

**LOUISIANA STATE EMPLOYEES'
RETIREMENT SYSTEM**

JUNE 30, 2021

ACTUARIAL VALUATION



September 23, 2021

Board of Trustees
Louisiana State Employees' Retirement System
Post Office Box 44213
Baton Rouge, Louisiana 70804-4213

Ladies and Gentlemen:

This report is prepared for the Louisiana State Employees' Retirement System (LASERS) Board of Trustees to present the results of the actuarial valuation of assets and liabilities, as well as funding requirements, as of June 30, 2021. The primary purpose of the report is to provide a measure of the plan's liability and funding levels and to determine the actuarially required contribution for fiscal year ending 2022 and the projected actuarially required contribution rate for fiscal year ending 2023. Section IV provides disclosures of the Fiduciary Net Position and Net Pension Liabilities required by the Governmental Accounting Standards Board Statements 67/68. Results of the funding valuation and GASB valuations should not be relied upon for other purposes.

In preparing this valuation, we have relied upon the information provided by the System regarding plan provisions, plan membership, plan assets and other matters as detailed in this report. In particular, we have relied upon the Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position as audited by Postlethwaite & Netterville, Certified Public Accountants. We did not audit the data or plan assets but reviewed for reasonableness and consistency with prior year data. Our review concluded that the data is reasonable and consistent with the prior year's data.

The liabilities and normal costs shown herein have been estimated on the basis of the actuarial cost methods as specified in Louisiana Revised Statutes Title 11 Section 22(6). All actuarial assumptions and methods have been approved by the Board of Trustees and are reasonable and appropriate for the purposes of this valuation. However, other sets of assumptions and methods could also be reasonable and could produce materially different results. Actual results may vary from the assumptions used to prepare the valuation.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities. Future actuarial measurements may differ significantly from the current measurements 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 and changes in plan provisions or applicable law. The scope of this report does not include an analysis of the range of such future measurements.

In performing the valuations, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models that apply the funding and accounting rules to generate the costs. All internally developed models are reviewed as part of the valuation process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

This report has been prepared in accordance with actuarial standards of practice, and to the best of our knowledge, fairly reflects the actuarial present value of accrued benefits of the Louisiana State Employees' Retirement System.

Shelley is an Associate in the Society of Actuaries and Pat is a Fellow in the Society of Actuaries. Shelley and Pat are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

FOSTER & FOSTER INC.



Shelley R. Johnson, ASA, MAAA



D. Patrick McDonald, FSA, EA, MAAA, FCA

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PRESENTATION OF VALUATION RESULTS

SUMMARY OF VALUATION RESULTS

		----- Prior Years -----		
		June 30, 2021	June 30, 2020	June 30, 2019
I.	Membership Census			
	Retirees	49,535	49,341	49,269
	Actives	38,572	39,487	39,533
	DROP	1,311	1,367	1,354
	Terminated Vested	3,724	3,691	3,744
II.	Annual Benefits	\$1,364,477,409	\$1,328,286,600	\$1,300,064,580
III.	Total Payroll	2,004,062,861	1,999,414,595	1,952,495,777
IV.	Market Value of Assets	14,716,344,767	11,420,710,895	12,282,698,991
	Valuation Assets	13,347,462,993	12,617,189,040	12,520,853,360
V.	Experience Account	85,173,827	12,289,990	11,824,506
VI.	Investment Yield			
	Market Value (Total Assets)	33.03%	-3.98%	3.76%
	Market Value (Excl. Self Directed, ORP)	34.58%	-4.32%	3.81%
	Actuarial Value	9.95%	3.94%	5.18%
	DROP	9.45%	3.44%	4.68%
VII.	Total Normal Cost	218,244,525	208,142,784	220,437,301
	Total Normal Cost (% of Payroll)	10.89%	10.41%	11.29%
	Employer Normal Cost (% of Payroll)	2.81%	2.35%	3.24%
VIII.	Unfunded Actuarial Accrued Liability (UAAL)	6,872,857,541	7,074,189,759	7,006,758,935
	Funded Percentage	66.0%	64.1%	64.1%
	UAAL w/o discount rate/method changes ¹	4,915,857,541	5,387,189,759	5,406,758,935
	Funding % w/o discount rate/method changes ¹	73.1%	70.1%	69.8%
IX.	Funding Requirements (Mid-Year)			
	1) Discount Rate (Current Year) ²	7.40%	7.55%	7.60%
	Discount Rate (Next Year) ²	7.25%	7.40%	7.55%
	2) Employee Contribution	163,058,370	162,479,335	157,280,757
	Avg. Employee Contribution Rate	8.08%	8.06%	8.05%
	3) Restated Required Employer Contribution	818,701,523	793,572,215	781,987,406
	Aggregate Rate (Current Year) ³	40.6%	39.4%	40.0%
	Restated Expected Contribution (Current Year)	811,255,752	818,444,293	797,149,675
	4) Projected Required Employer Contribution	835,703,090	817,898,542	791,545,988
	Proj. Aggregate Rate (Next Year) ³	41.0%	40.2%	40.6%

¹ Approximate values if not for the discount rate changes from 8.25% and change to entry age normal cost method.

² The discount rate is the long-term expected rate of return less 35 basis points to account for gain-sharing

³ Aggregate employer contribution rate for all plans, net of special sub-plan direct UAL payments.

PROJECTED CONTRIBUTION RATES BY PLAN

Act 1026 of the 2010 Legislative Session requires the employer contribution rate to be determined separately for each plan as shown in the table below. The normal cost portion of each plan's employer contribution rate varies based upon that plan's benefits, member demographics, actuarial assumptions, and the rate contributed by employees. The shared UAL contribution rate is determined in aggregate for all plans. The UAL established due to a specific plan or group of plans due to legislation will be allocated entirely to that plan or those plans. The Rank and File Employer Contribution Rate is applicable to Appellate Law Clerks, as determined by the Public Retirement Systems' Actuarial Committee (PRSAC) and was developed by including Appellate Law Clerk normal costs and payroll. The dollar amounts of the aggregate funding requirements for LASERS are shown in Section III.

Projected Cost for Fiscal Year 2022/2023								
Plan	Plan Status	Total Normal Cost % (A)	Employee NC % (B)	Employer NC % (A)-(B)	Admin Expense %	Shared UAL %	Plan Specific UAL %	Total Employer Contribution %
Rank & File, App. Law Clerks	Open	10.3%	7.8%	2.5%	0.86%	37.06%	0.00%	40.4%
Judges and Court Officers	Closed	18.4%	11.5%	6.9%	0.86%	37.06%	0.00%	44.8%
Legislators	Closed	10.2%	11.5%	-1.3%	0.86%	37.06%	0.00%	36.6%
Special Legislative	Closed	10.2%	9.5%	0.7%	0.86%	37.06%	0.00%	38.6%
Corrections - Primary	Closed	9.4%	9.0%	0.4%	0.86%	37.06%	0.89%	39.2%
Corrections - Secondary	Closed	14.3%	9.0%	5.3%	0.86%	37.06%	0.20%	43.4%
Wildlife	Closed	23.7%	9.5%	14.2%	0.86%	37.06%	0.05%	52.2%
Peace Officers	Closed	12.8%	9.0%	3.8%	0.86%	37.06%	0.06%	41.8%
Alcohol Tobacco Control	Closed	14.9%	9.0%	5.9%	0.86%	37.06%	0.05%	43.9%
Bridge Police	Closed	9.7%	8.4%	1.3%	0.86%	37.06%	0.07%	39.3%
Judges (Act 992)	Open	18.9%	13.0%	5.9%	0.86%	37.06%	0.00%	43.8%
Hazardous Duty (Act 992)	Open	17.7%	9.5%	8.2%	0.86%	37.06%	0.02%	46.1%
Harbor Police Plan	Closed	17.7%	9.0%	8.7%	0.86%	37.06%	0.09%	46.7%
Aggregate LASERS Plans		11.2%	8.1%	3.1%	0.86%	37.06%	0.01%	41.0%

FUNDING REQUIREMENTS SPECIFIC TO INDIVIDUAL SUB-PLANS

Peace Officers - Act 414 of 2007 increased the accrual rate for certain Peace Officers. The resulting UAL increase is funded with annual payments over 30 years from the Department of Public Safety Peace Officers' Fund.

Rank & File – Act 992 of 2010 changed the retirement eligibility for members hired on or after July 1, 2006. The increase in UAL is amortized over 30 years with level payments and paid only by employers of rank and file members.

Hazardous Duty Plan - Act 992 of 2010 changed the normal form of benefit for prior members joining the hazardous duty plan prospectively. The increase in UAL is funded with level payments over a period of 10 years. This payment is allocated only to employers of members of the Hazardous Duty Plan.

Harbor Police Plan – Act 648 of 2014 provides for the transfer of the members, assets, and liabilities of the Harbor Police Retirement System into LASERS, effective July 1, 2015. Per the cooperative endeavor agreement which established the terms of the transfer, the employer contribution rate established for members of the Harbor Police sub-plan will not include any payment for LASERS shared UAL existing on July 1, 2015 until the earlier of July 1, 2022 or the date that all sums owed, as established by the cooperative endeavor agreement, have been paid to LASERS.

All Public Safety Plans –Act 224 of 2018 provides for a 100 percent survivor benefit for any member eligible for Hazardous Duty Plan membership, if killed in the line of duty by an intentional act of violence. The benefit increase resulted in a UAL increase for the following plans: Corrections Primary, Corrections Secondary, Wildlife, Peace Officers, Alcohol Tobacco Control, Bridge Police, Hazardous Duty, and Harbor Police. The UAL payment is amortized over 10 years with level payments and paid by employers of members in each applicable plan via the plan specific UAL payment.

Act 595 provides for a disability benefit equal to 100 percent of final average compensation for members of the Hazardous Duty, Corrections Primary and Secondary, Wildlife and Harbor Police plans who are totally and permanently disabled in the line of duty by an intentional act of violence. The change is prospective for current members and retrospective for any eligible retirees. The UAL increase resulting from the prospective change was amortized beginning June 30, 2018. The amortization of the increase in UAL for members approved by the Board during fiscal year ending 2019 to receive retrospective benefit increases began June 30, 2019. The payments for the increase in UAL are amortized over 10 years.

CHANGES SINCE PRIOR VALUATION

The Board reduced the discount rate from 7.55% to 7.40%, effective July 1, 2021. This change was anticipated in the prior valuation when determining the projected contribution requirements for Fiscal Year 2021/2022. For purposes of determining the projected contribution requirements for Fiscal Year 2022/2023, the Board reduced the discount rate to 7.25%.

Act 95 of 2016 requires re-amortization of the OAB with level-dollar payments to 2029 when such re-amortization results in annual payments that are not more than the next annual payment otherwise required under prior law. This criterion was met after allocating legislative appropriations and investment experience gains to this schedule. The schedule was re-amortized with level dollar payments to be paid off 2029.

Act 37 of 2021 provided a monthly benefit increase to retirees that on June 30, 2021 have attained age 60, have 30 or more years of service, have been retired 15 or more years, receive a monthly benefit less than \$1,450, and have not participated in DROP or the Initial Benefit Option. The benefit increase is the lesser of \$300 per month or the amount needed to increase the monthly benefit to \$1,450.

CHANGE IN FUNDING REQUIREMENTS

The aggregate employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 2021/22 plan year was 40.2%. The restated employer contribution rate determined by this valuation for the 2021/22 plan year is 40.6%. Therefore, an employer contribution deficit of 0.4% of payroll is expected next year.

Changes in the required contribution are generally the result of gains or losses resulting from actual experience differing from expected plan experience, expected changes in the UAL payment due to statutory requirements, and changes in actuarial assumptions or methods. Changes in the employer contribution rate are impacted by both the change in the total dollar required contribution and by the total aggregate payroll for active members.

The projected aggregate employer contribution rate increased from 40.2% for Fiscal Year 2021/2022 to 41.0% for Fiscal Year 2022/2023. The reasons for the change are detailed below. The total of the items contributing to the contribution rate change may not exactly equal the actual contribution rate change due to rounding and since the items impacting the rate are not additive and may overlap.

FY 2022/2023 Employer Contribution Rate Reconciliation

Normal Cost	
Discount Rate Change (from 7.40% to 7.25%)	0.29%
Other	0.19%
Normal Cost Total Change	0.48%
UAL Payment	
Investment Experience Gain	-0.61%
Experience Account Allocation	0.53%
Other Experience Loss	0.02%
Statutory UAL Payment Change	0.19%
Contribution Variance Payment Change	-0.22%
Discount Rate Change (from 7.40% to 7.25%)	0.74%
Reamortization of OAB with Level Payments	-0.28%
Total UAL Payment Change	0.37%
Payroll Change	-0.05%
Administrative Expenses	-0.01%
Total	0.79%
Actual Contribution Rate Change	0.80%

CHANGE IN UNFUNDED ACCRUED LIABILITY

Below is a reconciliation of the change in the plan's unfunded accrued liability (UAL).

Unfunded Accrued Liability - June 30, 2020	\$	7,074,189,759
Interest on Unfunded Liability	\$	534,101,327
Amortization Payments	\$	(756,072,607)
Legislative Acts Income *	\$	(8,438,055)
Investment Experience Gain	\$	(272,802,470)
Experience Account Allocation	\$	77,702,485
Act 37 of 2021 (Minimum Benefit COLA)	\$	6,041,053
Experience Account Disbursement	\$	(6,041,053)
Other Experience Loss	\$	5,948,275
Employer Contribution Surplus	\$	(51,400,544)
Discount Rate Change (from 7.55% to 7.40%)	\$	269,629,371
Total Change	\$	(201,332,218)
Unfunded Accrued Liability - June 30, 2021	\$	6,872,857,541

* Includes \$7,368 in litter fines and \$8,430,687 from Act 120 of 2021

PLAN EXPERIENCE

The actuarial assumptions represent the best estimate of future plan experience in order to properly fund benefits. The results of the actuarial valuation are dependent on the actuarial assumptions used. These assumptions, which are adopted by the Board of Trustees, are detailed in Appendix E of the valuation report. A gain or loss occurs if the actual experience differs from the prior year's projected plan measurements. The funding policy, in Appendix C, describes how investment and non-investment gains are amortized, or allocated for other purposes.

Demographic and Salary Experience

Demographic assumptions include rates of retirement/DROP, rates at which members become disabled, turnover rates, mortality rates, and several other assumptions. Salary assumptions anticipate future salary increases. During the 2020/21 plan year, the system incurred an experience loss of \$5,948,275 due to plan experience differing from that anticipated by the demographic and salary assumptions. The loss is amortized over 30 years with level payments.

A breakdown of the non-investment experience gain/(loss) is provided below:

	\$ Gain/(Loss)	% of Liability
Active Member Decrements	(\$36,652,611)	-0.18%
Active Member Salaries	(\$27,068,003)	-0.13%
Inactive Mortality	\$16,501,365	0.08%
Administrative Expenses	\$0	0.00%
Other	\$41,270,974	0.20%
Total Experience Gain	(\$5,948,275)	-0.03%
Total Actuarial Liability	\$20,220,320,534	

Investment Experience

The market value of assets and actuarial value of assets include funds from the Optional Retirement Plan (ORP) and DROP accounts with member-directed investments. The rate of return on the actuarial value of assets is determined for trust assets net of these accounts, and in total, as shown below.

	Actuarial Value of Assets	Directed DROP Accounts	Net Actuarial Value of Assets
Beginning Assets	12,629,479,030	606,966,904	12,022,512,126
Contributions	1,034,725,142	63,236,975	971,488,167
Benefits Payments and Expenses	1,442,684,529	60,936,225	1,381,748,304
Investment Income	1,211,117,177	36,138,969	1,174,978,208
Ending Asset Value	13,432,636,820	645,406,623	12,787,230,197
Net AVA Rate of Return			9.95%

Section I
PRESENTATION OF VALUATION RESULTS

LASERS Actuarial Valuation
June 30, 2021

For the plan year ending June 30, 2021, the realized actuarial rate of return based upon the actuarial value of assets is 9.95%. Since this is more than the 7.55% discount rate, which was the assumed rate of return expected to fund regular plan benefits, the result is an investment experience gain of \$272,802,470, net of gains allocated to side funds or DROP Accounts. Investment experience losses are amortized over 30 years with level payments. Investment experience gains up to the threshold amounts, are allocated to the Original Amortization Base and Experience Account Allocation Base. The remaining gain is amortized over 30 years with level payments. One-half of the remaining gain is allocated to the experience account, up to the statutory cap and is amortized over ten years as a loss.

Development of Investment Gain/(Loss)

A. Beginning Net Actuarial Value of Assets (AVA)	12,022,512,126
B. Total Contributions	971,488,167
C. Benefits Payments and Expenses	1,381,748,304
D. Ending Net Actuarial Value of Assets (AVA)	12,787,230,197
E. Investment Income (D - A - B + C)	1,174,978,208
Investment Rate of Return	9.95%
F. Expected Investment Income	892,181,387
Expected Rate of Return	7.55%
G. Investment Gain/(Loss) (E - F)	282,796,821
H. Gain Allocated to Side Funds or DROP Accounts	9,994,351
I. Net Investment Gain (G - H)	272,802,470

Current Allocation of Gain Threshold to OAB/EAAB

J. \$100,000,000 Indexed by AVA Increase	117,397,500
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Allocation of Investment Gain

K. Original Amortization Base (OAB)	58,698,750
L. Experience Account Amortization Base (EAAB)	58,698,750
M. Amortized Gain (30 Year)	155,404,970
N. Total	272,802,470

L. Allocation to Experience Account (M / 2)	(77,702,485)
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The historical geometric average rates of return on the actuarial value of assets, net of investment expenses, for plan years ending June 30 are shown below. The discount rate reflects the expected return assumed to fund regular plan benefits. The historical returns below are analogous to the discount rate plus returns expected to be allocated to the experience account.

	Actuarial Rate of Return		Geometric Average
2016	5.43%	5 Year	6.82%
2017	7.62%	10 Year	8.24%
2018	7.52%	15 Year	6.91%
2019	5.18%	20 Year	6.25%
2020	3.94%	25 Year	7.13%
2021	9.95%	30 Year	7.57%

DROP accounts for members eligible for DROP prior to January 1, 2004 are credited with interest at the System's actuarial rate of return less a 0.5% expense adjustment, but not below zero. The DROP interest rate for the period July 1, 2020 through June 30, 2021 after the expense adjustment is 9.45%. DROP accounts for members eligible for DROP after January 1, 2004 are invested in self-directed accounts approved by the Board of Trustees.

The Harbor Police Retirement System Annual DROP Interest Rate is the three-year average (calculated as the compound average of 36 months) investment return of the plan assets for the period ending the June 30th immediately preceding that given date. The average rate so determined is to be reduced by a "contingency" adjustment of 0.5 percentage points, but not to below zero. The Harbor Police Retirement System Annual DROP Interest Rate for the period July 1, 2021 through June 30, 2022 after the "contingency" adjustment is 10.3147 percent.

ACTUARIAL ASSETS/VALUATION ASSETS

The gross actuarial value of assets, developed in Section II, are determined based on the market value of assets, with gradual recognition of gains and losses relative to the discount rate over a five-year period in order to smooth the effects of short-term market volatility. Valuation assets are determined as the gross actuarial value of assets less the assets held in side-fund accounts. Valuation assets are used to determine the employer contribution rate (see Section III).

The side-fund accounts excluded from valuation assets are as follows:

Employer Credit Account: This account, established by Act 588 of 2004, accumulates the excess contributions based on the minimum employer contribution rate of 15.5%, over the actuarially determined employer contribution, as restated in the current valuation. The minimum rate is not currently applicable. The account continues to have a zero balance.

Experience Account: The account is used to fund permanent benefit increases for retirees. Fifty percent of any excess return above \$100,000,000 (indexed to increases in the actuarial value of assets, beginning June 30, 2016) will be credited to the Experience Account, subject to the restrictions provided in Act 399 of 2014, as described in the Summary of Plan Provisions (Appendix B). There was a disbursement of \$6,041,053 to regular plan assets to offset the cost of the minimum benefit COLA granted on July 1, 2021 per Act 37 of 2021. The fund currently has a balance of \$85,173,827.

LEGISLATIVE/PLAN CHANGES

Act 120 of 2021 provided a supplemental appropriation of \$8,430,687 to LASERS to be applied to the IUAL, which is a component of the Original Amortization Base.

Act 37 of 2021 provided a monthly benefit increase to retirees that on June 30, 2021 have attained age 60, have 30 or more years of service, have been retired 15 or more years, receive a monthly benefit less than \$1,450, and have not participated in DROP or the Initial Benefit Option. The benefit increase is the lesser of \$300 per month or the amount needed to increase the monthly benefit to \$1,450.

The following provisions of Act 95 of 2016 will be implemented as certain triggers are met:

- Provides that until a system is 80% funded, the net remaining liability of the OAB and EAAB shall be re-amortized after application of the hurdle payments in Fiscal Year 2024/2025 and in every fifth fiscal year thereafter.
- Changes the amortization period for most actuarial changes, gains, or losses from 30 years to 20 years once the funded ratio reaches 70%.

