Conduent Human Resource Services
Retirement Consulting

The Judicial Retirement System of New Jersey

Information Required Under Governmental Accounting Standards Board Statement No. 67 as of June 30, 2017

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CONDUENT
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March 23, 2018

Director of the Division of Pension and Benefits
Division of Pension and Benefits
50 West State Street
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Trenton, New Jersey 08625-0295

Director:

This valuation provides information concerning the Judicial Retirement System of New Jersey in accordance with the Governmental Accounting Standards Board (GASB) Statement No. 67, effective for the fiscal year ending June 30, 2017.

This valuation reflects Chapter 83, P.L. 2016 which requires the State to make pension contributions on a quarterly basis: at least 25 percent by September 30, at least 50 percent by December 31, at least 75 percent by March 31, and at least 100 percent by June 30.

We certify that the information contained in this Actuarial Report has been prepared in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information fairly presents the actuarial position of the Judicial Retirement System of New Jersey in accordance with the requirements of GASB Statement No. 67 as of June 30, 2017.

The State House Commission may use this report for the review of the operation of the plan and as a source of information for the State financial statements. The report may also be used in the preparation of the plan's audited financial statements.

Use of this report for any other purpose or by anyone other than the State House Commission or the staff of the Division of Pensions and Benefits may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Conduent HR Consulting should be asked to review any statement to be made on the basis of the results contained in this report. Conduent HR Consulting will accept no liability for any such statement made without prior review by Conduent HR Consulting.

Future actuarial measurements may differ significantly from current measurements due 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 methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this valuation.

In preparing the actuarial results, we have relied upon information provided by the Division of Pensions and Benefits regarding plan provisions, plan participants, plan assets, contribution rates and other matters used in the actuarial valuation. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The accuracy of the results presented herein is dependent on the accuracy of the data.

As required under Chapter 140, P.L. 1973, experience studies are performed once in every three-year period. The valuation was prepared using demographic assumptions recommended on the basis of the July 1, 2011 – June 30, 2014 Experience Study and approved by the State House Commission. The Treasurer has recommended a change in the economic assumptions to be used to determine the actuarially determined contribution from 7.65% per annum to:

- Effective with the July 1, 2017 valuation: 7.50% per annum,
- Effective with the July 1, 2019 valuation: 7.30% per annum,
- Effective with the July 1, 2021 valuation: 7.00% per annum.

In accordance with paragraph 40 of GASB Statement No. 67, this valuation is based on a long-term expected rate of return of 7.00% per annum. However, the projected actuarially determined contributions are based on the above stated Treasurer recommended rate of investment return assumptions.

In my opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the System and to reasonable long-term expectations. The mortality improvement assumption was selected in accordance with Actuarial Standard of Practice No. 35.

This report was prepared under my supervision. I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Academy's qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice. I am available to answer questions and supply any additional information.

Respectfully submitted,

Aaron Shapiro

Aaron Shapiro, FSA, EA, MAAA
Principal, Consulting Actuary
Conduent HR Consulting, LLC

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Section I – GASB 67 Information

Notes to the Financial Statements for the Year Ended June 30, 2017

Summary of Significant Accounting Policies

Method used to value investments: Investments are reported at fair value.

Actuarial cost method: Entry Age Normal – Level Percentage of Pay

Plan Description

Plan administration. The State of New Jersey Division of Pensions and Benefits administers the Judicial Retirement System of New Jersey (Plan), a single-employer defined benefit pension plan that provides pensions for the Chief Justice and associate justices of the Supreme Court, judges of the Superior Court and tax courts of the State of New Jersey.

The general responsibility for the proper operation of the Plan is vested in the State House Commission (Commission).

The Commission shall consist of the Governor, the State Treasurer, and the Director of the Division of Budget and Accounting or their designees, or the persons upon whom shall devolve by law the powers, duties and emoluments of said offices respectively, for the time being, and two members of the Senate appointed by the President thereof and two members of the General Assembly appointed by the Speaker thereof, no more than one of either group of two being of the same political party or their alternates. Each alternate for an appointed member shall also be a member of the Senate or General Assembly appointed by the President or Speaker, as appropriate, and shall have full voting powers when required to attend commission meetings.

