 1, 2011 actuarial valuation, the actuarial cost method was changed from the Frozen Initial Liability Method to the Entry Age Normal Cost Method. The former amortization basis used through the January 1, 2009 actuarial valuations consisted of a level dollar amortization for a ten (10) year "closed" amortization period from January 1, 2008 through December 31, 2017. Effective January 1, 2011, this was replaced by a level dollar amortization for an "open" ten (10) year amortization period effective on each valuation date. Beginning with the January 1, 2012 actuarial valuation the open ten (10) year amortization amount was changed to an open fifteen (15) year amortization and that amount is developed later in this section and presented in Table 5.

## Table 4

## Entry Age Normal Cost for Plan Year

Beginning January 1, 2013
(1) Total Entry Age Normal Cost of All Active Participants \$ 7,254,652
(2) Current Annual Payroll of Active Participants * \$ 92,881,497
(3) Composite Entry Age Normal Cost Percentage:
(1) divided by (2)
7.811\%

* There are 2,327 active participants: 1,200-fully vested; 0-partially vested; 1,127-not vested.

Table 5
Entry Age Normal Cost Unfunded Actuarial Liability as of January 1, 2013
(1) Actuarial Present Value of

Expected Benefits to Plan
Participants
(a) Total Active
\$ 237,110,200
(b) Ordinary \& Separation Retirement
(c) Beneficiaries
(d) Disabled Retirement

263,389,125
(e) Terminated Vested

$$
10,1.0,121
$$

(f) D.R.O.P. Account Balance

17,163,004
(g) D.R.O.P. Future Benefits

3,722,685
11,624,386

Total Inactive
\$ 356,755,175
Grand Total
\$ 593,865,375
(2) Actuarial Present Value of Future Normal Cost Contributions:

48,470,595
(3) Entry Age Normal Cost Accrued Actuarial Liability
(a) Active: (1)(a) - (2)
\$ 188,639,605
(b) Inactive: (1)(g)
356,755,175
(c) Total: $(3)(\mathrm{a})+(3)(\mathrm{b})$
545,394,780
(4) Actuarial Value of Assets
(from Table 3)
372,049,011
(5) Unfunded EAN Actuarial Liability as of January 1, 2013:
(3)(c) - (4)
\$ 173,345,235

## TOTAL CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2013

The contribution for a plan year equals the normal cost, plus the expense assumption cost, plus the amount necessary to amortize the Entry Age Normal Cost (EAN) Unfunded Actuarial Liability. This Unfunded Liability for funding purposes is $\$ 173,345,235$, as discussed on page 4. The annual amount required to amortize this EAN Unfunded Liability over the open 15 year period ending December 31, 2027 at $7.50 \%$ annual interest is \$18,267,723.

The total plan contribution on this basis is developed in the following Table 6.

## Table 6

Total Required Contribution for the
Plan Year Beginning January 1, 2013
(1) Normal Cost
(From Table 4) \$ 7,254,652
(2) Expense Assumption Cost
( $0.3 \%$ of Annual Covered Payroll)
278,644
(3) Net Annual charge Required for 15 Year Amortization of EAN Unfunded Liability (See Above) $18,267,723$
(4) Total Plan Contribution as of January 1, 2013: (1) $+(2)+(3)$ \$ 25,801,019 (27.778\%) *
(5) Annual Employee Plan Contributions as of January 1, 2013
\$ 5,572,890 (6.000\%) *
(6) Employer Contribution as of January 1, 2013: (4) - (5)
\$ 20,228,129 (21.778\%) *

* Expressed as a percentage of annual participant payroll of $\$ 92,881,497$.
III.

Actuarial experience refers to the comparison of actuarial results of each valuation with those expected from the previous valuation according to the actuarial assumptions. Under the Entry Age Normal Cost Method the basis of comparison is the change in the total plan actuarial cost, expressed as a percentage of payroll. A decrease or increase in the total plan actuarial cost percentage is normally indicative of favorable (gains) or unfavorable (losses) experience, respectively. If the overall experience follows the general pattern indicated by the assumptions presented in the Appendix, the percentage of payroll will remain unchanged, except for routine fluctuations.

The method of determination of the actuarial gain or loss over the past plan year is presented in the table below.

## Table 7 <br> Net Actuarial Experience <br> for the Plan Year Ending December 31, 2012

(1) Total Plan Actuarial Cost Percentage as of January 1, $2013 \quad 27.778 \%$
(2) Total Plan Actuarial Cost Percentage as of January 1, 2012 $25.108 \%$
(3) Net Change in Total Plan Cost Percentage: $(1)-(2) \quad+2.670 \%$
(4) Change in Total Plan Cost Percentage Due to Change in Assumptions: $+1.347 \%$
(56) Change in Total Plan Cost Percentage Due to Actuarial Experience: (3)-(4) $+1.323 \%$

## Table 8

Net Actuarial Experience by Component for the Plan Year Ending December 31, 2012

## Component

Interest Assumption
Salary Scale
New Retirements (Including Disability)
New Entrants
Inactive Mortality
Active Mortality and Turnover
2012 COLA Payment
Inactive Data Changes
Active Data Changes
Net Change From All Other Sources

Grand Total
$\frac{\text { Effect on Employer cost }}{\text { Gain (-) or Loss ( }+ \text { ) }}$
Gain (-) or Loss (+)

$$
+2.330 \%
$$

$-0.663 \%$
$+0.350 \%$
$-3.231 \%$
$+0.217 \%$
$-0.589 \%$
$+0.201 \%$
$+1.205 \%$
$+0.858 \%$
$+0.648 \%$
$+1.323 \%$

## APPENDIX

## EXHIBIT I

## EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF NEW ORLEANS

## SUMMARY OF PLAN PROVISIONS

EFFECTIVE DATE:

CREDITABLE SERVICE:

EARNABLE COMPENSATION:

AVERAGE COMPENSATION:

EMPLOYEE CONTRIBUTIONS:

EMPLOYER CONTRIBUTIONS:

1947; Restated for Plan Qualification, January 1, 1994; Last major amendment date - January 1, 2013.

Prior service plus membership service for which credit is allowable. Also, one month service credit given for every twenty-one days accumulated sick and/or annual leave. Credit for prior military service may be purchased (maximum 4 years) by active contributing member who reaches age 65 or who has at least 10 years of service; lump sum payment required based on $4 \%$ of excess over first $\$ 100$ monthly average for each month claimed plus $4 \%$ compound interest. After March 1, 1980, military service available only to those who will not receive a benefit from another public pension plan. (except Social Security)

Annual compensation paid to an employee; includes tenure pay and excludes overtime pay.

Average annual earned compensation of a member for highest thirty-six successive months (forty-eight effective January 1, 2014 and sixty months effective January 1, 2015) of service as a member, minus $\$ 1,200$. Effective June 1, 2002, \$1,200 removed. After April 29, 1979, earned compensation based on pay for regular required work and excludes State supplemental pay.
$4 \%$ of earnable compensation over $\$ 1,200$ per year. Effective June 1, 2002, \$1,200 removed. Effective January 1,2012 the rate is $5 \%$ and effective January 1, 2013 the rate is $6 \%$.

