



Segal's Proposal to the Ohio Retirement Study Council for

Fiduciary Performance Audit of the School System Retirement Fund

July 31, 2026

Jeffrey Mills, PMP, Senior Vice President and Administration and Technology
Consulting (ATC) Practice Leader

Nick Perch, ASA, MAAA, Client Relationship Manager and Senior Associate

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Ms. Bethany Rhodes
Director
Ohio Retirement Study Council
30 East Broad St., 2nd Floor
Columbus, OH 43215

Re: Fiduciary Performance Audit of the School System Retirement Fund

Dear Ms. Rhodes:

Segal is pleased to submit our proposal to the Ohio Retirement Study Council (ORSC) to conduct a Fiduciary Performance Audit of the School Employees Retirement System of Ohio (SERS). We appreciate the opportunity to support ORSC with this important review and to provide an independent, practical assessment that strengthens fiduciary oversight and informs decision-making.

We have assembled an expert consulting team to conduct this audit. Our team will evaluate the areas identified in the RFP through an integrated lens, focusing on how SERS's governance, operations, technology, investment oversight and risk management practices work together to support fiduciary accountability.

Through rigorous analysis, peer comparison and stakeholder-focused reporting, Segal will deliver clear, fact-based findings that ORSC, the Legislature and the SERS Board can use to guide oversight and future decisions. Deliverables will include monthly updates and a final report summarizing key findings, prioritized recommendations, and proposed actions.

Segal brings the combination of public retirement system experience, multidisciplinary expertise and objective judgment needed for this engagement. Our team's experience aligns directly with ORSC's review—from governance and organizational structure to investment oversight, compliance, risk management and technology operations.

We welcome the opportunity to discuss our qualifications, methodology and experience in greater detail. If you have any questions, please contact Nick Perch using the information below.

Sincerely,



Jeffrey Mills, PMP
Senior Vice President and Administration and
Technology Consulting (ATC) Practice Leader
101 North Wacker Drive, Suite 1800
Chicago, IL 60606-1722
Phone: 301.908.3014
Email: jmills@segalco.com



Nick Perch, ASA, MAAA
Client Relationship Manager and Senior
Associate
101 North Wacker Drive, Suite 1800
Chicago, IL 60606-1722
Phone: 312.984.8586
Email: nperch@segalco.com

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Executive Summary

ORSC has an opportunity to bring a fresh, independent and forward-looking perspective to SERS—one that validates effective practices, identifies where governance and oversight can be strengthened, and translates findings into practical recommendations that support fiduciary accountability, risk management and long-term system performance. Segal's proposal includes a not-to-exceed fee and a coordinated, senior led fiduciary assessment, which is designed to reduce burden on SERS staff, surface cross-functional themes that a siloed review may miss and provide implementation-ready recommendations that can be monitored over time.

Segal brings nationally recognized public sector expertise to this engagement. Our professionals are regularly relied upon as subject matter experts and speakers at leading retirement and public-sector forums, including the National Conference on Public Employee Retirement Systems (NCPERS), National Association of State Retirement Administrators (NASRA), National Council on Teacher Retirement (NCTR), National Institute for Retirement Security (NIRS), State and Local Government Benefits Association (SALGBA), Government Finance Officers Association (GFOA), National Association of Public Pension Attorneys (NAPPA) and the International Foundation of Employee Benefit Plans (IFEBCP).

Partnering with the ORSC

Segal will support ORSC in meeting its goals of:

1. Identifying areas of strengths and weaknesses across governance, investments, compliance and technology
2. Comparing SERS operations with best practices across other public pension plans
3. Recommending improvements both now and throughout the course of this engagement

Segal will translate audit findings into clear, prioritized recommendations that policymakers, trustees and system leadership can use to strengthen oversight and guide future decisions.

This engagement is also an opportunity to revalidate current practices, identifying emerging opportunities and providing a practical path to enhance governance, investment oversight, operations and risk management.

Why Segal

Independent perspective with fresh insight

Having performed similar audits for state and local retirement systems across the country, Segal brings an objective lens to SERS and a disciplined approach aligned with leading governance practices. Our work will complement prior audit efforts while providing rigorous validation and forward-looking results that support ORSC's oversight responsibility.

Relevant public retirement system experience

Segal has performed similar work for the Nebraska Public Employees Retirement Systems, where we conducted a legal compliance review of the system's defined benefit, defined contribution and Section 457 deferred compensation plans. The review addressed documentary and operational compliance with applicable state and federal laws and included a high-level review of the investment and fiduciary functions of the Public Employees Retirement Board and the State Investment Board.

Segal has also provided fiduciary review, compliance and investment oversight consulting services to the State of Tennessee Department of Treasury in support of its retirement and deferred compensation programs.

For the Public Employees' Retirement System of Mississippi (MS PERS), which is comparable in size to SERS, Segal performed a comprehensive assessment of IT operations, IT organizational structure, infrastructure operations, cybersecurity, disaster recovery, governance, staffing and technology risk. The assessment resulted in major IT organizational and operational improvements, including reduced operational risk, strengthened cybersecurity and internal controls, improved organizational sustainability and a more resilient, well-governed technology environment capable of supporting the long-term needs of members and stakeholders. Segal has also performed more than 100 cybersecurity risk assessments for pension and benefit plans using the NIST Cybersecurity Framework and, for ERISA plans, the Department of Labor (DOL) framework.

Segal is consistently engaged to assess public retirement operations, benchmark performance and recommend practical improvements. Recent experience includes supporting the Public Employees Retirement System of Ohio (PERS) in developing a new operating model for Ohio Deferred Compensation; conducting an end-to-end operational and technology assessment for the Kansas Public Employees Retirement System (KPERs); and assisting the Employees' Retirement System of the City of Milwaukee (ERS) with an operational review of business processes, organizational structure, staffing needs, investment operations and consulting relationships.

Integrated, multi-disciplinary expertise with practical implementation-ready recommendations

Segal's team brings the full range of expertise required to evaluate SERS as an interconnected public retirement system, including:

- Retirement consulting
- Fiduciary governance and compliance
- Investment oversight and policy evaluation
- Technology and administrative operations

Unlike siloed reviews, Segal evaluates how governance, operations, technology, compliance, risk management and investment oversight interact to create or mitigate fiduciary risk.

Our approach

Segal will conduct an evidence-based audit that combines document review, stakeholder interviews, process evaluation, benchmarking and comparative analysis. Our review will evaluate governance, organizational effectiveness, investment oversight, compliance, risk management and technology operations against applicable requirements and recognized industry practices.

Regular project updates will keep ORSC informed throughout the engagement, and the final report will clearly communicate observations, conclusions, prioritized recommendations and implementation considerations.

The Segal difference

Several factors distinguish Segal for this engagement:

- **Extensive experience** serving public retirement systems and government organizations across the U.S.
- **Industry leading experts** providing specialized services to meet all stated needs of the ORSC, ensuring optimal analysis and recommendations
- **Integrated subject matter expertise** spanning governance, compliance, organizational effectiveness, technology operations, risk management, investment oversight and custodial services, allowing findings to be evaluated across functional areas rather than in isolation
- **Independent, employee-owned consulting** that promotes objective and unbiased analysis
- **Deep investment consulting resources** through Segal Marco Advisors
- **Practical recommendations** that can be implemented, monitored and measured over time.

ORSC will receive a coordinated, senior-led fiduciary assessment across the requested audit areas, supported by specialized public pension professionals in governance, compliance, investments, custody, operations, risk and technology. This includes a not-to-exceed fee that provides more than a set of standalone reviews or reports.

Commitment to the ORSC

Segal is committed to delivering more than a compliance-oriented review. We will provide ORSC with a clear, evidence-based assessment and a practical, prioritized plan to strengthen fiduciary oversight, reduce risk and support the continued effectiveness of SERS.

For ORSC, Segal offers the strongest overall value: an independent, senior-led team with deep public retirement experience; integrated fiduciary, investment, technology and operational expertise; and a practical approach focused on actionable results. Our work will deliver a defensible fiduciary audit and a clear path forward—giving ORSC, the Legislature and the SERS Board the insight needed to make informed decisions, strengthen accountability and help ensure SERS continues to serve its members and stakeholders with confidence.

4.1 Proposal Summary

Each proposal shall provide a narrative summary of the proposal being submitted. This summary should identify all of the services and work products that are being offered in the proposal and should demonstrate the firm's understanding of the project. In addition to the summary, please provide all of the following general information:

- The firm's primary contact for ORSC staff use and, if different, for SERS staff use during the audit, including the contact's address, telephone and e-mail address;*

Segal has designated the following individual as the Client Relationship Manager and primary point of contact for ORSC and SERS for all matters related to this engagement:

Nick Perch, ASA, MAAA
Client Relationship Manager and Senior Associate
101 North Wacker Drive, Suite 1800
Chicago, IL 60606-1722
Phone: 312.984.8586
Email: nperch@segalco.com.

- General ownership structure of the organization, including subsidiary and affiliated companies, and joint venture relationships;*

Segal is a private, employee-owned benefits and investment consulting firm. Members of the Segal family include benefits specialists Segal; benefits communication specialists Segal Benz; and investment solutions specialists Segal Marco Advisors.

Segal was founded in 1939 and does not rely on any joint venture relationships to provide the services proposed under this engagement.

- Information regarding any material change in the firm's structure or ownership within the last eighteen months, or any material change in ownership, staff, or structure currently under review or being contemplated by the firm;*

Segal remains an independent, privately held, employee-owned consulting firm. The firm has been employee owned since 1978 and currently has approximately 350 employee owners, with no shareholder owning more than 5% of the company. Governance is provided by an 11-member Board of Directors.

In a carefully planned leadership transition effective January 1, 2026, John R. DeMairo became President and Chief Executive Officer of Segal. David Blumenstein became Chair of the Board of Directors, and Joseph A. LoCicero assumed the role of Vice Chair. This transition did not result in any change to Segal's ownership structure.

Segal expects to continue operating as an independent, employee-owned organization. There are no ownership changes anticipated at this time.

- *If available, a third-party assessment or report concerning client satisfaction and measures of the firm's strengths and weaknesses;*

Occasionally we complete client satisfaction surveys of our clients, but due to client confidentiality, we do not release those results. We are very proud of our client retention rate of 98% and believe that this demonstrates client satisfaction.

We place a premium value on our relationships with our clients. Segal's commitment to clients is evidenced by the loyalty of our clients, many of whom have maintained long-standing relationships with us spanning over 60 years, as well as clients who have left that have returned to us. Due to our size, client loyalty, oversight and effort to seek continuous client feedback, surprises are seldom.

- *Any material litigation which has been threatened against the firm or to which the firm is currently a party;*

No. Segal has been a trusted advisor to our clients for more than 85 years and provides services to more than 2,500 current clients. Throughout our long history, Segal has occasionally been named as a party in litigation. No litigation has ever affected Segal's ability to provide services to its clients or materially affected Segal's financial position or operations.

- *A list and brief description of litigation brought against the firm by existing or former clients over the last five years; and*

Segal is not aware of any litigation brought by existing or former clients during the past five years that has materially affected the firm's ability to provide services, financial position, or operations. While Segal has occasionally been named in matters involving the performance of its services, no such matter has resulted in a material impact on the firm's operations or client service capabilities.

- *A list of any professional relationships involving the ORSC, the five Ohio public retirement systems, the State of Ohio, or its political subdivisions for the past five years, together with a statement explaining why such relationships do not constitute a conflict of interest relative to performing the proposed review. In the event that the firm has had any professional relationships involving the ORSC, the five Ohio public retirement systems, the State of Ohio, or its political subdivisions for the past five years, the firm shall provide a statement explaining why such relationships do not constitute a conflict of interest relative to performing the proposed review, or, if necessary, an explanation of the actions that will be taken to ensure an independent review. Note that any media or social media comments opining on SERS as an organization, whether positive or negative, may be viewed as pre-judgement of the system and result in disqualification. The firm must also disclose any staff relationships with other entities that evaluate pension systems and include a statement explaining why such relationships do not prevent an independent analysis or, if necessary, an explanation of the actions that will be taken to ensure an independent review.*

Segal currently provides health consulting services to Ohio SERS; however, those services are separate and unrelated to this fiduciary audit. Segal does not advise the SERS Board of Trustees on governance matters and would not be reviewing or auditing its own work. Accordingly, we do not believe our existing relationship with SERS presents an actual or perceived conflict of interest or impairs our ability to conduct an independent, objective and unbiased fiduciary performance audit.