Chapter 78, P.L. 2011 provides that when the "target funded ratio" for the Plan is achieved, the Commission will have the discretionary authority to modify the member contribution rate, formula for calculation of final compensation, fraction used to calculate the retirement allowance, age at which a member may be eligible and the benefits for service or early retirement and benefits provided for disability benefit. The Commission will not have the authority to change the number of years required for vesting. The Commission will have the authority to reactivate the cost of living adjustment and set the duration and extent of the activation. The Commission must give priority consideration to the reactivation of the cost of living adjustment. No decision of the State House Commission shall be implemented if the direct or indirect result of the decision will be that the System's funded ratio falls below the target funded ratio in any valuation period during the 30 years following the implementation of the decision. The Plan "target funded ratio" is defined as the ratio of the actuarial value of assets over the actuarially determined accrued liabilities expressed as a percentage that will be 75% in State fiscal year 2012, and increased annually by equal increments in each of the subsequent seven fiscal years, until the ratio reaches 80% at which it is to remain for all subsequent fiscal years. The Plan has not attained the required "target funded ratio."

Plan membership. Pension plan membership consisted of the following:

	June 30, 2015	June 30, 2016
Inactive plan members or beneficiaries currently receiving	586	605
Inactive plan members entitled to but not yet receiving	4	4
Active plan members	404	410
	994	1,019

Benefits provided. Please see Section III of the report for a summary of Plan provisions.

Contributions. The Commission establishes contributions based on an actuarially determined contribution recommended by an independent actuary and a contribution for the Non-Contributory Group Insurance Premium Fund (NCGIPF). The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by Plan members during the year, with an additional amount to finance a portion of any unfunded accrued liability. For the year ended June 30, 2017, the State contributed $20,341,379 to the Plan.

Investments

Rate of return. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. A system specific money-weighted rate of return has not been calculated. The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the co-mingled trust is as follows.

June 30, 2016	June 30, 2017
(1.15%)	13.01%

Receivables

N/A.

Net Pension Liability

The components of the net pension liability were as follows:

		June 30, 2016		June 30, 2017
Total pension liability	$	980,742,106	$	937,395,995
Plan fiduciary net position		(179,999,820)		(175,325,333)
State's net pension liability	$	800,742,286	$	762,070,662
Plan fiduciary net position as a percentage of the total pension liability		18.35%		18.70%

Actuarial assumptions

The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost-Level Percent of Pay method, as required by GASB Statement No. 67.

The total pension liability as of June 30, 2017 was determined by rolling forward the Plan's total pension liability as of July 1, 2016 to June 30, 2017 using the following actuarial assumptions, applied to all periods included in the measurement. In addition, an amount of $1,121,097 has been added to the liability as of June 30, 2017 equal to the amount in the June 30, 2017 Plan Fiduciary Net Position for transfers from other Systems.

The Treasurer has recommended a change in the economic assumptions to be used to determine the actuarially determined contribution from 7.65% per annum to:

- Effective with the July 1, 2017 valuation: 7.50% per annum,
- Effective with the July 1, 2019 valuation: 7.30% per annum,
- Effective with the July 1, 2021 valuation: 7.00% per annum.

All other methods and assumptions used to determine the total pension liability are set forth in Section II and are consistent with the assumptions used for the July 1, 2016 actuarial valuation.

Long-Term Expected Rate of Return

The long-term expected rate of return used for this valuation is 7.00% per annum.

The long-term expected rate of return on pension System investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic rates of return for each major asset class included in the System's target asset allocation as of June 30, 2017 are summarized in Appendix A, as provided by the Division of Pensions and Benefits.

Discount rate

The Tables presented in pages 7 through 10 illustrate the projections and calculations used to determine the discount rate as required by paragraphs 40−45 of this Statement as of June 30, 2017. A similar analysis was performed in determining the discount rate as of June 30, 2016. The discount rate is the single rate that reflects (1) the long-term expected rate of return on Plan investments that are expected to be used to finance the payment of benefits, to the extent that the Plan's fiduciary net position is projected to be sufficient to make projected benefit payments and Plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another scale), to the extent that the conditions for use of the long-term expected rate of return are not met.

The discount rates used to measure the total pension liability were 3.11% as of June 30, 2016 and 3.83% as of June 30, 2017. As discussed with the Division of Pensions and Benefits, the projection of cash flows used to determine the discount rate as of June 30, 2017 assumed:

- In accordance with Paragraph 40 of GASB Statement No. 67, the projection of the Plan's fiduciary net position is based on a long-term expected rate of return of 7.00% per annum.

- In accordance with Paragraph 37 of GASB Statement No. 67, the projection of the Plan's contributions and projected benefit payments were based on the recommended demographic assumptions of the July 1, 2011 – June 30, 2014 Experience Study, which was approved by the State House Commission on October 26, 2015.

  The Treasurer has recommended a change in the economic assumptions to be used to determine the actuarially determined contribution from 7.65% per annum to:

  - Effective with the July 1, 2017 valuation: 7.50% per annum,
  - Effective with the July 1, 2019 valuation: 7.30% per annum,
  - Effective with the July 1, 2021 valuation: 7.00% per annum.

