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June 17, 2019

Mr. John Herrington, Director
State of Connecticut
Office of the State Comptroller
Retirement Services Division
55 Elm Street
Hartford, CT 06106

Dear John:

Enclosed is the "Connecticut Probate Judges and Employees Retirement System Report of the Actuary on the Valuation Prepared as of December 31, 2018".

The valuation indicates that employer contributions of $4,236,400 for the fiscal year ending June 30, 2020 is sufficient to support the benefits of the System. Please note that the Commission has adopted a revised funding policy, whereby, the actuarially determined employer contribution cannot be less than the employer normal cost.

Please let us know if there are any questions concerning the report.

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

Enc.

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Cavanaugh Macdonald
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CONNECTICUT PROBATE JUDGES AND EMPLOYEES RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF DECEMBER 31, 2018

Cavanaugh Macdonald
CONSULTING, LLC
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June 17, 2019

State of Connecticut
State Employees Retirement Commission
55 Elm Street
Hartford, CT 06106

Members of the Commission:

Connecticut General Statutes Title 45a, Chapter 801, Part III governs the operation of the Connecticut Probate Judges and Employees Retirement System. The actuary makes periodic valuations of the contingent assets and liabilities of the Retirement System at the direction of the Commission. We have submitted the report giving the results of the actuarial valuation of the Retirement System prepared as of December 31, 2018. The report indicates that an actuarially determined employer contribution of $4,236,400 for the fiscal year ending June 30, 2020 is sufficient to support the benefits of the System.

In preparing the valuation, the actuary relied on data provided by the Comptroller's Office. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Please note that the Commission has adopted a revised funding policy, whereby, the actuarially determined employer contribution cannot be less than the employer normal cost.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Commission are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The funding objective of the plan is that contribution over time will remain level as a percent of payroll. The valuation method used is the entry age normal method. Gains and losses are reflected in the unfunded actuarial accrued liability which is being amortized as a level dollar amount within an 18-year period as of December 31, 2018.

This is to certify that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

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CONNECTICUT PROBATE JUDGES AND EMPLOYEES RETIREMENT SYSTEM
REPORT OF THE ACTUARY
ON THE VALUATION
PREPARED AS OF DECEMBER 31, 2018

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below:

Valuation Date	December 31, 2018	December 31, 2017
Discount Rate	**6.90%**	**6.90%**
Active members:		
Number	329	365
Annual compensation	$ 18,211,428	$ 19,907,883
Retired members and beneficiaries:		
Number	379	372
Annual allowances	$ 5,940,274	$ 5,507,957
Deferred Vested Members:		
Number	18	19
Annual allowances	$ 191,560	$ 226,974
Assets:		
Market Value	$ 95,239,456	$ 100,057,822
Actuarial Value	103,163,337	99,353,417
Unfunded actuarial accrued liability	$ 15,346,391	$ 17,748,228
Amortization period (years)	18	19
Funded Ratio	87.1%	84.8%
For Fiscal Year Ending	**June 30, 2020**	**June 30, 2019**
Actuarially Determined Employer Contribution (ADEC):		
Normal	$ 2,721,768	$ 2,784,137
Accrued liability	1,514,632	1,594,330
Total	$ 4,236,400	$ 4,378,467

2. The results of the valuation are given in Schedule A.

3. Comments on the valuation results are given in Section IV, the actuarially determined employer contribution is given in Section V, and comments on the experience and actuarial gains and losses during the valuation year are given in Section VII.

4. Schedule B of this report presents the development of the actuarial value of assets.

5. Schedule D details the actuarial assumptions and methods employed. There have been no changes since the previous valuation.

6. Schedule F gives a summary of the benefit and contribution provisions of the plan. There have been no changes since the previous valuation.