ACCELERATED REDUCTION AND REAMORTIZATION OF OAB AND EAAB

Act 497 of 2009 established the OAB and EAAB and required the application of certain investment gains and contribution variance credits to these schedules. Act 399 of 2014 modified the provisions of Act 497 and specifies that until the System's funded ratio reaches 85%, the funds applied to these schedules will be used to pay off the schedules early, rather than to reduce employer contributions. Since 2009, \$165,972,060 has been applied to the OAB and \$350,915,211 has been applied to the EAAB. Funds credited to the EAAB since its last re-amortization on June 30, 2019 result in an early payoff from FY 2039/40 to FY 2037/38, with a reduced final payment in the last payment year.

FUNDED STATUS

The funded status is a measure of the plan's assets relative to the plan's obligations. The current funded ratio is 66.0%, as measured by the plan's valuation assets divided by the total actuarial accrued liability, based on the asset valuation method, actuarial cost method, and actuarial assumptions described in Appendix E. The funded ratio has increased from 55.9% since 2012. See Appendix D for a 10-year history. If not for the reductions in the discount rate and change to the Entry Age Normal Cost method, the funded ratio would have increased to 73.1%. However, these changes have improved the financial stability of the plan by reducing the potential for future contribution rate increases. If all actuarial assumptions are realized, the funded ratio is expected to steadily increase as unfunded liabilities are amortized in accordance with the plan's funding policy.

The funded ratio reported for GASB purposes, which is based on the market value of assets rather than on valuation assets, is 72.8%.

ASSETS/FINANCIAL SUMMARY

STATEMENT OF REVENUES AND EXPENSES

	----- Prior Years -----		
	June 30, 2021	June 30, 2020	June 30, 2019
<u>Operating Income:</u>			
1. Contribution Income			
Member	\$ 166,954,560	\$ 164,576,018	\$ 160,338,556
Employer	844,395,225	837,086,539	759,779,744
ORP	381,162	363,063	370,705
2. Other Income			
Legislative Acts Income ¹	8,438,055	16,668,183	9,479,319
Transfers/Purchases	10,062,645	11,300,144	9,685,337
Miscellaneous	4,493,495	4,655,368	3,366,797
Total Non-Investment Income	1,034,725,142	1,034,649,315	943,020,458
3. Investment Income			
Investments	3,805,906,491	(388,156,381)	541,659,901
Less Investment Expenses	(102,313,232)	(92,417,433)	(88,745,584)
Net Investment Income	3,703,593,259	(480,573,814)	452,914,317
4. Total Income	4,738,318,401	554,075,501	1,395,934,775
<u>Operating Expenses:</u>			
1. General Administration	16,606,586	16,749,257	16,785,776
Other Post Employment Benefits	89,651	42,750	538,097
Depreciation Expenses	769,107	820,094	783,617
2. Benefits Paid			
Pension Benefits	1,394,914,135	1,368,004,318	1,343,892,705
Return of Contributions	30,305,050	30,447,178	34,948,707
Total Benefits Paid	1,425,219,185	1,398,451,496	1,378,841,412
3. Total Expenses	\$ 1,442,684,529	\$ 1,416,063,597	\$ 1,396,948,902
<u>Net Income:</u>	\$ 3,295,633,872	\$ (861,988,096)	\$ (1,014,127)

¹ Legislative Acts Income: 2021 includes \$7,368 in litter fines and \$8,430,687 in appropriations from Act 120 of 2021; 2020 includes \$6,628 in litter fines and \$16,661,555 in appropriations from Act 255 of 2020; 2019 includes \$1,135 in litter fines and \$9,478,184 in appropriations from Act 50 of 2019.

**COMPARATIVE SUMMARY OF REVENUES BY SOURCE
AND EXPENSES BY TYPE**

Revenues by Source

Plan Year	Member Contribution	Employer Contribution¹	Investment Income³	Total
2012	192,795,057	669,727,178	(9,610,468)	852,911,767
2013	173,357,802	682,836,602	1,106,494,873	1,962,689,277
2014	152,993,052	635,974,701	1,770,521,381	2,559,489,134
2015	153,281,097	739,607,123	152,809,130	1,045,697,350
2016	152,233,771	744,582,736	(296,729,233)	600,087,274
2017	149,931,242	689,633,005	1,520,600,699	2,360,164,946
2018	152,189,709	744,678,436	1,011,537,508	1,908,405,653
2019	160,338,556	782,681,902	452,914,317	1,395,934,775
2020	164,576,018	870,073,297	(480,573,814)	554,075,501
2021	166,954,560	867,770,582	3,703,593,259	4,738,318,401

Expenses by Type

Plan Year	Benefits	Refunds	Administrative Expenses^{2,3}	Total
2012	978,971,262	43,221,742	18,441,062	1,040,634,066
2013	1,070,410,859	61,522,162	18,932,247	1,150,865,268
2014	1,167,477,166	77,118,765	17,638,128	1,262,234,059
2015	1,199,079,252	38,308,757	18,011,841	1,255,399,850
2016	1,238,507,932	35,997,261	17,018,181	1,291,523,374
2017	1,274,461,022	37,606,040	18,536,860	1,330,603,922
2018	1,317,635,325	35,191,508	25,141,552	1,377,968,385
2019	1,343,892,705	34,948,707	18,107,490	1,396,948,902
2020	1,368,004,318	30,447,178	17,612,101	1,416,063,597
2021	1,394,914,135	30,305,050	17,465,344	1,442,684,529

¹ Includes transfers and purchases and the annual employer contribution, and any legislative appropriations.

² Includes other expenses, not related to administration.

³ Investment Income and Administrative Expenses do not tie to LASERS financial statements for 2012-2013 because Investment Administrative Expenses were transferred from Administrative Expenses to Investment Income per instructions from GASB.

STATEMENT OF ASSETS

	----Prior Years----		
	June 30, 2021	June 30, 2020	June 30, 2019
ASSETS (Market Value)			
1. Short-Term Assets			
Cash/Cash Equivalencies	\$ 148,590,579	\$ 139,023,019	\$ 134,308,012
Short-Term Investments	250,365,783	533,930,023	128,453,941
2. Bonds			
Domestic Issues	1,341,333,489	1,287,120,678	1,358,261,609
International Issues	1,687,925,583	1,267,656,475	917,116,972
3. Equities			
Domestic Stock	4,301,389,387	2,172,131,338	2,567,937,341
International Stock	3,644,585,085	2,929,335,194	3,772,924,328
4. Other Assets			
Fixed Assets	5,954,546	6,217,506	5,853,457
Real Estate & Alternative Assets	3,298,280,425	3,028,015,501	3,333,310,490
5. Receivables - Payables	38,268,362	59,505,364	65,654,038
6. Securities Lending Assets - Liabilities	6,447	6,629	61,853
7. Deferred Outflows & Inflows	(354,919)	(2,230,832)	(1,183,050)
TOTAL ASSETS - Market Value	14,716,344,767	11,420,710,895	12,282,698,991
Cost Value	11,037,578,296	10,596,943,658	10,441,713,527

ACTUARIAL VALUE OF ASSETS

The actuarial value of assets (AVA) is determined as the market value of assets (MVA) adjusted to gradually recognize investment gains and losses relative to the net assumed investment return, over a 5-year period in 20% increments. The actuarial value of assets is subject to Corridor Limits of 80% to 120% of the Market Value of Assets. The tables below show the development of the actuarial value of assets and the amount of deferred gains and losses to be recognized in future years.

Plan Year	Market Value Gain/(Loss)	Deferred %	Deferred Gain/(Loss)
2018	125,269,563	20%	25,053,913
2019	(469,064,390)	40%	(187,625,756)
2020	(1,398,931,804)	60%	(839,359,082)
2021	2,857,048,590	80%	2,285,638,872
			1,283,707,947
Market Value of Assets			14,716,344,767
- Deferred Asset Gain/(Loss)			1,283,707,947
Preliminary Actuarial Value of Assets			13,432,636,820
CORRIDOR LIMITS			
Minimum = 80% of Market Value			11,773,075,814
Maximum = 120% of Market Value			17,659,613,720
Actuarial Value of Assets			13,432,636,820

Deferred Gain/Loss to be Recognized in Actuarial Value of Assets in Future Years

Plan Year	Deferred Gain/(Loss)	2022	2023	2024	2025
2018	25,053,913	25,053,913			
2019	(187,625,756)	(93,812,878)	(93,812,878)		
2020	(839,359,082)	(279,786,361)	(279,786,361)	(279,786,360)	
2021	2,285,638,872	571,409,718	571,409,718	571,409,718	571,409,718
	1,283,707,947	222,864,392	197,810,479	291,623,358	571,409,718

**SIDE FUNDS AND DEVELOPMENT OF
ACTUARIAL VALUE OF ASSETS**

	---- Prior Years ----		
	June 30, 2021	June 30, 2020	June 30, 2019
<u>EMPLOYER CREDIT ACCOUNT</u>¹:			
Prior Year Ending Balance	\$ -	\$ -	\$ -
+ Current Year Allocation	-	-	-
- Current Year Disbursements	-	-	-
+ Accumulated Interest	-	-	-
Total Fund Balance - Year End	-	-	-
<u>INITIAL UAL AMORTIZATION FUND:</u>			
Prior Year Ending Balance	\$ -	\$ -	\$ -
+ Current Year Allocation	-	-	-
- Current Year Disbursements	-	-	-
+ Accumulated Interest	-	-	-
Total Fund Balance - Year End	-	-	-
<u>EXPERIENCE ACCOUNT FUND:</u>			
Prior Year Ending Balance	\$ 12,289,990	\$ 11,824,506	\$ 11,241,902
+ Experience Account Allocation	77,702,485	-	-
- Benefit Disbursements	(6,041,053)	-	-
+ Accumulated Interest	1,222,405	465,484	582,604
Fund Balance - Year End	85,173,827	12,289,990	11,824,506
<u>DEVELOPMENT OF VALUATION ASSETS:</u>			
Actuarial Value of Assets	\$ 13,432,636,820	\$ 12,629,479,030	\$ 12,532,677,866
- Employer Credit Account	-	-	-
- Initial UAL Fund	-	-	-
- Experience Account Fund	85,173,827	12,289,990	11,824,506
Valuation Assets	\$ 13,347,462,993	\$ 12,617,189,040	\$ 12,520,853,360

¹ The Employer Credit Account was created by ACT 588 of 2004.

DEVELOPMENT OF COSTS, LIABILITIES AND CONTRIBUTIONS

Normal Costs and Accrued Liabilities are calculated based on the Provisions of the Plan as summarized in Appendix B in accordance with the Entry Age Normal Cost Method, and the Actuarial Assumptions outlined in Appendix E.

	June 30, 2021		---- Prior Year ---- June 30, 2020	
	Dollar Amount	% of Salary	Dollar Amount	% of Salary
Discount Rate	7.40%		7.55%	
I. Normal Costs				
Active Members with Complete Data				
a) Retirement Benefits	130,762,314	6.52%	122,558,860	6.13%
b) Disability Benefits	3,940,747	0.20%	3,854,054	0.19%
c) Survivor Benefits	4,344,539	0.22%	4,225,208	0.21%
d) Voluntary Termination	79,196,925	3.95%	77,504,662	3.88%
TOTAL	218,244,525	10.89%	208,142,784	10.41%
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement/Termination Benefits	4,937,165,645		4,776,767,691	
2) Disability Benefits	52,058,753		49,727,181	
3) Survivor Benefits	62,468,179		61,291,315	
	5,051,692,577		4,887,786,187	
b) Retired and Inactive Members				
1) Regular Retirees	11,300,327,045		10,935,295,760	
2) Disability	237,335,673		245,403,379	
3) Survivors	881,684,751		825,136,215	
4) Terminated Vested	378,147,491		444,420,245	
5) Contributions Refunded	90,048,020		85,747,043	
6) DROP Deferred Benefits	1,122,799,731		1,163,368,740	
7) DROP Account Balances	1,152,219,353		1,098,800,777	
8) ORP Account Balances	6,065,893		5,420,453	
	15,168,627,957		14,803,592,612	
c) Total	20,220,320,534		19,691,378,799	

Section III**DEVELOPMENT OF COSTS, LIABILITIES AND CONTRIBUTIONS****LASERS Actuarial Valuation****June 30, 2021**

	June 30, 2021	---- Prior Year ---- June 30, 2020
II. Actuarial Accrued Liability	20,220,320,534	19,691,378,799
Discount Rate	7.40%	7.55%
III. Valuation Assets	13,347,462,993	12,617,189,040
IV. Unfunded Actuarial Accrued Liability - Entry Age Normal ¹	6,872,857,541	7,074,189,759
a) Change over prior year	(201,332,218)	67,430,824
b) Funded Percentage	66.0%	64.1%
V. Employer Contributions To Fund Current Plan Year ¹		
a) Employer Portion of Normal Cost	56,709,275	47,376,762
b) Administrative Expenses	17,500,000	17,600,000
c) Amortization Payments	738,385,308	722,486,762
d) Prior Contribution Variance Amort. Pmt	6,560,307	6,564,886
TOTAL Required Contribution	819,154,890	794,028,410
Less direct UAL payments ²	453,367	456,195
NET contribution required	818,701,523	793,572,215
	40.6%	39.4%
PR SAC Approved rate ³	40.2%	40.6%
VI. Projected Employer Contributions		
Discount Rate	7.25%	7.40%
To Fund Next Plan Year ¹		
a) Employer Portion of Normal Cost	63,196,547	53,375,336
b) Administrative Expenses	17,500,000	17,600,000
c) Amortization Payments	753,318,995	740,816,266
d) Prior Contribution Variance Amort. Pmt	1,983,315	6,560,307
TOTAL Required Contribution	835,998,857	818,351,909
Less direct UAL payments ²	295,767	453,367
NET contribution required	835,703,090	817,898,542
	41.0%	40.2%
Projected Rank and File Employer Normal Cost Rate	2.50%	1.93%
Projected Aggregate Employer Normal Cost Rate	3.10%	2.62%
VII. Current Payroll	2,004,062,861	1,999,414,595
Projected Payroll - Mid Year	2,018,049,135	2,015,872,642
Projected Payroll - Next Year	2,036,887,452	2,034,286,718

¹ Dollar amounts reflect estimated payments due mid-year on January 1st per Act 81.

² Direct UAL payments for Act 414 and Harbor Police are not included in the employer contribution rate.

³ Constitutional Minimum is 12% without regard to Employer Credits.

GASB STATEMENTS 67/68 REPORTING

The Governmental Accounting Standards Board Statements No. 67/68 establish financial reporting standards for state and local governmental pension plans and their sponsors that are administered through trusts or equivalent arrangements. The required actuarial disclosures are illustrated below. The Plan Fiduciary Net Position is the Market Value of Assets used for the funding valuation. The Total Pension Liability was developed using the Entry Age Normal cost method.

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY

	<u>June 30, 2021</u>	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Total Pension Liability	\$ 20,220,320,534	\$ 19,691,378,799	\$ 19,527,612,295
Plan Fiduciary Net Position	\$ 14,716,344,767	\$ 11,420,710,895	\$ 12,282,698,991
Net Pension Liability	\$ 5,503,975,767	\$ 8,270,667,904	\$ 7,244,913,304
Plan Fiduciary Net Position as a percentage of Total Pension Liability	72.8%	58.0%	62.9%
Covered Employee Payroll	\$ 2,004,062,861	\$ 1,999,414,595	\$ 1,952,495,777
Net Pension Liability as percentage of Covered Employee Payroll	274.6%	413.7%	371.1%

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year	Actuarially Determined Contribution (ADC) ¹	Contributions in Relation to ADC ¹	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2012	687,019,184	637,285,920	49,733,264	2,341,703,286	27.2%
2013	724,391,420	649,029,708	75,361,712	1,951,987,750	33.2%
2014	709,799,409	612,698,414	97,100,995	1,813,759,357	33.8%
2015	697,377,899	722,137,361	(24,759,462)	1,856,735,292	38.9%
2016	694,091,525	718,606,514	(24,514,989)	1,842,286,184	39.0%
2017	701,906,777	675,583,750	26,323,027	1,821,943,975	37.1%
2018	707,672,002	725,802,871	(18,130,869)	1,864,035,191	38.9%
2019	717,033,569	760,150,449	(43,116,880)	1,952,495,777	38.9%
2020	785,380,878	837,449,602	(52,068,724)	1,999,414,595	41.9%
2021	795,212,826	844,776,387	(49,563,561)	2,004,062,861	42.2%

¹ Contributions shown are not interest adjusted. Actual contributions tie to financial statements.

STATEMENT OF CHANGES IN NET PENSION LIABILITY

	2021	2020	2019
Total Pension Liability (TPL)			
Service Cost	218,244,525	220,437,301	218,865,385
Interest	1,449,374,537	1,447,710,612	1,425,430,990
Changes of Benefit Terms ¹	6,041,053	-	875,621
Diff Between Expected and Actual Experience	10,871,434	(158,856,913)	88,972,166
Changes of Assumptions	269,629,371	52,927,000	68,669,381
Retirement Benefits	(1,394,914,135)	(1,368,004,318)	(1,343,892,705)
Refunds and Transfers	(30,305,050)	(30,447,178)	(34,948,707)
Net Change in Total Pension Liability	528,941,735	163,766,504	423,972,131
Total Pension Liability - Beginning	19,691,378,799	19,527,612,295	19,103,640,164
Total Pension Liability - Ending (a)	20,220,320,534	19,691,378,799	19,527,612,295
Plan Fiduciary Net Position			
Employer Contributions	853,214,442	854,117,785	769,629,768
Employee Contributions	166,954,560	164,576,018	160,338,556
Net Investment Income	3,703,593,259	(480,573,814)	452,914,317
Other Income	14,556,140	15,955,512	13,052,134
Retirement Benefits	(1,394,914,135)	(1,368,004,318)	(1,343,892,705)
Refunds and Transfers of Member Contributions	(30,305,050)	(30,447,178)	(34,948,707)
Administrative Expense	(16,606,586)	(16,749,257)	(16,785,776)
Other Postemployment Benefit Expenses	(89,651)	(42,750)	(538,097)
Depreciation and Amortization Expenses	(769,107)	(820,094)	(783,617)
Net Change in Plan Fiduciary Net Position	3,295,633,872	(861,988,096)	(1,014,127)
Plan Fiduciary Net Position - Beginning	11,420,710,895	12,282,698,991	12,283,713,118
Plan Fiduciary Net Position - Ending (b)	14,716,344,767	11,420,710,895	12,282,698,991
Ending Net Pension Liability (NPL) (a) - (b)	5,503,975,767	8,270,667,904	7,244,913,304
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	72.8%	58.0%	62.9%
Covered Employee Payroll	\$ 2,004,062,861	\$ 1,999,414,595	\$ 1,952,495,777
Net Pension Liability as a Percentage of Covered Employee Payroll	274.6%	413.7%	371.1%

¹ Increase in Net Pension Liability resulting from Act 37 of 2021.

Actuarial Assumptions:

All assumptions used for purposes of GASB Statement 67/68 reporting requirements are described in Appendix E, except for the discount rate. Please see below for a description of the discount rate used for GASB Statement 67/68 reporting.

Discount Rate:

The long-term expected rate of return on pension plan 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 plan investment expenses 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 adjusting for expected inflation of 2.30% and an adjustment for the effect of rebalancing/diversification. The resulting expected long-term nominal rate of return is 7.61%. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2021 are summarized in the following table:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
Cash	-0.29%
Domestic Equity	4.09%
International Equity	5.12%
Domestic Fixed Income	0.49%
International Fixed Income	3.94%
Alternatives	6.93%
Total Fund	5.81%

The discount rate used to measure the total pension liability was 7.40 percent.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
	<u>6.40%</u>	<u>7.40%</u>	<u>8.40%</u>
2021 Employers' Net Pension Liability	7,457,471,407	5,503,975,767	3,841,797,070

The Schedule of Pension Amounts, below, provides employers with amounts to be recognized in the financial statements and note disclosures for GASB 68 reporting. In accordance with GASB Statement 68, changes in total pension liability due to differences between actual and expected experience and changes in assumptions are amortized over a period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees) determined as of the beginning of the measurement period. The current average remaining service life, when rounded up to the next higher whole number changed from 3 years to 2 years in 2019. Differences between projected and actual investment returns are amortized over a closed 5-year period.