  Please see Section II of the report for a summary of the demographic and economic assumptions used to determine the actuarially determined contribution.

- It is assumed that the State will contribute 40.00% of the actuarially determined contribution and 100% of its NCGIPF contribution. The 40.00% contribution rate is the actual total State contribution rate paid in fiscal year ending June 30, 2017 with respect to the actuarially determined contribution for the fiscal year ending June 30, 2017 for all State administered retirement systems.

- Prior to the July 1, 2017 valuation, it is assumed the State will make pension contributions the June 30th following the valuation date. Effective with the July 1, 2017 valuation, Chapter 83, P.L. 2016 requires the State to make pension contributions on a quarterly basis: at least 25 percent by September 30, at least 50 percent by December 31, at least 75 percent by March 31, and at least 100 percent by June 30.

Based on these assumptions, the pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members until fiscal year 2023. Municipal bond rates of 2.85% as of June 30, 2016 and 3.58% as of June 30, 2017 were used in the development of the blended GASB discount rate after that point. As selected by the State Treasurer, the rates are based on the Bond Buyer Go 20-Bond Municipal Bond Index. Based on the long-term rate of return of 7.65% and the municipal bond rate of 2.85% as of June 30, 2016 and the long-term rate of return of 7.00% and the municipal bond rate 3.58% as of June 30, 2017, the blended GASB discount rates are 3.11% as of June 30, 2016 and 3.83% as of June 30, 2017. The assumed discount rates have been determined in accordance with the method prescribed by GASB Statement No. 67. We believe this assumption is reasonable for the purposes of the measurements required by the Statement.

The projections of the Fiduciary Net Plan Position are based on contributions to the Plan in accordance with the State’s current funding policy and a 7.00% per annum long-term expected rate of return. Should contributions to the Plan be different from those based on the State’s current funding policy, the results shown in Tables 1 and 2 would reflect the new contribution policy and may result in the Fiduciary Net Plan Position not being sufficient to cover the Plan’s benefit payments at some other future date and thus changing the discount rate used to determine the Plan’s Total Pension Liability.

Schedules of Required Supplementary Information

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability, calculated using the discount rate of 3.83%, as well as what the State's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (2.83%) or 1-percentage-point higher (4.83%) than the current rate:

	1% Decrease (2.83%)	Current Discount Rate (3.83%)	1% Increase (4.83%)
Net Pension Liability	$ 861,952,973	$ 762,070,662	$ 677,006,861

Schedule of Changes in the State's Net Pension Liability and Related Ratios

	Increase (Decrease)		
Changes in Net Pension Liability	**Total Pension Liability (a)**	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) - (b)**
Balances as of June 30, 2016	$ 980,742,106	$ 179,999,820	$ 800,742,286
Changes for the year:			
Service cost	37,224,230		37,224,230
Interest on total pension liability	30,788,977		30,788,977
Effect of plan changes			
Effect of economic/demographic (gains) or losses	14,120,673		14,120,673
Effect of assumptions changes or inputs	(70,235,370)		(70,235,370)
Benefit payments	(56,365,718)	(56,365,718)	
Administrative expenses		(150,588)	150,588
Member contributions		10,348,191	(10,348,191)
Net investment income		20,031,152	(20,031,152)
Employer contributions		20,341,379	(20,341,379)
Transfers from Other Systems	1,121,097	1,121,097	
Balances as of June 30, 2017	$ 937,395,995	$ 175,325,333	$ 762,070,662

Plan fiduciary net position as a percentage of the total pension liability	18.70%
Covered-employee payroll as of the July 1, 2016 actuarial valuation	$ 68,062,584
Net pension liability as a percentage of covered-employee payroll	1,119.66%

Notes to Schedule:

Benefit changes. None.

Changes of assumptions. The discount rate changed from 3.11% as of June 30, 2016 to 3.83% as of June 30, 2017 in accordance with Paragraph 44 of the GASB Statement No. 67. In addition, the June 30, 2017 discount rate was determined based on long-term expected rate of return assumption of 7.00% per annum. Please see Section II of the report for a summary of the assumptions.

Employer Contributions. Employer contributions include the State's actual pension contribution of $19,677,000 and contributions to the NCGIPF of $664,379.

Schedule of State Contributions

	2016	2017
Actuarially determined contribution	$ 47,305,819	$ 44,807,771
Contributions related to the actuarially determined contribution[1]	14,794,774	20,341,379
Contribution deficiency (excess)	$ 32,511,045	$ 24,466,392

1. The amount represents the actual employer contributions made during fiscal year.

Notes to Schedule

Valuation date: Actuarially determined contributions are calculated as of the July 1 preceding the fiscal year in which contributions are made. That is, the contribution calculated as of the July 1, 2016 actuarial valuation will be made during the fiscal year ended June 30, 2018.