Certain percentage of earnable compensation of each member, known as "Normal Contributions," determined on basis of regular interest and mortality tables adopted by the Board, and additional percentage of earnable compensation, known as "Accrued Liability Contributions," determined by actuary on basis of the amortization period adopted by the board from time to time.

## EXHIBIT I (Continued)

MEMBERSHIP:

## RETIREMENT:

Eligibility:

Benefits:

Includes:

1) Employees hired on July 1, 1947 and after, who become members as condition of employment, except for those over 65 unless 10 years prior service.
2) Employees hired before July 1, 1947 became members, unless they elected not to join.
3) For officials elected or appointed for fixed terms, membership is optional.
4) All officers and employees of various judicial and parochial offices of the parish, except those covered by another system and those for whom no contributions are made by respective officers, are eligible.
5) For employees of French Market Corporation, membership is optional; eligibility is contingent on not having attained age 55.
6) Effective November 1, 1993, membership includes the full-time employees of the Coroner's Office.
7) Effective April 1, 1997, membership includes the fulltime employees of the District Attorney's Office.

Age 60 and 10 years of service: age 65 and 5 years of service; any age and 30 years of service. Effective January 1, 2002, any member whose age and service total 80 may retire with no age reduction.

Retirement allowance, consisting of (1) and (2) below:

1) An annuity, which is the actuarial equivalent of employee's accumulated contribution; plus

EXHIBIT I (Continued)
2) Effective for members retiring on or after January 1 , 2002, an annual pension, which, together with above annuity, provides total retirement allowance equal to $2.5 \%$ of average compensation times first 25 years, plus $4 \%$ of average compensation times creditable service over 25 years.
3) Effective for members retiring before 2002, but on or after January 1, 1983, an annual pension, which, together with above annuity, provides total retirement allowance equal to $2 \%$ of average compensation times first 10 years, plus $21 / 2 \%$ of average compensation times next 10 years, plus $3 \%$ of average compensation times next 10 years, plus $4 \%$ of average compensation times creditable service over 30 years.
4) Effective January 1, 1983, additional pension equal to $2 \%$ of $\$ 1,200$ times first 10 years, plus $21 / 2 \%$ of $\$ 1,200$ times next 10 years, plus $3 \%$ of $\$ 1,200$ times next 10 years, plus $4 \%$ of $\$ 1,200$ times service over 30 years. Ceases at 62 or at eligibility for Social Security, whichever comes first. Effective January 1, 2002, the $\$ 1,200$ exclusion will not apply.
5) Additional pension for member who reaches age 65 with 20 or more years and the retirement allowance under (1) and (2) above is less than $\$ 1,200$ per year; to produce total retirement allowance of $\$ 1,200$ per year.
6) Effective January 1, 1982, for service retirement prior to age 62 with less than 30 years of Service, (3) and (4) above are reduced by $3 \%$ for each year below 62. However, effective January 1, 1996, this reduction is not made if employee has at least 30 years of service. Effective January 1, 2002, no reduction if age and service total at least 80.
7) Maximum Benefit: Benefit not to be greater than $100 \%$ of average compensation, unless member has already accrued a larger benefit as of April 1978.

## EXHIBIT I (Continued)

8) Minimum Benefit: Effective June 1,1999 , benefit of $\$ 300$ per month for retirees with 10 years of service at retirement.
9) Form of Benefit: Modified cash refund annuity - If a member dies after retirement and before receiving the amount of his accumulated contributions in annuity payments, then lump sum balance of his contributions is paid to beneficiary.
10) Cost-of-Living: Board of Trustees retains excess over average $31 / 2 \%$ interest earnings to provide Cost-ofLiving increases in benefits to retirees (past or future) not to exceed $3 \%$ of original benefit per each year of retirement. Effective January 1, 2001, additional one-time increase of $1 \%$ times member's or beneficiary's current monthly benefit times whole calendar years from date benefit commenced.

## DISABILITY:

Ordinary Disability Retirement:
Eligibility:
10 years of credited service and totally and permanently incapacitated for performance of duty (certified by physician nominated by Board).

Benefit:
If eligible, service retirement allowance:
a) An annuity, which is the actuarial equivalent of employee's accumulated contributions; and
b) An annual pension, which, together with a) equals $75 \%$ of service allowance that would have been payable at age 65 had member continued in service to age 65 , computed on average compensation (minimum benefit $\$ 300$ per year).

Accidental Disability Retirement:
Eligibility:

Benefit:
Accident sustained in service as member and while in performance of duty (and certification by physician nominated by Board of incapacity).

1) If eligible - service retirement allowance.

## EXHIBIT I (Continued)

Note:

## DEATH BENEFITS:

## Ordinary Death Benefits:

Eligibility:
Benefits:
Notes:
2) If ineligible for retirement allowance, then accidental disability retirement allowance, consisting of:
a) An annuity which is the actuarial equivalent of employee's accumulated contributions; and
b) An annual pension, equal to the difference between the annuity and $65 \%$ of earnable compensation for year preceding Date of Accident.

Medical examinations required every three years for those disability retirees under 60 . Accidental disability benefits are offset by workmen's compensation payments, if any.

Death of member in active service.
Employee's accumulated contributions paid to beneficiary.

1) If member has three years Creditable Service, additional Lump Sum Benefit equal to $1 / 4$ of earnable compensation for year preceding death, plus $5 \%$ of such earnable compensation for each additional year of creditable service (benefit not to exceed compensation made before death).
2) If, at date of death, member was eligible for retirement and leaves Surviving Spouse, Surviving Spouse shall be eligible to elect either Option Number 2 or Lump Sum refund of Employee's contributions.
3) Offset by Worker's Compensation benefits.
4) If, at date of death, member was ineligible for retirement, but was at least 55 years of age and had

## SEPARATION BENEFITS:

Note:

OPTIONAL FORMS OF BENEFIT:

10 or more years of creditable service, or was under age 55 and had at least 20 years of creditable service, then surviving spouse may elect to receive benefit equal to an actuarially reduced amount based upon the members' age and years of creditable service. Benefit to cease when surviving spouse reaches age of eligibility for Social Security.

1) Effective January 1, 2002, a member who separates with 5 years of Creditable Service may allow his accumulated contributions to remain on deposit and service retirement allowance to begin as early as age 65 .

Prior to January 1, 2002, withdrawal with 10 years of Creditable Service prior to separation, member may allow accumulated contributions to remain on deposit and service retirement allowance to begin as early as age 60 (subject to reduction if retirement is elected before age 62). If death before retirement, return of accumulated contributions with interest.
2) Upon withdrawal without 5 years Creditable Service, Employee is entitled to return of his accumulated contributions with interest or may allow contributions to remain on deposit for maximum of five years. (In case of employee's death, then accumulated contribution plus interest are paid to beneficiary.)

If employee re-enters after receipt of refund and continues service thereafter for at least six months, he may repay amount of refund plus the amount of employer contributions, with compound interest, to receive prior creditable service again.

1) If a member dies before receiving, in annuity payments, the value of his annuity at the time of his retirement, then balance is payable to his beneficiary.
2) $100 \%$ survivor's benefits - reduced retirement benefit continued to beneficiary at member's death. If the spouse predeceases the retiree, the benefit reverts back to the maximum amount.