To the best of our knowledge, the following list summarizes Ohio public-sector organizations that have received consulting services from Segal during the past five years; however, they do not represent a conflict of interest in the scope of work proposed under this engagement:

- School Employees Retirement System of Ohio (SERS) – Health consulting services
- Ohio Public Employees Retirement System (Ohio PERS) – Retirement and deferred compensation consulting, communications, administration and technology consulting services
- City of Cincinnati Retirement System – Retirement consulting services
- Greater Cleveland Regional Transit Authority (GCRTA) – Compensation consulting services
- Lucas County – Compensation consulting services
- City of Cincinnati – Compensation consulting services
- Columbus Metropolitan Library – Compensation and organizational consulting services
- Cincinnati and Hamilton County Public Library – Performance and rewards consulting services
- Cuyahoga Community College – Performance and rewards consulting services
- Cuyahoga Library District – Organizational consulting services
- Ohio Northern University – Performance and health consulting services
- City of Hubbard Ohio – Health consulting services.

None of these engagements would create a conflict for Segal regarding the delivery of an impartial fiduciary performance audit of SERS. All of Segal's consulting services are shaped by

client need and conducted under a trusted advisor relationship that is independent of other client engagements and scopes of work.

Several proposed team members participate in professional organizations that support research, education, professional development and information sharing within the public retirement system community. These affiliations are professional in nature and do not impair Segal's ability to conduct an independent and objective review. Neither these organizations nor their members direct, influence, or participate in Segal's analysis, findings, recommendations, or conclusions.

Segal maintains internal conflict review procedures designed to identify actual or potential conflicts associated with new engagements. Based on our review, we are not aware of any professional or staff relationships that would prevent an independent analysis or require additional safeguards to ensure an independent review.

4.2 Capabilities and Experience

Each proposal shall describe the firm's capabilities and recent experience (at least during the last five years) in performing fiduciary audits or studies of public employee retirement systems. The firm should include information on the types and sizes of public employee retirement systems for which past work has been performed, including whether the systems were defined benefit or defined contribution plans, the types and number of participating employers, number of participants, and other relevant indicators of plan type, size, and comparability to SERS. You may provide a sampling or summary description of the scope of these projects and non-proprietary key findings and recommendations. Sampling of work should be incorporated in the report as an appendix or attachment rather than a web citation. You should include other information you believe may be relevant in demonstrating your capabilities in performing the fiduciary audit, including other professional experience and data processing capabilities.

Segal's experience in performing fiduciary audits is extensive. This experience includes: independent governance reviews, operational assessments, compliance reviews, organizational evaluations, technology assessments, investment oversight reviews, fiduciary consulting engagements and retirement system studies for public retirement systems, governmental entities and employee benefit organizations throughout the U.S. Our multidisciplinary team combines expertise from across Segal including Administration and Technology Consulting, Compliance, Retirement Consulting, and Segal Marco Advisors to provide comprehensive assessments of governance, operations, investments, compliance, risk management, and technology.

Unlike firms that approach fiduciary reviews from a single discipline method, Segal's approach is an integrated team approach where we collaborate while evaluating how governance, organizational structure, compliance, technology, risk management and investment oversight work together to support fiduciary accountability and organizational performance. This multidisciplinary perspective allows us to identify strengths, risks, gaps and opportunities for improvement across functional areas while providing practical recommendations and a roadmap for ORSC that is informed by expertise and knowledge of comparable public retirement systems.

Client examples presented below illustrate our experience performing the services requested in this RFP. Collectively, these projects demonstrate capabilities directly relevant to the ORSC fiduciary performance audit, including governance reviews, operational and technology assessments, investment oversight evaluations, compliance reviews, fiduciary benchmarking and organizational effectiveness studies.

Recent experience

Please include the firm's experience and capability regarding all of the following:

- Reviewing internal trading and trade processing operations;*
- Reviewing internal operational and investment risk controls;*
- Reviewing ancillary investment functions such as cash management, securities lending, proxy voting, shareholder litigation, and regulatory reporting;*
- Reviewing external manager and advisor selection processes, fee structures, reporting, and oversight;*
- Reviewing investment accounting processes, performance computation processes, and custodial support;*
- Reviewing the staffing, structure, and employee satisfaction of investment organizations;*
- Reviewing incentive compensation programs for public investment organizations; and*
- Reviewing asset/liability studies and reviewing investment policies for a defined-benefit public pension plan.*

Segal addresses fiduciary audits through our integrated experts across Administration and Technology Consulting, Segal Marco Advisors, Compliance, Retirement and Organizational Strategy and Transformation. Rather than present a placeholder matrix, the bullets below summarize how we address each required area. The narrative examples and case studies that follow provide supporting detail regarding relevant client work, plan types, system size and applicable outcomes.

- Internal trading and trade processing operations:** Segal Marco Advisors reviews trading governance, order entry procedures, trade allocation policies, broker and counterparty selection, use of routing or alternative trading resources, and the documentation of trading protocols. Our review considers whether trading resources, reporting lines and oversight practices are appropriate for the asset classes, managers and portfolio activity being evaluated.
- Internal operational and investment risk controls:** Segal evaluates the design and effectiveness of risk controls across governance, operations, investments, compliance and technology. This includes reviewing segregation of duties, control documentation, oversight practices, cybersecurity protocols, business continuity, disaster recovery, operational due diligence practices and escalation procedures.

- **Ancillary investment functions:** Segal reviews functions such as cash management, securities lending, proxy voting, shareholder litigation, regulatory reporting and related custodial support. Our Custody Research and investment consulting professionals evaluate whether these functions are appropriately documented, monitored, benchmarked and aligned with fiduciary obligations and investment policy requirements.
- **External manager and advisor selection, fees, reporting and oversight:** Segal reviews manager and advisor selection processes, due diligence criteria, fee structures, documentation, transparency, monitoring, performance reporting and oversight practices. Our process considers whether selection decisions are based on objective qualitative and quantitative factors, whether recommendations are documented, and whether ongoing monitoring supports fiduciary accountability.
- **Investment accounting, performance computation and custodial support:** Segal evaluates the processes used to collect, verify, reconcile and report investment performance and accounting information. This may include review of custodian data, manager reporting, benchmark selection, performance attribution, market values, cash flows, fee data, custody operations, service levels and reporting controls.
- **Staffing, structure and employee satisfaction of investment organizations:** Segal evaluates organizational structure, staffing levels, roles, responsibilities, reporting relationships, workload distribution, qualifications, succession planning, professional development and employee engagement or satisfaction practices. Our Administration and Technology Consulting and Organizational Strategy and Transformation teams assess whether staffing and structure support effective investment operations, oversight and long-term sustainability.
- **Incentive compensation programs for public investment organizations:** Segal can review compensation philosophy, incentive plan design, performance measures, governance, documentation, approval practices and alignment with public-sector fiduciary expectations. This review considers whether compensation practices support attraction and retention while maintaining transparency, accountability and appropriate risk controls.
- **Asset/liability studies and investment policies for defined benefit public pension plans:** Segal Marco Advisors reviews investment policy statements, asset allocation frameworks, rebalancing guidelines, risk tolerances, asset/liability study assumptions and alignment between investment strategy and plan funding objectives. Our review may include assessment of policy adoption processes, documentation of investment decisions, benchmarking and compatibility with recent actuarial and experience study results.

Client examples

The examples below illustrate Segal's relevant capabilities across the audit scope including operational and technology assessments, organizational and staffing reviews, investment policy and oversight support, compliance reviews, fiduciary-related benchmarking, custodian and service-provider evaluations, and defined contribution auditing and consulting.

Operations and technology

For more than three decades, Segal's Administration and Technology Consulting (ATC) practice has helped public retirement systems strengthen operations, modernize service delivery,

improve governance and reduce organizational risk. Our consultants combine deep pension administration expertise with operational, organizational, business process, technology, cybersecurity and project management experience to provide retirement systems with independent, objective assessments and practical recommendations that improve performance and support fiduciary responsibilities. Oftentimes public pension clients that engage Segal for an operational review or audit already participate in CEM Benchmarking and we target our reviews toward helping them improve and achieve improvements based upon the documented benchmarks prepared by CEM.

Unlike firms that focus solely on technology or organizational consulting, Segal evaluates pension operations holistically — examining the people, processes, governance structures, business controls, service models, supporting technology and organizational culture that collectively determine a retirement system's effectiveness. Our assessments are grounded in leading practices derived from hundreds of engagements across the public retirement industry and informed by direct experience working with state, county, municipal and labor-management retirement systems.

Segal's operational review and assessment services include:

- Pension administration operational assessments
- Business process improvement and workflow redesign
- Organizational and staffing assessments
- Governance and accountability reviews
- Member service and service delivery evaluations
- Performance measurement and key performance indicator (KPI) frameworks
- Pension administration system utilization reviews
- Operational readiness and transformation assessments
- Technology operations and IT organization reviews
- Cybersecurity, disaster recovery, and business continuity assessments
- Internal controls and risk management evaluations
- Project management and operational governance reviews

Our team has conducted comprehensive operational and technology assessments for retirement organizations ranging from large statewide systems to regional and specialty pension plans. Representative engagements in the past five years include:

- **Kansas Public Employees' Retirement System (KPERS):** Comprehensive review of pension operations and technology, and project management practices which lead to a series of improvement projects. Most recently, Segal prepared a Cybersecurity Risk review following NIST Cybersecurity Framework.
- **Mississippi Public Employees' Retirement System (MS PERS):** Comprehensive assessment of business operations, MIS organization, infrastructure operations, cybersecurity, disaster recovery, governance, staffing and technology risk, resulting in major organizational and operational improvements

- **San Diego County Employees Retirement Association (SDCERA):** End-to-end operational and technology assessment covering retirement processing, payroll, survivor benefits, member services, organizational effectiveness, operational controls and supporting technology
- **Oklahoma Teachers Retirement System (OTRS):** Operational and technology assessment evaluating pension administration processes, organizational readiness, communications practices and information technology operations
- **Chicago Transit Authority Retirement Plan (CTA):** Operational assessment focused on organizational structure, workload management, service delivery, governance and performance measurement
- **Maryland-National Capital Park and Planning Commission Employees' Retirement System:** Organizational and administrative study addressing governance, business processes, staffing, technology utilization, performance management and opportunities for operational modernization
- **IAM National Pension Fund and affiliated benefit funds:** Operational and Organizational review and IT assessment focused on benefits administration operations, employer services, workflow efficiency, pension payment controls, organizational effectiveness, and technology enablement.
- **Washington Department of Retirement Services (DRS):** Assessment and development of key process indicators to measure productivity, manage workload, and sustain high-quality member service across complex benefit administration functions.

What distinguishes Segal is our ability to translate findings into a roadmap with actionable improvements. Our recommendations are not theoretical; they are informed by direct experience observing how leading retirement systems organize their work, manage risk, serve members, govern technology and achieve operational excellence. As a result, our clients receive practical roadmaps that help strengthen internal controls, improve member experiences, increase operational efficiency, enhance staff effectiveness and position their organizations for long-term success.

For state retirement systems, this experience provides a unique advantage. Segal understands the operational realities of administering complex retirement benefits in highly regulated environments while balancing fiduciary responsibility, member expectations, workforce challenges, governance requirements and increasing technology demands. Our assessments provide boards and executive leadership with the independent insight needed to identify risks, prioritize investments and implement meaningful improvements that strengthen organizational performance and safeguard the integrity of retirement operations.

Two case studies follow that demonstrate this approach.

State retirement system IT operations review strengthens controls, reduces risk



Challenge

When this state retirement system engaged Segal, its leadership faced a critical concern: key technology risks threatened the long-term security, stability and resilience of the pension administration environment. Segal's independent assessment identified significant

vulnerabilities, including repeated penetration test findings, the absence of a tested disaster recovery capability, heavy dependence on a handful of individuals with undocumented institutional knowledge, high IT staff turnover, inconsistent governance processes, and application environments that had become increasingly complex to support. These conditions created elevated risk to business continuity, system integrity, cybersecurity readiness and the organization's ability to sustain reliable member services.



Our consulting strategy

Segal conducted a comprehensive IT operations and organizational review grounded in industry best practices and extensive public pension experience. Through detailed interviews, document analysis, governance evaluations, infrastructure assessments and application support reviews, Segal examined the entire IT operating model: from leadership structure and staffing to cybersecurity, disaster recovery, infrastructure operations, knowledge management, project governance and application development practices. Segal delivered a prioritized roadmap focused on strengthening governance and accountability, modernizing the organizational structure, reducing single points of failure, improving security and operational controls, establishing resilient disaster recovery capabilities and implementing more disciplined development, change management and knowledge-transfer practices.



Results

The system used Segal's recommendations as a catalyst for modernization and risk reduction. The organization restructured its IT organization to better align responsibilities and oversight, hired a new IT leader to drive accountability and strategic direction, and strengthened governance across critical technology functions. A new Project Management Office and related processes were implemented. Disaster recovery and resilience capabilities were significantly enhanced through the development of formal recovery planning, testing disciplines and improved continuity preparedness. Application development and support practices were modernized through stronger controls, knowledge-sharing expectations, documentation standards and more disciplined change management processes. Collectively, these improvements reduced operational risk, strengthened cybersecurity and internal controls, improved organizational sustainability and positioned this public employees retirement system with a more resilient and well-governed technology environment capable of supporting the long-term needs of its members and stakeholders.