7. The table on the following page provides a history of some pertinent figures.

Connecticut Probate Judges and Employees Retirement System

Comparative Schedule

Valuation Date December 31	Active Members				Retired Lives				Valuation Results ($ thousands)		
	Number	Payroll ($ thousands)	Average Salary	% increase from previous valuation	Number	Active/ Retired Ratio	Annual Benefits ($ thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2009	412	$17,959	$43,590	3.0%	288	1.4	$3,156	17.6%	$61,314	$86,776	$(25,462)
2011	330	15,404	46,679	7.1	342	1.0	4,417	28.7	73,127	85,154	(12,027)
2013	346	16,689	48,234	3.3	364	1.0	4,806	28.8	82,617	87,490	(4,873)
2015	371	19,042	51,325	6.4	336	1.0	4,739	24.9	85,852	92,002	(6,150)
2017#	365	19,908	54,542	6.2	372	1.0	5,508	27.7	117,101	99,353	17,748
2018	329	18,211	55,354	1.5	379	0.9	5,940	32.6	118,509	103,163	15,346

Represents assumption change

SECTION II – MEMBERSHIP

Data regarding the membership of the System for use as a basis for the valuation were furnished by the Comptroller's office. The following tables summarize the membership of the Retirement System as of December 31, 2018 and December 31, 2017 upon which the valuation was based. Detailed tabulations of the data are given in Schedule G.

Active Members as of December 31, 2018

			Group Averages		
Group	Number	Payroll	Salary	Age	Service
Judges	54	$ 6,202,409	$ 114,859	58.1	13.7
Employees	275	12,009,019	43,669	50.9	11.6
Total	329	$ 18,211,428	$ 55,354	52.1	11.9

Of the 329 active members, 176 are vested and 153 are non-vested.

Active Members as of December 31, 2017

			Group Averages		
Group	Number	Payroll	Salary	Age	Service
Judges	54	$ 6,258,450	$ 115,897	58.6	13.6
Employees	311	13,649,433	43,889	50.0	10.9
Total	365	$ 19,907,883	$ 54,542	51.3	11.3

Of the 365 active members, 179 are vested and 186 are non-vested.

Retired Lives as of December 31, 2018

			Group Averages	
Type of Benefit Payment	No.	Annual Benefits	Benefit	Age
Retirement	339	$ 5,551,798	$ 16,377	74.7
Survivor	40	388,476	9,712	79.2
Total	379	$ 5,940,274	$ 15,674	75.2

This valuation also includes 18 deferred vested members with estimated annual benefits of $191,560 and 112 non-vested inactive members with employee contribution account balances totaling $130,190.

Retired Lives as of December 31, 2017

			Group Averages	
Type of Benefit Payment	No.	Annual Benefits	Benefit	Age
Retirement	322	$ 4,992,279	$ 15,504	74.8
Survivor	50	515,678	10,314	80.5
Total	372	$ 5,507,957	$ 14,806	75.5

This valuation also includes 19 deferred vested members with estimated annual benefits of $226,974 and 113 non-vested inactive members with employee contribution account balances totaling $184,826.

SECTION III - ASSETS

1. As of December 31, 2018, the total market value of assets amounted to $95,239,456 as reported by the Comptroller's Office. This amount includes $4,435 of receivables as of the valuation date. The actuarial value of assets used for the current valuation was $103,163,337. Schedule B shows the development of the actuarial value of assets as of December 31, 2018.

2. Schedule C shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at market value.

SECTION IV – COMMENTS ON VALUATION

1. Schedule A of this report outlines the results of the valuation of the Retirement System as of December 31, 2018. The valuation was prepared in accordance with the actuarial assumptions and methods set forth in Schedule D and the actuarial cost method which is described in Schedule E.

2. The valuation shows that the System has a total actuarial accrued liability of $118,509,728, of which $65,679,203 is for the benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and $52,830,525 is for the benefits expected to be payable on account of present active members, based on service to the valuation date. Against these liabilities, the System has total present assets for valuation purposes of $103,163,337 as of December 31, 2018. When this amount is deducted from the actuarial accrued liability of $118,509,728, there remains $15,346,391 as the unfunded actuarial accrued liability.