## PAYMENT OF BENEFITS:

## RECIPROCITY:

EARLY RETIREMENT WINDOW:

## DROP ACCOUNT:

3) $50 \%$ survivor's benefits - $50 \%$ of reduced retirement benefit continued to beneficiary at member's death. If the spouse predeceases the retiree, the benefit reverts back to the maximum amount.
4) Other benefits of equal actuarial value, upon approval of Board.

On monthly basis, except when total retirement allowance is less than $\$ 120$ per year; then, quarterly, semi-annually, or annually, as Board decides.

Effective July 16, 1974, provisions made for reciprocal transfers of service and funds between this System and Employees' Retirement System of the Sewerage and Water Board of New Orleans, in the event an employee transfers from one employing agency to the other; service credits were transferred from sending system to receiving system provided all employee contributions plus earned interest and all employer contributions plus agreed-upon interest were transferred; effective September 23, 1993 retroactive for transfers on and after October 17, 1988), agreement was amended to provide for a transfer from the sending system to the receiving system equal to the GASB \#5 liability of the sending system at $7 \%$ interest, $5 \%$ salary scale, the remaining GASB \#5 actuarial assumptions and the salary and benefit structure in effect for the sending system at time of transfer.

From January 1, 1987 through April 30, 1987 an early retirement window was available. Any member who had at least 15 years of service and whose age plus service totalled at least 70 , could retire during the window with no reduction for early retirement. Member must have converted all sick leave into service credits.

Effective January 1, 1994, any member who is eligible for a service retirement under Section 114-201(a) may participate in the DROP program:

## EXHIBIT I (Continued)

1) A member can participate for up to five years.
2) When a member joins the DROP, he stops contributing to and earning benefits in the system. Employer contributions also stop. His retirement benefit begins being paid into his DROP account.
3) Interest is earned on the DROP account at an annual rate set by the Board. Members of the DROP receive cost-of-living increases, as if they would have received such raises as a retiree.
4) Upon termination of employment at the end of the specified period of DROP participation, the DROP account is paid out. After his DROP period ends and upon continued or re-employment, the member may resume contributions and earn a supplemental benefit based on current covered compensation.
5) If at the end of a Member's period of DROP participation he does not terminate employment, payments into the DROP shall cease and no further interest shall be earned or credited to the account. Payments shall not be made until employment is terminated.

## SUMMARY OF PLAN CHANGES IN RECENT YEARS

April 27, 1978

January 1, 1979

April 29, 1979

September 17, 1981

January 1, 1982

January 1, 1983

January 1, 1987

May 21, 1987

Monthly retirement benefit shall not exceed average monthly compensation of a member.

Mandatory retirement age is 70 .
Defined "Average Compensation" and "Based earned compensation".

Allows for purchase of credit for prior military service.
"Ordinary Death Benefits" is described.

Any member who has 30 years of creditable service may retire regardless of age.

Additional pension allotment was outlined.

Normal Retirement Benefits amended by the addition of $4 \%$ of average compensation times creditable service over 30 years. Also, $4 \%$ of $\$ 1,200$ times service over 30 years is provided for in the additional pension.

For those retiring under age 55 , benefit reduced by $2 \%$ for each year under 55.

Any member with a minimum of 15 years of creditable service and age plus service equal to 70 , providing that he converts all sick leave to membership credit, may retire with no reduction in benefits during the period of January 1, 1987 through April 30, 1987 only.
"Average Compensation" re-defined for computing benefits from September 30, 1986 through November 30, 1989.

## EXHIBIT I (Continued)

## SUMMARY OF PLAN CHANGES IN RECENT YEARS (Continued)

May 21, 1987

January 19, 1989

September 23, 1993

November 1, 1993

January 1, 1994

January 1, 1996

April 1, 1997
June 1, 1999

Offset of plan benefits with Workers' Compensation and Social Security benefits is clarified.
"Employee" re-defined to provide for part-time service credit.

Purchase of part-time service credits allowed.
Reciprocity agreement with Sewerage and Water Board amended retroactive for transfers on and after October 17, 1988 (see Page 15 of this report for details).

Membership extended to Coroner's Office.
Plan amended for qualification under Internal Revenue Code for Governmental Plans.

The Deferred Retirement Option Plan was adopted to allow members terminating employment and accepting a service retirement allowance under plan section 55-34(1) to participate in this program.

For members retiring on or after January 1, 1994, and choose either Option 2 or Option 3, if the beneficiary predeceases the retiree, the reduced benefit reverts back to the maximum amount beginning the month following notification of death.

Any member with 30 years of creditable service may retire regardless of age, with no reduction in benefits.

The DROP period extended from two to five years. The two-year waiting period was removed.

Membership extended to District Attorney's Office.
Minimum benefit of $\$ 300$ per month for retirees with 10 years of service at retirement.

## EXHIBIT I (Continued)

## SUMMARY OF PLAN CHANGES IN RECENT YEARS (Continued)

January 1, 2001

January 1, 2002

January 1, 2002

January 1, 2002

January 1, 2002

June 1, 2002

January 1, 2012

January 1, 2012

Additional cost of living increase to members and beneficiaries equal to a $1 \%$ increase times the current monthly benefit times whole calendar years since benefit commenced (one-time increase).

Rule of 80 adopted. Age plus service equal 80. No reduction in benefit.

Normal Retirement Benefit formula amended to $2.5 \%$ of average compensation times the first 25 years of creditable service plus $4 \%$ times service over 25 years.
"Creditable service" redefined.

Any member who separates from service before age 65 with 5 years of service and leaves his accumulated contributions on deposit may receive a retirement allowance beginning at or after age 65 .
$\$ 1,200$ exclusion on earnings removed.

Period for calculation of average compensation changed to 48 months effective January 1, 2014 and 60 months effective January 1, 2015.

Employee contribution percentage changed to $5 \%$ of all pension compensation effective January 1, 2012 and to 6\% effective January 1, 2013.

## CITY OF NEW ORLEANS

 EMPLOYEES' RETIREMENT SYSTEM
## STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES

Actuarial Funding Method:

Cost Method:
Asset Valuation Method:

## Actuarial Assumptions

Interest:

Healthy Mortality:

Disabled Mortality:

Turnover:

Salary Increases:
Retirement:

Disability Incidence:

Entry Age Normal Cost Method.
Adjusted Market Value using seven year smoothing.
7.50\% compounded annually (changed from 7.75\% effective with January 1, 2012 Actuarial Valuation).

RP-2000 Combined Healthy Mortality Table (Sex Distinct) Without Projection, with ages set forward six years below age 70 for males and four years below age 65 for females.

RP-2000 Disability Mortality Table (Sex Distinct) Without Projection.

Table developed from the 2006-2010 Actuarial Experience Study.
$5.0 \%$ compounded annually.
Based on the results of the 2006-2010 periodic actuarial experience study, it has been assumed that employees retire (or enter D.R.O.P.) one year after the earliest of: first, attainment of 30 years of service; second, the later of age 60 and completion of 10 years of service; third, attainment of age 65 and completion of 20 years of service; fourth, satisfaction of the "Rule of 80 " (age plus service equals or exceeds 80 ). Employees who would have retired (or entered D.R.O.P.) based on the foregoing criteria on or prior to the valuation date are assumed to retire three years after the valuation date.