Operational and technology assessment supports scalable and resilient operating model



Challenge

As pension systems grow in complexity, even strong organizations can find that long-standing processes, manual workarounds and inconsistent use of technology create inefficiencies that impact member service, operational risk, and staff productivity. This public pension system sought an independent assessment of its pension administration and supporting technology environment to determine whether current operations were positioned to meet future demands. Leadership recognized the need to evaluate how key business processes were being executed, identify opportunities to improve efficiency and internal controls, and ensure staff and technology resources were aligned to deliver high-quality service to members and beneficiaries.



Our consulting strategy

Segal conducted a comprehensive Operational and Technology Assessment covering the full pension administration lifecycle, including terminations and refunds, retirement estimates, retirement application processing, survivor benefits administration, payroll processing, retiree maintenance, organizational practices and supporting technology. Through document reviews, staff interviews, workflow analysis and operational benchmarking against pension industry best practices, Segal evaluated each functional area through the lenses of effectiveness, efficiency and internal control. The assessment focused on identifying process bottlenecks, manual activities, training and staffing challenges, opportunities to better

leverage pension administration technology, and governance practices required to support sustainable operational excellence



Results

Segal delivered a prioritized roadmap of operational improvements designed to strengthen service delivery, reduce risk and improve organizational performance. The recommendations provided management with a clear path to streamline pension administration processes, reinforce operational controls, improve workflow consistency, enhance staff effectiveness and maximize the value of existing technology investments. By focusing on both business operations and technology enablement, the assessment helped position the organization to improve processing efficiency, reduce dependency on manual procedures, strengthen accountability and enhance the member experience. The resulting framework supports a more scalable and resilient operating model — one that helps pension systems meet their fiduciary obligations while delivering timely, accurate and responsive service to members, retirees and beneficiaries.

Investment policy and operations

For over 50 years, our Segal Marco consultants have worked with clients to improve their 457 programs through vendor, service and investment option consolidation. The results are invariably a reduction in overall program costs and improvement in services. More importantly, it streamlines the fiduciary oversight process and dramatically reduces the risk of litigation which is of considerable importance in today's environment. For example, we assisted the Nebraska Public Power District \$750 million DC program in consolidating its service providers and the fund lineup from 40 investment options (not including two suites of target date funds). Overall investment expense decreased from 30% to 66% for the primary plan.

In addition to these project-based engagements, Segal Marco provides ongoing investment consulting, governance and fiduciary oversight services to both defined benefit and defined contribution plans. Through recurring client engagements, quarterly performance reporting and investment monitoring, our consultants assist boards and plan fiduciaries in evaluating investment performance, overseeing service providers and fulfilling their fiduciary responsibilities.

The Segal Marco team has also assisted the Rhode Island Public Transit Authority (RIPTA) with investment policy development, asset allocation, investment manager and service provider search, fee and expense monitoring, performance and risk evaluation and fiduciary education,

We also performed a plan review project for Teamsters Western Region & Local 177 Health and Welfare Fund. The project involved analysis of the Fund's asset allocation, performance measurement and investment management fees to support the Board's fiduciary responsibility to plan participants.

We've advised the State of Wyoming on developments in federal legislation and/or regulations regarding fiduciary responsibility, financing, benefits, taxation and disclosures.

Tennessee Department of Treasury – Defined contribution governance, compliance and investment program review

The State of Tennessee engaged Segal on a series of related projects spanning approximately three years as it explored changes to the oversight and administration of its defined contribution retirement programs.

The engagement began with a feasibility study evaluating whether the State could successfully integrate oversight of 403(b) and 457 plan assets under a centralized governance structure. The analysis required a combination of compliance, governance and investment consulting expertise to assess regulatory requirements, administrative considerations, participant impacts and investment program implications.

Following completion of the feasibility study, Segal conducted a comprehensive compliance review of plan documents, policies, procedures and governance practices. The review identified opportunities to strengthen oversight, improve consistency across programs and support the State's long-term objectives.

Building on this work, Segal assisted the State with a competitive vendor search and implementation process. Our team evaluated recordkeeping capabilities, governance structures, participant services and investment platform offerings. We subsequently helped the State consolidate providers and streamline the investment lineup to improve participant outcomes, simplify oversight and enhance governance efficiency.

The project required close coordination among Segal's compliance, governance and investment consulting professionals. By leveraging expertise across multiple disciplines, Segal was able to provide the State with an integrated approach that addressed regulatory, operational and investment considerations within a single framework.

This engagement demonstrates Segal's ability to help public-sector clients navigate complex retirement plan initiatives that require specialized expertise in governance, compliance and investment oversight.

Segal Marco has also provided customized vendor search projects for many public retirement funds, including the following state retirement systems:

- District of Columbia
- State of Connecticut
- State of Hawaii
- State of Kansas
- State of Michigan
- State of Nevada
- State of New Hampshire
- State of New Jersey
- State of North Dakota
- State of Rhode Island
- State of South Carolina

Our team of professionals that specialize in conducting vendor search and evaluations projects are fully aware of the latest services, products and pricing models that are being offered by the leading service providers in the public sector deferred compensation industry. We have redesigned the traditional process of conducting a vendor search and evaluation process to provide plan sponsors with a more interactive interview process to assist in service provider evaluations. Our goal is to actively market each plan to ensure competitive bids are received from all the leading service providers. We also are familiar with the pricing structure and services across the country.

Compliance reviews

Defined benefit and defined contribution vendor fee and service benchmarking assessment



Challenge

A long-time international client engaged our Segal compliance team to assess and evaluate the fees and services associated with the administration of its defined benefit and defined contribution retirement plans (including its U.S. employees and expatriates around the world) to fulfill its fiduciary obligation of proper plan oversight. This need was escalated based on pending business needs of the client. The organization had been with its DC recordkeeper since nearly two decades, and periodic benchmarking is required as a best practice



Our consulting strategy

Segal gathered all relevant documentation, evaluated services and fees relative to the market, confirmed our understanding through site visit conferences with the client and the service providers, conducted review of various transactions and formulated recommendations for senior management



Results

Segal successfully reduced the client's operational risk, and thereby reduced its reputational risk, by verifying and supporting the choice decisions made by the Retirement Committee for the benefit of its participants. We confirmed the thoroughness of the plan and participant services offered and the reasonableness of the cost structure associated with these services. We verified and, in some cases, corrected certain procedures and processes to better serve the client and its participants. Lastly, we provided the client with third-party due diligence documentation to support internal decisions and reduced its ongoing administrative burden and costs associated with supporting multiple plans.

Defined contribution auditing & consulting

Segal has been a trusted partner to the State of Michigan for many years, providing the State with investment consultation, auditing and advisory services related to the Defined Contribution and Deferred Compensation plans for the Department of Technology, Management and Budget for the State of Michigan Office of Retirement Services.

Segal has been working with the State of Michigan (the Treasury) regarding Public Act 202 since 2017. More recently, Segal has been working with the State on targeted reviews of specific communities' retiree pension and health obligations. To date, Segal has performed approximately 10 reviews. The reviews entail Segal performing a "deep dive" into the municipality's retirement obligations including a review of historical background, current conditions, history with contributions, eligibility, efforts to improve funding, union contract language and Corrective Action Plan submissions. The work is designed such that Segal provides an unbiased perspective of the municipality's situation so that the State of Michigan and municipality have a common understanding of the current situation and environment. The work also includes strategic recommendations for improvement. In some cases, Segal has helped to identify specific strategies designed to improve the health of the retirement plan. For example, during a recent review, Segal helped the municipality review managed care plan quotes for retiree healthcare that could potentially save the municipality over \$400,000 in annual spend.

Additional compliance reviews performed include:

Public Plan	Date(s)	Description of Services
City of Memphis: 401(a) DC Plan and 457(b) plan	2024	Comprehensive compliance review of governance structure, documents, procedures, and internal operations, including transactional audit of recordkeeper operations; ongoing compliance support and fiduciary training
Nebraska Public Employees Retirement System: 3 pension plans, 2 DC plans, 2 cash balance plans and 457(b) plan	2001, 2012, 2020	Comprehensive compliance review of System governance, documentation, procedures, state statutes and internal operations
State of Nevada Public Employees Retirement System	2016	Comprehensive compliance review of System governance structure, documents, procedures, state statutes, and internal operations; ongoing compliance support and fiduciary training
State of Illinois Teachers' Retirement System	Ongoing	Provide compliance consulting on tax, benefits and operational issues and quarterly training to staff on fiduciary, legislative, regulatory and judicial topics

4.3 Staff Qualifications

Each proposal shall, at a minimum, describe the qualifications of all management and lead professional personnel who will participate in the fiduciary audit. Each personnel description shall include: (1) a resume; (2) a summary of experience each has had in performing fiduciary audits or studies of public employee retirement systems; and (3) a management plan identifying the responsibilities each will have on the audit. The firm must also disclose any staff relationships with other entities that evaluate pension systems and include a statement explaining why such relationships do not prevent an independent analysis or, if necessary, an explanation of the actions that will be taken to ensure an independent review. Each proposal shall also include a description of the firm's procedures in the event that a key person assigned to this engagement leaves the firm during the engagement.

- (1) Resumes are included as Exhibit 1. Resumes include requested information on the current and past positions held with the firm, educational background, relevant credentials and other relevant information to demonstrate the person's qualifications.
- (2) Summary of experience below and references client information as listed on page 9 within 4.2 Capabilities and Experience. That information meets the request for information on the types and sizes of public employee retirement systems for which the designated staff have completed work, including whether the systems were defined benefit or defined contribution plans, the types and number of participating employers, number of participants and other relevant indicators of plan type, size and comparability to SERS.

Segal has assembled a multidisciplinary audit team whose expertise aligns directly with each component of the ORSC scope of audit. The proposed team combines leaders from across Segal with experience in governance, compliance, organizational effectiveness, information technology, risk management, investment oversight, manager due diligence and custodial services. This structure allows findings and recommendations to be evaluated across workstreams and helps ensure that observations reflect the interconnected nature of fiduciary oversight with a roadmap forward.

The engagement will be led by Jeff Mills, as the majority of the work that will be delivered by the practice which he leads at Segal. Jeff will rely on Nick Perch to serve as the Client Relationship Manager and dedicated Project Manager who will serve as the daily point of contact and responsible for delivery and reporting to ORSC.

The team we have organized to deliver services to ORSC is summarized below:

Segal Team

Team Member	Role	Experience
Jeffrey Mills, PMP Senior Vice President and Administration and Technology Consulting (ATC) Practice Leader	Executive Sponsor	30 years of experience providing operational and technology consulting to retirement and benefit plans including over 50 public pension and benefit plans at both the state and local levels, as well as several multiemployer plans.

Team Member	Role	Experience
Nick Perch, ASA, MAAA Client Relationship Manager and Senior Associate	Client Relationship Manager and Project Manager	Experience evaluating and analyzing pension plans. Specializes in deterministic and stochastic projections, experience studies, plan design analysis and withdrawal liability determinations. Provides actuarial and analytical support for the audit, including review of retirement system data, actuarial considerations and findings development.
Melanie Walker, JD Senior Vice President, National Compliance Practice Leader	Client Delivery Manager, Compliance	National Compliance Practice Leader with more than 25 years of experience advising public sector retirement plans. Extensive experience conducting compliance reviews, analyzing statutes, administrative rules and policy manuals, assessing fiduciary governance structures and providing training on fiduciary responsibilities and plan governance. Active member of NAPPA and NAGDCA.
Meghan Horn Vice President, Senior Compliance Consultant	Compliance Support	More than 15 years of experience advising retirement and benefit plans on compliance, governance and fiduciary matters. Former in-house counsel to a municipal retirement system with experience supporting both defined benefit and defined contribution plans. Provides expertise in legal research, regulatory compliance, fiduciary governance and operational compliance reviews.
Laura Keller Associate, Compliance	Compliance Support	Experience researching and analyzing federal and state employee benefits requirements, reviewing retirement and health plan documents, and advising public entities on fiduciary responsibilities, plan governance and regulatory compliance matters. Provides research, documentation review and analytical support for compliance assessments, governance reviews and legal compliance activities.
Scott A. Miller, JD, NAF Senior Consultant, ATC	Client Delivery Manager, Board Governance / Organization	Nearly 30 years of experience serving public pension and benefits systems in executive, legal, consulting, fiduciary and governance roles. Former Executive Director of the North Dakota Public Employees Retirement System and former leader within multiple public retirement organizations. Has worked with more than 50 benefit boards, including several of the largest public institutional investors in the United States.
Amy S. Timmons, PMP, CFA, FSA, MAAA, EA Senior Vice President and Senior Consultant, ATC	Organization / Risk Management Consultant	More than 30 years of experience in operational, organizational, technology and investment consulting. Extensive experience conducting administrative reviews, organizational and governance evaluations, strategic planning initiatives, technology assessments and operational improvement projects for public sector retirement systems.

