

LOUISIANA STATE POLICE RETIREMENT SYSTEM

**ACTUARIAL REVIEW OF THE JUNE 30, 2024
ACTUARIAL VALUATION REPORT**

ACTUARIAL SERVICES

Issued December 6, 2024

December 6, 2024

The Honorable Tony Bacala
Chairman, Public Retirement Systems' Actuarial Committee
Louisiana House of Representatives
Post Office Box 94062
Baton Rouge, Louisiana 70804

Re: Actuarial Review of LSPRS' 2024 Actuarial Valuation

Dear Chairman Bacala and PRSAC Members:

In accordance with La. R.S. 11:127(C) and 24:513(C)(1), the Louisiana Legislative Auditor has conducted an Actuarial Review for the Louisiana State Police Retirement System.

The following presents the results of our Actuarial Review of LSPRS' June 30, 2024 Actuarial Valuation, prepared by Curran Actuarial Consulting, Ltd and dated September 23, 2024. In doing so, we have reviewed certain actuarial assumptions and methods employed by LSPRS and its actuary for appropriateness.

I would like to thank LSPRS' director, staff, and actuary for the cooperation and assistance provided for this review.

Respectfully submitted,



Michael J. "Mike" Waguespack, CPA
Legislative Auditor

MJW:kjh

cc: Ms. Margaret Corley Michel, Executive Director
Louisiana State Police Retirement System

Mr. Gregory Curran, FCA, MAAA, ASA
Curran Actuarial Consulting, Ltd.

LSPRS 2024 Actuarial Review



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Executive Summary

The Louisiana Legislative Auditor (LLA) performed an Actuarial Review of the Louisiana State Police Retirement System's (LSPRS or System) June 30, 2024 Actuarial Valuation report (2024 Valuation Report) dated September 23, 2024 as prepared by Curran Actuarial Consulting, Ltd.

Actuarial Standards of Practice (ASOPs) are principles-based, rather than prescriptive, in nature, and therefore actuarial valuations involve significant use of an actuary's professional judgement when developing actuarial assumptions and methods. This can result in different actuaries utilizing different assumptions and methodologies when approaching similar, or even the same, benefit structures and legislative constraints.

In addition, the Louisiana Revised Statutes, Title 11, outline the primary components of the development of the annual required contribution but applying these standards can involve varying interpretations, as different retirement systems and their actuaries may differ in their approach to handling certain details.

This review is not an endorsement of any particular approach or methodology used but is instead an evaluation that the work appears to have been completed in accordance with applicable ASOPs, generally accepted actuarial practice, and relevant state statutes.

In general, we did not identify any significant deficiencies in the reporting nor with the basis on which the valuation has been performed. We believe LSPRS' Board and PRSAC can have a reasonable degree of confidence the 2024 Actuarial Valuation has been completed in accordance with applicable ASOPs, generally accepted actuarial practice, and relevant state statutes.

The following summarizes the areas reviewed and our general conclusions for each area:

- **Review of census data:** This review involves validating the accuracy and completeness of the census data used to determine the liabilities and contributions.

The census data appears to be reasonable and appropriate for the intended use and it appears LSPRS' actuary has followed the requirements of ASOP 23 with respect to data quality.

- **Review of actuarial assumptions:** This review evaluates the appropriateness and reasonableness of key assumptions, as well as the methodology and results of the experience study that was used to develop the assumptions.

Please refer to the LLA's Actuarial Review of LSPRS' July 1, 2017 – June 30, 2022 Experience Study Report for our most recent review of LSPRS' actuarial assumptions.

- **Review of liabilities:** This review includes verifying the calculations of the present value of future benefits, actuarial accrued liability, and normal cost.

We found the total plan liability to be reasonable and consistent with the system benefits, as well as the census data, methods, and assumptions detailed in the 2024 Valuation Report.

- **Review of contribution rate calculation:** This review consists of reproducing the calculations necessary to determine the employer contribution rate.

We are able to reproduce the reported employer contribution rate for both the current and prior years. It appears the contribution has been determined in accordance with a reasonable interpretation of applicable state statutes.

- **Review of valuation report:** This review consists of evaluating whether the valuation report is in compliance with the disclosure and reporting requirements of relevant actuarial standards.

We did not identify any significant deficiencies in the reporting. The 2024 Valuation Report appears to be compliant with the disclosure requirements outlined in ASOP No. 41 and section 4 of all other relevant ASOPs.