The methods and assumptions used to determine the actuarially determined contributions to the Plan are set forth in Section II.

Schedule of Investment Returns

	2016	2017
Annual money-weighted rate of return, net of investment expenses	(1.15%)	13.01%

Table 1

Projection of Fiduciary Net Position
(000's omitted)

Fiscal Year June 30	Beginning Fiduciary Net Plan Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Projected Investment Earnings	Ending Fiduciary Net Plan Position
2017	$ 180,000	$ 10,348	$ 21,463	$ 56,366	$ 151	$ 20,031	$ 175,325
2018	175,325	7,403	19,893	57,390	154	11,073	156,150
2019	156,150	6,914	20,330	59,108	158	9,666	133,794
2020	133,794	6,452	21,076	60,672	162	8,051	108,539
2021	108,539	6,033	22,051	61,721	165	6,258	80,995
2022	80,995	5,690	23,073	62,345	167	4,323	51,569
2023	51,569	5,210	24,462	63,498	169	2,242	19,816
2024	0	0	0	64,686	173	0	0
2025	0	0	0	65,571	176	0	0
2026	0	0	0	66,347	178	0	0
2027	0	0	0	66,807	179	0	0
2028	0	0	0	66,914	180	0	0
2029	0	0	0	66,906	179	0	0
2030	0	0	0	66,403	178	0	0
2031	0	0	0	66,343	178	0	0
2032	0	0	0	65,538	176	0	0
2033	0	0	0	65,084	175	0	0
2034	0	0	0	63,658	171	0	0
2035	0	0	0	62,290	167	0	0
2036	0	0	0	60,575	162	0	0
2037	0	0	0	58,377	156	0	0
2038	0	0	0	55,925	150	0	0
2039	0	0	0	53,095	142	0	0
2040	0	0	0	50,346	135	0	0
2041	0	0	0	47,327	126	0	0
2042	0	0	0	44,177	118	0	0
2043	0	0	0	41,065	109	0	0
2044	0	0	0	38,010	101	0	0
2045	0	0	0	35,044	93	0	0
2046	0	0	0	32,162	85	0	0
2047	0	0	0	29,404	78	0	0
2048	0	0	0	26,779	71	0	0
2049	0	0	0	24,291	64	0	0
2050	0	0	0	21,946	58	0	0
2051	0	0	0	19,745	52	0	0
2052	0	0	0	17,689	47	0	0
2053	0	0	0	15,778	42	0	0
2054	0	0	0	14,009	37	0	0
2055	0	0	0	12,379	33	0	0
2056	0	0	0	10,885	29	0	0
2057	0	0	0	9,522	25	0	0
2058	0	0	0	8,285	22	0	0
2059	0	0	0	7,167	19	0	0
2060	0	0	0	6,165	16	0	0
2061	0	0	0	5,270	14	0	0
2062	0	0	0	4,476	12	0	0
2063	0	0	0	3,777	10	0	0
2064	0	0	0	3,165	8	0	0
2065	0	0	0	2,634	7	0	0
2066	0	0	0	2,177	6	0	0
2067	0	0	0	1,786	5	0	0
2068	0	0	0	1,454	4	0	0

Table 1
(continued)
Projection of Fiduciary Net Position
(000's omitted)

Fiscal Year June 30	Beginning Fiduciary Net Plan Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Projected Investment Earnings	Ending Fiduciary Net Plan Position
2069	$ 0	$ 0	$ 0	$ 1,176	$ 3	$ 0	$ 0
2070	0	0	0	945	3	0	0
2071	0	0	0	754	2	0	0
2072	0	0	0	597	2	0	0
2073	0	0	0	470	1	0	0
2074	0	0	0	368	1	0	0
2075	0	0	0	287	1	0	0
2076	0	0	0	223	1	0	0
2077	0	0	0	173	0	0	0
2078	0	0	0	135	0	0	0
2079	0	0	0	105	0	0	0
2080	0	0	0	83	0	0	0
2081	0	0	0	66	0	0	0
2082	0	0	0	52	0	0	0
2083	0	0	0	42	0	0	0
2084	0	0	0	34	0	0	0
2085	0	0	0	27	0	0	0
2086	0	0	0	22	0	0	0
2087	0	0	0	18	0	0	0
2088	0	0	0	14	0	0	0
2089	0	0	0	12	0	0	0
2090	0	0	0	10	0	0	0
2091	0	0	0	8	0	0	0
2092	0	0	0	6	0	0	0
2093	0	0	0	5	0	0	0
2094	0	0	0	5	0	0	0
2095	0	0	0	4	0	0	0
2096	0	0	0	3	0	0	0
2097	0	0	0	3	0	0	0
2098	0	0	0	2	0	0	0
2099	0	0	0	2	0	0	0
2100	0	0	0	1	0	0	0
2101	0	0	0	1	0	0	0
2102	0	0	0	1	0	0	0
2103	0	0	0	1	0	0	0
2104	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0