Section IV
GASB STATEMENTS 67/68 REPORTING

LASERS Actuarial Valuation
June 30, 2021

2021 Active Remaining Service Life:	# Years	Plan Year	Amortization Period
Active	7.43	2014	3.00
Active After DROP	3.80	2015	3.00
Supplemental	3.36	2016	3.00
DROP	0	2017	3.00
Term Vested	0	2018	3.00
Term Non-vested	0	2019	2.00
Retired	0	2020	2.00
Weighted Average	1.87	2021	2.00
Amortization Period (Rounded Up)	2.0 Years		

SCHEDULE OF PENSION AMOUNTS

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	(8,270,667,904)	(271,055,947)	1,427,104,142	
Total Pension Liability Factors:				
Service cost	(218,244,525)			218,244,525
Interest	(1,449,374,537)			1,449,374,537
Changes in benefit terms	(6,041,053)			6,041,053
Differences between expected and actual	(10,871,434)	-	10,871,434	
Amortization of current year		-	(5,435,717)	5,435,717
Amortization of prior years		79,428,457	-	(79,428,457)
Changes in assumptions	(269,629,371)	-	269,629,371	
Amortization of current year		-	(134,814,686)	134,814,686
Amortization of prior years		-	(26,463,500)	26,463,500
Benefit payments	1,394,914,135			(1,394,914,135)
Refunds and Transfers of Member	30,305,050			(30,305,050)
Net Change in Total Pension Liability	(528,941,735)	79,428,457	113,786,902	335,726,376
Plan Fiduciary Net Position:				
Employer Contributions	853,214,442			
Employee Contributions	166,954,560			(166,954,560)
Expected earnings on pension plan investments	846,577,087			(846,577,087)
Differences between projected and actual				
earnings on pension plan investments	2,857,016,172	(2,857,016,172)	-	
Amortization of current year		571,403,234	-	(571,403,234)
Amortization of prior years		166,667,803	(373,615,907)	206,948,104
Retirement Benefits	(1,394,914,135)			1,394,914,135
Administrative Expense	(16,606,586)			16,606,586
Refunds and Transfers of Member	(30,305,050)			30,305,050
Other	13,697,382			(13,697,382)
Net Change in Plan Fiduciary Net Position	3,295,633,872	(2,118,945,135)	(373,615,907)	50,141,612
Ending Balance	(5,503,975,767)	(2,310,572,625)	1,167,275,137	385,867,988

MEMBERSHIP DATA

LASERS provides the data for individual members of the system as of the valuation date. The validity of the results of any actuarial valuation is dependent upon the accuracy of the data provided. Our review of submitted data is limited to validation of reasonableness and consistency in several areas, such as age, service, salary, and current benefits. Our review includes checks for duplicate records and a comparison of the current year records to those submitted in prior years. Records identified as containing suspicious data were assigned values based on information from similar records or based on historical averages for similarly situated members. Suspicious data are not necessarily errors, but data which fall outside the normal parameters. Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information.

The data contained in this valuation is summarized on the following pages. The data summarized in the tables that follow serve as the basis for determining costs and liabilities.

Salary data contained in the profiles and valuation report exceed the amount reported by internal audit for members with less than one year of service. In the valuation process, salaries are annualized for members with fractional service in the first year of employment.

Disability retirees who have reached normal retirement eligibility requirements are considered regular retirees by LASERS but are classified as disability retirees for purposes of the actuarial valuation. Liabilities are calculated accordingly.

ACTIVE MEMBERS BY PLAN

	2021	2020	2019
Rank and File, Appellate Law Clerks	32,324	32,774	32,807
Legislators	4	4	7
Judges, Prior to 2011	136	173	182
Judges, Post 2011	186	126	120
Wildlife	124	130	138
Corrections Primary	67	91	126
Corrections Secondary	1,151	1,272	1,405
Peace Officers	32	35	40
Alcohol Tobacco Control	7	9	10
Bridge Police	3	3	3
Hazardous Duty Plan	2,995	3,182	3,006
Harbor Police	16	19	22
Subtotal	37,045	37,818	37,866
Post DROP	1,527	1,669	1,667
Total Active Members	38,572	39,487	39,533

TOTAL MEMBERS

	2021	2020	2019
Active Members	38,572	39,487	39,533
DROP Participants	1,311	1,367	1,354
Regular Retirees	41,449	41,271	41,117
Disability Retirees	2,000	2,091	2,175
Survivors	6,086	5,979	5,977
Terminated Vested	3,724	3,691	3,744
Subtotal	93,142	93,886	93,900
Terminated, Due Refund	57,464	55,676	55,280
Total Members	150,606	149,562	149,180

MEMBER RECONCILIATION

	Active Pre-DROP	Active after DROP	Terminated Vested	In DROP	Retired, Disabled, Survivors	Total
June 30, 2020	37,818	1,669	3,691	1,367	49,341	93,886
Additions						
Initial Membership	3,606					3,606
Non-Vested Rehire	498					498
Data Revisions		3	5	0	32	40
Change in Status						
Active to Terminated Vested	(509)		509			
Active to In DROP	(452)			452		
Active to Retired	(879)				879	
Disabled to Active						
Terminated Vested to Active	113		(113)			
Terminated Vested to Retiree			(163)		163	
Terminated Vested to DROP			(7)	7		
In DROP to Active after DROP		256		(256)		
In DROP to Retiree				(255)	255	
Active After DROP to Retiree		(402)			402	
Eliminated from Census						
Refunded	(1,275)		(153)			(1,428)
Terminated, Due Refund	(1,824)		(16)			(1,840)
Deceased	(32)	(4)	(15)		(1,465)	(1,516)
Data Revisions	(19)	5	(14)	(4)	(72)	(104)
June 30, 2021	37,045	1,527	3,724	1,311	49,535	93,142

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Regular Members Before July 2006

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34		1	1		6					8
Avg. Pay		\$38,443	\$22,154		\$291,677					\$352,274
35 - 39	3	9	6	32	313	25				388
Avg. Pay	\$137,683	\$297,841	\$288,029	\$1,524,082	\$17,457,827	\$1,425,321				\$21,130,783
40 - 44	2	19	26	78	951	384	29	1		1490
Avg. Pay	\$53,210	\$621,358	\$1,058,384	\$4,838,467	\$59,077,519	\$23,305,978	\$2,026,188	\$64,859		\$91,045,963
45 - 49	1	19	23	64	740	865	322	14		2048
Avg. Pay	\$11,828	\$783,485	\$1,358,091	\$3,538,541	\$44,615,456	\$56,920,483	\$21,335,048	\$1,233,786		\$129,796,718
50 - 54	3	17	16	55	642	834	801	114	4	2486
Avg. Pay	\$58,264	\$736,254	\$916,477	\$2,915,480	\$37,103,166	\$52,393,893	\$55,228,549	\$9,082,219	\$577,513	\$159,011,815
55 - 59	1	19	12	45	625	701	267	154	47	1871
Avg. Pay	\$10,160	\$925,121	\$624,426	\$2,390,630	\$33,152,009	\$42,014,205	\$18,490,279	\$11,882,296	\$3,508,726	\$112,997,852
60 - 64	1	8	12	25	358	248	172	112	65	1001
Avg. Pay	\$26,964	\$338,989	\$528,909	\$1,427,175	\$20,041,775	\$13,852,382	\$11,414,841	\$9,206,657	\$4,620,623	\$61,458,315
65 - 69	1		4	11	181	142	78	49	31	497
Avg. Pay	\$21,785		\$231,897	\$509,691	\$10,839,171	\$8,317,856	\$4,989,451	\$3,748,636	\$2,574,596	\$31,233,083
70+			1	7	59	82	46	29	32	256
Avg. Pay			\$103,724	\$377,570	\$2,924,976	\$4,779,675	\$2,957,036	\$1,933,287	\$2,315,351	\$15,391,619
Total	12	92	101	317	3875	3281	1715	473	179	10045
	\$319,894	\$3,741,491	\$5,132,091	\$17,521,636	\$225,503,576	\$203,009,793	\$116,441,392	\$37,151,740	\$13,596,809	\$622,418,422

Averages ----- Attained Age 52.68
Service Years 21.42
Active Salary \$61,963

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Regular Members After July 2006

CELLS DEPICT -

MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25	616	571	19							1,206
Avg. Pay	\$14,679,424	\$17,119,514	\$627,781							\$32,426,719
25 - 29	606	1752	374	6						2,738
Avg. Pay	\$17,408,765	\$65,583,889	\$15,370,203	\$274,415						\$98,637,272
30 - 34	423	1606	1061	220	2					3,312
Avg. Pay	\$12,806,196	\$65,886,355	\$52,530,676	\$11,437,545	\$104,050					\$142,764,822
35 - 39	364	1352	1104	904	24	1				3,749
Avg. Pay	\$12,602,853	\$57,455,611	\$56,958,693	\$53,608,633	\$1,530,425	\$31,949				\$182,188,164
40 - 44	297	1070	779	804	34	8	1			2,993
Avg. Pay	\$10,297,876	\$46,856,179	\$39,917,486	\$47,839,912	\$2,427,320	\$523,932	\$53,422			\$147,916,127
45 - 49	255	861	627	594	45	8				2,390
Avg. Pay	\$8,970,361	\$38,384,133	\$33,189,477	\$32,861,570	\$3,434,282	\$608,495				\$117,448,318
50 - 54	204	808	628	561	41	4	5	1		2,252
Avg. Pay	\$7,276,207	\$36,011,100	\$32,775,493	\$31,608,088	\$3,103,151	\$190,251	\$356,875	\$50,601		\$111,371,766
55 - 59	129	597	558	611	33	15	1	1		1,945
Avg. Pay	\$4,479,512	\$26,116,546	\$26,935,318	\$33,960,210	\$2,337,117	\$904,126	\$71,293	\$62,164		\$94,866,286
60 - 64	61	306	351	383	21	6	2	1		1,131
Avg. Pay	\$2,589,802	\$13,068,967	\$16,675,619	\$19,222,394	\$1,587,244	\$450,328	\$283,715	\$61,193		\$53,939,262
65 - 69	19	58	105	165	12	1				360
Avg. Pay	\$972,928	\$3,003,502	\$5,722,826	\$8,861,878	\$765,545	\$114,301				\$19,440,980
70+	5	25	33	45	2					110
Avg. Pay	\$300,178	\$1,025,111	\$1,760,229	\$2,930,386	\$218,873					\$6,234,777
Total	2979	9006	5639	4293	214	43	9	3		22,186
	\$92,384,102	\$370,510,907	\$282,463,801	\$242,605,031	\$15,508,007	\$2,823,382	\$765,305	\$173,958		\$1,007,234,493

Averages ----- Attained Age 41.68
Service Years 5.70
Active Salary \$45,400

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Appellate Law Clerks

CELLS DEPICT -

MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39	3									3
Avg. Pay	\$232,393									\$232,393
40 - 44	6 2									8
Avg. Pay	\$459,790 \$147,641									\$607,431
45 - 49	3 10 4 1									18
Avg. Pay	\$237,676 \$778,628 \$313,212 \$80,914									\$1,410,430
50 - 54	3 5 10 5									23
Avg. Pay	\$282,372 \$427,445 \$948,139 \$492,272									\$2,150,228
55 - 59	2 2 2 4 6 1									17
Avg. Pay	\$152,087 \$192,912 \$176,099 \$399,966 \$596,958 \$100,000									\$1,618,022
60 - 64	1 5 4 1 4 2									17
Avg. Pay	\$82,464 \$460,666 \$345,749 \$116,377 \$428,550 \$199,022									\$1,632,828
65 - 69	1 1 1 1 1									4
Avg. Pay	\$70,680 \$130,000 \$90,092 \$85,903									\$376,675
70+	1 1 1									3
Avg. Pay	\$72,424 \$78,096 \$102,197									\$252,717
Total	20 26 20 12 12 3									93
	\$1,589,886 \$2,215,388 \$1,783,199 \$1,179,621 \$1,213,608 \$299,022									\$8,280,724

Averages ----- Attained Age 54.22
Service Years 21.31
Active Salary \$89,040

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Participating Legislators

CELLS DEPICT -

MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39										
Avg. Pay										
40 - 44										
Avg. Pay										
45 - 49										
Avg. Pay										
50 - 54						1				1
Avg. Pay						\$250,167				\$250,167
55 - 59						1				1
Avg. Pay						\$27,978				\$27,978
60 - 64				1						1
Avg. Pay				\$124,303						\$124,303
65 - 69										
Avg. Pay										
70+					1					1
Avg. Pay					\$104,046					\$104,046
Total				1	1	2				4
				\$124,303	\$104,046	\$278,145				\$506,494

Averages -----

Attained Age 61.94
Service Years 18.77
Active Salary \$126,624

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Active Judges Pre 2011

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39										
Avg. Pay										
40 - 44	1									1
Avg. Pay	\$102,000									\$102,000
45 - 49	2									8
Avg. Pay	\$154,229									\$858,857
50 - 54	6									28
Avg. Pay	\$163,971									\$4,069,015
55 - 59	1									27
Avg. Pay	\$159,666									\$4,079,656
60 - 64	1									35
Avg. Pay	\$157,505									\$5,397,610
65 - 69	1									30
Avg. Pay	\$157,493									\$4,667,495
70+	2									7
Avg. Pay	\$155,240									\$1,103,361
Total	2	3	2	45	31	25	21	7		136
	\$314,906	\$311,734	\$321,464	\$6,715,811	\$4,372,708	\$3,772,316	\$3,315,346	\$1,153,709		\$20,277,994

Averages ----- Attained Age 60.21
Service Years 18.27
Active Salary \$149,103

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Active Judges Post 2011

CELLS DEPICT -

MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25 Avg. Pay										
25 - 29 Avg. Pay										
30 - 34 Avg. Pay	2 \$319,332									2 \$319,332
35 - 39 Avg. Pay	11 \$1,482,838	4 \$497,772	1 \$133,139	1 \$164,332						17 \$2,278,081
40 - 44 Avg. Pay	13 \$2,105,622	7 \$1,103,467	7 \$941,320	2 \$314,986	1 \$157,493					30 \$4,622,888
45 - 49 Avg. Pay	8 \$1,254,632	6 \$951,436	15 \$2,188,923	1 \$157,493						30 \$4,552,484
50 - 54 Avg. Pay	11 \$1,613,110	6 \$946,865	17 \$2,582,209	1 \$157,493	3 \$437,909	1 \$157,493				39 \$5,895,079
55 - 59 Avg. Pay	5 \$736,082	6 \$944,958	14 \$2,210,234	3 \$471,108						28 \$4,362,382
60 - 64 Avg. Pay	6 \$957,996	7 \$1,037,747	7 \$1,108,929	1 \$157,493		1 \$157,493				22 \$3,419,658
65 - 69 Avg. Pay	6 \$827,290	2 \$314,986	7 \$1,071,785	2 \$321,464						17 \$2,535,525
70+ Avg. Pay	1 \$156,993									1 \$156,993
Total	62 \$9,296,902	38 \$5,797,231	69 \$10,393,532	10 \$1,586,876	5 \$752,895	2 \$314,986				186 \$28,142,422

Averages

Attained Age 51.96
Service Years 4.735
Active Salary \$151,303

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Hazardous Duty

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25	193	203	9							405
Avg. Pay	\$4,753,915	\$6,815,213	\$373,776							\$11,942,904
25 - 29	127	306	99							532
Avg. Pay	\$3,647,186	\$11,742,945	\$4,402,451							\$19,792,582
30 - 34	61	198	139	20						418
Avg. Pay	\$1,594,853	\$7,688,365	\$6,898,042	\$1,048,017						\$17,229,277
35 - 39	53	158	124	37	15					387
Avg. Pay	\$1,823,283	\$6,381,717	\$5,952,228	\$1,999,695	\$791,677					\$16,948,600
40 - 44	47	139	92	31	31	19				359
Avg. Pay	\$1,384,699	\$5,598,573	\$4,344,271	\$1,655,781	\$1,899,905	\$1,158,689				\$16,041,918
45 - 49	29	101	78	32	22	26	4			292
Avg. Pay	\$780,837	\$4,285,483	\$3,888,173	\$1,859,627	\$1,445,601	\$1,692,472	\$337,430			\$14,289,623
50 - 54	20	112	79	22	19	27	7	1		287
Avg. Pay	\$509,749	\$4,844,725	\$3,895,593	\$1,245,384	\$1,145,217	\$1,594,282	\$467,662	\$144,634		\$13,847,246
55 - 59	15	72	66	15	11	7	4			190
Avg. Pay	\$482,170	\$3,098,415	\$3,386,917	\$706,340	\$583,466	\$369,516	\$221,332			\$8,848,156
60 - 64	4	28	38	10	2	2	3	1		88
Avg. Pay	\$112,228	\$1,353,178	\$1,858,851	\$524,514	\$87,490	\$115,344	\$163,949	\$68,148		\$4,283,702
65 - 69	3	11	7	1	1	1				24
Avg. Pay	\$69,560	\$443,656	\$350,901	\$45,212	\$71,125	\$66,479				\$1,046,933
70+	1	8	2	2						13
Avg. Pay	\$28,820	\$358,356	\$84,176	\$84,532						\$555,884
Total	553	1336	733	170	101	82	18	2		2,995
	\$15,187,300	\$52,610,626	\$35,435,379	\$9,169,102	\$6,024,481	\$4,996,782	\$1,190,373	\$212,782		\$124,826,825

Averages ----- Attained Age 38.33
Service Years 5.15
Active Salary \$41,678

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Corrections Primary

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39										
Avg. Pay										
40 - 44			2		1	3				6
Avg. Pay			\$78,842		\$43,034	\$248,153				\$370,029
45 - 49					1	12	1			14
Avg. Pay					\$61,743	\$709,330	\$56,737			\$827,810
50 - 54			1			4	3			8
Avg. Pay			\$34,478			\$239,227	\$197,324			\$471,029
55 - 59			1			7	3	5	1	17
Avg. Pay			\$37,209			\$397,948	\$177,226	\$367,583	\$142,929	\$1,122,895
60 - 64					2	8	1	2	1	14
Avg. Pay					\$94,494	\$429,737	\$67,324	\$111,518	\$57,689	\$760,762
65 - 69					1	5	1			7
Avg. Pay					\$51,266	\$251,116	\$75,400			\$377,782
70+						1				1
Avg. Pay						\$53,847				\$53,847
Total		2	2		5	40	9	7	2	67
		\$71,687	\$78,842		\$250,537	\$2,329,358	\$574,011	\$479,101	\$200,618	\$3,984,154

Averages ----- Attained Age 55.95
Service Years 22.90
Active Salary \$59,465

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Corrections Secondary

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29			2							2
Avg. Pay			\$96,317							\$96,317
30 - 34	1		3	36	1					41
Avg. Pay	\$846,870		\$129,123	\$1,825,658	\$41,350					\$2,843,001
35 - 39		1	1	92	72	3				169
Avg. Pay		\$36,501	\$27,232	\$4,667,179	\$4,013,536	\$183,213				\$8,927,661
40 - 44		1	1	64	80	78	6			230
Avg. Pay		\$34,926	\$40,263	\$3,243,645	\$4,660,781	\$4,849,262	\$429,718			\$13,258,595
45 - 49		2	1	38	68	112	22	1		244
Avg. Pay		\$67,973	\$40,063	\$1,866,496	\$3,996,504	\$7,268,619	\$1,657,002	\$109,344		\$15,006,001
50 - 54				41	55	91	32	3		222
Avg. Pay				\$2,060,635	\$2,960,124	\$5,726,715	\$2,476,162	\$232,369		\$13,456,005
55 - 59			3	41	40	55	5	7		151
Avg. Pay			\$112,946	\$1,890,399	\$1,955,463	\$3,266,266	\$360,979	\$654,594		\$8,240,647
60 - 64				20	17	16	4	3		60
Avg. Pay				\$968,528	\$854,668	\$887,155	\$242,212	\$198,501		\$3,151,064
65 - 69				10	7	4			3	24
Avg. Pay				\$477,479	\$327,223	\$199,603			\$224,732	\$1,229,037
70+				1	2	4	1			8
Avg. Pay				\$40,923	\$87,392	\$242,842	\$47,457			\$418,614
Total	1	4	9	345	342	363	70	14	3	1,151
	\$846,870	\$139,400	\$349,627	\$17,137,259	\$18,897,041	\$22,623,675	\$5,213,530	\$1,194,808	\$224,732	\$66,626,942

Averages ----- Attained Age 48.15
Service Years 18.31
Active Salary \$57,886

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Wildlife

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34				3						3
Avg. Pay				\$195,095						\$195,095
35 - 39				18	12					30
Avg. Pay				\$1,177,537	\$852,230					\$2,029,767
40 - 44				11	18	9				38
Avg. Pay				\$744,751	\$1,270,687	\$732,316				\$2,747,754
45 - 49				1	10	15	1			27
Avg. Pay				\$63,905	\$793,286	\$1,311,557	\$135,752			\$2,304,500
50 - 54				1	5	8	2			16
Avg. Pay				\$70,920	\$376,505	\$729,744	\$184,603			\$1,361,772
55 - 59				2	3	2	2	1		10
Avg. Pay				\$156,746	\$236,462	\$160,592	\$201,477	\$103,367		\$858,644
60 - 64										
Avg. Pay										
65 - 69										
Avg. Pay										
70+										
Avg. Pay										
Total				36	48	34	5	1		124
				\$2,408,954	\$3,529,170	\$2,934,209	\$521,832	\$103,367		\$9,497,532

Averages ----- Attained Age 44.53
Service Years 17.88
Active Salary \$76,593

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Peace Officers

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39										2
Avg. Pay										\$120,073
40 - 44										7
Avg. Pay										\$404,452
45 - 49										11
Avg. Pay										\$709,270
50 - 54										7
Avg. Pay										\$430,704
55 - 59										3
Avg. Pay										\$228,318
60 - 64										1
Avg. Pay										\$82,549
65 - 69										1
Avg. Pay										\$90,270
70+										
Avg. Pay										
Total										32
										\$2,065,636

Averages ----- Attained Age 48.75
Service Years 20.20
Active Salary \$64,551

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Alcohol Tobacco Control

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39				1	1					2
Avg. Pay				\$57,851	\$63,177					\$121,028
40 - 44					2					2
Avg. Pay					\$120,204					\$120,204
45 - 49				1	2					3
Avg. Pay				\$54,445	\$143,056					\$197,501
50 - 54										
Avg. Pay										
55 - 59										
Avg. Pay										
60 - 64										
Avg. Pay										
65 - 69										
Avg. Pay										
70+										
Avg. Pay										
Total				2	5					7
				\$112,296	\$326,437					\$438,733