SCOPE OF REVIEW

The LLA performed an Actuarial Review of the LSPRS' June 30, 2024 Actuarial Valuation report (2024 Valuation Report) dated September 23, 2024, as prepared by Curran Actuarial Consulting, Ltd. This Actuarial Review is being performed in accordance with La. R.S. 11:127(C) and 24:513(C)(1). This Actuarial Review, in conjunction with the System's full actuarial valuation, is intended to fulfill the requirements of La. R.S. 11:127(C) to the Public Retirement Systems' Actuarial Committee (PRSAC).

This review includes an evaluation of the following items:

- **Review of census data:** This review involves validating the accuracy and completeness of the census data used to determine the liabilities and contributions.
- **Review of actuarial assumptions:** Actuarial assumptions play a critical role in developing and evaluating the financial position and sustainability of the retirement system. This review evaluates the appropriateness and reasonableness of key assumptions, as well as the methodology and results of the experience study that was used to develop the assumptions.
- **Review of liabilities:** This review includes verifying the calculations of the present value of future benefits, actuarial accrued liability, and normal cost. This review did not include a full replication of the liability. Instead, we performed a rough estimate to check the reasonableness of the valuation liabilities.
- **Review of contribution calculation:** This review consists of reproducing the calculations necessary to determine the employer contribution rate and ensuring they are consistent with our understanding of relevant statutes.
- **Review of valuation report:** This review consists of evaluating whether the valuation report is in compliance with the disclosure and reporting requirements of relevant actuarial standards.

This review is not an endorsement of any particular approach or methodology used, but is instead an evaluation that the work appears to have been completed in accordance with applicable ASOPs, generally accepted actuarial practice, and relevant state statutes.

Applicable sections of Louisiana Revised Statutes, Title 11, and the following ASOPs were considered in this review.

- (1) ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
- (2) ASOP No. 12, Risk Classification (for All Practice Areas)
- (3) ASOP No. 23, Data Quality
- (4) ASOP No. 25, Credibility Procedures
- (5) ASOP No. 27, Selection of Economic Assumptions for Measuring Pension Obligations
- (6) ASOP No. 35, Selection of Demographic Assumptions for Measuring Pension Obligations
- (7) ASOP No. 41, Actuarial Communications
- (8) ASOP No. 44, Selection and Use of Asset Valuation Methods for Pension Valuations
- (9) ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions
- (10) ASOP No. 56, Modeling

Census Data

The liabilities reported in the 2024 Valuation Report are entirely dependent on the accuracy and completeness of the census data provided by LSPRS. This review involves validating the accuracy and completeness of the census data used to determine the liabilities and contributions.

Professional Guidance

Actuarial Standard of Practice No. 23 (ASOP 23), *Data Quality*, provides guidance on selecting, reviewing, and using data, as well as on making appropriate disclosures about data quality. An actuary is not required to audit census data provided by the retirement system. The actuary's responsibilities include:

- Making a reasonable effort to ensure the data is appropriate and sufficient.
- Reviewing the data for accuracy, reasonableness, and consistency.
- Identifying and addressing any data deficiencies.
- Documenting data sources, adjustments, and any limitations.
- Disclosing relevant information about data quality in any actuarial communications.

Key Steps in the Data Review Process

Our data review focused on evaluating the actuarial data used by LSPRS' actuary. We reviewed the final census file(s) provided by LSPRS' actuary.

- (1) Consistency checks: The data is examined for internal consistency and compared with previous datasets to identify any discrepancies or anomalies. This includes performing a status reconciliation and matching any detailed descriptive statistics (e.g. age/service tables, etc.) included in the valuation report.
- (2) Cross-referencing with other sources: We may compare the data against the original source data provided by LSPRS, as well other sources of employment records available to the LLA, to validate its accuracy.

Conclusion

We did not identify any significant deficiencies in the reporting, nor did we identify any material discrepancies in the census data provided. The census data appears to be reasonable and appropriate for the intended use and it appears LSPRS' actuary has followed the requirements of ASOP 23 with respect to data quality.

Actuarial Assumptions

Actuarial assumptions play a critical role in developing and evaluating the financial position and sustainability of the retirement system. This review evaluates the appropriateness and reasonableness of key assumptions, as well as the methodology and results of the experience study that was used to develop the assumptions.

A separate review of the actuarial assumptions used in the 2024 Valuation Report has not been performed. Please refer to the LLA's Comprehensive Actuarial Review of LSPRS' July 1, 2017 – June 30, 2022 Experience Study Report for our most recent review of LSPRS' actuarial assumptions.

Liabilities

This review includes verifying the calculations of the present value of future benefits, actuarial accrued liability, and normal cost.

Professional Guidance

Generally accepted actuarial standards and practices offer a foundational framework and mathematical principles for determining actuarial results. However, applying these standards to complex calculations can involve varying interpretations, as individual actuaries and different software programs may differ in their approach to handling intricate details. Such differences might result in slight variations in outcomes making it difficult to match results exactly. However, they should not significantly impact the overall results.