Table 2

Actuarial Present Values of Projected Benefit Payments
(000's omitted)

Fiscal Year Ending June 30	Beginning Fiduciary Net Plan Position	Benefit Payments	Benefit Payments: Funded Portion	Benefit Payments: Unfunded Portion	Present Value of Benefit Payments: Funded Portion at 7.00%	Present Value of Benefit Payments: Unfunded Portion at 3.58%	Present Value of Benefit Payments: Using Single Discount Rate of 3.83%
2017	$ 180,000	$ 56,366	$ 56,366	$ 0	$ 54,491	$ 0	$ 55,315
2018	175,325	57,390	57,390	0	51,852	0	54,241
2019	156,150	59,108	59,108	0	49,910	0	53,801
2020	133,794	60,672	60,672	0	47,879	0	53,186
2021	108,539	61,721	61,721	0	45,521	0	52,108
2022	80,995	62,345	62,345	0	42,973	0	50,691
2023	51,569	63,498	51,569	11,929	33,219	9,492	49,722
2024	0	64,686	0	64,686	0	49,687	48,782
2025	0	65,571	0	65,571	0	48,626	47,623
2026	0	66,347	0	66,347	0	47,501	46,407
2027	0	66,807	0	66,807	0	46,177	45,003
2028	0	66,914	0	66,914	0	44,652	43,411
2029	0	66,906	0	66,906	0	43,104	41,803
2030	0	66,403	0	66,403	0	41,301	39,956
2031	0	66,343	0	66,343	0	39,837	38,446
2032	0	65,538	0	65,538	0	37,994	36,577
2033	0	65,084	0	65,084	0	36,427	34,983
2034	0	63,658	0	63,658	0	34,397	32,953
2035	0	62,290	0	62,290	0	32,495	31,054
2036	0	60,575	0	60,575	0	30,508	29,084
2037	0	58,377	0	58,377	0	28,385	26,993
2038	0	55,925	0	55,925	0	26,253	24,905
2039	0	53,095	0	53,095	0	24,063	22,771
2040	0	50,346	0	50,346	0	22,028	20,795
2041	0	47,327	0	47,327	0	19,991	18,826
2042	0	44,177	0	44,177	0	18,016	16,924
2043	0	41,065	0	41,065	0	16,168	15,151
2044	0	38,010	0	38,010	0	14,448	13,506
2045	0	35,044	0	35,044	0	12,860	11,992
2046	0	32,162	0	32,162	0	11,395	10,600
2047	0	29,404	0	29,404	0	10,058	9,333
2048	0	26,779	0	26,779	0	8,843	8,186
2049	0	24,291	0	24,291	0	7,744	7,151
2050	0	21,946	0	21,946	0	6,755	6,222
2051	0	19,745	0	19,745	0	5,867	5,391
2052	0	17,689	0	17,689	0	5,075	4,652
2053	0	15,778	0	15,778	0	4,370	3,996
2054	0	14,009	0	14,009	0	3,746	3,417
2055	0	12,379	0	12,379	0	3,196	2,908
2056	0	10,885	0	10,885	0	2,713	2,463
2057	0	9,522	0	9,522	0	2,291	2,075
2058	0	8,285	0	8,285	0	1,925	1,738
2059	0	7,167	0	7,167	0	1,607	1,448
2060	0	6,165	0	6,165	0	1,335	1,200
2061	0	5,270	0	5,270	0	1,102	988
2062	0	4,476	0	4,476	0	903	808
2063	0	3,777	0	3,777	0	736	657
2064	0	3,165	0	3,165	0	595	530
2065	0	2,634	0	2,634	0	478	425

Table 2
(continued)
Actuarial Present Values of Projected Benefit Payments
(000's omitted)