3. The employer's contributions to the System consist of normal contributions and accrued liability contributions. The normal cost represents the ultimate cost of the benefits and the accrued liability contribution is an addition due to the amortization of the unfunded actuarial accrued liability. The valuation indicates that an annual employer normal contribution of $2,721,768 is required to provide the currently accruing benefits of the System.

4. An accrued liability contribution of $1,514,632 is to be made toward amortizing the unfunded actuarial accrued liability. Annual accrued liability costs at this amount will amortize the unfunded actuarial accrued liability within 18 years from the valuation date.

SECTION V – CONTRIBUTIONS PAYABLE BY EMPLOYER

The following table shows the amount of contribution payable by the employer for the 2019/2020 and 2018/2019 fiscal years.

	2019 / 2020	**2018 / 2019**
Contribution for	Contribution Amount	Contribution Amount
Normal Cost:		
Service retirement benefits	$2,796,650	$2,920,592
Disability benefits	142,197	149,865
Survivor benefits	5,866	6,326
Total	$2,944,713	$3,076,783
Less Member Contributions:	222,945	292,646
Employer Normal Cost	$2,721,768	$2,784,137
Unfunded Actuarial Accrued Liabilities (18 and 19 year level dollar amortization)	$1,514,632	$1,594,330
Total (not less than employer normal cost)	$4,236,400	$4,378,467

The following table shows the estimated contribution payable by the employer for the next fiscal year following the valuation date. These results assume a 6.90% investment return on actuarial value of assets for the year following the valuation date, and 3.50% annual growth in the compensation of active members.

Estimated Contribution for	2020 / 2021
Employer Normal Cost	$2,817,030
Unfunded Actuarial Accrued Liabilities	$1,512,176
Total (not less than Employer Normal Cost)	$4,329,206

As can be seen in the table above, the employer contribution is expected to increase slightly in the next fiscal year. This is due to the anticipated investment losses still to be recognized in the actuarial value of assets. Of course, higher or lower than expected investment returns could possibly alter this trend.

SECTION VI – ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 replaced Statement Nos. 25 and 27 for plan years beginning after June 15, 2013. The information required under the new GASB Statements will be issued in separate reports. The information in this section is provided for informational purposes only. One such item is a distribution of the number of employees by type of membership, as follows:

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF DECEMBER 31, 2018 AND DECEMBER 31, 2017

GROUP	2018	2017
Retirees and beneficiaries currently receiving benefits	379	372
Terminated employees entitled to benefits but not yet receiving benefits	130	132
Active plan members	329	365
Total	838	869

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Projected Unit Credit (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
12/31/2011	$85,154	$73,127	$(12,027)	116.4%	$15,404	(78.1)%
12/31/2013	87,490	82,617	(4,873)	105.9	16,689	(29.2)
12/31/2015	92,002	85,852	(6,150)	107.2	19,042	(32.3)
12/31/2017#	99,353	117,101	17,748	84.8	19,908	89.2
12/31/2018	103,163	118,509	15,346	87.1	18,211	84.3

Reflects a change in actuarial assumptions

3. The following shows the schedule of employer contributions (all dollar amounts are in thousands).

Fiscal Year Ending June 30	Valuation Date Ending December 31	Annual Required Contribution	Percentage Contributed
2016	2013	$1,457,186	100%
2017	2015	$1,468,003	100%
2018	2015	$4,426,482	100%
2019	2017	$4,378,467	TBD
2020	2018	$4,236,400	TBD

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at December 31, 2018. Additional information as of the latest actuarial valuation follows.