Table developed from the 2006-2010 Actuarial Experience Study.

Note: The full rate set of assumptions for mortality, turnover and disability incidence is contained in the table in the following pages.

## CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUATION ASSUMPTION SET
ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

|  | MORTALITY |  | WITHDRAWAL |  | DISABILITY MORTALITY |  | DISABILITY INCIDENCE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AGE | MALE | FEMALE | MALE | FEMALE | MALE | FEMALE |  |
| 15 | . 000357 | . 000190 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 16 | . 000366 | . 000191 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 17 | . 000373 | . 000192 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 18 | . 000376 | . 000194 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 19 | .000376 | . 000197 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 20 | . 000378 | . 000201 | . 240400 | .176300 | . 022571 | . 007450 | . 001650 |
| 21 | . 000382 | . 000207 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 22 | . 000393 | . 000214 | . 240400 | .176300 | . 022571 | . 007450 | . 001650 |
| 23 | . 000412 | . 000223 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 24 | . 000444 | . 000235 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 25 | . 000499 | . 000248 | .240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 26 | . 000562 | . 000264 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 27 | . 000631 | . 000307 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 28 | . 000702 | . 000350 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 29 | . 000773 | . 000394 | . 240400 | . 176300 | . 022571 | . 007450 | . 001650 |
| 30 | . 000841 | . 000435 | . 122500 | . 128300 | . 022571 | . 007450 | . 001650 |
| 31 | . 000904 | . 000475 | . 122500 | . 128300 | . 022571 | . 007450 | . 001500 |
| 32 | . 000964 | . 000514 | . 122500 | . 128300 | . 022571 | . 007450 | . 001350 |
| 33 | . 001021 | . 000554 | . 122500 | . 128300 | . 022571 | . 007450 | . 001200 |
| 34 | .001079 | . 000598 | . 122500 | . 128300 | . 022571 | . 007450 | . 001050 |
| 35 | . 001142 | . 000648 | . 080000 | . 083200 | . 022571 | . 007450 | . 000900 |
| 36 | . 001215 | . 000706 | . 080000 | . 083200 | . 022571 | . 007450 | . 001050 |
| 37 | . 001299 | . 000774 | . 080000 | . 083200 | . 022571 | . 007450 | . 001200 |
| 38 | . 001397 | . 000852 | . 080000 | . 083200 | . 022571 | . 007450 | . 001350 |
| 39 | . 001508 | . 000937 | . 080000 | . 083200 | . 022571 | . 007450 | . 001500 |
| 40 | . 001616 | .001029 | . 066800 | . 060000 | . 022571 | . 007450 | . 001350 |
| 41 | . 001734 | . 001124 | . 066800 | . 060000 | . 022571 | . 007450 | . 001800 |
| 42 | . 001860 | . 001223 | . 066800 | . 060000 | . 022571 | . 007450 | . 002250 |
| 43 | . 001995 | . 001326 | . 066800 | . 060000 | . 022571 | . 007450 | . 002700 |
| 44 | . 002138 | . 001434 | . 066800 | . 060000 | . 022571 | . 007450 | . 003150 |
| 45 | . 002449 | . 001550 | . 050000 | . 051700 | . 022571 | . 007450 | . 003300 |
| 46 | . 002667 | . 001676 | . 050000 | . 051700 | . 023847 | . 008184 | . 003750 |
| 47 | . 002916 | . 001852 | . 050000 | . 051700 | . 025124 | . 008959 | . 004200 |
| 48 | . 003196 | . 002018 | . 050000 | . 051700 | . 026404 | . 009775 | . 004650 |
| 49 | . 003624 | . 002207 | . 050000 | . 051700 | . 027687 | . 010634 | . 005100 |
| 50 | . 004200 | . 002424 | . 050000 | . 040000 | . 028975 | . 011535 | . 005250 |
| 51 | . 004693 | . 002717 | . 050000 | . 040000 | . 030268 | . 012477 | . 005400 |
| 52 | . 005273 | . 003090 | . 050000 | . 040000 | . 031563 | . 013456 | . 005400 |
| 53 | . 005945 | . 003478 | . 050000 | . 040000 | . 032859 | . 014465 | . 005550 |
| 54 | .006747 | . 003923 | . 050000 | . 040000 | . 034152 | . 015497 | . 005550 |
| 55 | . 007676 | . 004441 | . 050000 | . 040000 | . 035442 | . 016544 | . 006450 |
| 56 | . 008757 | . 005055 | . 050000 | . 040000 | . 036732 | . 017598 | . 007350 |
| 57 | . 010012 | . 005814 | . 050000 | . 040000 | . 038026 | . 018654 | . 008250 |
| 58 | . 011280 | . 006657 | . 050000 | . 040000 | . 039334 | . 019710 | . 009150 |
| 59 | . 012737 | . 007648 | . 050000 | . 040000 | . 040668 | . 020768 | . 009150 |
| 60 | . 014409 | . 008619 | . 050000 | . 040000 | . 042042 | . 021839 | . 009150 |
| 61 | . 016075 | . 009706 | . 050000 | . 040000 | . 043474 | . 022936 | . 009150 |
| 62 | . 017871 | . 009706 | . 050000 | . 040000 | . 044981 | . 024080 | . 009150 |
| 63 | . 019802 | . 009706 | . 050000 | . 040000 | . 046584 | . 025293 | . 009150 |
| 64 | . 022206 | .009706 | . 050000 | . 040000 | . 048307 | . 026600 | . 009150 |
| 65 | . 022206 | .009706 | . 050000 | . 040000 | . 050174 | . 028026 | . 009150 |

## CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUATION ASSUMPTION SET
ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