			Benefit Payments		Present Value of Benefit Payments		
Fiscal Year Ending June 30	Beginning Fiduciary Net Plan Position	Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 7.00%	Unfunded Portion at 3.58%	Using Single Discount Rate of 3.83%
2066	$ 0	$ 2,177	$ 0	$ 2,177	$ 0	$ 382	$ 338
2067	0	1,786	0	1,786	0	302	267
2068	0	1,454	0	1,454	0	238	210
2069	0	1,176	0	1,176	0	186	163
2070	0	945	0	945	0	144	126
2071	0	754	0	754	0	111	97
2072	0	597	0	597	0	85	74
2073	0	470	0	470	0	64	56
2074	0	368	0	368	0	49	42
2075	0	287	0	287	0	37	32
2076	0	223	0	223	0	28	24
2077	0	173	0	173	0	21	18
2078	0	135	0	135	0	15	13
2079	0	105	0	105	0	12	10
2080	0	83	0	83	0	9	8
2081	0	66	0	66	0	7	6
2082	0	52	0	52	0	5	4
2083	0	42	0	42	0	4	3
2084	0	34	0	34	0	3	3
2085	0	27	0	27	0	2	2
2086	0	22	0	22	0	2	2
2087	0	18	0	18	0	1	1
2088	0	14	0	14	0	1	1
2089	0	12	0	12	0	1	1
2090	0	10	0	10	0	1	1
2091	0	8	0	8	0	1	0
2092	0	6	0	6	0	0	0
2093	0	5	0	5	0	0	0
2094	0	5	0	5	0	0	0
2095	0	4	0	4	0	0	0
2096	0	3	0	3	0	0	0
2097	0	3	0	3	0	0	0
2098	0	2	0	2	0	0	0
2099	0	2	0	2	0	0	0
2100	0	1	0	1	0	0	0
2101	0	1	0	1	0	0	0
2102	0	1	0	1	0	0	0
2103	0	1	0	1	0	0	0
2104	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0

Section II – Actuarial Assumptions and Methods

Investment Rate of Return to Determine the Actuarially Determined Contribution:

- July 1, 2016 valuation: 7.65% per annum, compounded annually.
- July 1, 2017 valuation: 7.50% per annum, compounded annually.
- July 1, 2018 valuation: 7.50% per annum, compounded annually.
- July 1, 2019 valuation: 7.30% per annum, compounded annually
- July 1, 2020 valuation: 7.30% per annum, compounded annually.
- July 1, 2021 and later valuations: 7.00% per annum, compounded annually.

Long-Term Expected Rate of Return to Project the Plan
Fiduciary Net Position and GASB 67 Effective Discount Rate: 7.00% per annum, compounded annually.

GASB 67 Effective Discount Rate:

- June 30, 2016: 3.11% per annum, compounded annually.
- June 30, 2017: 3.83% per annum, compounded annually.

COLA: No future COLA is assumed.

Salary Increases: Salaries are assumed to increase by 2.00% per year through fiscal year 2025 and 3.00% per year for fiscal years 2026 and thereafter.

401(a)(17) Pay Limit - $265,000 in 2016 increasing 3.00% per annum, compounded annually.

Separations From Service: Representative mortality and disability rates are as follows:

	Lives per Thousand		
	Death*		
Age	**Male**	**Female**	**Disability**
30	0.43	0.38	0.22
35	0.74	0.58	0.26
40	1.04	0.90	0.33
45	1.45	1.38	0.64
50	2.06	2.12	1.14
55	3.49	3.68	1.97
60	6.16	6.71	3.26
65	10.89	11.49	4.73

* RP-2000 Combined Healthy Male and RP-2000 Combined Healthy Female Mortality Tables (unadjusted for males and set forward 3 years for females) projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB for the base tables. The base tables are projected beyond the base year using the Conduent Modified 2014 Projection scale. The above rates are unadjusted for the Conduent Modified 2014 Projection Scale.

Deaths after Retirement

RP-2000 Combined Healthy Mortality Tables (unadjusted for males and set forward 3 years for females) for service retirement and beneficiaries of former members projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB for the base tables. The base tables are projected beyond the base year using the Conduent Modified 2014 Projection scale. The RP-2000 Disability Mortality Tables (set forward 2 years for males and females) are used to value disabled retirees. Representative values of the annual rates of mortality unadjusted for the Conduent Modified 2014 Projection Scale are as follows:

Lives Per Thousand

Age	Retired Members & Beneficiaries of Deceased Members: Males	Retired Members & Beneficiaries of Deceased Members: Females	Disabled Members: Males	Disabled Members: Females
55	3.49	3.68	38.03	18.65
60	6.16	6.71	44.98	24.08
65	10.89	11.49	54.45	31.32
70	18.25	19.63	69.41	42.85
75	31.09	32.13	92.15	59.54
80	52.89	53.43	121.88	82.30
85	91.00	91.72	155.23	114.51
90	158.84	147.61	216.61	159.92