Averages -----

Attained Age	43.18
Service Years	17.33
Active Salary	\$62,676

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Bridge Police

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39	1									1
Avg. Pay	\$55,002									\$55,002
40 - 44	1									1
Avg. Pay	\$72,355									\$72,355
45 - 49										
Avg. Pay										
50 - 54										
Avg. Pay										
55 - 59	1									1
Avg. Pay	\$71,738									\$71,738
60 - 64										
Avg. Pay										
65 - 69										
Avg. Pay										
70+										
Avg. Pay										
Total	1 1 1									3
	\$55,002 \$72,355 \$71,738									\$199,095

Averages ----- Attained Age 46.71
Service Years 21.70
Active Salary \$66,365

LASERS MEMBERSHIP PROFILE
Harbor Police

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29			1							1
Avg. Pay			\$47,854							\$47,854
30 - 34			1							1
Avg. Pay			\$52,183							\$52,183
35 - 39			2	2						4
Avg. Pay			\$105,526	\$113,132						\$218,658
40 - 44						1				1
Avg. Pay						\$86,913				\$86,913
45 - 49			1	1	2	1				5
Avg. Pay			\$47,848	\$53,581	\$118,040	\$60,385				\$279,854
50 - 54					1		1			2
Avg. Pay					\$55,841		\$73,106			\$128,947
55 - 59						1				1
Avg. Pay						\$57,180				\$57,180
60 - 64										
Avg. Pay										
65 - 69						1				1
Avg. Pay						\$56,916				\$56,916
70+										
Avg. Pay										
Total			5	3	3	4	1			16
			\$253,411	\$166,713	\$173,881	\$261,394	\$73,106			\$928,505

Averages ----- Attained Age 45.45
Service Years 15.99
Active Salary \$58,032

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Active After DROP

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY
TOTAL BENEFIT

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1	2	3	4	5-9	10-14	15-20	Total	
40-44										
Pay										
Benefit										
45-49	1	2								3
Pay	\$37,434	\$168,925								\$206,359
Benefit	\$42,024	\$97,860								\$139,884
50-54	14	10	7	5						36
Pay	\$859,535	\$699,029	\$448,380	\$367,042						\$2,373,986
Benefit	\$615,840	\$451,524	\$280,920	\$198,348						\$1,546,632
55-59	97	87	31	32	19	36	4	1		307
Pay	\$5,723,294	\$5,732,939	\$2,226,969	\$2,280,013	\$1,308,321	\$2,537,309	\$369,730	\$105,074		\$20,283,649
Benefit	\$3,931,092	\$3,397,308	\$1,343,028	\$1,371,312	\$762,804	\$1,466,052	\$98,076	\$17,736		\$12,387,408
60 - 64	142	140	79	68	49	119	17	3		617
Pay	\$7,200,328	\$7,831,699	\$5,601,955	\$4,231,337	\$3,716,136	\$8,607,261	\$1,355,114	\$271,279		\$38,815,109
Benefit	\$3,485,556	\$3,517,440	\$3,026,268	\$2,318,664	\$2,134,092	\$4,725,588	\$532,020	\$47,388		\$19,787,016
65 - 69	2	6	76	62	60	137	36	10	1	390
Pay	\$72,022	\$326,596	\$4,301,212	\$3,553,040	\$3,824,858	\$9,388,324	\$2,221,473	\$769,932	\$83,560	\$24,541,017
Benefit	\$16,596	\$102,036	\$1,782,540	\$1,364,844	\$1,492,452	\$4,251,492	\$1,032,588	\$277,824	\$12,588	\$10,332,960
70+			2	4	4	61	61	35	7	174
Pay			\$95,379	\$172,742	\$211,826	\$3,561,576	\$4,261,052	\$2,960,420	\$616,331	\$11,879,326
Benefit			\$20,004	\$26,328	\$34,344	\$1,109,544	\$1,363,812	\$988,344	\$148,692	\$3,691,068
Total	256	245	195	171	132	353	118	49	8	1527
Pay	\$13,892,613	\$14,759,188	\$12,673,895	\$10,604,174	\$9,061,141	\$24,094,470	\$8,207,369	\$4,106,705	\$699,891	\$98,099,446
Benefit	\$8,091,108	\$7,566,168	\$6,452,760	\$5,279,496	\$4,423,692	\$11,552,676	\$3,026,496	\$1,331,292	\$161,280	\$47,884,968

Averages ----- Attained Age 64.06
Service Years 4.63
Average Salary \$64,243
Average Benefit \$31,359

LASERS MEMBERSHIP PROFILE
DROP Participants

CELLS DEPICT - MEMBER COUNT VALUATION DATE 6/30/2021
TOTAL BENEFITS

Years Retired							
Age	<1	1 - 2	2-3	3 - 4	4-5	5+	Total
< 40							
40-44							
45-49	9 \$390,468	3 \$132,000	2 \$69,552				14 \$592,020
50-54	121 \$5,995,584	85 \$4,018,968	42 \$1,917,528				248 \$11,932,080
55-59	165 \$7,074,537	225 \$9,567,180	176 \$7,370,136				566 \$24,011,853
60-64	150 \$4,027,332	158 \$4,152,636	171 \$4,092,792	1 \$38,352			480 \$12,311,112
65-69	1 \$78,348						1 \$78,348
70-74		1 \$2,820					1 \$2,820
75-79			1 \$2,892				1 \$2,892
80-84							
85-90							
90+							
Total	446 \$17,566,269	472 \$17,873,604	392 \$13,452,900	1 \$38,352			1311 \$48,931,125

Averages -----
Attained Age 57.9
Years Retired 1.47
Average Benefit \$37,323

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Post Retirement Service

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	Total
< 25										
Avg. Pay										
25 - 29										
Avg. Pay										
30 - 34										
Avg. Pay										
35 - 39										
Avg. Pay										
40 - 44		1								1
Avg. Pay		\$36,199								\$36,199
45 - 49	1									1
Avg. Pay	\$28,299									\$28,299
50 - 54	2	3								5
Avg. Pay	\$170,796	\$297,818								\$468,614
55 - 59	7	12	7	5						31
Avg. Pay	\$392,751	\$915,662	\$480,425	\$276,084						\$2,064,922
60 - 64	6	21	9		1					37
Avg. Pay	\$234,290	\$1,131,279	\$634,774		\$66,097					\$2,066,440
65 - 69	20	23	6	2	1	1				53
Avg. Pay	\$902,764	\$1,239,395	\$448,840	\$106,688	\$50,068	\$114,021				\$2,861,776
70+	27	24	14	2	1					68
Avg. Pay	\$1,365,497	\$1,091,631	\$842,280	\$84,444	\$55,500					\$3,439,352
Total	63	84	36	9	3	1				196
	\$3,094,397	\$4,711,984	\$2,406,319	\$467,216	\$171,665	\$114,021				\$10,965,602

Averages ----- Attained Age 67.62
Service Years 3.38
Active Salary \$55,947

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Regular Retirees

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2021

Age	Years Retired									Total
	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 14	15 - 19	20+	
< 40		1 \$11,316								1 \$11,316
40-44	12 \$387,936	2 \$42,264	7 \$154,872		3 \$38,220	4 \$65,700				28 \$688,992
45-49	31 \$1,374,864	22 \$752,448	25 \$678,984	22 \$734,928	28 \$888,516	52 \$940,848				180 \$5,370,588
50-54	91 \$4,098,348	83 \$3,838,812	67 \$2,767,284	76 \$3,321,780	72 \$2,721,576	378 \$9,490,188	19 \$449,532	5 \$126,420		791 \$26,813,940
55-59	156 \$6,980,304	188 \$7,765,092	189 \$7,636,728	233 \$10,333,464	244 \$10,533,348	1356 \$46,420,800	308 \$9,379,008	100 \$2,088,432	18 \$350,640	2792 \$101,487,816
60-64	358 \$9,092,916	384 \$9,490,404	427 \$10,717,836	447 \$11,620,008	456 \$11,775,360	2671 \$102,364,440	1787 \$62,796,420	383 \$8,354,760	190 \$3,305,412	7103 \$229,517,556
65-69	205 \$6,077,976	170 \$5,416,692	216 \$5,605,632	255 \$6,767,436	293 \$7,934,856	3394 \$90,385,008	3021 \$111,244,416	1644 \$51,343,464	472 \$9,491,784	9670 \$294,267,264
70-74	80 \$3,481,440	63 \$3,067,884	88 \$2,628,336	110 \$3,100,992	115 \$3,251,436	1367 \$33,357,588	3030 \$72,207,660	3049 \$96,138,144	1336 \$37,898,724	9238 \$255,132,204
75-79	21 \$892,536	12 \$304,524	22 \$768,840	14 \$363,876	33 \$846,588	359 \$9,978,420	629 \$13,022,484	2000 \$40,775,088	2221 \$63,182,820	5311 \$130,135,176
80-84	7 \$149,028	1 \$16,512	5 \$118,140	8 \$249,936	6 \$203,940	63 \$1,908,072	163 \$3,569,880	419 \$7,286,196	2713 \$60,874,692	3385 \$74,376,396
85-90		1 \$44,544	2 \$44,244	1 \$52,500	3 \$64,824	16 \$600,312	36 \$1,083,732	74 \$1,477,992	1737 \$34,971,420	1870 \$38,339,568
90+							7 \$215,304	9 \$152,340	1064 \$18,143,688	1080 \$18,511,332
Total	961 \$32,535,348	927 \$30,750,492	1048 \$31,120,896	1166 \$36,544,920	1253 \$38,258,664	9660 \$295,511,376	9000 \$273,968,436	7683 \$207,742,836	9751 \$228,219,180	41449 \$1,174,652,148

Averages

Attained Age 70.83
Years Retired 14.11
Average Benefit \$28,340

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE
Disability Retirees

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2021

Age	Years Retired									Total
	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 14	15 - 19	20+	
< 40	3 \$55,008	1 \$9,132		2 \$58,428		1 \$6,984				7 \$129,552
40-44	3 \$76,740	6 \$101,712		3 \$59,952	2 \$20,412	9 \$143,328				23 \$402,144
45-49	3 \$52,080	6 \$149,064	3 \$51,444	4 \$72,468	2 \$37,728	15 \$264,684	7 \$97,788	1 \$35,280		41 \$760,536
50-54	7 \$123,228	9 \$215,616	9 \$183,876	3 \$94,740	5 \$151,812	41 \$813,996	28 \$480,096	8 \$119,232		110 \$2,182,596
55-59	13 \$168,816	7 \$139,392	11 \$141,168	6 \$108,504	7 \$130,320	75 \$1,439,160	61 \$1,084,404	35 \$484,236	16 \$144,780	231 \$3,840,780
60-64		2 \$23,880	3 \$47,100	8 \$104,184	6 \$68,208	96 \$1,654,272	100 \$1,809,012	78 \$1,179,072	60 \$657,432	353 \$5,543,160
65-69						55 \$1,180,308	113 \$1,873,608	117 \$2,064,612	148 \$1,868,880	433 \$6,987,408
70-74							33 \$549,816	109 \$1,573,500	204 \$2,619,072	346 \$4,742,388
75-79								31 \$389,496	188 \$2,210,076	219 \$2,599,572
80-84									156 \$1,670,736	156 \$1,670,736
85-90									62 \$612,660	62 \$612,660
90+									19 \$166,140	19 \$166,140
Total	29 \$475,872	31 \$638,796	26 \$423,588	26 \$498,276	22 \$408,480	292 \$5,502,732	342 \$5,894,724	379 \$5,845,428	853 \$9,949,776	2000 \$29,637,672

Averages -----
Attained Age 67.87
Years Retired 18.43
Average Benefit \$14,819

Appendix A
MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Survivor Benefits

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2021

Years Retired										
Age	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 14	15 - 19	20+	Total
< 40	11 \$516,756	12 \$284,052	12 \$289,560	11 \$253,236	14 \$370,704	68 \$1,824,924	88 \$2,097,528	97 \$1,836,048	133 \$2,033,628	446 \$9,506,436
40-44	1 \$9,996	1 \$5,652	2 \$37,032	1 \$15,180	2 \$45,204	9 \$111,864	14 \$266,520	15 \$239,196	69 \$1,104,024	114 \$1,834,668
45-49	5 \$182,460	1 \$9,324	2 \$23,880	6 \$105,132	1 \$31,944	17 \$301,716	20 \$397,824	19 \$272,208	49 \$679,284	120 \$2,003,772
50-54	4 \$148,584	3 \$71,220	6 \$141,120	7 \$97,776		19 \$382,860	21 \$334,476	25 \$363,276	51 \$760,740	136 \$2,300,052
55-59	3 \$56,424	5 \$145,020	7 \$145,536	7 \$201,408	9 \$227,340	50 \$1,228,392	47 \$1,064,484	45 \$820,656	51 \$685,404	224 \$4,574,664
60-64	3 \$105,312	4 \$109,452	4 \$89,508	3 \$53,352	12 \$305,556	69 \$1,883,652	98 \$2,161,128	72 \$1,176,732	120 \$1,825,272	385 \$7,709,964
65-69	6 \$232,632	5 \$155,664	5 \$158,952	5 \$77,580	7 \$116,004	103 \$2,253,744	140 \$3,184,500	164 \$3,263,184	229 \$4,079,088	664 \$13,521,348
70-74		2 \$17,412	1 \$7,320	3 \$106,812	4 \$143,388	61 \$1,501,512	152 \$3,181,740	233 \$5,146,092	407 \$8,124,192	863 \$18,228,468
75-79			2 \$15,984	1 \$732	1 \$76,740	17 \$467,052	67 \$1,280,808	185 \$3,650,988	673 \$12,154,740	946 \$17,647,044
80-84			1 \$55,152	2 \$65,820	3 \$38,436	8 \$252,468	27 \$452,148	79 \$1,370,016	824 \$13,565,244	944 \$15,799,284
85-90						4 \$93,888	9 \$181,620	14 \$194,700	712 \$10,445,496	739 \$10,915,704
90+						1 \$17,292	1 \$22,644	4 \$41,556	499 \$7,133,568	505 \$7,215,060
Total	33 \$1,252,164	33 \$797,796	42 \$964,044	46 \$977,028	53 \$1,355,316	426 \$10,319,364	684 \$14,625,420	952 \$18,374,652	3817 \$62,590,680	6086 \$111,256,464

Averages ----- Attained Age 71.98
Years Retired 23.58
Average Benefit \$18,281

Appendix A

MEMBERSHIP DATA

LASERS Actuarial Valuation
June 30, 2021

LASERS MEMBERSHIP PROFILE

Terminated Vested

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2021

Credited Service										
Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
<20										
20-24			1						1	2
			\$30,288						\$15,600	\$45,888
25-29			48							48
			\$1,399,980							\$1,399,980
30-34			167	10						177
			\$4,275,876	\$328,824						\$4,604,700
35-39		4	321	105	12					442
		\$54,120	\$6,274,428	\$4,037,628	\$489,252					\$10,855,428
40-44	1		201	236	36	7	1			482
	\$216		\$3,864,840	\$6,690,276	\$1,460,388	\$358,896	\$57,348			\$12,431,964
45-49	1	2	165	297	115	17	4			601
	\$360	\$13,308	\$3,201,468	\$7,369,152	\$3,516,276	\$1,063,248	\$328,896			\$15,492,708
50-54		3	159	337	165	43	9	1		717
		\$12,864	\$3,421,476	\$6,810,156	\$4,804,140	\$2,237,784	\$472,680	\$82,572		\$17,841,672
55-59	1	2	120	370	210	64	8	1		776
	\$192	\$4,488	\$2,799,504	\$7,596,960	\$6,030,060	\$2,290,824	\$473,340	\$97,524		\$19,292,892
60-64	1	4	76	156	63	15	2			317
	\$1,080	\$32,568	\$1,406,436	\$2,425,476	\$1,570,500	\$287,688	\$120,072			\$5,843,820
65-69			15	49	24	7	2			97
			\$162,120	\$802,080	\$485,772	\$182,652	\$62,052			\$1,694,676
70+	1		3	38	12	5	4	1	1	65
	\$348		\$17,016	\$329,340	\$591,204	\$126,504	\$56,148	\$29,844	\$91,932	\$1,242,336
Total	5	15	1276	1598	637	158	30	3	2	3724
	\$2,196	\$117,348	\$26,853,432	\$36,389,892	\$18,947,592	\$6,547,596	\$1,570,536	\$209,940	\$107,532	\$90,746,064

Averages ----- Attained Age 50.16
Service Years 11.62
Average Benefit \$24,368

SUMMARY OF PLAN PROVISIONS

EFFECTIVE DATE:

July 1, 1947

EMPLOYEE:

Any person legally occupying a position in state service.

EMPLOYER:

The State of Louisiana or any of its boards, commissions, departments, agencies and courts which are contributing members and those approved for membership by the legislature from which any employee receives his compensation.

ELIGIBILITY FOR PARTICIPATION:

Condition of employment in state service except the following: elected or appointed officials or employees who are contributing members of any other state system; public officials and state employees who receive a per diem in lieu of compensation; persons employed on or after July 1, 1991, who work on a part-time basis except those with ten or more years of service in the system; patient or inmate help in state charitable, penal or correctional institutions; part-time students, interns and resident physicians; independent contractors; retirees of the retirement system who return to work under certain conditions; judges in office prior to October 2, 1976 who did not elect to become members prior to October 2, 1976; civilian employees who on November 1, 1981, were within five years of retirement eligibility in the Federal Civil Service Retirement and Disability Fund; certain unclassified, temporary seasonal employees of the Department of Revenue excluding the Louisiana Tax Commission; Employees of the New Orleans City Park Improvement Association, certain employees of political subdivisions.

CREDITABLE SERVICE:

For service prior to January 1, 1973: 1/4 year granted for each 89 day interval of service, not to exceed one credit per fiscal year. Minimum 15 days required for 1st Quarter credit.

For service on or after January 1, 1973, a member shall receive credit based on the ratio of actual pay to the annual base per calendar year. Fractional service shall be rounded to the next highest 1/10th, not to exceed 100 percent per year.

ADDITIONAL CREDITABLE SERVICE:

1. Credit for service canceled by withdrawal of accumulated contributions may be restored by member by paying into system the amount withdrawn plus interest at the Actuarial Valuation rate.
2. Maximum of four years of credit for military service may be obtained for each member with at least two years of service, contingent on payment of Actuarial Cost.

3. Credit for service which was classified as a job appointment or emergency appointment where the intended duration of employment exceeds two years of service.
4. At retirement, all accumulated unused sick and annual leave shall be credited based on the following schedule:

1 - 26 Days	10% of a Year
27 - 52 Days	20% of a Year
53 - 78 Days	30% of a Year
79 - 104 Days	40% of a Year
105 - 130 Days	50% of a Year
131 - 156 Days	60% of a Year
157 - 182 Days	70% of a Year
183 - 208 Days	80% of a Year
209 - 234 Days	90% of a Year
235 - 260 Days	100% of a Year

Service credit for unused leave can be used for computation purpose only, not for eligibility. An actuarial equivalent lump sum is available after August 15, 1993.

EARNABLE COMPENSATION:

The base pay earned by an employee for a given pay period as reported by the employing agency. This includes the full amount earned by an employee, overtime, and per diem earned by an employee of the House of Representatives, the Senate, or an agency of the legislature, and expense allowances and per diem paid to members of the legislature, the clerk, or sergeant at arms of the House of Representatives and president and secretary or sergeant at arms of the Senate.

**AVERAGE FINAL COMPENSATION
FOR BENEFIT PURPOSES:**

The average annual earned compensation for the 36 highest months of successive employment, or the highest 36 successive joined months where interruption of service occurred; part-time employees use the base pay the part-time employee would have received had employment been full-time. Per Act 75 of 2005, average final compensation for Regular members, Bridge Police, and Appellate Law Clerks hired on or after July 1, 2006, is determined as the 60 highest months of successive employment. Per Act 992 of 2010, average final compensation for Judges hired on or after January 1, 2011 and all members of the Hazardous Duty Plan is based on the highest 60 months. Compensation is limited by the 401(a)(17) compensation limit of the Internal Revenue Code for certain members.

ACCUMULATED CONTRIBUTIONS:

The sum of all amounts deducted from earned compensation and credited to the individual account in the employee's savings account, plus regular interest credited prior to July 1971.

EMPLOYER CONTRIBUTIONS:

Determined in accordance with Louisiana Revised Statutes Sections 102 and 102.1, which require the employer rate to be actuarially determined and set annually, based on the Public Retirement Systems' Actuarial Committee's recommendation to the Legislature.