Valuation date	12/31/2018
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, closed
Remaining amortization period	18 years
Asset valuation method	Smoothed market with 20% recognition of investment gains and losses
Actuarial assumptions:	
Investment rate of return*	6.90%
Projected salary increases*	3.50%
Cost-of-living adjustments	2.25%
Social Security Wage Base	3.00%
*Includes inflation at	2.75%

SECTION VII – EXPERIENCE

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended December 31, 2018 is shown below.

		$ Thousands
(1)	UAAL* as of December 31, 2017	$ 17,748.2
(2)	Total normal cost from last valuation	3,076.8
(3)	Total actual contributions for 2018	4,532.7
(4)	Interest accrual: {[(1) + (2)] x .0690} - [(3) x .0339]	1,283.3
(5)	Expected UAAL as of December 31, 2018: (1) + (2) – (3) + (4)	$ 17,575.6
(6)	Change due to plan amendments	0.0
(7)	Change due to actuarial assumptions or methods	0.0
(8)	Expected UAAL as of December 31, 2018 after changes: (5) + (6) + (7)	$ 17,575.6
(9)	Actual UAAL as of December 31, 2018	$ 15,346.4
(10)	Gain/(loss): (8) – (9)	$ 2,229.2
(11)	Gain/(loss) as percent of actuarial accrued liabilities at start of year ($117,101.6)	1.9%

*Unfunded actuarial accrued liability.

Valuation Date December 31	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2013	5.4%
2015	1.7
2017	(0.6)
2018	1.9

SCHEDULE A

RESULTS OF VALUATION

PREPARED AS OF DECEMBER 31, 2018 AND DECEMBER 31, 2017

	DECEMBER 31, 2018	DECEMBER 31, 2017
1. ACTUARIAL ACCRUED LIABILITY		
Present value of prospective benefits payable in respect of:		
(a) Present active members		
- Service retirement benefits	$51,189,072	$54,724,789
- Disability retirement benefits	1,549,867	1,666,223
- Death and survivor benefits	91,586	97,382
- Total	$52,830,525	$56,488,394
(b) Present inactive members and members entitled to deferred vested benefits:	$2,041,447	$2,203,962
(c) Present annuitants and beneficiaries	$63,637,756	$58,409,289
(d) Total actuarial accrued liability [1(a) + 1(b) + 1(c)]	$118,509,728	$117,101,645
2. ACTUARIAL VALUE OF ASSETS	$103,163,337	$99,353,417
3. UNFUNDED ACTUARIAL ACCRUED LIABILITY [1(d) – 2]	$15,346,391	$17,748,228

SCHEDULE B

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

For the Year Ending December 31		2018	2017
(1)	Actuarial Value Beginning of Year*	$ 99,353,417	$ 94,888,378
(2)	Market Value End of Year**	$ 95,239,456	$ 100,057,822
(3)	Market Value Beginning of Year	$ 100,057,822	$ 89,326,667
(4)	Cash Flow		
	(a) Contributions**	$ 4,537,125	$ 3,096,913
	(b) Disbursements	(5,561,685)	(5,275,523)
	(c) Net: (4)(a) + (4)(b)	$ (1,024,560)	$ (2,178,610)
(5)	Investment Income		
	(a) Market Total: (2) – (3) – (4)(c)	$ (3,793,806)	$ 12,909,765
	(b) Assumed Rate	6.90%	6.90%
	(c) Amount for Immediate Recognition: [(1) x (5)(b)] + [(4)(c) less Receivable**] x (5)(b) x 0.5	$ 6,819,885	$ 6,471,983
(6)	Expected Actuarial Value End of Year: (1) + (4)(c) less Receivable** + (5)(c)	$ 105,144,307	$ 99,177,316
(7)	Phased-In Recognition of Investment Income		
	(a) Difference between Market & Expected Actuarial Value: (2) – (6)	$ (9,904,851)	$ 880,506
	(b) 20% of Difference: 0.2 x (7)(a)	$ (1,980,970)	$ 176,101
(8)	Preliminary Actuarial Value End of Year: (6) + (7)(b)	$ 103,163,337	$ 99,353,417
(9)	Final Actuarial Value End of Year Using 20% Corridor: Greater of [(8) and .8 x (2)], but no more than 1.2 x (2)	$ 103,163,337	$ 99,353,417
(10)	Difference Between Market & Actuarial Values: (2) – (9)	$ (7,923,881)	$ 704,405
(11)	Rate of Return on Actuarial Value	4.89%	7.08%

* Before corridor constraints, if applicable and adjusted.
** Includes additional receivables of $4,435 in 2018 and $4,435 in 2017.