Team Member	Role	Experience
Karen Chavez Senior Consultant, ATC	Organization Consultant	More than 30 years of public sector experience and over 22 years of leadership experience in pension and health benefits administration. Former administrator of the Oregon Public Employees Retirement System (PERS) Retiree Health Insurance Program with extensive experience in organizational assessments, strategic planning, change management, workforce development, business process improvement and governance-related initiatives. Provides expertise in organizational structure, staffing effectiveness, succession planning and change management activities
Jay Preall Senior Consultant, ATC	IT/Risk Management Consultant	More than 35 years of experience leading technology modernization, cybersecurity, business continuity, disaster recovery and risk management initiatives across public sector organizations. Extensive experience evaluating technology operations, security controls, application portfolios, system modernization strategies and operational risks. Provides expertise in IT governance, cybersecurity, business continuity planning, technology risk assessment and operational resilience.
Rosemary Elly Guillette Senior Vice President and Senior Consultant, Segal Marco Advisors	Client Delivery Manager, Investment Review	Senior investment consultant with more than 25 years of public pension investment consulting experience. Specializes in defined benefit and defined contribution retirement systems, asset allocation, investment governance, investment policy development, alternative investments and fiduciary oversight. Leads the investment policy and investment oversight components of the audit.
Geoff Strotman, CFA Senior Vice President, Alpha Investment Research, Segal Marco Advisors	Manager Research Consultant	Head of Segal Marco Advisors' Alpha Investment Research Group with more than 25 years of financial services experience. Responsible for manager research, manager selection, operational due diligence and investment oversight across all asset classes. Provides expertise related to manager evaluation, investment governance and operational risk assessments.
Rosa Limas Vice President and Director, Segal Marco Advisors	Custodial Services Consultant	More than 30 years of consulting and institutional custody experience. Leads custodian services evaluations, custodian searches, fee reviews, securities lending assessments, transition management reviews and custody due diligence activities. Provides expertise in custody operations, trade processing, performance reporting and custodial oversight.

Employee continuity is an important component of Segal's client service model. We take a team-based approach to service delivery and have intentionally staffed this engagement with

professionals who have complementary and overlapping expertise. As a result, multiple team members will remain familiar with the engagement, its objectives, work products and client expectations throughout the project.

In the event that a key team member becomes unavailable during the engagement due to circumstances beyond our control, Segal will promptly notify ORSC and identify a qualified replacement with comparable experience and expertise. It is Segal's practice to discuss proposed staffing changes with the client before making a final assignment. Because of the depth of our public sector consulting practice and multidisciplinary team structure, we can provide continuity of service and maintain project momentum with minimal disruption.

Staff relationships and independence

All employees assigned to this engagement are employees of Segal and have no relationships with other entities that provide independent analysis.

Segal maintains a Relationship Identification and Conflict Identification System designed to identify actual or potential conflicts of interest associated with new engagements. Potential conflicts are reviewed by practice leaders, market leaders, senior management and legal counsel, as appropriate, before undertaking an engagement. Based on our review, we are not aware of any staff relationships that would prevent an independent analysis or require additional safeguards to ensure an independent review.

(3) Management Plan

The following chart identifies areas of responsibility for each team member in the delivery of the requested fiduciary audit scope of services.

	Program Management	2.1 Board Governance and Administration	2.2 Organizational Structure and Staffing	2.3 Investment Policy and Oversight	2.4 Legal Compliance	2.5 Risk Management and Controls	2.6 IT Operations
Nick Perch, ASA, MAAA	✓						
Jeffrey Mills, PMP	✓		✓			✓	✓
Melanie Walker, JD		✓			✓	✓	
Meghan Horn		✓			✓		
Laura Keller		✓			✓		
Scott A. Miller, JD, NAF		✓	✓		✓	✓	
Amy S. Timmons, PMP, CFA, FSA, MAAA, EA		✓	✓			✓	✓
Karen Chavez			✓			✓	

	Program Management	2.1 Board Governance and Administration	2.2 Organizational Structure and Staffing	2.3 Investment Policy and Oversight	2.4 Legal Compliance	2.5 Risk Management and Controls	2.6 IT Operations
Jay Preall						✓	✓
Rosemary Elly Guillette				✓			
Geoff Strotman, CFA				✓			
Rosa Limas				✓			

We have assigned an experienced team of consultants to the team. Additionally, we will make other top Segal public sector retirement consultants available as resources to the team wherever their special skill sets may be required. In the rare circumstance that a key member of the ORSC account team leaves our organization, we have the resources available to replace them at any time because of the size of our firm and depth of consultant experience and expertise. We have supplied a large client team so that there is notable overlap and many consultants are up to speed on the client and all relevant client issues. This makes handling a sudden departure much more manageable.

Segal has a succession planning procedure in place that allows seamless transition of client assignments for planned departures (e.g., retirement of a senior consultant). Formally, Segal requests 18 months of notice for planned retirements, which allows associate consultants and actuaries to spend at least one valuation cycle working firsthand with the client. Informally, many Segal employees nearing retirement begin training replacement consultants three to five years in advance.

If a need arises to replace a professional due to circumstances beyond our control, we will determine the best fit from our extensive list of qualified and experienced consultants and actuaries, then propose that individual to ORSC for approval.

Lead professionals included on the project team should, at a minimum, have performed a fiduciary audit or study of a public employee retirement system within the last two years.

Segal confirms all proposed lead team members have the requested experience with fiduciary audits or public employee retirement system studies within the last two years.

Each proposal shall include the firm's affiliations with organizations that sponsor and support investment or fiduciary related research.

Segal Marco Advisors is a founding member of the Global Investment Research Alliance (GIRA), an international network of independent investment consulting firms that collaborate on investment research and global market insights. Through this affiliation, the firm enhances its

research capabilities and access to global investment perspectives while maintaining its independence in investment recommendations and fiduciary advice.

Additionally, Segal and Segal Marco maintains memberships and professional affiliations including the CFA Institute, CFA Society chapters, the National Institute on Retirement Security (NIRS), National Association of State Retirement Administrators (NASRA), the International Foundation of Employee Benefit Plans (IFEBC) and the National Conference on Public Employee Retirement Systems (NCPERS).

Segal, however, is more than a participant and often present at many industry conferences. In fact, Segal was named a 2026 Pension Partner of the Year by NCPERS in recognition of our continued contributions to advancing education and supporting best practices across the public pension community. Examples of the proposed team's thought leadership for public pensions include:

- Jeff Mills led multiple sessions in the 2026 NCPERS Program for Advanced Trustee Studies related to cyber risk management.
- Melanie Walker participated in a breakout session at the May 2026 NCPERS Annual Conference about: "Evolving Pension Plan Design: Case Studies and Practical Strategies." At the July 2026 National Council on Teacher Retirement (NCTR) Trustee Workshop (UC Berkley), Melanie addressed "Aging and Affordability: The Future of Healthcare Spending." She also participated on a panel about "SECURE and SECURE 2.0 – Hot Topics for Governmental Plans" at the 2025 National Association of Government Defined Contribution Administrators (NAGDCA) Annual Conference. She also co-presented "Smarter, Greener, Better? Defined Contribution and Hybrid Plans Catch-Up on Secure 2.0 and ESG Investing" at the June 2023 National Association of Public Pension Attorneys (NAPPA) Legal Education Conference.
- Amy Timmons led an annual survey and panel at the National Conference of Teachers Retirement (NCTR) related to cyber risk.
- Scott Miller wrote "[Artificial Intelligence and Plan Governance Considerations](#)," NCPERS *PERSist*, Winter 2025 and led a similar titled session at the 2024 Annual Conference.
- Karen Chavez was an instructor for "Change Management and Communication Strategies" at the IFEBC – Certification of Achievement in Public Plan Policy (CAPPP) Program, Boston, MA, August 2024.
- Rosemary Guillette presented on Emerging Managers at the 2025 National Council on Teacher Retirement (NCTR) conference and taught Real Assets at the 2025 NCPERS Program for Advanced Trustee Studies (PATS). She also regularly participates in National Institute on Retirement Security (NIRS) programs and industry forums focused on public pension investment and fiduciary oversight. At the July 2026 National Council on Teacher Retirement (NCTR) Trustee Workshop (UC Berkley), Rosemary addressed "Managing Risk in a Peak Market."

4.4 References

Each proposal must include a list of at least three organizations, but no more than five, that may be used as references for your work on fiduciary audits or studies. References will be contacted to determine the quality of the work performed, personnel assigned to the project, and contract adherence. It is expected by the ORSC that firms will ensure the accuracy of contact information and prior work from references cited. Firms should not anticipate ORSC staff to correct or otherwise rehabilitate references that are listed in the RFP response. Failure to provide accurate information in the reference section will be reflected in scoring. The following should be included for the references listed:

Reference #1

<i>Date of the fiduciary audit work;</i>	July 2019 to present
<i>Name and address of client;</i>	City of Detroit 2 Woodward Avenue Detroit, MI 48226
<i>Name and telephone number of individual in the client organization who is familiar with the work; and</i>	Denise Starr Director, Human Resources Department 313.224.3559 starrd@detroitmi.gov
<i>Description of the work performed.</i>	Completed compliance audit of Deferred Compensation Plan in 2018-2019; then hired as ongoing investment and compliance consultant; currently conducting a retirement plan study for City and recordkeeper search for the Deferred Compensation Plan which included: • Renegotiated services agreements for their four (4) service providers • Created investment policy statement and Committee Charter • Consolidated over 100 investment options to a core investment structure for four (4) companies • Provide ongoing investment and administration consulting services • Conducted vendor search and evaluation project to consolidate four (4) providers to a single vendor relationship • Negotiated stable value manager contracts for four (4) companies • Committee training and education • Implementation of Roth account and Secure Act provisions • Assist Program Manager in the oversight in managing 4 service providers

Reference #2

<i>Date of the fiduciary audit work;</i>	2011 - Present
<i>Name and address of client;</i>	City of Memphis DC Plans 125 N Main St Memphis, TN 38103
<i>Name and telephone number of individual in the client organization who is familiar with the work; and</i>	Michael Burose Investment Manager 901.636.6177 Michael.Burose@memphistn.gov
<i>Description of the work performed.</i>	Completed compliance review of 457 and 401 DC Plans in 2024; completed recordkeeper search in 2024; recently hired to conduct cybersecurity vendor review in 2025; providing ongoing investment and retirement plan consulting services.

Reference #3

<i>Date of the fiduciary audit work;</i>	March 2025 – August 2025 Search and selection of successor provider has been completed. Transition of custodian provider is set for 1/2/2026. Segal is currently providing project risk management during the implementation.
<i>Name and address of client;</i>	Parochial Employees Retirement System of Louisiana 7905 Wrenwood Blvd Baton Rouge, LA 70809
<i>Name and telephone number of individual in the client organization who is familiar with the work; and</i>	Christopher Burke, CFA Chief Investment Officer 225.928.1361 cburke@Persla.org
<i>Description of the work performed.</i>	Master Custodian, Plan Accounting and Performance Analytics Services for \$5.8 billion in AUM/AUC.

Reference #4

<i>Date of the fiduciary audit work;</i>	2023-2024 (operational performance measurements)
<i>Name and address of client;</i>	Washington Department of Retirement Services (DRS) 6835 Capitol Blvd SE Tumwater, WA 98501
<i>Name and telephone number of individual in the client organization who is familiar with the work; and</i>	Amy McMahon Chief Operating Officer 360.664.7307 Amy.mcmahan@drs.wa.gov
<i>Description of the work performed.</i>	Assessment and development of key process indicators to measure productivity, manage

	workload, and sustain high-quality member service across complex benefit administration functions. (in addition to this effort Segal provides quality assurance to their PAS Modernization project)
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Reference #5

<i>Date of the fiduciary audit work;</i>	2021-2024
<i>Name and address of client;</i>	State of Tennessee Department of Treasury 600 Dr. Martin Luther King, Jr. Blvd. Nashville, TN 37243
<i>Name and telephone number of individual in the client organization who is familiar with the work; and</i>	Hunter Bethea Director of Deferred Compensation, Tennessee Department of Treasury 615.532.1183 hunter.bethea@tn.gov
<i>Description of the work performed.</i>	Investment/ administration monitoring and audit services including vendor search and evaluation services

4.5 Methodology, Work Product and Timeline

- *Each proposal shall describe the proposed methodology for each element of the components listed in Section II, Scope of Audit. The description should include specific techniques that will be used, including anticipated sampling techniques and sizes, and proposed sources of data and information. You may propose alternative ways of addressing the elements of the audit's scope.*
- *In describing the proposed methodology, also identify the type and level of assistance that you anticipate will be needed from the staff of SERS, including assistance to understand the operations and records of SERS and assistance to access, obtain, and analyze information needed for the audit. The description of the proposed methodology shall also identify meetings, interviews, programming support, space needs, etc., that you anticipate needing from SERS.*
- *Each proposal shall also include one or more examples of work product(s) for fiduciary audits that may help to illustrate the proposed methodology and final work product.*
- *Each proposal shall provide an estimated date that the final report will be submitted and the projected timeline or the anticipated work requirements and milestone dates to reach that date. This may be expressed as time after start of contract (i.e., "1 week after contract start date," "4 weeks after contract start date"), rather than specific calendar dates.*

Overall program management approach

To ensure the successful delivery of all six workstreams as a single, integrated engagement, we will establish a centralized Program Management Office (PMO), under Jeff Mill's leadership and led by Nick Perch, that provides governance, coordination, quality assurance and reporting across all participating practices. Rather than managing each report as an independent effort, our approach creates a unified program structure that aligns objectives, streamlines activities and delivers a consistent client experience throughout the engagement. This approach is informed by Segal's established program governance and integrated workstream methodologies.