Retirement

Age	Age 60 with 20 Years Judicial Service or Age 65 with 15 Years Judicial Service	After Age 59 with Less than 12 Years Judicial Service	After Age 59 with 12 or More Years of Judicial Service (but have not attained 60/20JS or 65/15JS)	Prior to age 60 with 5 Years Judicial Service and 25 Years Public Service
50	0.00000	0.00000	0.00000	0.00000
51	0.00000	0.00000	0.00000	0.00000
52	0.00000	0.00000	0.00000	0.00000
53	0.00000	0.00000	0.00000	0.00000
54	0.00000	0.00000	0.00000	0.00000
55	0.00000	0.00000	0.00000	0.00000
56	0.00000	0.00000	0.00000	0.00000
57	0.00000	0.00000	0.00000	0.00000
58	0.00000	0.00000	0.00000	0.00000
59	0.00000	0.00000	0.00000	0.00000
60	0.30000	0.02500	0.00000	0.00000
61	0.20000	0.02500	0.00000	0.00000
62	0.20000	0.02500	0.00000	0.00000
63	0.30000	0.02500	0.00000	0.00000
64	0.30000	0.02500	0.00000	0.00000
65	0.37500	0.02500	0.10000	0.00000
66	0.24000	0.02500	0.00000	0.00000
67	0.24000	0.02500	0.00000	0.00000
68	0.24000	0.02500	0.00000	0.00000
69	0.24000	0.02500	0.00000	0.00000

Marriage: Husbands are assumed to be 3 years older than wives. Among the active population, 90% of participants are assumed married. No children are assumed. Neither the percentage married nor the number of children assumption is individually explicit but are considered reasonable as a single combined assumption.

Valuation Method:

GASB actuarial cost method: Entry Age Normal – Level Percentage of Pay

Funding Calculations: Projected Unit Credit Method. This method essentially funds the System's benefits accrued to the valuation date. Experience gains and losses are recognized in future accrued liability contributions. In accordance with Chapter 78, P.L. 2011, beginning with the July 1, 2010 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over an open 30 year period. Beginning with the July 1, 2019 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over a closed 30 year period (i.e., for each subsequent actuarial valuation the amortization period shall decrease by one year.) Beginning with the July 1, 2029 actuarial valuation, when the remaining amortization period reaches 20 years, any increase or decrease in the unfunded accrued liability as a result of actuarial losses or gains for subsequent valuation years shall serve to increase or decrease, respectively, the amortization period for the unfunded accrued liability, unless an increase in the amortization period will cause it to exceed 20 years. If an increase in the amortization period as a result of actuarial losses for a valuation year would exceed 20 years, the accrued liability contribution shall be computed for the valuation year using a 20 year amortization period.

To the extent that the amortization period remains an open period in future years and depending upon the specific circumstances, it should be noted that in the absence of emerging actuarial gains or contributions made in excess of the actuarially determined contribution, any existing unfunded accrued liability may not be fully amortized in the future.

State Contribution Payable Dates:

Prior to the July 1, 2017 valuation, it is assumed the State will make pension contributions the June 30th following the valuation date. Effective with the July 1, 2017 valuation, Chapter 83, P.L. 2016 requires the State to make pension contributions on a quarterly basis: at least 25 percent by September 30, at least 50 percent by December 31, at least 75 percent by March 31, and at least 100 percent by June 30.

Receivable Contributions:

For the July 1, 2016 valuation, State contributions are expected to be paid the June 30th following the valuation date and are discounted by the valuation interest rate of 7.65% to the valuation date. Effective with the July 1, 2017 valuation, State contributions are expected to be paid in equal quarterly amounts as of September 30th, December 31st, March 31st, and June 30th following the valuation date and are discounted by the interest rate used at the valuation date.

Asset Valuation Method:

GASB method used to value investments: Investments are reported at fair value.

Funding calculations: A five-year average of market values with write-up was used. This method takes into account appreciation (depreciation) in investments in order to smooth asset values by averaging the excess of the actual over the expected income, on a market value basis, over a five-year period.

Section III – Summary of Plan Provisions

New Jersey Statutes, Title 43, Chapter 6A.

Eligibility for Membership

Chief Justice and associate justices of the Supreme Court, judges of the Superior Court and tax courts of the State of New Jersey.

1. Definitions

Plan Year	The 12-month period beginning on July 1 and ending on June 30.
Service	A year is credited for each year of service as a public employee in the State of New Jersey. Any service, for which member did not receive annual salary of at least $500, shall be excluded.
Final Salary	Annual salary received by the member at the time of retirement or other termination of service. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code.)
Accumulated Deductions	The sum of all amounts deducted from the compensation of a member or contributed by him or on his behalf.
Retirement Allowance	Pension derived from contributions of the State plus the annuity derived from employee contributions.

2. Benefits

Service Retirement

(A) Mandatory retirement at age 70. Voluntary retirement prior to age 70 as follows:

(a) Age 70 and 10 years of judicial service;
(b) Age 65 and 15 years of judicial service; or
(c) Age 60 and 20 years of judicial service.