SCHEDULE C

SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)

	YEAR ENDING	
Receipts for the Year	December 31, 2018 ($1,000's)	December 31, 2017 ($1,000's)
Contributions:		
Members	$ 230	$ 245
Employer	4,303	2,847
Subtotal	$ 4,533	$ 3,092
Investment Earnings	(3,794)	12,910
Health Services Allowance	0	0
Other	4	4
TOTAL	$ 743	$ 16,006
Disbursements for the Year		
Benefit Payments	$ 5,483	$ 5,251
Refunds to Members	79	24
Health Services Cost	0	0
Other	0	0
TOTAL	$ 5,562	$ 5,275
Excess of Receipts over Disbursements	$ (4,819)	$ 10,731
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of Year	$ 100,058	$ 89,327
Excess of Receipts over Disbursements	(4,819)	10,371
Asset Balance as of the End of Year	$ 95,239	$ 100,058
Rate of Return	-3.81%	14.63%

SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted or reaffirmed by the Commission for the December 31, 2016 and later valuations.

VALUATION INTEREST RATE: 6.90% per annum, compounded annually, net of expenses.

SALARY INCREASES: 3.50% per annum.

COST OF LIVING ADJUSTMENTS: 2.25% per annum.

SOCIAL SECURITY WAGE BASE INCREASES: 3.00% per annum.

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

Age	Annual Rates of			
	Withdrawal		Death	Disability
	Employees	Judges		
	Men			
20	5.00%	5.00%	.024%	.03%
25	5.00	5.00	.032	.04
30	5.00	2.50	.037	.06
35	5.00	1.25	.059	.08
40	5.00	0.75	.086	.12
45	5.00	0.38	.107	.19
50	5.00	0.00	.142	.31
55	5.00	0.00	.219	.52
60	5.00	0.00	.414	.73
65	5.00	0.00	.810	.00
	Women			
20	7.50%	7.50%	.013%	.03%
25	7.50	7.50	.014	.04
30	5.00	3.75	.019	.06
35	5.00	1.88	.033	.08
40	5.00	1.25	.044	.12
45	5.00	0.63	.069	.19
50	5.00	0.00	.101	.31
55	5.00	0.00	.198	.52
60	5.00	0.00	.392	.73
65	5.00	0.00	.760	.00

RETIREMENT: The assumed annual rates of retirement are shown below.

Age	Annual Rates of Retirement
50 – 61	5%
62 – 64	10
65 – 69	20
70 +	100

DEATHS AFTER RETIREMENT: The RP 2000 Mortality Table projected with Scale AA 15 years for men set back 2 years and projected 25 years for women set back 1 year is used for the period after retirement and for dependent beneficiaries. Based on the results of the most recent experience study adopted by the Commission, the numbers of expected future deaths are 12-14% less than the actual number of deaths that occurred during the study period for healthy retirees. Representative values of the assumed annual rates of mortality are as follows:

Age	Men	Women	Age	Men	Women
40	.086%	.044%	65	.810%	.760%
45	.107	.069	70	1.425	1.311
50	.142	.101	75	2.460	2.083
55	.219	.198	80	4.483	3.482
60	.414	.392	85	8.075	5.981

50% (men) and 80% (women) of the RP-2000 Disability Mortality Table is used for the period after disability.