|  | MORTALITY |  | WITHDRAWAL |  | DISABILITY MORTALITY |  | $\begin{aligned} & \text { DISABILITY } \\ & \text { INCIDENCE } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AGE | MALE | FEMALE | MALE | FEMALE | MALE | FEMALE |  |
| 66 | . 022206 | . 010954 | . 050000 | . 040000 | . 052213 | . 029594 | . 009150 |
| 67 | . 022206 | . 012163 | . 050000 | . 040000 | . 054450 | . 031325 | . 009150 |
| 68 | . 022206 | . 013445 | . 050000 | . 040000 | . 056909 | . 033243 | . 009150 |
| 69 | . 022206 | . 014860 | . 050000 | . 040000 | . 059613 | . 035335 | . 009150 |
| 70 | . 022206 | . 016742 | . 050000 | . 040000 | . 062583 | . 037635 | . 009150 |
| 71 | . 024570 | . 018579 | 0.000000 | 0.000000 | . 065841 | . 040140 | . 009150 |
| 72 | . 027281 | . 020665 | 0.000000 | 0.000000 | . 069405 | . 042851 | . 009150 |
| 73 | . 030387 | . 022970 | 0.000000 | 0.000000 | . 073292 | . 045769 | . 009150 |
| 74 | . 033900 | . 025458 | 0.000000 | 0.000000 | . 077512 | . 048895 | . 009150 |
| 75 | . 037834 | . 028106 | 0.000000 | 0.000000 | . 082067 | . 052230 | . 009150 |
| 76 | . 042169 | . 030966 | 0.000000 | 0.000000 | . 086951 | . 055777 | . 009150 |
| 77 | . 046906 | . 034105 | 0.000000 | 0.000000 | . 092149 | . 059545 | . 009150 |
| 78 | . 052123 | . 037595 | 0.000000 | 0.000000 | . 097640 | . 063545 | . 009150 |
| 79 | . 057927 | . 041506 | 0.000000 | 0.000000 | . 103392 | . 067793 | . 009150 |
| 80 | . 064368 | . 045879 | 0.000000 | 0.000000 | . 109372 | . 072312 | . 009150 |
| 81 | . 072041 | . 050780 | 0.000000 | 0.000000 | . 115544 | . 077135 | . 009150 |
| 82 | . 080486 | . 056294 | 0.000000 | 0.000000 | . 121877 | . 082298 | . 009150 |
| 83 | . 089718 | . 062506 | 0.000000 | 0.000000 | . 128343 | . 087838 | . 009150 |
| 84 | .099779 | . 069517 | 0.000000 | 0.000000 | . 134923 | . 093794 | . 009150 |
| 85 | . 110757 | . 077446 | 0.000000 | 0.000000 | . 141603 | . 100203 | . 009150 |
| 86 | . 122797 | . 086376 | 0.000000 | 0.000000 | . 148374 | . 107099 | . 009150 |
| 87 | . 136043 | . 096337 | 0.000000 | 0.000000 | . 155235 | . 114512 | . 009150 |
| 88 | . 150590 | .107303 | 0.000000 | 0.000000 | . 162186 | . 122464 | . 009150 |
| 89 | . 166420 | . 119154 | 0.000000 | 0.000000 | . 169233 | . 130972 | . 009150 |
| 90 | . 183408 | . 131682 | 0.000000 | 0.000000 | . 183408 | . 140049 | . 009150 |
| 91 | . 199769 | . 144604 | 0.000000 | 0.000000 | . 199769 | . 149698 | . 009150 |
| 92 | . 216605 | . 157608 | 0.000000 | 0.000000 | . 216605 | . 159924 | . 009150 |
| 93 | . 233662 | . 170433 | 0.000000 | 0.000000 | . 233662 | . 170433 | . 009150 |
| 94 | . 250693 | . 182799 | 0.000000 | 0.000000 | . 250693 | . 182799 | . 009150 |
| 95 | . 267491 | . 194509 | 0.000000 | 0.000000 | . 267491 | . 194509 | . 009150 |
| 96 | . 283905 | . 205379 | 0.000000 | 0.000000 | . 283905 | . 205379 | . 009150 |
| 97 | . 299852 | . 215240 | 0.000000 | 0.000000 | . 299852 | . 215240 | . 009150 |
| 98 | . 315296 | . 223947 | 0.000000 | 0.000000 | . 315296 | . 223947 | . 009150 |
| 99 | . 330207 | . 231387 | 0.000000 | 0.000000 | . 330207 | . 231387 | . 009150 |
| 100 | . 344556 | . 237467 | 0.000000 | 0.000000 | . 344556 | . 237467 | . 009150 |
| 101 | . 258628 | . 244834 | 0.000000 | 0.000000 | . 358628 | . 244834 | . 009150 |
| 102 | . 371685 | . 254498 | 0.000000 | 0.000000 | . 371685 | . 254498 | . 009150 |
| 103 | . 383040 | . 266044 | 0.000000 | 0.000000 | . 383040 | . 266044 | . 009150 |
| 104 | . 392003 | . 279055 | 0.000000 | 0.000000 | . 392003 | . 279055 | . 009150 |
| 105 | . 397886 | .293116 | 0.000000 | 0.000000 | . 397886 | . 293116 | . 009150 |
| 106 | . 400000 | . 307811 | 0.000000 | 0.000000 | . 400000 | . 307811 | . 009150 |
| 107 | . 400000 | . 322725 | 0.000000 | 0.000000 | . 400000 | . 322725 | . 009150 |
| 108 | . 400000 | . 337441 | 0.000000 | 0.000000 | . 400000 | . 337441 | . 009150 |
| 109 | . 400000 | . 351544 | 0.000000 | 0.000000 | . 400000 | . 351544 | . 009150 |
| 110 | . 400000 | . 364617 | 0.000000 | 0.000000 | . 400000 | . 364617 | . 009150 |

## EXHIBIT III

## January 1, 2013 ACCOUNTING INFORMATION FOR FINANCIAL STATEMENTS

This section is included to provide information required by the Governmental Accounting Standards Board Statement Numbers 25 and 50. The Projected Benefit Obligation (PBO) as of January 1, 2013 is based on all of the assumptions outlined in Exhibit II including future salary growth. The Unfunded Actuarial Accrued Liability (UAAL) is that used in funding the plan and is developed in Table 5 and also summarized below.

## SCHEDULE OF FUNDING PROGRESS

|  |  | 1/01/2012 | 1/01/2013 |
| :---: | :---: | :---: | :---: |
| Interest | t Assumption | 7.50\% | 7.50\% |
| RATIO OF ENTRY AGE NORMAL COST UAAL TO VALUATION PAYROLL: |  |  |  |
| [1] | EAN Actuarial Accrued Liability (AAL) | \$ 530,262,467 | \$ 545,394,780 |
| [2] | Actuarial Value of Assets | 379,526,159 | 372,049,545 |
| [3] | Unfunded Actuarial Accrued Liability (UAAL): $[1]-[2]$ | 150,736,308 | 173,345,235 |
| [4] | Valuation Annual Payroll | 93,636,301 | 92,881,497 |
| [5] | Ratio: [3] divided by [4] | 161.0\% | 186.6\% |

## FUNDED RATIO:

[1] Projected Benefit Obligation (PBO)
Inactive Plan Participants \$342,178,606 \$356,755,175

Active Plan Participants 164,994,620 140,902,099

Total PBO
\$ 507,173,226
\$ 497,657,274
[2] Actuarial Value of Assets [Table 3]
379,526,159
372,049,545
[3] Funded Ratio: [2] divided by [1]
$74.8 \%$
$74.8 \%$

Note: The figures above for $1 / 01 / 2012$ are based on the actuarial valuation results and assumptions before the changes made as a result of the 2006-2010 Experience Study; those for 1/01/2013 are after those changes.

## EXHIBIT IV

## ACTIVE AND INACTIVE PARTICIPANT PROFILES

$\qquad$

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-.-...- ORDINARY RETIREMENT .-......
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...... SEPARATION RETIREMENT ........


CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
1/1/2013 INACTIVE PARTICIPANT PROFILE
JANUARY 1, 2013 ACTUARIAL VALUATION
-....-. D.R.O.P. -........


CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
$1 / 1 / 2013$ INACTIVE PARTICIPANT PROFILE
JANUARY 1, 2013 ACTUARIAL VALUATION
...... TERMINATED VESTED .-......