EMPLOYEE CONTRIBUTIONS:

Plan	Current Contribution
Regular Employees, Appellate Law Clerks, Optional Retirement Plan	
Pre-Act 75 (hired before 7/1/2006)	7.5%
Post-Act 75 (hired after 6/30/2006)	8.0%
Legislators	11.5%
Special Legislative	9.5%
Judges hired before 1/1/2011	11.5%
Judges hired after 12/31/2010	13.0%
Corrections Primary and Secondary	9.0%
Wildlife and Fisheries, Hazardous Duty	9.5%
Peace Officers/Alcohol Tobacco Control	9.0%
Bridge Police	8.5%
Harbor Police	9.0%

NORMAL RETIREMENT ELIGIBILITY AND BENEFIT:

Members whose first LASERS eligible employment occurs on or after July 1, 2015:

1. Regular Plan: Eligible with 5 years at age 62. Benefit accrual rate is 2.5%.
2. Judges: Eligible with 5 years at age 62. Benefit accrual is 3.5%, plus regular plan benefits for prior service.
3. Hazardous Duty Plan: Eligible with 12 years at age 55 or 25 years at any age. Benefit accrual rate is 3.33% for service earned in the Hazardous Duty Plan if the last 10 years of service was earned in a hazardous duty position; otherwise, the accrual rate is 2.5%.

Members whose first LASERS eligible employment occurs during January 1, 2011 to June 30, 2015:

1. Regular Plan: Eligible with 5 years at age 60. Benefit accrual rate is 2.5%.
2. Judges: Eligible with 5 years at age 60. Benefit accrual is 3.5% plus regular plan benefits for prior service.
3. Hazardous Duty Plan: Eligible with 12 years at age 55 or 25 years at any age. Benefit accrual rate is 3.33% for service earned in the Hazardous Duty Plan if the last 10 years of service was earned in a hazardous duty position; otherwise, the accrual rate is 2.5%.

Members whose first LASERS eligible employment occurs prior to January 1, 2011:

1. Regular members hired prior to July 1, 2006: Eligible with 10 years at age 60, or 25 years at age 55, or 30 years at any age. Regular members hired on or after July 1, 2006 are eligible with 5 years at age 60. Benefit accrual rate is 2.5% for all years of service.
2. Judges, Court Officers, and Appellate Law Clerks: Eligible with 18 years at any age, 10 years at age 65, 20 total years with at least 12 years as a judge or court officer at age 50, 12 years at age 55, or age 70 regardless of service. Judges and Court Officers earn 3.5% for year of service, plus regular plan benefits for prior service. Appellate Law Clerks earn 2.5% for all years of service.

3. Members of the legislature, governor, lieutenant governor and state treasurer: Eligible with 16 years of service at any age, 20 total years with at least 12 years as a member of this class at age 50, or 12 years at age 55. Members earn 3.5% per year of service, plus regular plan benefits for prior service.
4. Plans for certain employees of the Department of Public Safety and Corrections:
 - a. Corrections Primary, hired before August 15, 1986: Eligible with 10 years at age 60 or 20 years at any age. Benefit accrual rate is 2.5%.
 - b. Corrections Primary, hired August 15, 1986 to December 31, 2001: Eligible with 10 years at age 60, 20 years at age 50, or 25 years at any age. Benefit accrual rate is 2.5%.
 - c. Corrections Primary, hired prior to January 1, 2002, and employed as a probation and parole officers in the Office of Adult Services of the Department of Corrections: Eligible as stated above. Benefit accrual rate is 3.0% for service earned prior to July 1, 2014 and 3.33% for service earned after June 30, 2014.
 - d. Corrections Secondary Plan, hired after January 1, 2002, or transferred from Corrections Primary Plan: Eligible with 10 years at age 60 or 25 years at any age. Benefit accrual rate is 3.33%.
5. Wildlife and Fisheries:
 - a. Members hired before July 1, 2003: 10 years at age 55, or 20 years at any age. Benefit accrual is 3.0% for service earned prior to July 1, 2003 and 3.33% for service earned after June 30, 2003.
 - b. Members hired on or after July 1, 2003: 10 years at age 60, or 25 years at any age. Benefit accrual is 3.33%.
6. Peace Officers: Eligible with 10 years of service and age 60 or at 25 years at age 55, or 30 years at any age. Benefit accrual is 3.33%.
7. Alcohol Tobacco Control: Eligible with 10 years of service and age 60 or at 25 years of service at any age. Benefit accrual is 3.33%.
8. Bridge Police: Eligible with 10 years at age 60, or 25 years at any age. Benefit accrual is 2.5%.

Members originally enrolled in the Harbor Police Retirement System who transferred to LASERS and elected not to enroll in the Hazardous Duty Plan are eligible with 25 years at any age, 10 years at age 60, 12 years at age 55, or 20 years at age 45. Benefit accrual is 3.33%.

NOTES:

- A. Benefits are limited to 100% of final average compensation.
- B. Retirees who return to work will continue to receive unreduced benefits if compensation does not exceed 50% of the annual benefit during the fiscal year. Earnings above this limit will result in a corresponding reduction to benefits. Retirees who return to work may choose to suspend their retirement benefits and resume making contributions in the system. Upon subsequent retirement, benefit will resume. If post-retirement employment is at least 36 months, a supplemental benefit will be calculated. Otherwise, employee contributions will be refunded.
- C. A \$300 annual supplemental benefit is provided to persons who become members of the retirement system prior to July 1, 1986 (Act 608 of 1986).
- D. For members employed after January 1, 1990, the annual pension paid from the trust cannot exceed the maximum benefit provided under Section 415(b) of the Internal Revenue Code, and related Section 415 regulations, as adjusted for inflation and form of benefit other than life annuity or qualified joint and survivor annuity for retirement ages.

ACTUARIALLY REDUCED RETIREMENT:

Members with 20 years of service credit at any age are eligible for an actuarially reduced benefit from the earliest date member would be eligible if employment had continued, to the earliest normal retirement date, based on service earned to date. This does not apply to the correctional secondary plan members, wildlife agents hired on or after July 1, 2003, or harbor police plan members.

POST RETIREMENT INCREASES:

The provisions regarding future Permanent Benefit Increases (PBIs) were substantially changed by Act 399 of 2014. PBIs may be granted, if requested by the Board and approved with a two-thirds vote of both houses of legislature, provided there are sufficient funds in the Experience Account to fully fund the increase on an actuarial basis.

Experience Account Credits/Debits: After allocation of the first \$100,000,000 to the unfunded accrued liability, the Experience Account is credited with 50% of the remaining excess investment income, up to a maximum balance as described below. The \$100,000,000 threshold is indexed based upon the increase in the actuarial value of assets. Excess investment income is investment income for the prior fiscal year in excess of the expected income based on the actuarial valuation rate for that fiscal year. Balances in the Experience Account accrue interest at the actuarial rate of return earned during the prior year. All credits are limited as follows:

If the system's funded ratio is less than 80%, the Experience Account is limited to the reserve necessary to grant one PBI. If the funded ratio is at least 80%, the Experience Account is limited to the reserve necessary to fund two PBI's. The Experience Account is debited for the increase in actuarial accrued liability resulting from the increases.

Permanent Benefit Increases: No increase can be granted if the legislature granted an increase in the preceding fiscal year, unless the system is 85% funded or greater. Additionally, PBI's are limited to the lesser of the increase in the Consumer Price Index, U.S. city average for all urban consumers (CPI-U) for the twelve-month period ending on the system's valuation date, or by a percentage increase determined by the system's funded ratio:

Funded Ratio	PBI Increase Limit
< 55%	0%
55% to <65%	1.5%
65% to <75%	2.0%
75% to <80%	2.5%
80% +	3.0%

Beginning July 1, 2015, any increase is limited to the first \$60,000 of a retiree's annual benefit, increased annually by the CPI-U for the twelve-month period ending in June. If the actuarial rate of return for the prior plan year is less than 8.25%, regardless of the discount rate, the increase is limited to the lesser of 2% or the amount described above.

Eligibility Requirements: Benefits are restricted to those retirees who have attained age 60 and have been retired for at least one year. The minimum age 60 for the receipt of a benefit increase does not apply to disability retirees.

MINIMUM BENEFITS:

Effective September 1, 2001, retirees and beneficiaries receiving retirement benefits shall be entitled to a minimum benefit which is not less than \$30.00 per month for each year of creditable service. The minimum benefit is adjusted for the option elected at retirement.

DISABILITY RETIREMENT:

Eligibility:

Ten years of creditable service and certification of disability by medical board. (Medical examination may be required once per year for the first five years of disability retirement, and once every three years thereafter, until age 60.) No minimum service requirement for judges hired before January 1, 2011. Five years of service for members of the harbor police plan.

Benefit:

1. The disability retirement annuity shall be equivalent to the regular retirement formula without reduction due to age for all classes of membership.
2. For judges and court officers, the benefit in (1) but not less than 50% of current salary.
3. Corrections Primary Plan: When the disability is incurred in the line of duty, the retirement annuity is 60% of their final average compensation. When incurred in the line of duty and caused by an intentional act of violence, the retirement annuity is 100% of final average compensation. Otherwise, benefits paid per (1) above.
4. Corrections Secondary Plan: When the disability is incurred in the line of duty, the retirement annuity is 40% of final average compensation. If the member has 10 or more years of service, the benefit will be the greater of 40% of final average compensation or the benefit determined by (1) above. When incurred in the line of duty and caused by an intentional act of violence, the retirement annuity is 100% of final average compensation. Disabilities not incurred in the line of duty determined per (1) above.
5. For certain Wildlife agents: When partially disabled and not eligible for (1) above, the retirement annuity is 75% of the annuity in (1); When totally disabled while in the line of duty, the retirement annuity is 60% of final average compensation. When the disability is incurred in the line of duty and caused by an intentional act of violence, the retirement annuity is 100% of final average compensation.
6. Hazardous Duty Plan: When the disability is incurred in the line of duty, the retirement annuity is 75% of their final average compensation. When incurred in the line of duty and caused by an intentional act of violence, the retirement annuity is 100% of final average compensation. Disabilities not incurred in the line of duty paid per (1) above.
7. Harbor Police Plan: When the disability is incurred in the line of duty, the retirement annuity is 60% of final average compensation. When incurred in the line of duty and caused by an intentional act of violence, the retirement annuity is 100% of final average compensation. When not incurred in the line of duty, the retirement annuity is 40% of final average compensation if under age 55, and is the regular retirement annuity if age 55 or greater.

SURVIVOR'S BENEFITS:

Members whose first LASERS eligible employment occurs on or after January 1, 2011, or members of the Hazardous Duty Plan regardless of when hired:

Eligibility and Benefit:

1. Regular Members and Judges:
 - a. Surviving spouse with minor children of a deceased member with five years of service credit, two of which were earned immediately prior to death, or 20 years of service will receive 50% of the retirement benefit that would have been due to the member, or \$600 per month if greater. Each qualifying child will receive 50% of the spouse's benefit, up to 2 children. The total spouse and children benefit is subject to a minimum based on the Option 2A equivalent for the surviving spouse.
 - b. Surviving spouse, legally married one year prior to death, of a deceased member with 10 years of service credit, two of which were earned immediately prior to death, or 20 years of service regardless of date earned will receive the Option 2A equivalent of the retirement benefit that would have been due to the member, or \$600 per month if greater.
 - c. Surviving minor children will each (up to two) receive 50% of the benefit paid to a surviving spouse with children. This amount will be divided equally among all eligible children.
 - d. Surviving physically handicapped or mentally disabled children continue to receive a minor child's benefit described above in (1) or (3), whichever is applicable.
2. Hazardous Duty Members:
 - a. Surviving spouse and children of members who did not die in the line of duty receive benefits described for non-Hazardous Duty members.
 - b. Surviving spouse and children of members who died in the line of duty receive 80% of the member's final average compensation, or 100% if the death was caused by an intentional act of violence. The benefit is shared equally.
 - c. Surviving spouse of a retired member will receive 75% of members' monthly benefit. If no spouse, then surviving children receive (1.c.) above.
3. If no one is eligible to receive a survivor benefit, named beneficiary receives accumulated contributions.

Members whose first LASERS eligible employment occurs prior to January 1, 2011:

Eligibility and Benefit:

1. Regular members:
 - a. Surviving spouse, legally married one year prior to death, of a deceased member with 10 years of service credit, two of which were earned immediately prior to death, or 20 years of service, receive the greater of 50% of member's average compensation or \$200 per month.
 - b. If member with no spouse has surviving minor child, and 5 years of service credit, two of which were earned immediately prior to death, or 20 years of service, minor children receive the greater of 75% of member's average compensation or \$300 per month.
 - c. For surviving spouse with minor children, the spouse must be eligible per (a) above and the children per (b) above to receive these benefits. If either one is ineligible, then the criteria in (a) or (b) would apply accordingly.

- d. Surviving physically handicapped or mentally disabled children continue to receive a minor child's benefit described above in (a) or (c) whichever is applicable.
- 2. Surviving spouse of a judge or court officer receive survivor's benefit described in (1a) or (1b), but not less than the greater of 1/3 the member's current compensation, 50% of the retirement pay which such member was entitled or receiving prior to death, or 50% of the member's final average compensation (if the provisions of R.S. 11:471 are met). Benefit limited to 75% of average compensation.
- 3. Corrections
 - a. In the line of duty:
 - i. Surviving spouse with no minor children: 60% of average compensation if member had less than 25 years of service, or 75% of average compensation with 25 or more years of service.
 - ii. Minor children or disabled children and no spouse: 60% of average compensation if member had less than 5 years of service (25 years for Secondary Plan), or 75% of average compensation if member had 5 or more years of service (25 years for Secondary Plan).
 - iii. Surviving spouse with minor children: 60% of average compensation if member had less than 5 years of service (25 years for secondary plan) and benefit divided 1/3 to spouse and 2/3 to minor children equally. 75% of average compensation with 5 or more years of service (25 years for Secondary Plan) and benefit divided 1/3 to spouse and 2/3 to minor children equally.
 - b. Not in the line of duty: Benefits in accordance with the provisions for regular members.
- 4. Wildlife agents
 - a. In the line of duty:
 - i. Surviving spouse receives 75% of average compensation if member has 25 or more years of service, otherwise, spouse receives 60% of compensation. Spouse receives 100% if the death was caused by an intentional act of violence. Benefits cease upon remarriage.
 - ii. Minor children (if no eligible surviving spouse): one child – 30% of average compensation, 2 children – 40%, 3 children – 50%, 4 or more children – 60%, divided equally among children. Minor children receive 100% if the death was caused by an intentional act of violence.
 - b. Not in the line of duty benefit to surviving spouse and children: Surviving spouse receives a benefit as if the member retired on the date of death, until remarried. If member dies prior to age 55 with at least 15 years of service, benefit computed based on years of service without regard to age.
 - c. Survivors of retired wildlife agents will receive 75% of the retiree benefit in priority order: surviving spouse (until remarriage), minor children, parents who derive main support from retiree.
- 5. If no one is eligible to receive a survivor benefit, then the named beneficiary will receive the member's accumulated contributions.
- 6. Harbor Police
 - a. In line of duty benefit to surviving spouse is 60% of average compensation, regardless of years of service or 100% if the death was caused by an intentional act of violence. Benefits cease upon remarriage. Benefits continue to minor children until age 18 if there is no eligible surviving spouse or the member's parents if there is no eligible surviving spouse or child.
 - b. Not in the line of duty benefit to surviving spouse with children is 60% of final average compensation, until remarried and children attain age 18. If no children, surviving spouse receives 40% of final average compensation, until remarried. If no surviving spouse, children receive 60%

of final average compensation until the youngest child attains age 18. If no surviving spouse or child, parents who derive sole support from member receive 40% of final average compensation.

OPTIONAL FORMS OF BENEFIT:

In lieu of receiving normal retirement benefit, member may elect to receive actuarial equivalent of retirement allowance in a reduced form as follows:

Option 1 - If a member dies before receiving present value of annuity in monthly payments, balance paid to designated beneficiary(ies).

Option 2 - 100% of reduced retirement allowance, if member dies, continued for designated beneficiary's lifetime.

Option 3 - 50% of reduced retirement allowance, if member dies, continued for designated beneficiary's lifetime.

Option 4 - Other benefits of equal actuarial value may be elected with approval of board.

A. 90% of the maximum retirement allowance to member; when member dies, 55% of the maximum retirement allowance continued to beneficiary.

B. 55% of the reduced retirement allowance, if member dies, continued for designated beneficiary's lifetime.

Member's reduced benefit reverts to the maximum if the beneficiary predeceases the annuitant.

If divorced after retirement, optional benefit can revert to maximum benefit with actuarial adjustment.

Automatic COLA Option – An irrevocable retirement option which permits the member to receive an actuarially reduced benefit with a 2.5% annual benefit COLA (Cost of Living Adjustment) beginning on the first retirement anniversary date, but not before the retiree attains age 55 or would have attained age 55 in the case of a surviving spouse. This option can be chosen in combination with the above options.

Initial Benefit Option - Maximum benefit actuarially reduced for partial lump sum equal to not more than 36 months of maximum monthly pension.

REFUND OF CONTRIBUTIONS:

If a member ceases to be a member, except by death or retirement, he shall be paid in full or partially at his option, the amount of the accumulated contributions credited to his individual account in annuity savings fund plus any accumulated interest thereon as of June 30, 1971; if member of legislature, no interest. No interest credited after June 30, 1971. Death prior to retirement - accumulated contributions credited to individual account in annuity savings fund are returnable to a designated beneficiary or to member's estate.

DEFERRED RETIREMENT OPTION PLAN:

Instead of terminating employment and accepting a service retirement allowance, any member who has met the normal eligibility requirements may participate in the Deferred Retirement Option Plan (DROP).

Normal Eligibility: Any member who is eligible for unreduced service retirement allowance may begin participation on the first retirement eligibility date for a period not to exceed the third anniversary of retirement eligibility.

Benefit: Upon termination of employment, a participant will receive, at his option:

1. Lump sum payment (equal to the payments to the account);
2. A true annuity based upon his account; or
3. Other methods of payment approved by the Board of Trustees.

If a participant dies during the period of participation in the program, his account balance shall be paid to the beneficiary, or if none, to his estate in any form approved by the Board of Trustees.

If employment is not terminated at the end of DROP participation, then:

1. Payment into account shall cease;
2. Payment from account only upon termination of employment; and
3. The participant shall resume active contributing membership.

Upon termination of employment, the benefit payments indicated above shall be paid. The participant shall receive an additional retirement benefit based on additional service rendered since termination of DROP participation, usually the normal method of computation of benefit subject to the following:

1. If additional service was less than the period used to determine the average compensation, then the average compensation figure used to calculate the additional benefit shall be based on compensation used to determine the initial benefit.
2. If additional service was greater than the period used to determine the average compensation, the average compensation figure used to calculate the additional benefit shall be based on compensation earned during the period of additional service.

DROP accounts for members who become eligible for retirement prior to January 1, 2004, and participate in DROP shall earn interest, following termination of DROP, at a rate of 0.5% below the actuarial rate of the System's investment portfolio. Members eligible for retirement on or after January 1, 2004, must invest their DROP accounts in self-directed accounts approved by the Board of Trustees.

The annual DROP interest rate for the Harbor Police plan is the three-year average investment return of the plan assets (calculated as the compound average of 36 months) for the period ending the June 30th immediately preceding that given date. This rate determined by LASERS is reduced by a 0.5% "contingency" adjustment, but not to below zero. DROP interest is forfeited if member does not cease employment after DROP participation.

FUNDING POLICY

LASERS' funding policy is established by Sections 102 and 102.1 of Title 11 of the Louisiana Revised Statutes. LASERS is funded by employee and employer contributions, as a percentage of payroll, plus investment earnings. The basic elements of the annual required contribution are the normal cost, which is the cost of benefits earned by current active employees that is allocated to the current year, plus amortization of the unfunded accrued liability (UAL). Act 55 of 2014, Section 1, appropriates a percentage of nonrecurring revenue in accordance with the Constitution Article VII, Section 10(D)(2)(b)(ii) and requires the funds to be used to reduce the IUAL. The funds are used to reduce the Original Amortization Base (OAB), which includes the Initial Unfunded Accrued Liability (IUAL).

Per State constitutional provisions, the employer contribution rate cannot drop below 12%, without regard to employer credits, and without a corresponding adjustment to the employee contribution rate. Per statutory provisions, the employer contribution rate cannot drop below 15.5% until the UAL that existed on June 30, 2004 is fully funded. Amounts paid to the system due to the minimum will be accumulated in the employer credit account to be used exclusively to reduce any UAL created before July 1, 2004.

Employee contributions are fixed and established by statutes. Employer contributions are determined using the Entry Age Normal actuarial cost method, as required by statute and actuarial assumptions regarding future experience, such as long-term expected investment rates of return, future salary increases, and demographic assumptions such as rates of retirement, termination, disability, and mortality. The actuarial assumptions utilized in this valuation can be found in Appendix E of this report. The cost method is used to determine the normal cost, which is divided into the employee portion and the employer portion, both expressed as a percentage of payroll. The cost method also determines the plans total actuarial accrued liability. The Unfunded Accrued Liability (UAL) is determined as the total actuarial accrued liability less the plan's valuation assets, which are developed in Section II of this report. The UAL changes annually due to plan experience gains or losses, which develop as actual plan experience will differ from that assumed by the actuarial assumptions, and if applicable, changes in benefits, or actuarial methods and/or assumptions. Statutes provide for the amortization of changes in the UAL.