Key Steps in the Liability Review Process

Our review did not include a full replication of the liability. However, we valued what we deemed to be the most material aspects of LSPRS' retirement benefits to estimate the total liabilities and evaluate the reasonableness of the liabilities provided. The process includes the following items:

- (1) Data: We used the final census data as provided by LSPRS' actuary.
- (2) Assumptions: We used the economic and demographic assumptions as outlined in the 2024 Valuation Report and LSPRS' July 1, 2017 – June 30, 2022 Experience Study Report.
- (3) Methods: We used the methods as outlined in the 2024 Valuation Report and our understanding of relevant state statutes.
- (4) Additional information: LSPRS' actuary provided detailed breakdowns of the different benefit groups and tiers to aid in our comparison.

Conclusion

We are able to come within a reasonably close range of the values for normal cost, active participants, inactive participants, and total plan liabilities on a system-wide basis. There exists some variation, sometimes significant, when reviewed on an individual group and/or tier basis, but this can be attributed to the limited scope in our programming and the fact we did not attempt to match every detail of the plan benefits. As a result, we found the total plan liability to be reasonable and consistent with the system benefits, as well as the census data, methods, and assumptions detailed in the 2024 Valuation Report.

Contribution Calculation

This review consists of reproducing the calculations necessary to determine the employer contribution rate.

Professional Guidance

Louisiana Revised Statutes, Title 11, outline the primary components of the development of the annual required contribution. However, applying these standards can involve varying interpretations, as different retirement systems and their actuaries may differ in their approach to handling certain details. Such differences might result in slight variations in their calculations. However, these differences should not significantly impact the overall results.

Key Steps in the Contribution Calculation Review Process

Our review focused on reproducing the calculations necessary to determine the employer contribution rate, including all intermediate steps necessary, as presented in the 2024 Valuation Report. Our review consisted of:

- (1) Review state statutes: The contribution calculations are evaluated against all applicable state statutes, with particular attention paid to the application of any new statutes.
- (2) Consistency checks: In general, the mathematics involved in the development of the annual contribution is straight-forward. However, there are small differences in approach that could exist. Therefore, the calculations are reproduced for the current and prior valuations to evaluate internal consistency in methodology between years.

Conclusion

We are able to reproduce the reported employer contribution rate for both the current and prior years. It appears the contribution has been determined in accordance with a reasonable interpretation of applicable state statutes.

Valuation Report

This review consists of evaluating whether the valuation report is in compliance with the disclosure and reporting requirements of relevant actuarial standards.

Professional Guidance

ASOP No. 41 Actuarial Communication provides general guidance with respect to all actuarial communications and identifies certain disclosures that must be included in a given actuarial communication. Also, each ASOP specifically includes a Communications and Disclosures section to provide guidance regarding what information specific to that ASOP should be communicated. Rightly so, how actuaries communicate the work they are providing is considered extremely important by the Actuarial Standards Board.

Further, while the ASOPs are guidance and not “rules”, they do include “Terms of Construction”¹, specifically the words *must*, *should*, or *may*, to express which items within the guidance are, or are not, optional. “Failure to follow a course of action denoted by either the term ‘must’ or ‘should’ constitutes a deviation from the guidance of the ASOP.”¹ This includes many items found in ASOP 41 and the disclosure section of relevant ASOPs.

Most items within an ASOP that are preceded by *must* or *should* include a corresponding *must* or *should* disclosure requirement. However, that is not always the case. In addition, when an actuary *should consider* something, or *may* (or may not) follow specific guidance within an ASOP, the consideration or decision process does not always include a *must* or *should* disclosure requirement. However, for clarity’s sake, it is frequently best practice to include this information to ensure “another actuary qualified in the same practice area could make an objective appraisal of the reasonableness of the actuary’s work as presented in the actuarial report”², particularly in the public plan space where transparency is of the utmost importance.

¹ Actuarial Standards Board, “Actuarial Standard of Practice No. 1: Introductory Actuarial Standard of Practice,” ASB, March 2013, <https://www.actuarialstandardsboard.org/asops/introductoryactuarialstandardpractice/>

² Actuarial Standards Board, “Actuarial Standard of Practice No. 41: Actuarial Communications,” ASB, December 2010, <https://www.actuarialstandardsboard.org/asops/actuarial-communications/>

Key Steps in the Valuation Report Review Process

Our review evaluates whether the 2024 Valuation Report is compliant with the disclosure requirements outlined in ASOP No. 41 *Actuarial Communications* and section 4 of all other relevant ASOPs. In addition, we evaluate whether, in our opinion, the actuary has “state[d] the actuarial findings, and identif[ied] the methods, procedures, assumptions, and data used by the actuary with sufficient clarity that another actuary qualified in the same practice area could make an objective appraisal of the reasonableness of the actuary’s work as presented in the actuarial report.”³

Conclusion

We did not identify any significant deficiencies in the reporting. The 2024 Valuation Report appears to be compliant with the disclosure requirements outlined in ASOP No. 41 and section 4 of all other relevant ASOPs.