## EXHIBIT V

MARKET VALUE AND ACTUARIAL VALUE ASSET INVESTMENT PERFORMANCE

BY CALENDAR YEAR

| PLAN YEAR ENDING | BEGINNING market value | EMPLOYER CONTRIBUTIONS FOR YEAR | EMPLOYEE CONTRIBUTIONS FOR YEAR | $\begin{gathered} \text { TRANSFERS } \\ \text { IN } \\ \text { FOR YEAR } \end{gathered}$ | total benefit PAYMENTS FOR YEAR | $\begin{gathered} \text { COLA } \\ \text { PAID FOR } \\ \text { YEAR } \end{gathered}$ | TRANSFERS OUT FOR YEAR * | NET EXTERNAL CASH FLOW FOR YEAR | MARKET VALUE <br> INV. INCOME <br> FOR YEAR | ENDING MARKET VALUE | MARKET VALUE INV. PERFORMANCE FOR YEAR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/31/89 | 133,386,566 | 9,078,892 | 2,226,412 | 6,918 | 11,546,681 | 924,842 | 59,880 | -1,219,181 | 13,892,547 | 146,059,932 | 10.4631\% |
| 12/31/90 | 146,059,932 | 8,947,779 | 2,456,143 | 15,663 | 12,398,801 | 940,873 | 0 | -1,920,089 | 5,462,388 | 149,602,231 | 3.7646\% |
| 12/31/91 | 149,602,231 | 8,938,947 | 2,639,973 | 138,771 | 12,106,676 | 1,762,120 | 213,613 | -2,364,718 | 26,846,336 | 174,083,849 | 18.0881\% |
| 12/31/92 | 174,083,849 | 9,258,071 | 2,769,427 | 135,055 | 11,896,989 | 1,503,162 | 117,862 | -1,355,460 | 17,272,173 | 190,000,562 | 9.9605\% |
| 12/31/93 | 190,000,562 | 9,274,320 | 2,728,107 | 62,742 | 12,573,696 | 1,326,681 | 186,607 | -2,021,815 | 24,849,967 | 212,828,714 | 13.1489\% |
| 12/31/94 | 212,828,714 | 9,238,967 | 2,646,225 | 60,643 | 13,254,585 | 1,338,486 | 297,357 | -2,944,593 | -3,197,363 | 206,686,758 | -1.5128\% |
| 12/31/95 | 206,686,758 | 10,629,702 | 2,921,784 | 214,735 | 13,119,259 | 1,368,009 | 863,462 | -1,584,509 | 43,229,352 | 248,331,601 | 20.9959\% |
| 12/31/96 | 248,331,601 | 9,858,968 | 2,761,098 | 159,681 | 13,135,573 | 1,414,345 | 1,687,069 | -3,457,240 | 33,571,866 | 278,446,227 | 13.6137\% |
| 12/31/97 | 278,446,227 | 9,063,207 | 3,036,531 | 44,423 | 13,785,309 | 1,458,386 | 460,082 | -3,559,616 | 44,255,400 | 319,142,011 | 15.9959\% |
| 12/31/98 | 319,142,011 | 8,739,480 | 3,481,930 | 93,077 | 14,045,949 | 1,465,548 | 162,565 | -3,359,575 | 39,783,953 | 355,566,389 | 12.5319\% |
| 12/31/99 | 355,566,389 | 5,532,936 | 3,717,531 | 798,061 | 15,128,484 | 1,633,925 | 286,607 | -7,000,488 | 27,236,487 | 375,802,388 | 7.7362\% |
| 12/31/00 | 375,802,388 | 6,044,588 | 3,237,744 | 883,698 | 16,260,880 | 1,701,048 | 828,404 | -8,624,302 | 4,731,448 | 371,909,534 | 1.2736\% |
| 12/31/01 | 371,909,534 | 6,369,982 | 3,289,714 | 136,633 | 16,224,519 | 3,150,264 | 1,317,841 | -10,896,295 | -12,222,626 | 348,790,613 | -3.3353\% |
| 12/31/02 | 348,790,613 | 6,665,119 | 3,500,753 | 632,479 | 18,167,527 | 3,152,822 | 1,082,938 | $-11,604,936$ | -23,149,025 | 314,036,652 | -6.7492\% |
| 12/31/03 | 314,036,652 | 6,648,233 | 3,660,906 | 782,396 | 20,628,009 | 3,276,815 | 335,010 | -13,148,299 | 65,492,332 | 366,380,685 | 21.3009\% |
| 12/31/04 | 366,380,685 | 7,592,093 | 4,771,376 | 144,249 | 20,252,982 | 3,432,714 | 520,140 | $-11,698,118$ | 35,797,958 | 390,480,525 | 9.9292\% |
| 12/31/05 | 390,480,525 | 6,396,358 | 3,642,894 | 591,914 | 22,590,610 | 3,553,237 | 286,029 | -15,798,710 | 17,464,439 | 392,146,254 | 4.5649\% |
| 12/31/06 | 392,146,264 | 4,510,813 | 2,735,241 | 1,188,916 | 32,138,912 | 3,517,039 | 2,042,721 | -29,263,702 | 41,708,472 | 404,591,034 | 11.0482\% |
| 12/31/07 | 404,591,034 | 4,894,439 | 2,986,023 | 779,955 | 28,270,387 | 4,390,096 | 1,563,418 | -25,563,484 | 33,770,375 | 412,797,925 | 8.6191\% |
| 12/31/08 | 412,797,925 | 4,991,193 | 3,429,766 | 632,232 | 28,375,247 | 4,379,663 | 863,952 | -24,565,671 | -120,890,979 | 267,341,275 | -30.1839\% |
| 12/31/09 | 267,341,275 | 12,614,236 | 3,855,051 | 1,418,335 | 30,342,718 | 3,808,797 | 791,534 | -17,055,427 | 59,869,583 | 310,155,431 | 23.1323\% |
| 12/31/10 | 310,155,431 | 13,031,810 | 3,781,490 | 1,792,875 | 32,158,476 | 3,269,131 | 1,411,074 | -18,232,506 | 42,485,923 | 334,408,848 | 14.1131\% |
| 12/31/11 | 334,408,848 | 19,917,899 | 4,087,034 | 2,281,255 | 34,784,101 | 2,856,770 | 1,168,345 | -12,523,028 | -4,276,183 | 317,609,637 | -1.3031\% |
| 12/31/12 | 317,609,637 | 19,010,841 | 5,155,380 | 1,685,729 | 37,639,270 | 2,242,059 | 815,100 | -14,844,479 | 35,842,303 | 338,607,461 | 11.5550\% |
|  | Number of Years | Included: 24 |  |  |  |  |  | -244,606,241 | 449,827,126 |  |  |