Centralized leadership and governance

Jeff Mills as the Executive Sponsor will be accountable for the project, and Nick Perch will be responsible for the daily delivery as the Client Relationship Manager and dedicated Project Manager. Jeff will serve as the single point of accountability for overall delivery. Nick, as the Project Manager, will coordinate the day-to-day activities including all workstreams, manage

interdependencies, monitor progress and ensure alignment with project objectives, schedules and stakeholder expectations. Supporting governance will include:

- A formal project kickoff and initiation process conducted once for the entire engagement
- A unified work plan and integrated master schedule covering all six reports
- Regular status meetings and progress reporting across practices
- Clear escalation procedures for risks, issues, and decision-making
- Executive-level oversight to maintain strategic alignment and timely resolution of priorities

This governance structure provides transparency, accountability and consistent execution while minimizing administrative burden on client staff.

Coordinated and efficient delivery

A key objective of our program management approach is to eliminate redundant activities and maximize efficiency. Rather than each workstream independently requesting information, conducting separate meetings or developing duplicative documentation, the project team will leverage shared processes wherever practical, including:

- Coordinated stakeholder interviews and workshops
- Consolidated data requests and document collection
- Shared project assumptions, definitions, and analytical frameworks
- Integrated scheduling and milestone management
- Common reporting templates and deliverable standards

This coordinated approach reduces disruption to client personnel, improves consistency across analyses and enables findings from one workstream to inform others.

Segal anticipates starting this project within one month after notification and anticipates completing each workstream, with the ability to provide a consolidated report within four months after start. Each workstream will follow a similar approach that includes:

Task	Description	Involvement	Timing
Kickoff & stakeholder identification	Confirm audit objectives, refine work plan, identify key stakeholders and align the governance review with the overall fiduciary audit schedule. Stakeholders may include Board members, executive leadership, investment, finance, legal, communications and administrative personnel.	Segal ORSC SERS	Weeks 1-5
Data collection & document review	Obtain and review Board and committee governance materials, bylaws, statutes, administrative rules, governance policies, delegation documents, trustee education records, conflict-of-interest policies, budget materials, succession planning documentation, communication policies, Board packets, minutes and management reports.	Segal SERS	Weeks 6-10

Task	Description	Involvement	Timing
Stakeholder interviews & validation	Conduct structured interviews and working sessions with Board leadership, executive management and key staff to validate how governance responsibilities, reporting relationships, budget oversight, succession planning, conflicts of interest and communications function in practice.	Segal SERS	Weeks 10-15
Analysis & development of findings	Analyze governance practices, perform comparative benchmarking, evaluate fiduciary oversight processes and develop findings, observations and recommendations.	Segal	Weeks 16-20
Report consolidation & delivery	Integrate governance findings with other workstreams, identify themes and dependencies, and develop final recommendations and implementation considerations for inclusion in the consolidated report.	Segal ORSC SERS	Weeks 21-26

Quality assurance and consistency

The PMO will oversee a cross-practice quality management process designed to ensure consistency in methodology, analysis and reporting. Common quality standards, review protocols and deliverable templates will be applied across all workstreams. Key reports, findings and recommendations will undergo both technical and editorial review to verify accuracy, completeness and alignment with engagement objectives during the Workstream report development tasks

This centralized quality assurance process helps ensure that recommendations are practical, evidence-based and presented in a clear, consistent manner regardless of which practice produced the underlying analysis.

Integrated reporting and synthesis

While each analytical report will address its specific objectives, the PMO will oversee the integration of findings across all workstreams to produce a cohesive set of deliverables. Cross-functional themes, risks, opportunities and dependencies will be evaluated collectively to ensure recommendations are aligned and mutually reinforcing.

The final deliverables will include an integrated executive summary that synthesizes key findings, highlights strategic priorities and presents an enterprise-level perspective on opportunities for improvement. This provides decision-makers with a concise, actionable view of the overall results while preserving the detailed analysis contained within each individual report.

Commitment to successful outcomes

Our program management approach is designed to provide the client with a well-coordinated, efficient, and highly usable engagement experience. Through centralized leadership, integrated governance, disciplined project controls and consistent quality oversight, we will deliver the six required reports as a unified body of work — on schedule, with clear accountability, and with recommendations that support informed decision-making and successful implementation.

Section II. Scope of Audit

2.1 Board Governance and Administration

The Contractor will perform a review of the governance structure of SERS in terms of the make-up of its board and level of monitoring and oversight provided in its policies, procedures, and practices. The Contractor shall evaluate the adequacy of the policies concerning delineation of roles and responsibilities of the board, staff, investment managers, and others with administrative or oversight responsibilities. Specifically, this will include an analysis of:

- Board trustee education, training, and their associated costs;*
- Whether SERS sufficiently delineates, communicates, and documents the lines of reporting and responsibility over staff responsibilities in general and in the investment program specifically and whether the role of the board and staff are clearly defined for both;*
- The statutes and administrative rules under which SERS operates to determine if the board and staff comply with applicable statutes and rules as well as whether the statutes and administrative rules are sufficient to allow the board and staff to meet their responsibilities;*
- Comparison of the governance provisions and practices to industry standards and best practices in comparable systems.*
- SERS budget process and its adherence to board approved budget;*
- Written policies and procedures currently in place to monitor and guard against professional conflicts of interest;*
- Succession planning for key positions;*
- Administrative costs, including determining their appropriateness compared to comparable public systems; and*
- Communication policies and procedures of SERS between the board, its members, and its retirees.*

As indicated in our Overall Program Management Approach, we will kick off each workstream uniformly and conclude each workstream with an effort to consolidate all workstreams into an executive summary. The tasks and steps unique to this workstream are as follows.

Data collection and review: Segal will request and review the governance and administrative materials needed to evaluate the specific scope items identified by ORSC. Materials may include Board and committee governance documents, charters, policies, administrative rules, delegation documents, reporting relationships, organizational materials, meeting materials, trustee education records and associated costs, conflict-of-interest policies, budget materials,

administrative cost information, succession planning materials and member and retiree communications. This review will allow Segal to evaluate whether governance expectations are sufficiently documented and whether the underlying materials support effective fiduciary oversight, role clarity, transparency and accountability.

Staff interviews (where applicable): Segal will supplement the document review with structured interviews or working sessions with appropriate Board leadership, executive management, staff and other stakeholders. Interviews are important because governance documents do not always show how policies, delegations, reporting relationships and oversight practices operate in practice. These discussions will help us validate our understanding of the written materials, identify where practices are consistent or inconsistent with documented expectations and understand how governance responsibilities are carried out in day-to-day administration.

To use interview time efficiently, Segal will develop interview questions after reviewing the initial governance materials and confirming the audit scope, stakeholder roles and workstream objectives. Questions will be tailored to the interviewee's responsibilities and will be designed to test specific audit topics rather than repeat information already available in policies, minutes or reports. Before interviews begin, Segal will prepare structured interview guides organized by topic area, such as Board and staff roles, reporting and escalation, trustee education, budget oversight, conflicts of interest, succession planning, administrative costs, communications and investment governance. This approach ensures the questions are appropriate for a fiduciary performance audit, focused on evidence and practices, and respectful of stakeholder time.

The questions will generally focus on how governance expectations are applied in practice, including how Board and staff roles are understood, how lines of reporting and responsibility are communicated, how investment program oversight is administered, how budget development and monitoring occur, how conflicts of interest are disclosed and addressed, how succession planning is managed and how communications occur between the Board, members and retirees. For example, Segal may ask interviewees to describe how decisions are elevated to the Board, how management determines what information should be reported to trustees, how trustee education needs are identified and tracked, how administrative cost information is reviewed, how conflict disclosures are monitored, how key-person risks are addressed and how communication policies are evaluated for effectiveness.

Where appropriate, Segal may also recommend or facilitate a Board member self-evaluation as part of the governance review. A structured self-evaluation can provide useful insight into how trustees view the Board's effectiveness, committee structure, information flow, meeting practices, role clarity, fiduciary oversight and educational needs. If used, Segal would design the self-evaluation questions to align with the audit scope, the Board's governance responsibilities and recognized public retirement system practices, while keeping the process focused, confidential and respectful of trustee time. The results would not be used to evaluate individual trustees, but rather to identify themes, potential governance improvement opportunities and areas where additional trustee education, orientation or continuing training may strengthen Board effectiveness.

Analysis and Report Development: Segal will synthesize the results of the document review, interviews and comparative analysis into a Board Governance and Administration workstream report.

Segal's comparative analysis will be based on a structured review of recognized governance practices, public retirement system experience, peer system materials where available, professional standards and relevant industry guidance. We will identify best practices by considering how comparable public retirement systems document Board and staff roles, structure committees, oversee trustee education, monitor conflicts of interest, manage budget oversight, address succession planning and communicate with members and retirees. Where appropriate, Segal will also draw on professional association guidance, published governance resources, prior fiduciary review experience and benchmarking observations from similar public pension systems. This approach allows us to distinguish between practices that are merely common and practices that are appropriate, effective and relevant to SERS's statutory framework, governance model and operational context.

2.2 Organizational Structure and Staffing

The Contractor will perform a review of the overall organizational structure of SERS and its capacity and effectiveness in implementing the policy and assignments delineated by the SERS Board and management. Specifically, this will include an analysis of:

- *Staffing size, hiring procedures, staff qualifications, roles, compensation, performance evaluation requirements, and an analysis of these factors compared to other similar size public pensions;*
- *Adequacy of process to evaluate and improve customer/member satisfaction;*
- *Whether compensation levels are sufficient to facilitate SERS's ability to attract and retain qualified pension fund professionals; and*
- *Monitoring and maintaining staff qualifications and continuing education requirements.*

As part of this engagement, Segal will evaluate SERS's organizational structure, staffing model and workforce practices to determine how effectively the organization supports its mission, strategic objectives and member service goals. Our review will assess organizational design, staffing levels, workforce capabilities, hiring practices, compensation competitiveness, performance management processes, staff qualifications and professional development opportunities.

In conducting this review, Segal will evaluate the extent to which SERS's organizational structure and staffing resources support operational effectiveness, member satisfaction and the successful implementation of Board and management priorities. We will compare SERS's practices to similarly sized public pension systems and relevant industry standards to identify strengths, opportunities and actionable recommendations.

Areas of review may include:

- Organizational design, reporting relationships and allocation of responsibilities
- Current staffing levels and workforce capacity
- Roles, responsibilities and accountability structures

- Hiring, onboarding and talent acquisition practices
- Staff qualifications, certifications, training and continuing education opportunities
- Compensation competitiveness and workforce retention considerations
- Performance management processes and evaluation requirements, including performance metrics used to evaluate performance and compensation
- Processes used to measure, monitor and improve member satisfaction

As indicated in our Overall Program Management Approach, we will kick off each workstream uniformly and conclude each workstream with an effort to consolidate all workstreams into a consolidated executive summary. The tasks and steps unique to this workstream are as follows.

Data collection and review : Segal will request and review documentation necessary to understand SERS's current organizational structure, staffing model and workforce practices. Examples of materials that may be requested include: written policies and procedures, reports, processing volumes, organizational charts, job descriptions including job qualification, financial data, productivity reports, performance metrics including any prior studies or benchmarking reports from CEM, hiring processes and technology applications/tools used. When looking at performance and member satisfaction metrics it will be important for us to understand what is reported to the Board, versus what other metrics are available. Often we find Boards are only concerned with ensuring an employee transitions from actively working to retirement swiftly and in other cases boards are provided with more detailed metrics such as call center metrics, and metrics for each business process.

Stakeholder interviews: Segal will work with SERS leadership to identify key staff members, managers, executives and other stakeholders to participate in structured interviews. Interviews may be conducted individually or in groups and may occur virtually or in person.

Following completion of the interviews, Segal will conduct a preliminary debrief with SERS leadership and, if requested, representatives of the Board to discuss common themes, observations and emerging opportunities identified during the discovery process. Without interviews with fund leadership, it will be hard for us to fully evaluate the details around the staffing model.

In a combination of organizational chart review and interviews, Segal will evaluate SERS's organizational structure, staffing resources and workforce practices to determine how effectively they support current and future operational needs.