ASSET METHOD: Actuarial Value, as developed in Schedule B. The actuarial value of assets 20% of any difference between actual and expected investment income (gain/loss) in the valuation year and 20% of any previous years' unrecognized investment gains/losses. In addition, the actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

VALUATION METHOD: Entry Age Normal cost method. See Schedule E for a brief description of this method.

SPOUSES: For members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

NON-VESTED INACTIVE MEMBERS: The employee contribution account balances as of the valuation date is used as a liability for these members.

SCHEDULE E

ACTUARIAL COST METHOD

The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 6.90%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of PJERS are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the PJERS. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

SCHEDULE F

SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

The Connecticut Probate Judges and Employees Retirement System (CT PJERS) is a defined benefit pension plan established by the Connecticut General Assembly for the purpose of providing retirement allowances and other benefits for Probate judges and employees of probate courts in Connecticut, and their survivors and other beneficiaries. Special retirement provisions apply to a judge whose probate district is merged with another district and who has not been elected to a term which begins or is subsequent to such consolidation.

Eligibility Requirements	
Judges	All Judges of Probate commencing service before January 1, 2011 (provided one full term is served by age 70). For Judges commencing service on or after January 1, 2011, the hourly requirement is 1,000 hours per year.
Employees	For Employees hired before January 1, 2011, the hourly requirement is 430 hours per year. For Employees hired on or after January 1, 2011, the hourly requirement is 1,000 hours per year.
Credited Service	All periods as a Judge of Probate, Acting Judge of Probate, Employee of any probate court, plus a period of not more than 3 years of service as a member of the General Assembly or in the military.
Final Average Compensation	*Judges* – average annual compensation for the 3 highest paid years of service in the probate court, provided the compensation for any year does not exceed the maximum net income allowed by law. *Employees* – the average annual rate of pay during the employee's 3 highest paid years of employment.
Normal Retirement Benefit	
Eligibility	*Judges* - Age 62 and 10 years of service (age 70 mandatory retirement provided one full term is served). *Employees* - Age 62 and 10 years of service (no additional pension credit after age 70).
Benefit	*Judges and Employees not covered by Social Security* – 2% of Final Average Compensation times years of Credited Service, minimum $360 annually.

Early Retirement Benefit	
Eligibility	*Judges and Employees* - 10 years of creditable service.
Benefit	Accrued benefit actuarially reduced unless separation occurs after age 60 in which case the reduction is .25% for each month that separation precedes age 62.
Disability Retirement Benefit	
Eligibility	10 years of creditable service.
Benefit	Calculated as a normal retirement benefit
Deferred Vested Retirement Benefit	
Eligibility	10 years of creditable service.
Benefit	Accrued benefit deferred to age 62.
Pre-Retirement Spouse's Benefit	
Eligibility	10 years of service and married for at least one year.
Benefit	Average of 50% of life annuity benefit and 50% of joint and 50% survivor benefit which member would have received had he retired on the date of his death.
Termination Benefit	
Eligibility	Termination with less than 10 years of creditable service.
Benefit	Return of the member's accumulated contributions with interest (no interest paid if the termination is due to death).
Payment Options	Straight life annuity; 50% or 100% joint and last survivor annuity; 10 or 20 year certain and life annuity.
Cost of Living Adjustments	The COLA percentage is based on the average monthly change in the nationwide Consumer Price Index and it is applied annually on July 1 to the previous July 1 benefit amount. The COLA is limited to 3% and no adjustment is made if the change in the CPI is less than 1%.

Contributions

By Members	*Judges and Employees not covered by Social Security* – 3.75% of Compensation *Judges and Employees covered by Social Security* – 1% of Compensation up to the current Social Security Wage Base plus 3.75% of Compensation above the current Social Security Wage Base.
By Employers	Employer contributions are actuarially determined and approved and certified by the Commission. The minimum employer contribution is the employer normal cost.