* "transfers out" includes administrative expenses

MVBVHIS1 .R1

| $\begin{gathered} \text { YEAR } \\ \text { ENDING } \end{gathered}$ | $\begin{aligned} & \text { ENDING } \\ & \text { MARKET VALUE } \end{aligned}$ | MARKET VALUE INV. PERF. FOR YEAR | MARKET VALUE MEAN FUND | ACTUARIAL VALUE <br> MEAN FUND | ENDING ACTUARIAL VALUE OF ASSETS | ACTUARIAL ASSETS INV. PERF. FOR YR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/31/1989 | 146,059,932 | 10.4631\% | 132,776,976 | 134,474,947 | 145,400,919 | 8.5782\% |
| 12/31/1990 | 149,602,231 | 3.7646\% | 145,099,888 | 144,440,875 | 152,159,905 | 6.0087\% |
| 12/31/1991 | 174,083,849 | 18.0881\% | 148,419,872 | 150,977,546 | 158,285,109 | $5.6233 \%$ |
| 12/31/1992 | 190,000,562 | 9.9605\% | 173,406,119 | 157,607,379 | 165,981,703 | $5.7434 \%$ |
| 12/31/1993 | 212,828,714 | 13.1489\% | 188,989,655 | 164,970,796 | 172,649,085 | 5. $2671 \%$ |
| 12/31/1994 | 206,686,758 | -1.5128\% | 211,356,418 | 171,176,789 | 180,625,703 | $6.3801 \%$ |
| 12/31/1995 | 248,331,601 | 20.9959\% | 205,894,504 | 179,833,449 | 221,866,292 | 23.8138\% |
| 12/31/1996 | 278,446,227 | 13.6137\% | 246,602,981 | 220,137,672 | 242,897,086 | 11.1240\% |
| 12/31/1997 | 319,142,011 | 15.9959\% | 276,666,419 | 241,117,278 | 270,561,907 | 12.9499\% |
| 12/31/1998 | 355,566,389 | 12.5319\% | 317,462,224 | 268,882,120 | 300,107,935 | 12. $2379 \%$ |
| 12/31/1999 | 375,802,388 | 7.7362\% | 352,066,145 | 296,607,691 | 328,133,916 | $11.8090 \%$ |
| 12/31/2000 | 371,909,534 | 1.2736\% | 371,490,237 | 323,821,765 | 351,735,022 | $9.9516 \%$ |
| 12/31/2001 | 348,790,613 | -3.3353\% | 366,461,387 | 346,286,875 | 374,022,897 | 9.5829\% |
| 12/31/2002 | 314,036,652 | -6.7492\% | 342,988,145 | 368,220,429 | 384,415,399 | $5.9740 \%$ |
| 12/31/2003 | 366,380,685 | $21.3009 \%$ | 307,462,503 | 370,269,833 | 402,773,504 | 10.5539\% |
| 12/31/2004 | 390,480,525 | 9.9292\% | 360,531,626 | 396,924,445 | 412,486,855 | $5.3943 \%$ |
| 12/31/2005 | 392,146,254 | 4.5649\% | 382,581,170 | 404,587,500 | $412,970,222$ | 4.0244\% |
| 12/31/2006 | 404,591,034 | $11.0482 \%$ | 377,514,413 | 398,338,371 | 403,370,965 | 4.9366\% |
| 12/31/2007 | 412,797,925 | 8.6191\% | 391,809,292 | 390,589,223 | 398,490,554 | 5.2954\% |
| 12/31/2008 | 267,341,275 | -30.1839\% | 400,515,090 | 386,207,719 | 381,604,003 | 1.9883\% |
| 12/31/2009 | 310,155,431 | 23.1323\% | 258,813,562 | 373,076,290 | 387,146,017 | 6.0571\% |
| 12/31/2010 | 334,408,848 | 14.1131\% | 301,039,178 | 378,029,764 | 384,105,611 | 4.0188\% |
| 12/31/2011 | 317,609,637 | -1.3031\% | 328,147,334 | 377,844,097 | 379,526,159 | 2. 1023\% |
| 12/31/2012 | 338,607,461 | $11.5550 \%$ | 310,187,398 | 372,103,920 | 372,049,545 | $1.9801 \%$ |

$\left.\begin{array}{ccc}\text { A } \\ \text { PLAN YEAR } \\ \text { ENDING }\end{array} \begin{array}{c}\text { BEGINNING } \\ \text { MARKET VALUE }\end{array} \begin{array}{c}\text { NET EXTERNAL } \\ \text { CASH FLOW } \\ \text { FOR YEAR }\end{array}\right\}$

| MARKET VALUE <br> INV. INCOME <br> FOR YEAR | ENDING <br> MARKET VALUE |
| ---: | :---: |
| $13,892,547$ | $146,059,932$ |
| $5,462,388$ | $149,602,231$ |
| $26,846,336$ | $174,083,849$ |
| $17,272,173$ | $190,000,562$ |
| $24,849,967$ | $212,828,714$ |
| $-3,197,363$ | $206,686,758$ |
| $43,229,352$ | $248,331,601$ |
| $33,571,866$ | $278,446,227$ |
| $44,255,400$ | $319,142,011$ |
| $39,783,953$ | $355,566,389$ |
| $27,236,487$ | $375,802,388$ |
| $4,731,448$ | $371,909,534$ |
| $-12,222,626$ | $348,790,613$ |
| $-23,149,025$ | $314,036,652$ |
| $65,492,332$ | $366,380,685$ |
| $35,797,958$ | $390,480,525$ |
| $17,464,439$ | $392,146,254$ |
| $41,708,472$ | $404,591,034$ |
| $33,770,375$ | $412,797,925$ |
| $-120,890,979$ | $267,341,275$ |
| $59,869,583$ | $310,155,431$ |
| $42,485,923$ | $334,408,848$ |
| $-4,276,183$ | $317,609,637$ |
| $35,842,303$ | $338,607,461$ |

MARKET VALUE
investment performance

| FOR YEAR | CUMULATIVE | AVERAGE |
| ---: | :---: | ---: |
| $10.4631 \%$ | $10.46 \%$ | $10.46 \%$ |
| $3.7646 \%$ | $14.62 \%$ | $7.06 \%$ |
| $18.0881 \%$ | $35.35 \%$ | $10.62 \%$ |
| $9.9605 \%$ | $48.84 \%$ | $10.45 \%$ |
| $13.1489 \%$ | $68.41 \%$ | $10.99 \%$ |
| $-1.5128 \%$ | $65.86 \%$ | $8.80 \%$ |
| $20.9959 \%$ | $100.68 \%$ | $10.46 \%$ |
| $13.6137 \%$ | $128.00 \%$ | $10.85 \%$ |
| $15.9959 \%$ | $164.47 \%$ | $11.41 \%$ |
| $12.5319 \%$ | $197.62 \%$ | $11.52 \%$ |
| $7.7362 \%$ | $220.64 \%$ | $11.17 \%$ |
| $1.2736 \%$ | $224.73 \%$ | $10.31 \%$ |
| $-3.3353 \%$ | $213.90 \%$ | $9.20 \%$ |
| $-6.7492 \%$ | $192.71 \%$ | $7.97 \%$ |
| $21.3009 \%$ | $255.06 \%$ | $8.81 \%$ |
| $9.9292 \%$ | $290.31 \%$ | $8.88 \%$ |
| $4.5649 \%$ | $308.13 \%$ | $8.62 \%$ |
| $11.0482 \%$ | $353.22 \%$ | $8.76 \%$ |
| $8.6191 \%$ | $392.29 \%$ | $8.75 \%$ |
| $-30.1839 \%$ | $243.70 \%$ | $6.37 \%$ |
| $23.1323 \%$ | $323.20 \%$ | $7.11 \%$ |
| $14.1131 \%$ | $382.93 \%$ | $7.42 \%$ |
| $-1.3031 \%$ | $376.63 \%$ | $7.03 \%$ |
| $11.5550 \%$ | $431.71 \%$ | $7.21 \%$ |