Our assessment will focus on six key areas:

- **Organizational design and reporting structure:** We will evaluate reporting relationships, organizational alignment, accountability structures and the distribution of responsibilities across the organization to determine whether the current structure effectively supports organizational objectives.
- **Staffing analysis and workforce capacity:** We will assess staffing levels, workload distribution, operational demands and workforce capacity to identify areas where staffing resources may be optimized or adjusted to support service delivery goals.
- **Hiring and talent acquisition practices:** We will review hiring procedures (which will include interviews with Human Resources), recruitment strategies, minimum qualifications and talent

acquisition practices to assess their effectiveness in attracting qualified candidates and supporting organizational needs.

- **Compensation, retention and workforce development:** We will assess compensation structures, professional development opportunities, continuing education programs and workforce development practices to evaluate SERS's ability to attract, retain and develop qualified pension professionals.
- **Member satisfaction and service delivery:** We will evaluate the processes and measures used to assess, monitor and improve member satisfaction and consider how organizational structure, staffing levels and workforce practices support member service objectives.

The findings from this assessment will provide SERS with information to support future workforce planning efforts, organizational effectiveness initiatives, career path development, succession planning activities and long-term staffing decisions.

- **Analysis and Report Development:** At the conclusion of the interviews, Segal will synthesize the information collected throughout the engagement and prepare a comprehensive analysis of SERS's organizational structure, staffing resources and workforce practices.

The analysis will identify strengths, opportunities, risks and potential areas for improvement. Recommendations may address:

- Organizational design and reporting relationships
- Staffing levels and workforce capacity
- Position classifications and role alignment
- Hiring and recruitment practices
- Compensation competitiveness
- Staff development and continuing education programs
- Performance management practices
- Member satisfaction processes and service delivery considerations

As part of our recommendations, Segal may identify workforce planning considerations that support successful implementation of future organizational changes. These may include succession planning opportunities, workforce development priorities, role alignment considerations and strategies for strengthening organizational capacity. Any recommendations will be designed to support SERS's long-term organizational effectiveness and service delivery objectives. A sample report, we prepared in 2026 for a public pension agency is included in Exhibit 2. This sample has been redacted to protect the client, and Segal research and benchmark data.

For each major recommendation, the report will identify practical implementation considerations and assist SERS in prioritizing improvement opportunities based on organizational need and potential impact.

2.3 Investment Policy and Oversight

Investment policy

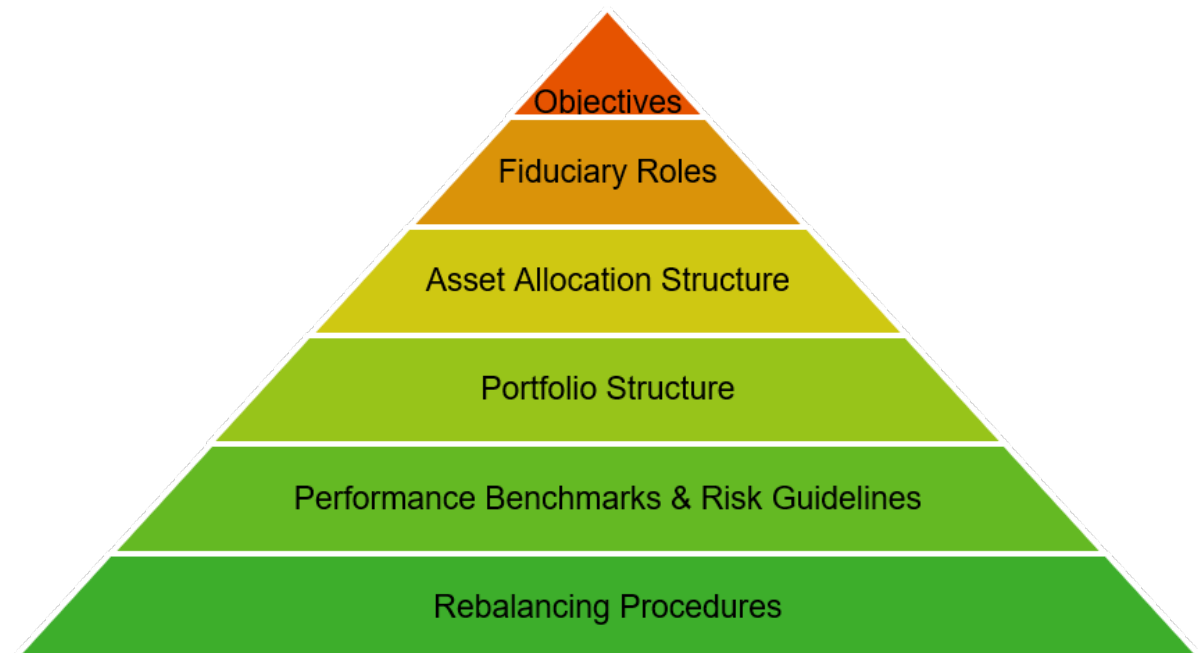
The Contractor will perform an evaluation of the board investment policy and procedure. The Contractor will:

- Review the process by which the investment policy is adopted and compare that process to best practices;*
- Review the investment policy statement and compare it to industry best practices;*
- Determine whether SERS investment policy includes all critical elements, acknowledging an understanding of SERS's financial and actuarial characteristics, and in accordance with established investment and funding goals, and risk tolerances;*

We believe the investment policy is the foremost governance document for a fund's investment program. A well-developed investment policy provides a framework for investment structure design, decision-making, risk monitoring and performance measurement. As such, we take a holistic approach to helping clients develop investment policies. This process includes ensuring that the policy accurately documents fund objectives, the roles of fiduciaries, the fund's asset allocation and investment manager structure, performance and risk measures and rebalancing procedures.

We will assess SERS's current IPS across the following areas:

Investment Policy Components



- It may be reasonable on an ongoing basis to make recommendations between asset classes and investment managers, when there is a need to rebalance back to target allocations.
- Asset classes with greater volatility typically have relatively wider rebalancing ranges to allow the asset class to perform “normally” without incurring unnecessary rebalancing transaction costs.
- Short/intermediate term (six-month to two-year time horizon) outlooks can be developed for each asset class and used to suggest shorter term shifts, or tilts, away from long term strategic targets, within the context of specific client risk tolerances.
- As markets change and potentially move back towards long term steady state, shifts back towards strategic targets are also considered. These observations are also used to anticipate and identify opportunistic investment vehicles that may be relevant for our clients. Specific implementation considerations are reviewed on a client-by-client basis.

Overall, appropriate rebalancing strategy is plan specific and closely linked to liquidity requirements, time horizon, governance structure and risk tolerance.

- *Evaluate whether the asset allocation is tied to the investment policy statement;*
- *Evaluate whether SERS investment policy is compatible with the most recent asset/liability study and five-year experience review;*
- *Evaluate the adequacy of the mechanisms and decision-making processes utilized for setting, periodically reviewing, and rebalancing the asset allocation;*

Our research specialists use broad asset allocation and asset/liability analysis and will apply this expertise to review asset allocation against SERS’s current investment policy statement. Asset allocation should capture cash-flow characteristics in sufficient detail to project asset metrics such as nominal market values, real market values, pension payroll and purchasing power of assets.

We recommend SERS continuously monitor asset allocation throughout the year and through its investment consultant, receive proactive recommendations and insights. Best practice recommendation is to perform a formal review of a client’s asset allocation policy every two to three years at a minimum, and we also recommend annual confirmation of investment objectives with investment structure.

We can apply our proprietary model for asset allocations studies, Segal Marco Advisors Risk SysTem, SMART, to review the last asset/liability study and five-year experience review against current allocation and investment policy statement. Our proprietary asset class assumption methodology incorporates a top-down (Capital Asset Pricing Model or “CAPM” reverser optimization) and bottom-up (yield curve for bonds and equity building block for U.S. equities) analysis of asset class characteristics. Segal Marco employs a forward-looking building block methodology that:

- Takes into account current market and economic conditions when building expected return assumptions and risk premiums
- Analyzes historical data when developing standard deviation assumptions for each asset class as well as the underlying correlation matrix

- Employs stochastic modeling, generally referred to as Monte Carlo simulation, to ensure that our clients understand the range of possible outcomes and the probability of their occurrence under various target allocation scenarios

We recommend an asset/liability study be done every four to five years so to ensure a consistent approach to a comprehensive strategic asset allocation. Because of the non-linear relationship between risk and return, it is critical that a risk attribution is performed to identify the magnitudes and sources of risk at the portfolio level. We have developed proprietary models that help us map the interactions between the various factors of risk in the market into sources of risk for the fund. These risks are defined in terms of actionable pension fund metrics such as funded ratios, contribution rates, liquidity flows, etc.

Systematic rebalancing should be rooted in identifying risk appropriate rebalancing guidelines specific to SERS's investment policy statement. These guidelines include asset class specific rebalancing ranges based on long-term estimates of transaction costs and volatility and should consider the target allocation of each asset class. We will assess such activities keeping in mind the following conditions:

- It may be reasonable on an ongoing basis to make recommendations between asset classes and investment managers, when there is a need to rebalance back to target allocations.
- Asset classes with greater volatility typically have relatively wider rebalancing ranges to allow the asset class to perform "normally" without incurring unnecessary rebalancing transaction costs.
- Short/intermediate term (six-month to two-year time horizon) outlooks can be developed for each asset class and used to suggest shorter term shifts, or tilts, away from long term strategic targets, within the context of specific client risk tolerances.
- As markets change and potentially move back towards long term steady state, shifts back towards strategic targets are also considered. These observations are also used to anticipate and identify opportunistic investment vehicles that may be relevant for our clients. Specific implementation considerations are reviewed on a client-by-client basis.

Overall, appropriate rebalancing strategy is plan specific and closely linked to liquidity requirements, time horizon, governance structure and risk tolerance.

- *Evaluate whether SERS policy specifies to what extent the basis for particular investment decisions should be articulated in writing by the Board or SERS staff;*
- *Evaluate the extent to which SERS observes its formal written investment policies and procedures, and identify what, if any, practical problems have resulted either on a systematic or isolated (but significant) basis; and*
- *Evaluate how often and by what process the board or staff reviews SERS's written policies, guidelines, and procedures.*

Through the designation of a target asset mix and a target performance benchmark, SERS's IPS should define a proper asset allocation within an acceptable range of expected risk and return parameters, permissible investment vehicles and management style. We will assess the current structure for external consistency and highlight any observed strengths or weaknesses.

Overall, investment policy statement is a living document that should be reviewed and updated at least annually or as a result of any major change to the investment program.

Investment oversight and review

The Contractor will perform an evaluation of the oversight and control of investments.

The Contractor will:

- *Evaluate the appropriateness of board and staff controls, procedures, and capabilities to regularly review and monitor the performance of the investments and the practices of investment managers, as well as ensuring compliance with policies;*

Our operational due diligence incorporates six elements focusing on:

- Formalized compliance policies and procedures
- Exercise of proper controls
- Appropriate client concentration
- Sufficient trading resources and oversight
- Culture of integrity
- Cybersecurity controls and protection

Senior members of our Alpha manager research team are responsible for performing operational due diligence and have the background and experience to assess SERS's process. Typically, an operational due diligence questionnaire or RFI that seeks to answer the following due diligence questions:

- Is there a set of formal compliance policies and procedures that are well documented, comprehensive and appropriate?
- Is there excessive client concentration that would create risk in the event of client loss?
- Are the trading resources experienced, well governed and fully compliant? Is there an appropriate number of traders given the level of assets and portfolio activity? Does the firm have ample experience to execute trades? Is there clear expressed written trading compliance standards and trading protocol that is appropriately supervised? Are trades excessive relative to the strategy in producing optimal results? Does trade execution reflect best practices in terms of timing, compliance, oversight?
- Have there been any citations from any regulatory authorities or litigation regarding a violation or non-compliance?
- Does the performance of background checks of key principals and their findings reflect reputational integrity?
- Have internal violations of compliance processes and procedures been disclosed?
- Are there appropriate separation of duties with regard to cash management and approvals and asset oversight internal controls?

- Is there appropriate documentation of internal controls, through operations manual SSAE 16, do the ordered financial statements and filings disclose any control weaknesses/issues or experiences?
- Does the entire operational process suggest a level of confidence that compliance infractions and regulatory violations are unlikely to occur?
- Has the firm engaged top-tier, independent third party service providers?
- Is the principals' alignment of interest properly reflected by adequate co-investment?
- How are hard-to-value assets valued e.g., illiquid investments? Is there a valuation policy?
- Has the firm experienced any cybersecurity breaches? If so, what measures were taken to rectify them?
- What cybersecurity protocols are currently in place?
- *Evaluate SERS's process for measuring, evaluating, and controlling transaction costs, directed brokerage and commission recapture (if any), and compare the process to other funds as well as public or private third party industry surveys.*

Our process evaluates the structure (centralized or distributed) and reporting lines of the Trading Department against minimum industry standards and the requirements of the manager's strategies. We request the firm's personal trading policy, seeking insight into recent or significant violations. Interviews of senior traders and supporting staff seek to understand order entry procedures, order/program types, trade allocation policies, broker/counterparty selection and the use of order routing/alternative trading resources.