SCHEDULE G

The Number and Average Annual Compensation of Active Judges By Age and Service as of December 31, 2018

Age	Years of Service									Totals	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Count	Average Pay
Under 25										0	0
25 to 29										0	0
30 to 34	1									1	N/A
35 to 39										0	0
40 to 44	2	1	1							4	117,047
45 to 49	1	1			1					3	112,625
50 to 54		1	1	1	4	1				8	118,977
55 to 59		3	2	1	5		3			14	113,144
60 to 64		3	3	1		1	3	1	1	13	112,440
65 to 69	1	2	2		2	3	1			11	117,193
70 & Up										0	0
Total	5	11	9	3	12	5	7	1	1	54	114,859

* Pay not included in some cells due to data privacy laws.

Average Age: 58.1
Average Service: 13.7

<u>**SCHEDULE G**</u>
(Continued)

The Number and Average Annual Compensation of Active Employees
By Age and Service as of December 31, 2018

Age	Years of Service									Totals	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Count	Average Pay
Under 25	6									6	30,038
25 to 29	4	3	4	1						12	29,735
30 to 34	2	11	3	3						19	38,655
35 to 39	2	4	7	7	4					24	38,231
40 to 44	3	3	6	4	1	3				20	44,936
45 to 49	1	6	6	7	6	4				30	47,990
50 to 54		10	7	7	4	2	2	1		33	42,836
55 to 59	4	11	7	15	13	1	6	5	1	63	46,338
60 to 64	2	6	6	14	8	4	4	2		46	47,330
65 to 69		1	3	2	4	3	4		1	18	46,817
70 & Up				2		1		1		4	32,209
Total	24	55	49	62	40	18	16	9	2	275	43,669

Average Age: 50.9
Average Service: 11.6

SCHEDULE G
(Continued)

NUMBER OF RETIRED MEMBERS
AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	6	$ 27,994	$ 4,666
50 - 54	6	22,989	3,832
55 - 59	15	105,353	7,024
60 - 64	22	332,776	15,126
65 - 69	53	962,703	18,164
70 - 74	70	1,599,141	22,845
75 - 79	69	1,213,635	17,589
80 - 84	41	540,255	13,177
85 - 89	33	482,926	14,634
90 - 94	18	190,822	10,601
95 & Over	6	73,204	12,201
Total	339	$ 5,551,798	$ 16,377

NUMBER OF BENEFICIARIES
AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	3	$ 30,663	$ 10,221
50 - 54	1	675	675
55 - 59	1	675	675
60 - 64	2	11,552	5,776
65 - 69	2	27,541	13,771
70 - 74	3	28,966	9,655
75 - 79	2	25,117	12,559
80 - 84	6	58,760	9,793
85 - 89	11	112,425	10,220
90 - 94	8	72,575	9,072
95 & Over	1	19,527	19,527
Total	40	$ 388,476	$ 9,712

SCHEDULE G
(Continued)

NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	4	$ 41,265	$ 10,316
50 - 54	4	44,142	11,036
55 - 59	4	50,580	12,645
60 - 64	5	42,394	8,479
65 - 69	0	0	0
70 - 74	1	13,179	13,179
75 - 79	0	0	0
80 - 84	0	0	0
85 - 89	0	0	0
90 - 94	0	0	0
95 & Over	0	0	0
Total	18	$ 191,560	$ 10,642

SCHEDULE H

ANALYSIS OF FINANCIAL EXPERIENCE

Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
($ Thousands)

Type of Activity	$ Gain (or Loss) For the One Year Period Ending 12/31/2018
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$ (482.0)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(15.8)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(71.2)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	1,918.0
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	3,329.0
New Members. Additional unfunded accrued liability will produce a loss.	(418.3)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(1,981.0)
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	526.8
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	(576.3)
Gain (or Loss) During Year From Financial Experience	$ 2,229.2
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	0.0
Composite Gain (or Loss) During Year	$ 2,229.2