Benefit is an annual retirement allowance equal to 75% of final salary.

(B) Age 65 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service; or

Age 60 while serving as a judge, 5 consecutive years of judicial service and 20 years in the aggregate of public service.

Benefit is an annual retirement allowance equal to 50% of final salary.

(C) Age 60 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service. Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year in excess of 25 years.

(D) Age 60 while serving as a judge. Benefit is an annual retirement allowance equal to 2% of final salary for each year of judicial service up to 25 years plus 1% for each year in excess of 25 years.

Early Retirement	Prior to age 60 while serving as a judge, 5 consecutive years of judicial service and 25 or more years in the aggregate of public service. Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year of public service in excess of 25 years, actuarially reduced for commencement prior to age 60.
Vested Termination	Termination of service prior to age 60, with 5 consecutive years of judicial service and 10 years in the aggregate of public service. Benefit is a refund of accumulated deductions, or a deferred life annuity beginning at age 60 equal to 2% of final salary for each year of public service up to 25 years, plus 1% for service in excess of 25 years.

Death Benefits

Before Retirement

Death of an active member of the plan. Benefit is equal to:

(a) Lump sum payment equal to 1-1/2 times final salary, plus

(b) Spousal life annuity of 25% of final salary payable until spouse’s remarriage plus 10% (15%) to one (two or more) dependent child (children). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child (children). If there is no surviving spouse (or dependent children), 20% or 30% of final salary to one or two dependent parents.

After Retirement

Death of a retired member of the plan. Benefit is equal to:

(a) Lump sum of 25% of final salary for a member retired under normal or early retirement. If a member were receiving a disability benefit, a lump sum 1-1/2 times final salary if death occurred before the member attained age 60 and 1/4 times final salary if death occurred after age 60, plus

(b) Spousal life annuity of 25% of final salary payable until spouse’s remarriage plus 10% (15%) to one (two or more) dependent child (children). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child (children).

Disability Retirement	Physically or otherwise incapacitated for the full and efficient service to State in his judicial capacity and such incapacity is likely to be permanent. Benefit is an annual retirement allowance of 75% of final salary.
Member Contributions	Any member enrolled prior to January 1, 1996 contributes 3% of the difference between current salary and salary for that position on January 18, 1982. Members enrolled on and after January 1, 1996 contribute 3% of their full salary.

Chapter 78, P.L. 2011 increased Member Contributions by 9% of salary phased-in over a period of seven years beginning October 2011. (The additional 9% of salary will be fully phased-in in July 2017.)

(a) For members enrolled prior to January 1, 1996:

i. Member Contributions of 9% (phased-in over a period of seven years beginning October 2011) of the salary for that position on January 18, 1982.

ii. Member Contributions increase from 3% to 12% (phased-in over a period of seven years beginning October 2011) of the difference between current salary and salary for that position on January 18, 1982.

(b) For members enrolled on or after January 1, 1996, Member Contributions increase from 3% to 12% of full salary phased-in over a period of seven years beginning October 2011.

Appendix A – Information on Projected Returns by Asset Class Provided by the Division of Pensions and Benefits

FY18 Long-Term Expected Rate of Return

The best estimate long-term expected rate of return for the Pension Fund is based on the targeted asset allocation, long-term capital market assumptions (including compound expected returns, volatility of returns, and correlation of returns), and the application of modern portfolio theory. Long-term capital market assumptions are determined by a survey of a wide universe of third party investment professionals and reflect nominal return expectations, as well as the analysis of the Division of Investment and its team of outside investment consultants.

Asset Class	Targeted Asset Allocation	Expected Returns (Arithmetic)
Risk Mitigation Strategies	5.00%	5.51%
Cash Equivalents	5.50%	1.00%
US Treasuries	3.00%	1.87%
Investment Grade Credit	10.00%	3.78%
High Yield	2.50%	6.82%
Global Diversified Credit	5.00%	7.10%
Credit-Oriented HFs	1.00%	6.60%
Debt-Related PE	2.00%	10.63%
Debt Related Real Estate	1.00%	6.61%
Private Real Assets	2.50%	11.83%
Equity Related Real Estate	6.25%	9.23%
US Equity	30.00%	8.19%
Non-US Dev Market Eq	11.50%	9.00%
Emerging Market Eq	6.50%	11.64%
Buyouts/Venture Cap	8.25%	13.08%
Portfolio One-Year Arithmetic Return		7.83%
Portfolio Standard Deviation		12.27%
Portfolio Long-Term Expected Return		7.14%
Long-Term Expected Rate of Return		7.00%