SERS should require a thorough description of and subsequently evaluate technology infrastructure and support, the use of 3rd party service providers, and proprietary trading systems relative to institutional peers and industry standards. Firm soft dollar and securities lending policies should also be requested and reviewed. It is important to also understand the system interface, workflow and communication between portfolio managers, traders, operations and compliance personnel. Overall, we will assess manager's efforts to measure and track transaction costs; link trading desk compensation to best execution and positive client outcomes.

- *Evaluate the process used to determine and measure investment performance, including how performance data is collected and verified and selection of appropriate benchmarks;*

We would evaluate current investment performance against best practices and current standards used by our investment consultants.

To be consistent with the CFA Institute performance presentation standards (GIPS; formerly AIMR) and their requirement of asset weighting the portfolio returns within a composite, we treat a composite as an aggregation of individual portfolios. We combine the assets and cash flows of the individual portfolios to arrive at a composite portfolio. After a composite portfolio is created, the Time-Weighted Return (TWR) Modified Dietz method is used to calculate the composite's return. A composite includes terminated portfolios for all periods prior to termination. The

Modified Dietz method overcomes the need to revalue the portfolio right before and after each cash flow by assuming a constant rate of return on the portfolio during the valuation period.

Our standard performance-measurement process begins with quantification of over- or under-performance relative to these benchmarks – but then goes a step further to identify the sources of the relative performance. We use quantitative models for performance attribution and risk assessment to delineate the principal factors contributing to investment return and risk, such as security selection, sector weighting and style.

To compute the investment performance of individual managers, we rely on monthly custodian bank information, which usually includes market values, interest income, dividend income, sales, sales pending, purchases, purchases pending and cash flows.* Our analysts input this data into our proprietary performance measurement system, which calculates time-weighted rates of return, both pre-fee and post-fee.

To be consistent with the CFA Institute's performance presentation standards (GIPS; formerly AIMR) and its requirement of asset-weighting the portfolio returns within a composite, we treat a composite as an aggregation of individual portfolios (in which we have combined the assets and cash flows). After the composite portfolio is created, we use the Time Weighted Return (TWR) Modified Dietz method** to calculate the composite's return. This method overcomes the need to revalue the portfolio right before and after each cash flow by assuming a constant rate of return on the portfolio during the valuation period.

To ensure that performance is accurately computed, we reconcile performance and market values each quarter between (a) our system, (b) the manager and (c) the custodian bank, and our consultants review all documents and are accountable for all reporting deadlines.

* The cash flows may include contributions, fees, expenses and transfers between manager accounts.

** The Modified Dietz Method is a method of evaluating a portfolio's return based on a weighted calculation of its cash flow. It takes into account the timing of cash flows and assumes that there is a constant rate of return over a specified period of time.

- *Evaluate the basis and methodology for the compensation of external investment managers and advisors and payments to others, if any;*

To evaluate investment option fees, we use multiple sources. First our quarterly performance reports compare the investments' expense ratios against the peer group medians in the Lipper universe. These medians are sometimes skewed upwards relative to what our clients use due to the inclusion of retail share classes. Annually, we also conduct a deeper review using the Morningstar Direct database. This system provides access to the full universe of mutual funds and allows us to run comparisons for each option relative to its specific peer group. For instance, target date funds are compared to other institutionally priced options in the specific age band, not just 60/40 balanced funds. Our reporting on fees provides a look versus the 95th percentile, median and 5th percentile as well as options for lower share classes.

We would encourage impartiality and payments and pursue business relationships should be driven solely by plan need. All "pay-to-play" regulations as defined by Securities and Exchange Commission adopted new Rule 206(4)-5 should be followed with managers and advisors.

Any referral fees or finder's fees must be disclosed and there should be no soft-dollar compensation or commission based arrangements with SERS's investment consultant that could affect the objectivity of associated advisement. The current consultant(s) should not serve

as a placement agent or registered representative for any firms or products involved in SERS's lineup of funds. The plan consultants should not receive revenues from investment managers for consulting services provided.

- *Evaluate the written policies and procedures currently in place to monitor and guard against professional conflicts of interest; and*

The assigned compliance consultant will oversee a review of SERS's conflict of interest policy to ensure best practices and enforcement reviews are followed.

- *Analyze how investment managers are selected, including the transparency in the decision-making process, due diligence provisions, whether specific criteria and procedures govern the selection process, whether they are actually observed in the selection process, and whether there is adequate documentation of selection process.*

We will review the manager selection process to ensure all key criteria are evaluated to identify top-tier managers that meet SERS's Investment Policy Statement guidelines and goals.

Key issues to consider are what factors are used to define manager success, any forward-looking investment theses and manager potential to generate alpha. The evaluation process should include:

- Objective analysis of key qualitative factors- such as:
 - Organizational stability
 - Skill and background of team
 - Philosophy
 - Process
 - Operational risk management
 - Appropriateness
- Transparent determination of reasons for recommendation
- Consistent, comprehensive research methodology
- Comparable ranking of investment manager products against relevant peers, and a documented history of manager information and recommendations.

Investment and fiduciary risk

The Contractor will perform an evaluation of the awareness of risk and management of risk in investments. The Contractor will:

- *Evaluate the processes by which the board is aware of the risks associated with the asset allocation they have adopted; and*

We believe asset class returns and risks can be thought of as a summation of multiple factors including the risk free rate, inflation and risk premium. Macro-economic factors and asset class

specific factors such as liquidity or currency also inform these asset class characteristics. We think in terms of decomposing asset classes to identify drivers of risk and return on an asset class by asset class basis. This decomposition not only enables the understanding of diversifying characteristics at the asset class level, but also assists in identifying specific hedging properties of asset classes and ultimately matching those hedging properties to client specific needs.

We use a variety of systems to aid our analysis including proprietary tools that help us bring together the assets and the liabilities. Our internal models allow us to look at asset allocation options and run Monte Carlo simulations on potential outcomes, stress test these allocations based on past historical events or future “What If” scenarios, and calculate various risk and efficiency statistics related to each allocation option as they relate to the underlying asset class components. Our proprietary models allow for complete flexibility in solving client specific asset allocation questions.

For asset classes that exhibit non-normal return distributions due to illiquidity or absence of an investable index such as closed-end real estate, private infrastructure and private equity, returns of a representative index are unsmoothed to provide a public market risk equivalency where applicable. Ultimately, minimal constraints are applied to private market and less liquid asset classes during the modeling process to account for the relative illiquidity and higher fees typically exhibited in these markets and investments.

- *Examine investment risk factors. Attention should be on the types, levels, and appropriateness of risks in the investment portfolios and overall funds as well as any internal controls in place at SERS to ensure compliance with the adopted standards, policies and procedure for managing investment and fiduciary risk. This examination should include a comparison to best practices.*

Overall, we suggest a multi-faceted approach to risk management. The risk characteristics of a plan are based on various factors, including the plan’s funded percentage and expected future liabilities. Both absolute (i.e., standard deviation) and relative (i.e., tracking error) risk is considered when recommending an asset allocation and subsequent investment structure. Risk is controlled by diversifying plan assets both by asset class and investment style. Asset class targets and ranges are identified within the investment policy statement.

Risk is monitored on a plan and individual manager level, and is reviewed on an ongoing basis. Our use of dynamic allocation, which we consider as a de-risking strategy, looks to take the focus from generating a level of return to minimizing the volatility between assets and liabilities. Wide swings in asset valuations over the past 15 years, culminating in a significant de-leveraging event and asset value write-down across risk sectors have caused many to re-think their perspective on fundamental issues such as risk assessment.

We have been introducing the concept of dynamic asset allocation as a means for managing risk. Dynamic asset allocation sets targeted asset class commitments in accordance with liability risk – the risk of shortfall against promised benefit payments. Using actuarial valuation metrics, we establish a long term funding policy with the objective of defeasing liabilities.

For a fully funded plan, or one with excess reserves, the cost of defeasing liabilities through low volatility investments, such as bonds, is significantly less expensive than it is for a plan that is

less than fully funded. Following the recent sharp decline in asset prices, many pensions are in an underfunded position, some at distressed levels. For such plans, a full defeasance is an expensive option. A more practical approach is to separate the portfolio between a liability hedging sub-portfolio and a performance seeking sub-portfolio. A less well-funded plan will allocate a greater portion performance-seeking investment and necessarily accept greater volatility. As the plan progresses toward fully funded status, the asset allocation is systematically subjected to a de-risking process, with greater allocation to liability hedging investments. Importantly, the allocation among liability hedging and performance seeking investments is a function of actuarial valuation metrics. As such, dynamic asset allocation is not a strategy for market timing, or tactical asset allocation. Instead, it is a discipline for implementation of a long-term strategy for liability management.

The Board might consider dynamic asset allocation modeling, which transfers the focus from asset based only consulting to asset/liability consulting. Under this scenario, the funded status of a plan drives the overall asset allocation and risk budgeting decisions. This is an extremely proactive approach and one that we think will be the future of an overall Plan's success in paying out its pension obligations. We welcome the opportunity to discuss dynamic asset allocation theory with you in the future.

Custodian policy

The Contractor will evaluate SERS's relationship with its custodial bank, including the custodial bank's breadth of services, technological planning and capability to address SERS's needs, the bank's structure and level of fees, cash management and analytical services, and the ability of SERS to have oversight over custodial functions. The Contractor will also review the custody model used by the Ohio Treasurer of State as custodian of financial assets for SERS and evaluate the oversight provided as compared against other public systems and best practices.

Segal does not provide direct trust, custody, or benefit payment services; however, we can partner with independent third-party custodians on our proprietary funds to support custodian placement and contract negotiation, as needed. We have extensive experience with top-tier banks, and our internal Custody Research Department annually evaluates custodian service offerings across our client universe.

In our discretionary services model, we act as authorized signer and direct managers and banks to raise portfolio cash to fund benefits as needed. We also work with the client's bank at the start of each relationship to identify ways to streamline and improve cash management.

We maintain relationships with leading domestic and global custodians and can work with a plan's preferred custodian/trustee while helping ensure appropriate service quality and pricing.

Our Custody Research Department oversees custodian searches and annually updates Custodian Evaluation Profiles that assess each custodian's services. When a plan seeks to hire or replace a custodian, we use a process similar to our manager search methodology to identify suitable providers.

Our search and evaluation process uses a due diligence framework that includes questionnaires, RFP responses, onsite visits, risk analysis, regulatory compliance review and

ongoing monitoring. Combined with peer and best-practice comparisons, this approach helps clients select an appropriate custodian.

Questionnaires gather factual information on each custodian's financial stability, operations, services, client service model, technology and developments. Onsite visits review custody and asset-servicing controls and infrastructure, including operations, compliance, governance, reconciliations, accounting leadership, business commitment and overall competence.

We tailor each search to the plan's requirements, identifying key criteria and risks to align the selection process. Our customized searches and fee assessments have achieved meaningful fee concessions; for example, domestic custody and administration fees for combined assets of \$260 million typically range from 0.75 to 1.0 basis points annually. We also provide education, fee modeling, industry comparisons and transition support to align cost structures with service levels.

We also assist with custodian transitions and risk mitigation by coordinating search materials, onsite visits, finalist presentations and negotiations of fees and service guarantees.

In addition, Segal Marco works with domestic and global custodians to collect custodian data for quarterly performance reporting.

2.4 Legal Compliance

The Contractor will evaluate the adequacy of SERS's legal compliance with applicable state and federal law and regulations. The evaluation will include an analysis of:

- *Legal compliance and adherence to IRS regulations;*
- *Adequacy of internal and external counsel;*
- *Adequacy of ethics training, disclosure, and monitoring of compliance; and*
- *Board and staff compliance with legal requirements.*

As indicated in our Overall Program Management Approach, we will kick off each workstream uniformly and conclude each workstream with an effort to consolidate all workstreams into a consolidated executive summary. The tasks and steps unique to this workstream are as follows.

Data collection and review: Compliance with applicable legal and regulatory requirements is fundamental to effective fiduciary oversight and administration. Segal's review will evaluate SERS's compliance framework, including adherence to Internal Revenue Code (IRC) requirements, applicable state and federal laws, fiduciary standards and related governance practices. Our approach is designed to assess both the design and operation of compliance processes, ensuring that legal requirements are not only documented but also consistently implemented in practice.

Stakeholder interviews: Our review will not only include a systematic evaluation of governing documents, administrative procedures and operational practices but it will be combined with stakeholder interviews and targeted testing to determine whether policies align with actual

operations and regulatory requirements. We will evaluate SERS's compliance with applicable laws and regulations, including adherence to IRS requirements, governing statutes and administrative policies, and assess whether written procedures correspond to actual practices and whether compliance responsibilities are clearly defined and executed.