Benefit changes resulting in an actuarial cost can only be enacted by a two-thirds vote of the legislature and must be paid within 10 years. Non-investment experience gains and losses and investment losses are amortized over 30 years with level payments. Investment gains are first allocated to the OAB and EAAB, without re-amortization, up to the \$100 million threshold amounts, indexed beginning June 30, 2016, as required by Act 399 of 2014. By not re-amortizing, gains applied to these schedules result in earlier pay-off of these schedules. One-half of any remaining gains are credited to the Experience Account up to the statutory cap. Any remaining gains are then amortized over 30 years with level payments. Beginning in 2016, the full investment gain remaining after the allocation to the OAB and EAAB will be amortized over 30 years, and any gains credited to the Experience Account will be amortized as an offsetting loss over a 10-year period. Once the fund attains a funded ratio of 70%, future gains or losses (investment and non-investment) that would have otherwise been amortized over 30 years will be amortized over 20 years.

The OAB will be re-amortized with level-dollar payments to 2029 when such re-amortization results in annual payments less than the next annual payment otherwise required. If the System is less than 80% funded, the net remaining liability of the OAB and EAAB shall be re-amortized after application of the "threshold allocations" in Fiscal Year 2024/2025 and in every fifth fiscal year thereafter. Once the system attains an 80% funded ratio, the OAB and EAAB will be re-amortized following allocations of "threshold allocations" or contribution variance surpluses. Future payments to amortize the OAB will increase by 2.0%. All other schedules will have level payments.

If aggregate payroll increases at the same rate as the increase in amortization payments, the employer contribution rate attributable to the amortization payments will maintain a level percentage of payroll. If future aggregate payroll increases at a higher rate than the total amortization payments, the employer contribution will decrease. A table and graph showing future UAL amortization payments in aggregate for all current schedules are shown in Appendix F.

Employers pay the full required employer contribution rate, as recommended to the legislature by the Public Retirement Systems' Actuarial Committee (PRSAC). This rate is determined as the projected actuarially determined contribution divided by the projected payroll. The actual actuarially determined contribution and actual payroll will vary from the projected amounts, resulting in a contribution variance. Per statutory requirements, contribution surpluses will be allocated to the EAAB through fiscal year 2039/2040, and contribution deficits will be amortized over a five-year period with level payments.

The funding policy described above is consistent with the plan accumulating adequate assets to make benefit payments when due and improving the funded status of the plan by fully amortizing the unfunded accrued liability, assuming the actuarially determined contributions will be paid when due and all actuarial assumptions will be realized.

DISCUSSION OF RISK

Measuring pension obligations and calculating actuarially determined contributions require the use of assumptions regarding future economic and demographic experience. It should be noted that the liabilities and the corresponding funded status presented in this report would differ if a different assumption set were utilized. Future plan experience may differ from the assumptions used in this valuation resulting in actuarial gains and losses. The extent of these differences will impact the plan's future financial condition, the volatility of future plan measurements, and the volatility of future required contributions. Actuarial losses on assets and liabilities will lead to higher contribution amounts, while actuarial gains on assets and liabilities will lead to lower contribution amounts. Because these risks may not be apparent to the reader, we have included a summary of the key risk factors that should be considered.

Investment Risk

For most plans, investment returns are a significant portion of the assets used to fund plan benefits. Therefore, current plan liabilities are developed by discounting future expected benefits based on the expected returns that will be used to fund those benefits.

Statutory funding policy provides that a portion of investment gains will be transferred to the experience account to fund future Permanent Benefit Increases, should the legislature grant them. The guidance provided in Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, makes it clear that the discount rate is not necessarily the same as the expected investment return assumption. Section 3.5.1 states that the actuary may determine that it is appropriate to adjust the economic assumptions for provisions that are difficult to measure, of which the definition includes gain-sharing provisions. Therefore, in accordance with this guidance, the reasonableness of the discount rate is evaluated against the expected investment return less the portion of returns that are expected to be transferred to the experience account rather than fund regular plan benefits.

Due to the nature of investments, long-term expectations are not a guarantee and actual average long-term returns may be above or below the assumed investment return. Investment experience gains and losses will develop from two sources: (1) the extent to which the actual long-term rate of return used to fund regular plan benefits differs from the discount rate, and (2) the extent to which transfers to the experience account differ from the margin described above. Short-term volatility in actual returns is expected and will result in year-over-year fluctuations in financial metrics. Prolonged periods of investment performance below the assumed rate of return can result in a decrease in funded status (i.e. increases unfunded liabilities) and an increase in contributions required in future years. Of course, the opposite is also true. Therefore, as part of the annual valuation process, the expected return is evaluated in comparison to LASERS investment consultant's expected return for LASERS portfolio and industry-average long-term capital market assumptions to determine if the return assumption continues to be reasonable.

Demographic Risk

The results in this report assume demographic characteristics of the plan will follow a pattern consistent with assumptions disclosed for termination of employment, incidence of disabilities, timing of retirement, and duration of payments throughout retirement. Actuarial assumptions are applied to large groups of individuals to reasonably estimate plan liabilities and are not necessarily intended to be applied on an individual basis. As actual demographic experience will differ from the assumptions, future experience gains and losses will develop.

Payroll Risk

Individual Salary - Total plan liabilities include the estimated impact of future salary increases on future benefits for individual plan participants. To the extent that future salary increases differ from plan assumptions, gains and losses will develop.

Aggregate Plan Payroll - The valuation determines the Actuarially Determined Contribution (ADC) for the year immediately following the valuation date and projects the ADC for the following year. The employer contribution rate for the second fiscal year following the valuation date, which is the rate actually paid by the employer, is determined as the projected ADC divided by projected aggregate payroll. A contribution surplus may develop if actual aggregate payroll for the projected period exceeds the projected aggregate payroll and/or if the restated ADC is less than the projected ADC. Conversely, a contribution deficit may develop if actual aggregate payroll for the projected period is less than projected aggregate payroll and/or if the restated ADC is greater than the projected ADC.

Contribution Risk

This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with statutory funding policy. The funding policy provides contribution requirements that will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due, and eventually reach a 100% funded status if actuarial assumptions are realized in the aggregate. The Louisiana Constitutional requirements set forth in Article 10 Section 29(E) further reduce contribution risk.

Other Considerations

Significant legislative changes have been enacted since 2009, which reduced the plan's risk of not accumulating sufficient assets to pay plan benefits when due. Highlights of these changes are listed below:

- Restructuring of UAL payment schedules so that all schedules are amortized with level payments.
- Dedication of significantly more investment experience gains to the reduction of UAL debt before credits can be made to the Experience Account to fund future Permanent Benefit Increases (PBIs).
- Reduction in the maximum PBI percentage that can be granted, until funded status reaches 80%.
- Limitations on frequency of potential for Board to request that future PBI's be granted.
- Reduction in the term of future amortization schedules from 30 years to 20 years once the system attains a 70% funded ratio.
- Requirement that contribution variance surpluses and a portion of investment experience gains be used to reduce the UAL without an immediate reduction to employer contributions.
- Funding of administrative expenses via direct employer contributions.
- Constitutional requirement that benefit provisions enacted by the legislature that have an actuarial cost be amortized over a 10-year period.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared among active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on the risk characteristics and risk tolerance of the plan. For example, plans with a large amount of liability attributable to retirees have a shorter time horizon to recover from losses (such as investment experience losses due to lower than expected investment returns) than plans where the majority of the liability is attributable to active members. For this reason, highly mature plans with a substantial liability due to retirees and inactive members have less tolerance for risk.

Similarly, mature plans paying substantial retirement benefits resulting in a small positive or negative net cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan and assessing risk, we have provided some relevant metrics and discuss the highlights of information derived from these metrics below.

* Asterisks in tables in this section denote dollar values shown in millions.

	(A) Total Active Members	(B) DROP Members	(C) Inactive Members	(D) Inactive Accrued Liability *	(E) Total Accrued Liability *	(F) Valuation Assets *	(F)/(E) Funded Ratio	(A)/(B+C) Support Ratio	(D)/(E) Accrued Liability Ratio
2012	52,352	2,577	44,944	\$11,030	\$16,158	\$9,026	55.9%	110.2%	68.3%
2013	44,111	2,092	49,587	\$11,981	\$16,182	\$9,741	60.2%	85.4%	74.0%
2014	40,321	1,838	51,498	\$13,073	\$17,878	\$10,606	59.3%	75.6%	73.1%
2015	40,194	1,682	51,596	\$13,327	\$18,217	\$11,318	62.1%	75.4%	73.2%
2016	39,284	1,609	52,066	\$13,692	\$18,576	\$11,631	62.6%	73.2%	73.7%
2017	39,055	1,520	52,473	\$13,978	\$18,792	\$11,977	63.7%	72.3%	74.4%
2018	39,293	1,398	52,726	\$14,244	\$19,104	\$12,361	64.7%	72.6%	74.6%
2019	39,533	1,354	53,013	\$14,502	\$19,528	\$12,521	64.1%	72.7%	74.3%
2020	39,487	1,367	53,032	\$14,804	\$19,691	\$12,617	64.1%	72.6%	75.2%
2021	38,572	1,311	53,259	\$15,169	\$20,220	\$13,347	66.0%	70.7%	75.0%

Funded Ratio: The funded ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 55.9% to 66.0% over the last ten years. This ratio generally reflects the financial health of the plan but should not be considered in isolation since changes in methods and assumptions may reduce the funded ratio but also reduce future potential losses and resulting contribution rate increases. For example, during this time period, LASERS has reduced the discount rate from 8.25% to 7.40% and changed the actuarial cost method from projected unit credit to entry age normal which in total have increased the unfunded accrued liability by \$2.0 billion. If not for these changes, the funded ratio would be approximately 73.1%. However, these changes have improved the financial stability of the plan by reducing the potential for future contribution rate increases. If all actuarial assumptions are realized, the funded ratio is expected to steadily increase as unfunded liabilities are amortized in accordance with the plan's funding policy.

Support Ratio: The support ratio is determined as the ratio of active to inactive members. Active membership, which includes Active After DROP members, decreased substantially between 2012 and 2013 due in part to State lay-offs but has been fairly level since 2014. Inactive membership, which includes retirees, survivors, and terminated vested members, increased substantially from 2012 to 2014 but has remained fairly stable since 2014. The support ratio has decreased substantially from 110.2% to 70.7%, over the last ten years. This should be closely monitored by the investment staff to be sure no cash-flow issues develop that would require pre-mature liquidation of assets, which could result in investment experience losses.

Accrued Liability Ratio: The accrued liability ratio, which is a measure of the proportion of Total Accrued Liability attributable to inactive members, increased between 2012 and 2013 as the number of active members sharply decreased but has remained steady since 2013 at approximately 75%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors should be amortized over a shorter time horizon than for a less mature plan. The legislature has enacted a provision that will reduce the amortization period from 30 years to 20 years once the funded ratio reaches 70%.

	(A) Market Value of Assets *	(B) Total Payroll *	(A)/(B) Asset Volatility Ratio
2012	\$9,516	\$2,342	406.4%
2013	\$10,328	\$1,952	529.1%
2014	\$11,625	\$1,814	640.9%
2015	\$11,415	\$1,857	614.8%
2016	\$10,724	\$1,842	582.1%
2017	\$11,753	\$1,822	645.1%
2018	\$12,284	\$1,864	659.0%
2019	\$12,283	\$1,952	629.1%
2020	\$11,421	\$1,999	571.2%
2021	\$14,716	\$2,004	734.3%

Asset Volatility Ratio: The asset volatility ratio, determined as the ratio of the Market Value of Assets to Total Payroll, is a measure of the impact of investment volatility on employer contributions which are paid as a percentage of payroll. Although MVA growth that exceeds payroll growth may contribute to the financial stability of the plan, the amortization of changes in these higher asset values have a greater impact on contribution volatility as this ratio increases. Since 2012, the asset volatility ratio has increased from 406.4% to 734.3%.

	(A) Contributions*	(B) Benefits*	(A)-(B) Contributions less Benefits*	(C) Market Value of Assets*	(B)/(C) Benefits/ MVA	[(A)-(B)]/(C)
2012	\$863	\$1,041	(\$178)	\$9,516	10.9%	-1.9%
2013	\$856	\$1,151	(\$295)	\$10,328	11.1%	-2.9%
2014	\$789	\$1,262	(\$473)	\$11,625	10.9%	-4.1%
2015	\$893	\$1,255	(\$363)	\$11,415	11.0%	-3.2%
2016	\$897	\$1,292	(\$395)	\$10,724	12.0%	-3.7%
2017	\$840	\$1,331	(\$491)	\$11,753	11.3%	-4.2%
2018	\$897	\$1,378	(\$481)	\$12,284	11.2%	-3.9%
2019	\$943	\$1,397	(\$454)	\$12,283	11.4%	-3.7%
2020	\$1,035	\$1,416	(\$381)	\$11,421	12.4%	-3.3%
2021	\$1,035	\$1,443	(\$408)	\$14,716	9.8%	-2.8%

Cash Flow Measures: Mature plans paying substantial retirement benefits resulting in small positive or negative cash flows may be more sensitive to near term investment volatility. Note investment returns result in significant asset growth despite the negative cash flow.

	(A) Investment Experience Gains/(Losses)*	(B) Other Experience Gains/(Losses)*	(A)+(B) Total Experience Gain/(Loss)*
2012	(\$255)	(\$40)	(\$295)
2013	\$321	\$429	\$750
2014	\$473	\$61	\$534
2015	\$281	(\$28)	\$253
2016	(\$250)	\$81	(\$169)
2017	(\$14)	\$100	\$86
2018	(\$20)	\$18	(\$2)
2019	(\$286)	(\$96)	(\$382)
2020	(\$431)	\$151	(\$280)
2021	\$273	(\$6)	\$267

Experience Gains and Losses: As plan experience differs from actuarial assumptions, experience gains and losses will develop. If assumptions are appropriately determined, gains and losses are expected to offset over time. Consistent gains or losses may be an indication that actuarial assumptions need to be re-evaluated. LASERS' consistent "other" experience gains result primarily from salary and mortality assumptions. Recent changes following the experience study are expected to mirror actual experience more closely.

The risks identified and discussed above are the most significant risks based on the characteristics of the plan, however this is not an exhaustive list of potential risks that could be considered. Advanced modeling, as well as the identification of additional risks, can be helpful and can be provided upon request of the Board.

ACTUARIAL COST METHODS AND ASSUMPTIONS

ACTUARIAL COST METHOD:

Louisiana Statutes, R. S. 11:22, prescribes the Entry Age Normal cost method for funding valuation purposes. This cost method generally produces normal costs that are level as a percentage of the member's projected pay if the composition of the active group with regard to age, sex, and service is stable. Normal costs are attributed from the first period in which a member accrues benefits through all assumed exit ages until retirement.

ASSET VALUATION:

The market value of assets is adjusted to gradually recognize investment gains and losses relative to the discount rate over a 5-year period in 20% increments. The adjusted asset value is subject to Corridor Limits of 80% to 120% of the market value of assets.

ACCOUNTING DISCLOSURE:

The Statements of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position provided by the accounting staff were the final drafts prior to publication. If these statements differ from the final audit report by a margin that affects the employer contribution rate or the yield to the actuarial value of assets, a revised actuarial report will be issued, but only to the extent that any changes affect the employer's contribution rate or the return on the Actuarial Value of Assets.

ADMINISTRATIVE EXPENSES:

Administrative expenses are funded directly by employers as a percentage of projected payroll beginning July 1, 2018, in accordance with Act 94 of 2016. Projected administrative expenses are determined based on prior year actual expenses with consideration of any expected variations provided by LASERS Fiscal Division.

POST RETIREMENT BENEFIT INCREASES:

The accrued actuarial liability includes previously granted post-retirement benefit increases. Louisiana law pertaining to LASERS' retiree benefit increases provides for the funding of future increases by requiring the automatic transfer of a portion of excess investment earnings to the experience account, subject to the statutory maximum balance of the account. The law does not provide for automatic benefit increases. Many conditions must be met before an increase can be granted, as described in the Post-Retirement Increases section of the Summary of Plan Provisions in Appendix B of this report. The legislature and governor have the ultimate authority as to whether a future increase will be granted. Since a portion of investment earnings will be used to fund these benefits, if granted, the rate used to discount plan liabilities represents the long-term expected returns (net of investment expenses) less the expected returns used to fund future retiree benefit increases. This adjustment is made in accordance with Actuarial Standards of Practice No. 27 (section 3.5.1) regarding the selection of economic assumptions, which states that it is appropriate to adjust the economic assumptions to provide for plan provisions that are difficult to measure, such as gain-sharing provisions.

ACTUARIAL ASSUMPTIONS:

Demographic and Salary assumptions used in the valuation were adopted by the Board of Trustees following the most recent experience study. The Retirement System is required to conduct an experience study every five years. An experience study was completed for the observation period of July 1, 2013 through June 30, 2018. The recommended assumption changes based on this study were adopted by the Board, effective July 1, 2019. The experience study report, dated January 23, 2019, provides further information regarding the rationale for these assumptions. The current rate tables are illustrated at the end of this appendix.

INFLATION:

The Board of Trustees adopted a change in the inflation assumption from 2.50% to 2.30%, effective July 1, 2020.

DISCOUNT RATE / INVESTMENT EARNINGS:

Funding Valuation Assumption: A discount rate of 7.40%, was used for the June 30, 2021 valuation. The projected contribution requirements for Fiscal Year 2022/2023 were determined using a discount rate of 7.25%.

The discount rate for funding purposes reflects the assumed investment rate of return, net of investment expenses, and net of investment gains expected to be allocated to the Experience Account to fund future permanent benefit increases (35 basis points). Therefore, by excluding returns expected to be used for purposes other than funding regular plan benefits, the discount rate represents the expected returns to be used to fund regular plan benefits.

GASB Assumptions: A discount rate of 7.40% is used for GASB reporting purposes.

MORTALITY ASSUMPTIONS:

Mortality rates were revised based on the 2014-2018 experience study as follows:

General Active Employees

Males	RP-2014 Blue Collar Employee *0.978
Females	RP-2014 Blue Collar Employee * 1.144

Public Safety Active Employees

Males	RP-2014 Blue Collar Employee *1.005
Females	RP-2014 Blue Collar Employee * 1.129

General Retiree/Inactive Employees

Males	RP-2014 Blue Collar Annuitant * 1.280
Females	RP-2014 White Collar Annuitant * 1.417

Public Safety Retiree/Inactive Employees

Males	RP-2014 Blue Collar Annuitant *1.185
Females	RP-2014 Blue Collar Annuitant * 1.017

Disability Retirees

Males	RP-2000 Disability Retiree * 1.009
Females	RP-2000 Disability Retiree * 1.043

Mortality assumptions for active and regular retirees include adjustments for expected future mortality improvement using the MP-2018 Generational Improvement Scale. Mortality assumptions for Disability Retirees include no adjustments for expected future mortality improvement, based on plan experience.

DISABILITY ASSUMPTION:

Rates of total and permanent disability vary based upon attained age and vary by plan, based upon the 2014-2018 experience study.

RETIREMENT/DROP ASSUMPTION:

Eligibility for normal retirement benefits and DROP participation is based on age and service requirements that vary by plan, based on the 2014-2018 experience study.

TERMINATION ASSUMPTIONS:

Voluntary termination or withdrawal rates are based on the 2014-2018 experience study. Rates for Regular members and Corrections/Hazardous Duty members are based on a combination of age and service. Rates for Wildlife employees are 7.6% for zero to five years of service and 0.5% for six or more years of service. The expected withdrawal rate for Judges is a flat rate of 1.20%. For members terminating with vested benefits, it is assumed that 20% will elect to withdraw their accumulated employee contribution, and 80% will receive a benefit beginning at age 60.

SALARY GROWTH:

The rates of annual salary growth are based upon the member's years of service and are based on the 2014-2018 experience study. The rates include anticipated productivity growth, merit adjustments, and an inflation component, which is consistent with the inflation assumptions used to develop the discount rate. For valuation purposes, current salaries and projected future salaries are limited to the Section 401(a)(17) limit of the Internal Revenue Service Code, with future indexed increases.

All salary growth assumptions were reduced by 0.20%, effective July 1, 2020, based on the reduction in the inflation assumption from 2.50% to 2.30%.

FAMILY STATISTICS:

The composition of the family is based upon Current Population Reports published by the United States Census Bureau. Seventy-five percent of the membership is assumed to be married. The wife is assumed to be three years younger than the husband. Sample rates for the assumed number of minor children are as follows:

Age of Member	Number of Minor Children	Years for Youngest Child to Attain Majority
25	1.2	17
30	1.4	15
35	1.7	13
40	1.7	10
45	1.4	8
50	1.1	4

CONVERTED LEAVE:

Leave credit is accrued throughout a member's career and converted to service credit or paid as a lump sum. Converted leave rates below represent the percentage increase in a retiree's accrued benefit upon conversion of the leave to benefits. Prior and new rates are shown below. The prior rates were based on the prior experience study. The current rates are based on the 2014-2018 experience study.