³ ASOP No. 41

Actuarial Disclosures

Intended Use

This Actuarial Review was prepared in accordance with La. R.S. 11:127(C) and 24:513(C)(1). This Actuarial Review, in conjunction with the System's full actuarial valuation, is intended to fulfill the requirements of La. R.S. 11:127(C) to the Public Retirement Systems' Actuarial Committee (PRSAC). Other readers of this Actuarial Review are advised to seek professional guidance as to its content and interpretation, and not to rely upon this communication without such guidance. The Actuarial Review, and any referenced documents, should be read as a whole. Distribution of, or reliance on, only parts of this Actuarial Review could result in its misuse and may mislead others. The Louisiana Legislative Auditor is not responsible for unauthorized use of this Actuarial Review.

This Actuarial Review should not be construed as providing tax advice, legal advice, or investment advice. It should not be relied on for any purpose other than the purposes described herein. This Actuarial Review assumes the continuing ability of the System to collect the contributions necessary. A determination regarding whether or not the System is actually willing and able to do so in the future is outside our scope of expertise and was not performed.

Actuarial Data, Methods and Assumptions

This Actuarial Review was based upon information furnished by the System, the System's investment consultant, the System's actuary, and by numerous external inflation and investment forecasters. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by outside parties.

For certain calculations that may be presented herein, we have utilized commercially available valuation software. We made a reasonable attempt to understand the intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of these models. In our professional judgment, the models have the capability to provide results that are consistent with the purposes of the analysis and have no material limitations or known weaknesses. Tests were performed to ensure that the model reasonably represents that which is intended to be modeled.

Conflict of Interest

There are no known conflicts that would compromise the ability to present an unbiased statement of actuarial opinion.

Risks Associated with Measuring Costs

This actuarial note is an actuarial communication, and is required to include certain disclosures in compliance with Actuarial Standards of Practice (ASOP) No. 51.

A full actuarial determination of the retirement system's costs, actuarially determined contributions and accrued liability require the use of assumptions regarding future economic and demographic events. The assumptions used to determine the retirement system's contribution requirement and accrued liability are summarized in the 2024 Valuation Report being reviewed.

The actual emerging future experience, such as a retirement fund's future investment returns, may differ from the assumptions. To the extent that emerging future experience differs from the assumptions, the resulting shortfalls (or gains) must be recognized in future years by future taxpayers. Future actuarial measurements may also differ significantly from the current measurements due to other factors: changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period; or additional cost or contribution requirements based on the system's funded status); and changes in plan provisions or applicable law.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns (assumptions);
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity and life expectancy risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits at rates that differ from what was assumed, resulting in actual future accrued liability and contributions differing from expected.

The scope of this Actuarial Review does not include an analysis of the potential range of such future measurements or a quantitative measurement of the future risks of not achieving the assumptions. In certain circumstances, detailed or quantitative assessments of one or more of these risks as well as various plan maturity measures and historical actuarial measurements may be requested from the actuary. Additional risk assessments are generally outside the scope of this Actuarial Review. Additional assessments may include stress tests, scenario tests, sensitivity tests, stochastic

modeling, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

However, the general cost-effects of emerging experience deviating from assumptions can be known. For example, the investment return since the most recent actuarial valuation may be less (or more) than the assumed rate, or a cost-of-living adjustment may be more (or less) than the assumed rate, or life expectancy may be improving (or worsening) compared to what is assumed. In each of these situations, the cost of the plan can be expected to increase (or decrease).

The use of reasonable assumptions and the timely receipt of the actuarially determined contributions are critical to support the financial health of the plan. However, employer contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Certification

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Kenneth J. Herbold is an Associate of the Society of Actuaries (ASA), a Member of the American Academy of Actuaries (MAAA), and an Enrolled Actuary (EA) under the Employees Retirement Income Security Act of 1974. Mr. Herbold meets the US Qualification Standards necessary to render the actuarial opinion contained herein.



Kenneth J. "Kenny" Herbold, ASA, EA, MAAA
Director of Actuarial Services
Louisiana Legislative Auditor

December 6, 2024
Date