ACTUARIAL ASSET VALUE
INVESTMENT PERFORMANCE

| FOR YEAR | CUMULATIVE | AVERAGE | YEAR |
| ---: | ---: | ---: | ---: |
| $8.58 \%$ | $8.58 \%$ | $8.58 \%$ | 1 |
| $6.01 \%$ | $15.10 \%$ | $7.29 \%$ | 2 |
| $5.62 \%$ | $21.57 \%$ | $6.73 \%$ | 3 |
| $5.74 \%$ | $28.56 \%$ | $6.48 \%$ | 4 |
| $5.27 \%$ | $35.33 \%$ | $6.24 \%$ | 5 |
| $6.38 \%$ | $43.96 \%$ | $6.26 \%$ | 6 |
| $23.81 \%$ | $78.25 \%$ | $8.61 \%$ | 7 |
| $11.12 \%$ | $98.07 \%$ | $8.92 \%$ | 8 |
| $12.95 \%$ | $123.72 \%$ | $9.36 \%$ | 9 |
| $12.24 \%$ | $151.10 \%$ | $9.64 \%$ | 10 |
| $11.81 \%$ | $180.76 \%$ | $9.84 \%$ | 11 |
| $9.95 \%$ | $208.70 \%$ | $9.85 \%$ | 12 |
| $9.58 \%$ | $238.28 \%$ | $9.83 \%$ | 13 |
| $5.97 \%$ | $258.49 \%$ | $9.55 \%$ | 14 |
| $10.55 \%$ | $296.32 \%$ | $9.61 \%$ | 15 |
| $5.39 \%$ | $317.70 \%$ | $9.35 \%$ | 16 |
| $4.02 \%$ | $334.51 \%$ | $9.03 \%$ | 17 |
| $4.94 \%$ | $355.96 \%$ | $8.79 \%$ | 18 |
| $5.30 \%$ | $380.10 \%$ | $8.61 \%$ | 19 |
| $1.99 \%$ | $389.65 \%$ | $8.27 \%$ | 20 |
| $6.06 \%$ | $419.31 \%$ | $8.16 \%$ | 21 |
| $4.02 \%$ | $440.18 \%$ | $7.97 \%$ | 22 |
| $2.10 \%$ | $451.53 \%$ | $7.71 \%$ | 23 |
| $1.98 \%$ | $462.46 \%$ | $7.46 \%$ | 24 |

Number of Years Included: 24

## EXHIBIT VI

DEMONSTRATION OF AVAILABLE "RESERVE" FOR COST OF LIVING PAYMENTS PURSUANT TO ORDINANCE SECTION 114-204 (7)

| PLAN YEAR ENDING | BEGINNING MARKET VALUE | ```ACTUAL "ONE TIME" COLA PAID DURING YEAR``` | ACTUAL NET EXTERNAL CASH FLOW DURING YEAR | ACTUAL ENDING MARKET VALUE |
| :---: | :---: | :---: | :---: | :---: |
| 12/31/1989 | 133,386,566 | 924,842 | -1,219,181 | 146,059,932 |
| 12/31/1990 | 146,059,932 | 940,873 | -1,920,089 | 149,602,231 |
| 12/31/1991 | 149,602,231 | 1,762,120 | -2,364,718 | 174,083,849 |
| 12/31/1992 | 174,083,849 | 1,503,162 | -1,355,460 | 190,000,562 |
| 12/31/1993 | 190,000,562 | 1,326,681 | -2,021,815 | 212,828,714 |
| 12/31/1994 | 212,828,714 | 1,338,486 | -2,944,593 | 206,686,758 |
| 12/31/1995 | 206,686,758 | 1,368,009 | -1,584,509 | 248,331,601 |
| 12/31/1996 | 248,331,601 | 1,414,345 | -3,457,240 | 278,446,227 |
| 12/31/1997 | 278,446,227 | 1,458,386 | -3,559,616 | 319,142,011 |
| 12/31/1998 | 319,142,011 | 1,465,548 | -3,359,575 | 355,566,389 |
| 12/31/1999 | 355,566,389 | 1,633,925 | -7,000,488 | 375,802,388 |
| 12/31/2000 | 375,802,388 | 1,701,048 | -8,624,302 | 371,909,534 |
| 12/31/2001 | 371,909,534 | 3,150,264 | -10,896,295 | 348,790,613 |
| 12/31/2002 | 348,790,613 | 3,152,822 | -11,604,936 | 314,036,652 |
| 12/31/2003 | 314,036,652 | 3,276,815 | -13, 148, 299 | 366,380,685 |
| 12/31/2004 | 366,380,685 | 3,432,714 | -11,698,118 | 390,480,525 |
| 12/31/2005 | 390,480,525 | 3,553,237 | -15,798,710 | 392,146,254 |
| 12/31/2006 | 392,146,264 | 3,517,039 | -29,263,702 | 404,591,034 |
| 12/31/2007 | 404,591,034 | 4,390,096 | -25,563,484 | 412,797,925 |
| 12/31/2008 | 412,797,925 | 4,379,663 | -24,565,671 | 267,341,275 |
| 12/31/2009 | 267,341,275 | 3,808,797 | -17,055,427 | 310,155,431 |
| 12/31/2010 | 310,155,431 | 3,269,131 | -18,232,506 | 334,408,848 |
| 12/31/2011 | 334,408,848 | 2,856,770 | -12,523,028 | 317,609,637 |
| 12/31/2012 | 317,609,637 | 2,242,059 | -14,844,479 | 338,607,461 |

HYPOTHETICAL MARKET VALUE
AT END OF YEAR ASSUMING NO "ONE TIME" COLA PAYMENTS AND 3.5\% ANNUAL RETURN SINCE $1 / 1 / 1989$

ACTUARIAL
PRESENT VALUE OF "PERMANENT" COLA INCREASES

| 137,739,421 | 0 |
| :---: | :---: |
| 141,547,483 | 0 |
| 145,857,665 | 0 |
| 151,086,664 | 0 |
| 155,644,182 | 0 |
| 159,434,091 | 0 |
| 164,770,055 | 0 |
| 168,433,610 | 0 |
| 172,165,263 | 0 |
| 176,238,228 | 0 |
| 176,917,495 | 0 |
| 176,035,428 | 0 |
| 174,259,951 | 9,942,496 |
| 171,703,849 | 553,302 |
| 167,611,905 | 1,240,046 |
| 165,008,200 | 1,831,186 |
| 158,261,537 | 1,643,499 |
| 137,541,913 | 1,816,172 |
| 120,735,131 | 4,366,253 |
| 104,344,953 | 0 |
| 94,451,927 | 0 |
| 82,475,300 | 0 |
| 75,476,525 | 0 |
| 65,256,005 | 0 |

21,392,954
$57,866,832$
Number of Years Included: 24

COLARES.R2

## CERTIFICATION

The foregoing report presents fairly the actuarial position of the City of New Orleans Employees' Retirement System as of January 1, 2013 in accordance with generally accepted actuarial principles, applied on a basis consistent with that of the preceding valuation, except where noted. In our opinion, each actuarial assumption used in preparing the liabilities and estimated costs is reasonably related to the historical experience of the plan and to reasonable future expectations and represents our best estimate of anticipated experience under the plan.

CONEFRY \& COMPANY, L.L.C.


Michael A. Conefry, FCA, ASA, MAAA MSPA
Enrollment Number 11-1235

New Orleans, Louisiana
May, 2013

V1212.CNO