	Regular Retirement	Disability
Regular Members	5.0%	1.5%
Judicial Members	0.5%	1.0%
Corrections	9.0%	3.0%
Wildlife	9.0%	3.0%
Rehired Retirees	7.5%	N/A

Actuarial Assumptions
Regular Members

AGE	DISABILITY RATES	TERMINATION RATES					
		< 1 YEAR	1 YEAR	2-3 YEARS	4-6 YEARS	7-9 YEARS	10+ YEARS
18	0.0000	0.500	0.550	0.330	0.230	0.105	0.080
19	0.0000	0.500	0.550	0.330	0.230	0.105	0.080
20	0.0000	0.500	0.380	0.330	0.230	0.105	0.080
21	0.0001	0.500	0.320	0.330	0.230	0.105	0.080
22	0.0001	0.440	0.300	0.240	0.230	0.105	0.080
23	0.0001	0.380	0.300	0.240	0.230	0.105	0.080
24	0.0001	0.325	0.270	0.200	0.230	0.105	0.080
25	0.0001	0.325	0.270	0.200	0.160	0.105	0.080
26	0.0001	0.325	0.270	0.200	0.160	0.105	0.080
27	0.0001	0.290	0.270	0.200	0.160	0.105	0.080
28	0.0001	0.290	0.270	0.200	0.160	0.105	0.080
29	0.0001	0.290	0.230	0.180	0.160	0.105	0.080
30	0.0001	0.290	0.230	0.180	0.133	0.105	0.080
31	0.0001	0.290	0.230	0.180	0.133	0.080	0.080
32	0.0001	0.290	0.230	0.180	0.133	0.080	0.080
33	0.0001	0.290	0.230	0.180	0.133	0.080	0.080
34	0.0001	0.290	0.220	0.180	0.133	0.080	0.055
35	0.0005	0.290	0.220	0.180	0.133	0.080	0.055
36	0.0005	0.290	0.220	0.180	0.133	0.080	0.055
37	0.0005	0.290	0.220	0.150	0.133	0.080	0.055
38	0.0005	0.290	0.180	0.150	0.130	0.080	0.055
39	0.0005	0.280	0.180	0.150	0.130	0.080	0.055
40	0.0010	0.280	0.180	0.150	0.130	0.080	0.055
41	0.0010	0.280	0.180	0.150	0.130	0.080	0.055
42	0.0010	0.280	0.180	0.140	0.125	0.080	0.055
43	0.0010	0.250	0.180	0.140	0.125	0.080	0.055
44	0.0010	0.250	0.180	0.140	0.125	0.080	0.055
45	0.0015	0.250	0.180	0.140	0.125	0.080	0.050
46	0.0015	0.250	0.180	0.140	0.125	0.075	0.050
47	0.0015	0.250	0.180	0.125	0.115	0.075	0.050
48	0.0015	0.250	0.180	0.125	0.115	0.075	0.050
49	0.0015	0.250	0.180	0.125	0.115	0.075	0.050
50	0.0022	0.250	0.180	0.125	0.115	0.075	0.050
51	0.0022	0.250	0.180	0.125	0.115	0.070	0.050
52	0.0022	0.250	0.180	0.115	0.115	0.070	0.050
53	0.0022	0.250	0.180	0.115	0.115	0.070	0.050
54	0.0022	0.250	0.180	0.115	0.085	0.070	0.050
55	0.0030	0.200	0.180	0.115	0.085	0.070	0.050
56	0.0030	0.200	0.180	0.115	0.085	0.070	0.050
57	0.0030	0.200	0.180	0.115	0.085	0.070	0.050
58	0.0030	0.200	0.180	0.115	0.085	0.070	0.050
59	0.0030	0.200	0.180	0.115	0.085	0.070	0.050
60	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
61	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
62	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
63	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
64	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
65	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
66	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
67	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
68	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
69	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
70	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
71	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
72	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
73	0.0000	0.200	0.180	0.115	0.085	0.070	0.050
74	0.0000	0.200	0.180	0.115	0.085	0.070	0.050

Actuarial Assumptions
Regular Members

AGE	RETIREMENT/DROP RATES					DUR	SALARY INCREASE
	< 10 YOS	10-19 YOS	20-24 YOS	25-29 YOS	30+ YOS		
18	0.000	0.000	0.000	0.000	0.000	0	0.1280
19	0.000	0.000	0.000	0.000	0.000	1	0.0690
20	0.000	0.000	0.000	0.000	0.000	2	0.0615
21	0.000	0.000	0.000	0.000	0.000	3	0.0540
22	0.000	0.000	0.000	0.000	0.000	4	0.0515
23	0.000	0.000	0.000	0.000	0.000	5	0.0490
24	0.000	0.000	0.000	0.000	0.000	6	0.0460
25	0.000	0.000	0.000	0.000	0.000	7	0.0430
26	0.000	0.000	0.000	0.000	0.000	8	0.0400
27	0.000	0.000	0.000	0.000	0.000	9	0.0390
28	0.000	0.000	0.000	0.000	0.000	10	0.0360
29	0.000	0.000	0.000	0.000	0.000	11	0.0360
30	0.000	0.000	0.000	0.000	0.000	12	0.0360
31	0.000	0.000	0.000	0.000	0.000	13	0.0330
32	0.000	0.000	0.000	0.000	0.000	14	0.0320
33	0.000	0.000	0.000	0.000	0.000	15	0.0320
34	0.000	0.000	0.000	0.000	0.000	16	0.0320
35	0.000	0.000	0.000	0.000	0.000	17	0.0320
36	0.000	0.000	0.000	0.000	0.000	18	0.0310
37	0.000	0.000	0.000	0.000	0.000	19	0.0300
38	0.000	0.050	0.050	0.050	0.000	20	0.0300
39	0.000	0.050	0.050	0.050	0.000	21	0.0300
40	0.000	0.050	0.050	0.050	0.000	22	0.0300
41	0.000	0.050	0.050	0.050	0.000	23	0.0300
42	0.000	0.050	0.050	0.050	0.000	24	0.0300
43	0.000	0.050	0.050	0.050	0.000	25	0.0300
44	0.000	0.050	0.050	0.050	0.000	26	0.0300
45	0.000	0.050	0.050	0.050	0.000	27	0.0300
46	0.000	0.050	0.050	0.050	0.000	28	0.0300
47	0.000	0.050	0.050	0.050	0.000	29	0.0300
48	0.000	0.080	0.080	0.080	0.200	30	0.0300
49	0.000	0.080	0.080	0.080	0.200	31	0.0300
50	0.000	0.100	0.100	0.100	0.200	32	0.0300
51	0.000	0.100	0.100	0.100	0.200	33	0.0300
52	0.000	0.100	0.100	0.100	0.200	34	0.0300
53	0.000	0.100	0.100	0.100	0.200	35	0.0300
54	0.000	0.250	0.250	0.250	0.250	36	0.0300
55	0.000	0.180	0.180	0.600	0.600	37	0.0300
56	0.000	0.180	0.180	0.200	0.200	38	0.0300
57	0.000	0.180	0.180	0.200	0.200	39	0.0300
58	0.000	0.180	0.180	0.200	0.200	40	0.0300
59	0.000	0.180	0.180	0.200	0.200	41	0.0300
60	0.350	0.350	0.350	0.350	0.350	42	0.0300
61	0.180	0.180	0.180	0.180	0.180	43	0.0300
62	0.170	0.170	0.170	0.170	0.170	44	0.0300
63	0.150	0.150	0.150	0.150	0.150	45	0.0300
64	0.170	0.170	0.170	0.170	0.170	46	0.0300
65	0.200	0.200	0.200	0.200	0.200	47	0.0300
66	0.180	0.180	0.180	0.180	0.180	48	0.0300
67	0.180	0.180	0.180	0.180	0.180	49	0.0300
68	0.180	0.180	0.180	0.180	0.180	50	0.0300
69	0.180	0.180	0.180	0.180	0.180	51	0.0300
70	0.180	0.180	0.180	0.180	0.180	52	0.0300
71	0.180	0.180	0.180	0.180	0.180	53	0.0300
72	0.180	0.180	0.180	0.180	0.180	54	0.0300
73	0.180	0.180	0.180	0.180	0.180	55	0.0300
74	0.180	0.180	0.180	0.180	0.180	56	0.0300

Actuarial Assumptions
Judges

AGE	DISABILITY RATES	RETIREMENT/DROP			DUR	SALARY INCREASE
		< 12 YOS	12-17 YOS	18+ YOS		
18	0.0000	0.000	0.000	0.000	0	0.0505
19	0.0000	0.000	0.000	0.000	1	0.0255
20	0.0000	0.000	0.000	0.000	2	0.0255
21	0.0000	0.000	0.000	0.000	3	0.0255
22	0.0000	0.000	0.000	0.000	4	0.0255
23	0.0000	0.000	0.000	0.000	5	0.0255
24	0.0000	0.000	0.000	0.000	6	0.0255
25	0.0000	0.000	0.000	0.000	7	0.0255
26	0.0000	0.000	0.000	0.000	8	0.0255
27	0.0000	0.000	0.000	0.000	9	0.0255
28	0.0000	0.000	0.000	0.000	10	0.0255
29	0.0000	0.000	0.000	0.000	11	0.0255
30	0.0000	0.000	0.000	0.000	12	0.0255
31	0.0000	0.000	0.000	0.000	13	0.0255
32	0.0000	0.000	0.000	0.000	14	0.0255
33	0.0000	0.000	0.000	0.000	15	0.0255
34	0.0000	0.000	0.000	0.000	16	0.0255
35	0.0000	0.000	0.000	0.000	17	0.0255
36	0.0000	0.000	0.000	0.000	18	0.0255
37	0.0000	0.000	0.000	0.000	19	0.0255
38	0.0000	0.000	0.000	0.068	20	0.0255
39	0.0000	0.000	0.000	0.068	21	0.0255
40	0.0000	0.000	0.000	0.068	22	0.0255
41	0.0000	0.000	0.000	0.068	23	0.0255
42	0.0000	0.000	0.000	0.068	24	0.0255
43	0.0000	0.000	0.000	0.068	25	0.0255
44	0.0000	0.000	0.000	0.068	26	0.0255
45	0.0002	0.000	0.000	0.068	27	0.0255
46	0.0002	0.000	0.000	0.068	28	0.0255
47	0.0002	0.000	0.000	0.068	29	0.0255
48	0.0002	0.000	0.000	0.068	30	0.0255
49	0.0002	0.000	0.000	0.068	31	0.0255
50	0.0002	0.000	0.000	0.068	32	0.0255
51	0.0002	0.000	0.000	0.068	33	0.0255
52	0.0002	0.000	0.000	0.068	34	0.0255
53	0.0002	0.000	0.000	0.068	35	0.0255
54	0.0002	0.000	0.000	0.068	36	0.0255
55	0.0002	0.000	0.208	0.115	37	0.0255
56	0.0002	0.000	0.090	0.115	38	0.0255
57	0.0002	0.000	0.090	0.115	39	0.0255
58	0.0002	0.000	0.090	0.115	40	0.0255
59	0.0002	0.000	0.090	0.115	41	0.0255
60	0.0002	0.108	0.090	0.238	42	0.0255
61	0.0002	0.108	0.090	0.173	43	0.0255
62	0.0002	0.108	0.090	0.173	44	0.0255
63	0.0002	0.108	0.090	0.173	45	0.0255
64	0.0002	0.108	0.090	0.173	46	0.0255
65	0.0002	0.108	0.182	0.173	47	0.0255
66	0.0002	0.108	0.105	0.122	48	0.0255
67	0.0002	0.108	0.105	0.122	49	0.0255
68	0.0002	0.108	0.105	0.122	50	0.0255
69	0.0002	0.108	0.105	0.122	51	0.0255
70	0.0000	0.108	0.105	0.122	52	0.0255
71	0.0000	0.108	0.105	0.122	53	0.0255
72	0.0000	0.108	0.105	0.545	54	0.0255
73	0.0000	0.108	0.105	0.545	55	0.0255
74	0.0000	0.108	0.105	0.545	56	0.0255

Actuarial Assumptions
Corrections/Hazardous Duty & Wildlife

AGE	DISABILITY RATES	RETIREMENT/DROP RATES		TERMINATION RATES (Excluding Wildlife)							DUR	SALARY INCREASES
		< 10 YOS	10+ YOS	< 1 YOS	1 YOS	2 YOS	3-4 YOS	5-7 YOS	8-9 YOS	10+ YOS		
18	0.0000	0.000	0.000	0.580	0.500	0.300	0.370	0.155	0.064	0.028	0	0.1380
19	0.0000	0.000	0.000	0.580	0.500	0.300	0.370	0.155	0.064	0.028	1	0.0780
20	0.0001	0.000	0.000	0.580	0.390	0.300	0.370	0.155	0.064	0.028	2	0.0630
21	0.0001	0.000	0.000	0.580	0.390	0.300	0.370	0.155	0.064	0.028	3	0.0605
22	0.0001	0.000	0.000	0.580	0.390	0.300	0.370	0.155	0.064	0.028	4	0.0580
23	0.0001	0.000	0.000	0.480	0.360	0.300	0.240	0.155	0.064	0.028	5	0.0555
24	0.0001	0.000	0.000	0.480	0.305	0.300	0.240	0.155	0.064	0.028	6	0.0555
25	0.0001	0.000	0.000	0.480	0.305	0.300	0.240	0.155	0.064	0.028	7	0.0480
26	0.0001	0.000	0.000	0.467	0.305	0.240	0.205	0.155	0.064	0.028	8	0.0480
27	0.0001	0.000	0.000	0.467	0.305	0.240	0.205	0.155	0.064	0.028	9	0.0480
28	0.0001	0.000	0.000	0.467	0.305	0.240	0.205	0.135	0.064	0.028	10	0.0480
29	0.0001	0.000	0.000	0.467	0.305	0.240	0.200	0.135	0.064	0.028	11	0.0480
30	0.0005	0.000	0.000	0.435	0.255	0.240	0.200	0.135	0.064	0.028	12	0.0480
31	0.0005	0.000	0.000	0.435	0.255	0.240	0.200	0.100	0.064	0.028	13	0.0430
32	0.0005	0.000	0.000	0.435	0.255	0.200	0.200	0.100	0.064	0.028	14	0.0380
33	0.0005	0.000	0.000	0.435	0.255	0.200	0.200	0.100	0.064	0.028	15	0.0355
34	0.0005	0.000	0.000	0.435	0.255	0.200	0.200	0.100	0.064	0.028	16	0.0355
35	0.0013	0.000	0.000	0.435	0.255	0.200	0.200	0.100	0.064	0.028	17	0.0355
36	0.0013	0.000	0.000	0.410	0.255	0.200	0.155	0.100	0.064	0.028	18	0.0355
37	0.0013	0.000	0.110	0.410	0.255	0.200	0.155	0.100	0.064	0.028	19	0.0355
38	0.0013	0.000	0.110	0.410	0.255	0.200	0.155	0.100	0.064	0.028	20	0.0355
39	0.0013	0.000	0.110	0.410	0.210	0.200	0.155	0.100	0.064	0.028	21	0.0355
40	0.0017	0.000	0.110	0.410	0.210	0.200	0.155	0.090	0.064	0.028	22	0.0355
41	0.0017	0.000	0.110	0.410	0.210	0.200	0.155	0.090	0.064	0.028	23	0.0355
42	0.0017	0.000	0.235	0.320	0.210	0.200	0.155	0.090	0.064	0.028	24	0.0355
43	0.0017	0.000	0.235	0.320	0.170	0.200	0.155	0.090	0.064	0.028	25	0.0355
44	0.0017	0.000	0.235	0.320	0.170	0.200	0.155	0.090	0.064	0.028	26	0.0355
45	0.0028	0.000	0.235	0.320	0.170	0.120	0.155	0.090	0.064	0.028	27	0.0355
46	0.0028	0.000	0.235	0.320	0.170	0.120	0.155	0.090	0.064	0.028	28	0.0355
47	0.0028	0.000	0.235	0.320	0.170	0.120	0.100	0.090	0.064	0.028	29	0.0355
48	0.0028	0.000	0.235	0.320	0.170	0.120	0.100	0.090	0.064	0.028	30	0.0355
49	0.0028	0.000	0.235	0.275	0.170	0.120	0.100	0.090	0.064	0.028	31	0.0355
50	0.0055	0.000	0.235	0.275	0.170	0.120	0.100	0.090	0.064	0.028	32	0.0355
51	0.0055	0.000	0.235	0.275	0.170	0.120	0.100	0.090	0.064	0.028	33	0.0355
52	0.0055	0.000	0.235	0.275	0.170	0.120	0.100	0.090	0.064	0.028	34	0.0355
53	0.0055	0.000	0.235	0.275	0.170	0.090	0.100	0.090	0.064	0.028	35	0.0355
54	0.0055	0.000	0.235	0.275	0.170	0.090	0.100	0.090	0.064	0.028	36	0.0355
55	0.0080	0.000	0.235	0.275	0.170	0.090	0.100	0.090	0.064	0.028	37	0.0355
56	0.0080	0.000	0.235	0.190	0.170	0.090	0.100	0.090	0.064	0.028	38	0.0355
57	0.0080	0.000	0.289	0.190	0.170	0.090	0.100	0.090	0.064	0.028	39	0.0355
58	0.0080	0.000	0.289	0.190	0.170	0.090	0.100	0.090	0.064	0.028	40	0.0355
59	0.0080	0.500	0.369	0.190	0.170	0.090	0.100	0.090	0.064	0.028	41	0.0355
60	0.0000	0.500	0.240	0.190	0.170	0.090	0.100	0.090	0.064	0.028	42	0.0355
61	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	43	0.0355
62	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	44	0.0355
63	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	45	0.0355
64	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	46	0.0355
65	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	47	0.0355
66	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	48	0.0355
67	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	49	0.0355
68	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	50	0.0355
69	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	51	0.0355
70	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	52	0.0355
71	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	53	0.0355
72	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	54	0.0355
73	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	55	0.0355
74	0.0000	0.325	0.196	0.190	0.170	0.090	0.100	0.090	0.064	0.028	56	0.0355

Actuarial Assumptions
Mortality Tables

Adjusted RP-2014 Base Table				Projected 2020 Table			Projected 2050 Table		
	Age	Male	Female	Age	Male	Female	Age	Male	Female
General Active Member Mortality	20	0.000513	0.000208	20	0.000532	0.000220	20	0.000411	0.000172
	30	0.000572	0.000279	30	0.000666	0.000319	30	0.000521	0.000251
	40	0.000795	0.000508	40	0.000909	0.000561	40	0.000746	0.000455
	50	0.002134	0.001414	50	0.002046	0.001377	50	0.001618	0.001077
	60	0.005934	0.003133	60	0.006024	0.003264	60	0.004510	0.002473
	Age	Male	Female	Age	Male	Female	Age	Male	Female
Public Safety Active Member Mortality	20	0.000528	0.000205	20	0.000547	0.000217	20	0.000423	0.000169
	30	0.000588	0.000275	30	0.000685	0.000315	30	0.000536	0.000247
	40	0.000817	0.000501	40	0.000934	0.000553	40	0.000767	0.000449
	50	0.002193	0.001395	50	0.002102	0.001359	50	0.001663	0.001062
	60	0.006097	0.003092	60	0.006189	0.003221	60	0.004634	0.002440
	Age	Male	Female	Age	Male	Female	Age	Male	Female
General Non-Disabled Retiree Mortality	50	0.005202	0.002942	50	0.004987	0.002866	50	0.003945	0.002241
	60	0.010824	0.005514	60	0.010988	0.005744	60	0.008226	0.004352
	70	0.025199	0.014955	70	0.024699	0.014237	70	0.018928	0.010935
	80	0.066380	0.043104	80	0.063142	0.041450	80	0.047371	0.030847
	90	0.187405	0.141993	90	0.180033	0.138271	90	0.137459	0.106224
	Age	Male	Female	Age	Male	Female	Age	Male	Female
Public Safety Non-Disabled Retiree Mortality	50	0.004816	0.002870	50	0.004617	0.002796	50	0.003653	0.002186
	60	0.010020	0.005832	60	0.010172	0.006075	60	0.007615	0.004603
	70	0.023329	0.014203	70	0.022866	0.013521	70	0.017523	0.010385
	80	0.061453	0.038813	80	0.058455	0.037324	80	0.043855	0.027776
	90	0.173496	0.113767	90	0.166671	0.110785	90	0.127257	0.085108
	Age	Male	Female	Age	Male	Female	Age	Male	Female
General and Public Safety Disabled Mortality	30	0.022774	0.007770	30	0.022774	0.007770	30	0.022774	0.007770
	40	0.022774	0.007770	40	0.022774	0.007770	40	0.022774	0.007770
	50	0.029236	0.012031	50	0.029236	0.012031	50	0.029236	0.012031
	60	0.042420	0.022778	60	0.042420	0.022778	60	0.042420	0.022778
	70	0.063146	0.039253	70	0.063146	0.039253	70	0.063146	0.039253
	80	0.110356	0.075421	80	0.110356	0.075421	80	0.110356	0.075421

Appendix F
AMORTIZATION SCHEDULES

LASERS Actuarial Valuation
June 30, 2021

AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
June 30, 2021 - (7.40% Discount Rate)

Date	Description	Notes *	Amtz. Period	Initial Liability	Years Remain	Remaining Balance	Mid-Year Payment
2021	OAB	Note 1	8	1,133,458,713	8	1,133,458,713	187,851,974
2021	EAAB	Note 2	19	1,955,635,898	19	1,955,635,898	204,558,278
2021	2009 Change in Assumptions		18	(183,601,645)	18	(183,601,645)	(18,124,027)
2021	2009 Experience Loss		18	1,145,035,025	18	1,145,035,025	113,030,827
2021	2010 Experience Loss		19	535,605,286	19	535,605,286	51,514,208
2021	2011 Experience Loss		20	75,516,190	20	75,516,190	7,093,529
2021	2012 Assumption Change		21	316,711,946	21	316,711,946	29,117,016
2021	2012 Experience Loss		21	241,527,470	21	241,527,470	22,204,907
2021	2013 Change in Asset Val Method		22	(76,762,946)	22	(76,762,946)	(6,920,137)
2021	2013 Experience Gain		22	(486,914,017)	22	(486,914,017)	(43,895,026)
2021	2014 Change in Assumptions		23	665,205,975	23	665,205,975	58,902,575
2021	2014 Change in Cost Method		23	570,516,896	23	570,516,896	50,518,059
2021	2014 Non-Inv Experience Gain		23	(56,121,545)	23	(56,121,545)	(4,969,444)
2021	2015 Experience Gain		24	(143,091,577)	24	(143,091,577)	(12,464,276)
2021	2016 Experience Loss		25	159,687,841	25	159,687,841	13,702,319
2021	2017 Discount Rate/Salary Chg		26	39,943,848	26	39,943,848	3,380,480
2021	2017 Experience Gain		26	(81,660,088)	26	(81,660,088)	(6,910,960)
2021	2018 Experience Loss		27	2,158,194	27	2,158,194	180,348
2021	2018 Discount Rate Change		27	80,684,313	27	80,684,313	6,742,334
2021	2019 Discount Rate/Assumptions		28	67,309,377	28	67,309,377	5,559,438
2021	2019 Experience Loss		28	373,799,491	28	373,799,491	30,874,079
2021	2020 Experience Loss		29	277,264,552	29	277,264,552	22,656,112
2021	2020 Discount Rate/Salary Change		29	52,419,763	29	52,419,763	4,283,374
2021	2021 Inv and Other Experience		30	(149,456,696)	30	(149,456,696)	(12,092,277)
2021	2021 Experience Account Allocation		10	77,702,485	10	77,702,485	10,873,389
2021	2021 Discount Rate Change		30	269,629,371	30	269,629,371	21,815,236
Plan Specific UAL							
2021	Act 414		16	2,844,907	16	2,844,907	298,343
2021	Act 992 - 2012 Chg in Lia	Note 3	1	72,995	1	72,995	75,648
2021	Harbor Police	Note 4	1	149,588	1	149,588	155,024
2021	Acts 224 and 595 (2018)	Note 5	7	508,066	7	508,066	92,240
2021	Acts 595 (2019)	Note 5	8	747,598	8	747,598	122,688
Total Outstanding Balance						6,866,527,274	740,226,278
2021	2017 Contribution Variance Credit		1	6,330,267	1	6,330,267	6,560,307
2021	2018 Contribution Variance Credit	Note 6	2	-	2	-	-
2021	2019 Contribution Variance Credit	Note 6	3	-	3	-	-
2021	2020 Contribution Variance Credit	Note 6	4	-	4	-	-
2021	2021 Contribution Variance Credit	Note 6	5	-	5	-	-
Total Contribution Variance Credit Balance						\$ 6,330,267	\$ 6,560,307
Total Unfunded Actuarial Accrued Liability						\$ 6,872,857,541	\$ 746,786,585

* See UAL Amortization Schedule Notes within this Appendix.

Appendix F
AMORTIZATION SCHEDULES

LASERS Actuarial Valuation
June 30, 2021

AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
Projected June 30, 2022 - (7.25% Discount Rate)

Date	Description	Notes *	Amtz. Period	Initial Liability	Years Remain	Remaining Balance	Mid-Year Payment
2022	OAB	Note 1	7	1,024,564,067	7	1,024,564,067	185,176,183
2022	EAAB	Note 2	18	1,888,361,087	18	1,888,361,087	202,784,480
2022	2009 Change in Assumptions		17	(178,405,518)	17	(178,405,518)	(17,951,515)
2022	2009 Change in Liability		17	1,112,629,282	17	1,112,629,282	111,954,954
2022	2010 Change in Liability		18	521,853,857	18	521,853,857	51,002,216
2022	2011 Change in Liability		19	73,753,082	19	73,753,082	7,020,145
2022	Change in Lia (Assumed Rate)		20	309,973,510	20	309,973,510	28,804,362
2022	Change in Lia (Experience)		20	236,388,676	20	236,388,676	21,966,474
2022	Change in Asset Val Method		21	(75,271,792)	21	(75,271,792)	(6,843,206)
2022	Change in Lia (Experience)		21	(477,455,495)	21	(477,455,495)	(43,407,050)
2022	2014 Assumption Change*		22	653,388,139	22	653,388,139	58,226,217
2022	2014 Method Change		22	560,381,276	22	560,381,276	49,937,976
2022	2014 Non-Inv Experience Gan		22	(55,124,508)	22	(55,124,508)	(4,912,381)
2022	2015 Experience Gain		23	(140,763,130)	23	(140,763,130)	(12,316,755)
2022	2016 Experience Loss		24	157,304,483	24	157,304,483	13,535,486
2022	2017 Discount Rate/Salary Chg		25	39,396,367	25	39,396,367	3,338,213
2022	2017 Experience Gain		25	(80,540,833)	25	(80,540,833)	(6,824,550)
2022	2018 Experience Loss		26	2,130,998	26	2,130,998	178,036
2022	2018 Discount Rate Change		26	79,667,604	26	79,667,604	6,655,905
2022	2019 Discount Rate/Assumptions		27	66,528,805	27	66,528,805	5,486,483
2022	2019 Experience Loss		27	369,464,619	27	369,464,619	30,468,928
2022	2020 Inv and Other Experience		28	274,302,700	28	274,302,700	22,352,181
2022	2020 Discount Rate/Salary Change		28	51,859,794	28	51,859,794	4,225,913
2022	2021 Inv and Other Experience		29	(147,984,784)	29	(147,984,784)	(11,926,661)
2022	2021 Experience Account Allocation		9	72,183,944	9	72,183,944	10,812,288
2022	2021 Discount Rate Change		29	266,973,949	29	266,973,949	21,516,454
2022	2022 Discount Rate Change		30	270,104,098	30	270,104,098	21,548,434
Plan Specific UAL							
2022	Act 414 - Chg in Lia		15	2,746,245	15	2,746,245	295,767
2022	Act 224 and 595	Note 5	6	450,071	6	450,071	91,881
2022	Act 595 retro	Note 5	7	675,774	7	675,774	122,137
Total Outstanding Balance						6,879,536,367	753,318,995
2022	2018 Contribution Variance Credit	Note 6	1	-	1	-	-
2022	2019 Contribution Variance Credit	Note 6	2	-	2	-	-
2022	2020 Contribution Variance Credit	Note 6	3	-	3	-	-
2022	2021 Contribution Variance Credit	Note 6	4		4		
2022	2021 Contribution Variance Credit		5	8,365,538	5	8,365,538	1,983,315
Total Contribution Variance Credit Balance						\$ 8,365,538	\$ 1,983,315
Total Unfunded Actuarial Accrued Liability						\$ 6,887,901,905	\$ 755,302,310

* See UAL Amortization Schedule Notes within this Appendix.

UAL AMORTIZATION SCHEDULES NOTES

Act 497 of 2009 consolidated all LASERS amortization schedules established on or before July 1, 2008, except those established due to benefit changes for a specific plan, into two schedules: the Original Amortization Base (OAB) and the Experience Account Amortization Base (EAAB). The OAB, which consists of the outstanding balance of the Initial Unfunded Accrued Liability (IUAL) and other schedules with negative outstanding balances, was credited with the balance of funds from the IUAL fund. The EAAB consists of the 2004 schedule and all other remaining schedules. The outstanding balance of this schedule was credited with funds from the IUAL subaccount, which were originally transferred from the Employee Experience Account on June 30, 2009. The EAAB payment schedule is prescribed by statute, as described in Note 2 below.

All schedules were re-amortized, effective July 1, 2021, using a rate of 7.40%. Additionally, the OAB was re-amortized with level payments to be paid off in 2029 in accordance with Act 95 of 2016. Projected July 1, 2022 schedules are re-amortized using a 7.25% rate.

Note 1: The Original Amortization Base includes the Initial Unfunded Accrued Liability (IUAL) and certain negative bases that existed prior to 2009: The new combined balance was credited with funds from IUAL Account. The OAB was reduced by \$50 million on June 30, 2013 and re-amortized. The OAB was reduced by appropriations paid to LASERS per Act 368 of 2015, Act 59 of 2018, Act 50 of 2019, Act 255 of 2020, and Act 120 of 2021. This schedule was re-amortized to its original pay-off date of 2029 on June 30, 2019, per Act 95 of 2016 and on June 30, 2021, per Act 95 of 2016.

Note 2: The Experience Account Amortization Base includes the liability resulting from Act 588 of 2004 which zeroed out the Experience Account, and certain other positive schedules that existed prior to 2009. The new combined balance was credited with funds from the sub-account of the IUAL Fund, which were transferred from the Experience Account on June 30, 2009. The EAAB was reduced by \$50 million on June 30, 2013 and re-amortized. This schedule was re-amortized to its original pay-off date of 2040 on June 30, 2019, per Act 95 of 2016. Future payments will remain level until paid off in 2040 or before.

Note 3: Act 992 – 2011 and 2012 Increase in Accrued Liability - Change in normal form of benefit for prior members joining the Hazardous Duty Plan prospectively between January 1, 2011 and June 30, 2011, and between July 1, 2011 and June 30, 2012, respectively.

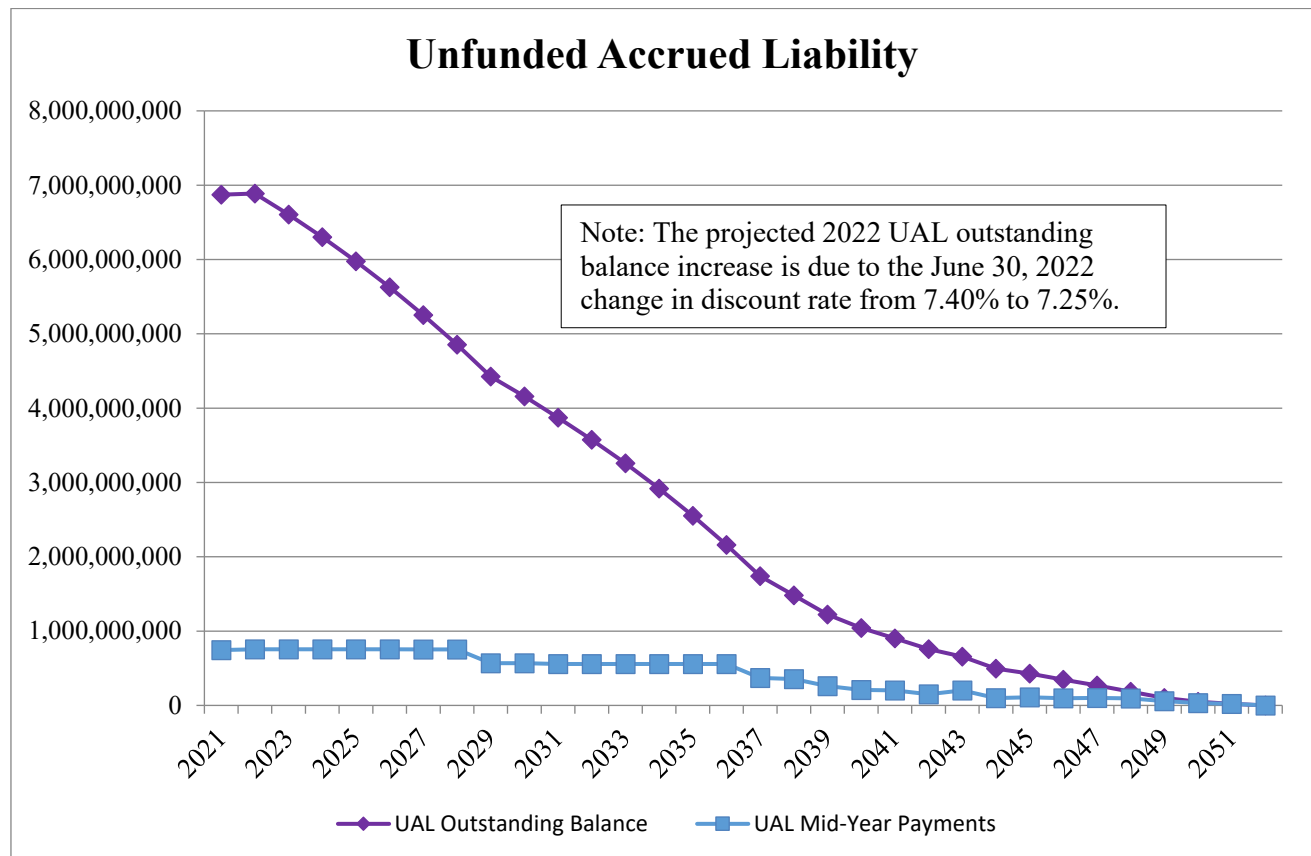
Note 4: The remaining balance of the Harbor Police “established UAL” per the Cooperative Endeavor Agreement is paid with direct payments on a quarterly basis.

Note 5: Acts 224 and 595 of 2018 Increase in Accrued Liability – Increase in disability and survivor benefits for members disabled or killed in the line of duty. The resulting amortization payments are allocated to the plan specific UAL payment for each affected plan.

Note 6: Per Act 399 of 2014, the 2015 and 2016 contribution variance surpluses were used to reduce the OAB. The 2018, 2019, 2020, and 2021 contribution variance surpluses were used to reduce the EAAB. The 2021 contribution variance surplus was updated from last year’s projected amount to \$51,400,544.

UAL Outstanding Balance and Payment Schedule
Based on Projected June 30, 2022 UAL Schedules

FY Beginning	UAL Outstanding Balance (Millions)	UAL Mid-Year Payments (Millions)	Payment % Change	FY Beginning	UAL Outstanding Balance (Millions)	UAL Mid-Year Payments (Millions)	Payment % Change
2021	6,873	745	0.0%	2037	1,739	370	-33.5%
2022	6,888	755	1.4%	2038	1,482	354	-4.4%
2023	6,605	755	0.0%	2039	1,223	260	-26.6%
2024	6,302	755	0.0%	2040	1,042	209	-19.6%
2025	5,976	755	0.0%	2041	901	202	-3.4%
2026	5,627	755	0.0%	2042	757	151	-25.1%
2027	5,253	753	-0.3%	2043	656	201	33.2%
2028	4,854	753	0.0%	2044	495	98	-51.2%
2029	4,426	568	-24.6%	2045	429	111	12.5%
2030	4,159	568	0.0%	2046	345	97	-12.2%
2031	3,872	557	-1.9%	2047	270	101	3.6%
2032	3,576	557	0.0%	2048	185	94	-6.8%
2033	3,258	557	0.0%	2049	102	58	-38.4%
2034	2,917	557	0.0%	2050	49	31	-46.0%
2035	2,552	557	0.0%	2051	21	22	-30.8%
2036	2,160	557	0.0%	2052	0	0	



Components of Original Amortization Base
(Dollar amounts in millions)

	Annual Outstanding Balance					Annual Payments				
	IUAL	IUAL Acct	Net IUAL	Other Schedules	Total OAB	IUAL	IUAL Acct	Net IUAL	Other Schedules	Total OAB
2021	1,938.1	-63.8	1,874.3	-673.7	1,200.6	300.3	-9.9	290.4	-104.4	186.0
2022	1,691.2	-57.7	1,633.6	-609.0	1,024.6	307.0	-10.5	296.6	-110.6	186.0
2023	1,498.2	-51.1	1,447.1	-539.5	907.6	307.0	-10.5	296.6	-110.6	186.0
2024	1,290.8	-44.0	1,246.8	-464.8	782.0	307.0	-10.5	296.6	-110.6	186.0
2025	1,068.2	-36.4	1,031.7	-384.6	647.1	307.0	-10.5	296.6	-110.6	186.0
2026	829.0	-28.3	800.7	-298.5	502.2	307.0	-10.5	296.6	-110.6	186.0
2027	572.1	-19.5	552.6	-206.0	346.6	307.0	-10.5	296.6	-110.6	186.0
2028	296.3	-10.1	286.2	-106.7	179.5	307.0	-10.5	296.6	-110.6	186.0
2029	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

This table has changed from previously published tables due to legislative appropriations and investment gains allocated to the IUAL, and the change in discount rate from 7.55% to 7.40%.

GLOSSARY

Accrued Benefit – The pension benefit that an individual has earned as of a specific date based on the provisions of the plan and the individual's age, service, and salary as of that date.

Actuarial Accrued Liability – Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the actuarial present value of benefits attributable to service credit earned (or accrued) as of the valuation date.

Actuarial Present Value of Benefits – Amount which, together with future interest, is expected to be sufficient to pay all benefits to be paid in the future, regardless of when earned, as determined by the application of a particular set of actuarial assumptions; equivalent to the actuarial accrued liability plus the present value of future normal costs attributable to the members.

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of investment earnings, changes in compensation, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.

Actuarial Cost Method – A method of determining the portion of the cost of a pension plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs.

Actuarial Equivalence – Series of payments with equal actuarial present values on a given date when valued using the same set of actuarial assumptions.

Actuarial Present Value – The amount of funds required as of a specified date to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.

Actuarial Value of Assets – The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to market value of assets, or some modification using an asset valuation method to reduce the volatility of asset values.

Actuarially Reduced – The method of adjusting a benefit received at an early date, or paid in a form other than the lifetime of the member so that the expected total cost to the retirement system is equivalent to the cost if the benefit did not begin until later, or was paid for the lifetime of the member.

Asset Gain (Loss) – That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

Amortization – Paying off an interest-discounted amount with periodic payments of interest and (generally) principal, as opposed to paying off with a lump sum payment.

Amortization Payment – That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

Contribution Variance – The difference between actuarially required contribution and the actual amount received based upon a projected contribution rate. Results in an increase or decrease to future required contributions.

Discount Rate – The interest rate used in developing present values to reflect the time value of money.

Decrements – Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

Employer Normal Cost – Portion of the normal cost not paid by employee contributions.

Entry Age Normal (EAN) Funding Method – A standard actuarial funding method whereby each member's normal costs (service costs) are generally level as a percentage of pay from entry age until retirement. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the UAL.

Experience Gain (Loss) – The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities during the period between two valuation dates. It is a measurement of the difference between actual and expected experience, and may be related to investment earnings above (or below) those expected or changes in the liability due to fewer (or greater) than expected numbers of retirements, deaths, disabilities, or withdrawals, or variances in pay increases relative to assumed pay increases. The effect of such gains (or losses) is to decrease (or increase) future costs.

Experience Account Amortization Base (EAAB) – Amortization base created in 2010 by Act 497 of 2009. Consolidated and re-amortized schedules created in the following valuation years, which existed prior to Act 497: 1996, 1999 - 2003, 2004 (the liability resulting from Act 588 of 2004 which zeroed out the Experience Account), and 2008. The new combined balance was credited with funds from the sub-account of the IUAL Fund, which were transferred from the Experience Account on June 30, 2009.

Funded Ratio – A measure of the ratio of the actuarial value of assets to liabilities of the system. Typically, the assets used in the measure are the actuarial value of assets as determined by the asset valuation method adopted by the Board of Trustees; the liabilities are determined using the actuarial funding method specified by Louisiana statute. Thus, the funded ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the funding method used to determine the liabilities.

Governmental Accounting Standards Board (GASB) – Governmental agency that sets the accounting standards for state and local government operations.

Market Value of Assets (MVA) – The value of assets as they would trade on an open market.

Normal Cost – Computed differently under different funding methods, generally that portion of the actuarial present value of benefits allocated to the current plan year.

Original Amortization Base (OAB) – Amortization base created in 2010 by Act 497 of 2009. Consolidated and re-amortized schedules created in the following valuation years, which existed prior to Act 497: 1993 (Initial Unfunded Accrued Liability), 1993 (Change in Liability), 1994, 1995, 1997, 1998, 2005, 2006, and 2007 (excluding schedules established to amortize liability resulting from Acts 414, 262, and 740).

Permanent Benefit Increase – An increase in specified current retiree benefits authorized by statutes.

Projected Benefits – The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

Projected Unit Credit (PUC) Funding Method – A standard actuarial funding method whereby the actuarial present value of projected benefits of each individual is accumulated from the participant's attained age to anticipated retirement. The portion attributable to current year benefit accruals is called the normal cost. The actuarial present value of future benefits in proportion to service accrued on the date of valuation is called the

actuarial accrued liability. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the unfunded actuarial accrued liability.

Public Retirement Systems' Actuarial Committee (PRSAC) –A committee created by state law to insure orderly and consistent strategies for continuing development and growth that will attain and maintain the soundness of the public retirement systems, plans and funds, adopts the official valuation for each state and statewide retirement system, and reports all findings, recommendations and official valuation to the House and Senate committees on retirement and the Joint Legislative Committee on the Budget.

Side-Fund Assets – Assets held in the trust for purposes other than for paying the accrued benefits or administrative expenses of the plan.

Unfunded Actuarial Accrued Liability (UAAL or UAL) – The excess of the actuarial accrued liability over the valuation assets; sometimes referred to as "unfunded past service liability". UAL increases each time an actuarial loss occurs and when new benefits are added without being fully funded initially and decreases when actuarial gains occur.

Valuation Assets – The actuarial value of assets less side-fund assets; represents the portion of the actuarial value of assets available to pay the accrued benefits of the plan.

Vested Benefit – Benefits that the members are entitled to regardless of employment status.