Analysis and report development: As part of this review, we will evaluate the adequacy of internal and external legal counsel, including roles, responsibilities and effectiveness in supporting governance, compliance and operational decision-making. We will also review ethics training, disclosure processes and compliance-monitoring mechanisms, including conflict-of-interest policies and enforcement practices, to determine whether SERS has established a culture of compliance supported by effective oversight. In addition, we will assess whether board members and staff are operating in compliance with applicable legal and regulatory requirements, including adherence to fiduciary responsibilities, statutory obligations and governance policies.

Segal will deliver a comprehensive compliance assessment, including identification of risks and gaps, benchmarking to best practices and practical recommendations to strengthen legal compliance, governance, fiduciary oversight and accountability processes.

2.5 Risk Management and Controls

The Contractor will evaluate the risk review and control procedures of SERS. The Contractor will also evaluate the SERS management process by analyzing, as appropriate, the essential components of its internal control structure. These components include segregation of duties, availability of information, timeliness, accessibility, and accuracy of information, policy manuals, supervision and review, audits, and training and planning. A review of this task area should also encompass an assessment of whether the pension fund utilizes a holistic view of risk management.

The evaluation will include an analysis of:

- *The adequacy of financial controls and integrity of financial statements. This should include an analysis of the purchasing policy and adherence to that policy;*
- *The adequacy of the current accounting process;*
- *The appropriateness and utility of regular reports provided to the Board and management, and how that reporting compares to industry standards and best practices;*
- *Sufficiency of internal audit services and external audit procedures; and*
- *Adequacy of record-keeping system.*

Julian Regan, Senior Vice President and the Public Sector Market Leader for Segal Marco, is the principal author of the NCPERS "Guide to Pension Governance and Oversight Best Practices," which includes a description of enterprise risk management for public pension funds

and a sample risk management framework. We will leverage this governance and model risk management framework in our approach.

As indicated in our Overall Program Management Approach, we will kick off each workstream uniformly and conclude each workstream with an effort to consolidate all workstreams into a consolidated executive summary. The tasks and steps unique to this workstream are as follows.

Data collection and review: Segal's review will evaluate the design and effectiveness of SERS's risk management processes and internal control environment against leading practices among public retirement systems as well as test it against the framework that SERS has chosen such as COSO Enterprise Risk Management, PMI Risk Management or in the case of IT the ISACA Risk Management Framework or NIST cybersecurity. Our approach is structured, evidence-based and aligned with leading practices among public pension systems. We will collect the agency's Enterprise Risk Reporting policies and procedures and also review sample risk reports used both internally and as reported to the Board. We will also request copies of all accounting procedures and control manuals, internal control policies, and auditor notes and financial statements. Finally, we will request and evaluate procurement procedures as well as a listing of all purchases that required competitive procurement.

Stakeholder interviews (and testing): We will assess the design and effectiveness of SERS's internal control framework through document review, stakeholder interviews and benchmarking against peer systems. Our evaluation will consider segregation of duties, information quality, policy adherence, oversight practices, audit functions and training processes. The review will encompass financial controls and purchasing policy adherence, accounting processes and financial reporting integrity, board and management reporting, the sufficiency of internal and external audit functions, and recordkeeping systems and data controls. To test the implementation of policy, we will review samples of reports and transactions where applicable.

Analysis and report development: In our analysis, we will evaluate whether SERS utilizes a holistic, enterprise-wide approach to risk management, ensuring that risks are identified, monitored and appropriately integrated into governance, oversight and decision-making processes.

Our review will also assess the extent to which risk information supports board oversight, management decision-making and ongoing monitoring of fiduciary responsibilities.

Segal will deliver a comprehensive assessment, benchmarking analysis and actionable recommendations to strengthen SERS's risk management framework, internal controls, governance oversight and operational accountability.

2.6 IT Operations

The Contractor will evaluate the control, accuracy, and integrity of the SERS information technology system. This should include a review of SERS data integrity; security and confidentiality of its records system; contingency and continuity planning; and incident management system. The Contractor will evaluate the overall risk level for SERS IT operations. The analysis will include an analysis of:

- The quality of processes and controls for the organization and management of IT operations and governance; IT project and portfolio management; data management; application development and maintenance; local area network infrastructure; security; business continuity plan and disaster recovery; and*
- Areas of high risk and SERS's mitigating controls for those defined high-risk areas. The analysis will compare the SERS's control structure with IT industry best practices.*

Reliable and secure technology operations are critical to supporting pension administration, investment oversight, data integrity and cybersecurity. Segal's review will evaluate the control, accuracy and integrity of SERS's information technology environment, including the systems, processes and controls that support secure and efficient operations.

As indicated in our Overall Program Management Approach, we will kick off each workstream uniformly and conclude each workstream with an effort to consolidate all workstreams into a consolidated executive summary. The tasks and steps unique to this workstream are as follows.

Data collection and review: Our approach is designed to assess both the design and effectiveness of IT controls and governance practices, with a focus on data integrity, cybersecurity, operational resilience and alignment with industry best practices. Drawing on our experience supporting public retirement systems, we evaluate IT environments from both a risk management and operational effectiveness perspective, helping ensure that technology supports fiduciary responsibilities and organizational objectives.

Segal will conduct a structured review of SERS's IT environment starting with a document review. While public pensions are not governed by the DOL, Segal is highly experienced in the DOL best practices and will use this in the risk review framework as it is better tuned to plan fiduciaries than other, broader guidelines like NIST 2.0 (which Segal also has the capabilities to employ). Using this framework, we will streamline the data collection and review process.

A DOL Best Practices Risk Assessment helps organizations understand whether their current policies, procedure and technical safeguards meet these expectations. It identifies gaps that could expose the plan to operational disruptions, data breaches, financial losses or regulatory scrutiny. By evaluating the organization against EBSA's recommended practices — ranging from secure system development and access controls to vendor due diligence and incident response planning — plan fiduciaries gain a clearer picture of their cybersecurity posture and defensibility.

The DOL focused cybersecurity review provides a fiduciary “health check” that supports compliance, reduces risk and demonstrates proactive responsibility to participants and trustees. Specifically it looks at the following twelve controls:

1. Have a formal, well documented cybersecurity program
2. Conduct prudent annual risk assessments
3. Have a reliable annual third-party audit of security controls
4. Clearly define and assign information security roles and responsibilities
5. Have strong access control procedures
6. Ensure that any assets or data stored in a cloud or managed by a third-party service provider are subject to appropriate security reviews and independent security assessments
7. Conduct periodic cybersecurity awareness training
8. Implement and manage a secure system development life cycle (SDLC) program
9. Have an effective business resiliency program addressing business continuity, disaster recovery, and incident response
10. Encrypt sensitive data, stored and in transit
11. Implement strong technical controls in accordance with best security practices
12. Appropriately respond to any past cybersecurity incidents

Stakeholder interviews: We will supplement our normal DOL assessment with interviews to cover any required scope not addressed by the DOL framework, primarily the Project and Portfolio management areas.

We will pay particular attention to technologies and controls that support pension administration, investment operations, financial reporting and the protection of participant information.

Analysis and report development: Segal will deliver a comprehensive IT Risk assessment that identifies high-risk areas, evaluates mitigating controls and provides practical, actionable recommendations to enhance IT governance, security and operational resilience.

Recommendations will be prioritized based on risk, operational impact and implementation considerations to support informed decision-making by SERS leadership and the Board. In *Exhibit 2*, we have provided a sample IT Assessment. This Assessment has been scrubbed of any client data.

4.6 Additional Information

Each proposal shall include any additional information that might be helpful to gain an understanding of the proposal. This may include diagrams, excerpts from reports, or other explanatory documentation that would clarify and/or substantiate the proposal. Any material included here should be specifically referenced elsewhere in the proposal.

Rarely does Segal look at all of the components being requested by ORSC in a single study or report. As indicated by the responses to each section, we approach each workstream in varying ways with practices of expertise. We have provided a few sample reports, again, that vary by level of detail and format. For ORSC, we will work to keep the integrity of our standard processes but also ensure consistency when we consolidate each of the reports together.

4.7 Glossary

Each proposal shall provide a glossary of all abbreviations, acronyms, and technical terms used to describe the services or products proposed. This glossary should be provided even if the terms are described or defined when first used in the proposal response.

The following glossary defines abbreviations, acronyms, professional designations, Segal business units, professional organizations and technical terms referenced throughout this proposal. The glossary is intended to assist ORSC reviewers in understanding terminology used to describe Segal's qualifications, methodology, proposed team and scope of services.

Term	Definition
AI	Artificial Intelligence
Alpha Investment Research Group	Segal Marco Advisors' manager research group responsible for investment manager due diligence, monitoring and selection.
ASA	Associate of the Society of Actuaries
ATC	Administration and Technology Consulting, a Segal practice specializing in retirement system operations, governance, organizational effectiveness, technology, risk management and administration reviews.
AUC	Assets Under Custody
AUM	Assets Under Management
BAA	Business Associate Agreement
CAPPP	Certification of Achievement in Public Plan Policy Program
CAPM	Capital Asset Pricing Model
CFA	Chartered Financial Analyst
COSO	Committee of Sponsoring Organizations of the Treadway Commission internal control framework
CTA	Chicago Transit Authority Retirement Plan
Cybersecurity Risk Assessment	Structured evaluation of cybersecurity threats, vulnerabilities and controls.
DB Plan	Defined Benefit retirement plan
DC Plan	Defined Contribution retirement plan
DCIIA	Defined Contribution Institutional Investment Association
DEI	Diversity, Equity and Inclusion
DOL	U.S. Department of Labor
DRS	Washington Department of Retirement Services
EA	Enrolled Actuary
ERISA	Employee Retirement Income Security Act of 1974
ETF	Exchange-Traded Fund
Fiduciary Audit	Independent evaluation of governance, oversight, compliance, controls, operations and fiduciary practices.

Term	Definition
FSA	Fellow of the Society of Actuaries
GFOA	Government Finance Officers Association
GIPS	Global Investment Performance Standards
GIRA	Global Investment Research Alliance
HIPAA	Health Insurance Portability and Accountability Act
IFEBP	International Foundation of Employee Benefit Plans
IPS	Investment Policy Statement
IRS	Internal Revenue Code
IT	Information Technology
JD	Juris Doctor
KPERS	Kansas Public Employees Retirement System
KPI	Key Performance Indicator
LLM	Master of Laws
MAAA	Member of the American Academy of Actuaries
Modified Dietz Method	Performance calculation methodology commonly used for investment return measurement
MS PERS	Mississippi Public Employees' Retirement System
NAF	NCPERS Accredited Fiduciary
NAGDCA	National Association of Government Defined Contribution Administrators
NAPPA	National Association of Public Pension Attorneys
NASP	National Association of Securities Professionals
NASRA	National Association of State Retirement Administrators
NCCMP	National Coordinating Committee for Multiemployer Plans
NCPERS	National Conference on Public Employee Retirement Systems
NCTR	National Council on Teacher Retirement
NDA	Non-Disclosure Agreement
NIRS	National Institute on Retirement Security
OCIO	Outsourced Chief Investment Officer
Ohio PERS	Ohio Public Employees Retirement System
OPEB	Other Post-Employment Benefits
Operational Due Diligence	Review of governance, controls, operational processes and risks associated with service providers or investment managers
ORSC	Ohio Retirement Study Council
OTRS	Oklahoma Teachers Retirement System
PMO	Program Management Office
PMP	Project Management Professional
PRISM	Public Retirement Information Systems Management

Term	Definition
PSLG	Public Sector Leadership Group
R&C Module	Segal's Relationship Identification and Conflict Identification System used to evaluate actual or potential conflicts of interest.
RFI	Request for Information
RFP	Request for Proposal
SALGBA	State and Local Government Benefits Association
SDCERA	San Diego County Employees Retirement Association
SDLC	Systems Development Life Cycle
SERS	School Employees Retirement System of Ohio
SMA	Segal Marco Advisors, Segal's affiliated investment consulting practice.
SMART	Segal Marco Advisors Risk SysTem, Segal Marco's proprietary asset allocation and risk modeling platform.
TWR	Time-Weighted Rate of Return

4.8 Cost Information

The pricing summary should include a breakdown of costs per element, including personnel costs (including hourly rates and estimated hours for professional and clerical staff assigned to the audit); travel and lodging; data processing costs; materials; and any other potential costs. The cost estimates in the pricing summary must include all necessary charges to conduct the audit and must be a “not to exceed” figure.

Segal’s pricing summary is structured to provide ORSC with transparency into both the personnel resources assigned to the fiduciary performance audit and the proposed fees associated with each major scope area.

The tables below identify the proposed team members, roles, hourly rates and estimated hours, followed by a scope-of-work pricing summary aligned with the audit components described in Section 4.5. All final pricing will be reflected in Segal’s not-to-exceed fee quote.

Proposed Fees:

Scope of work	Proposed Fee
2.1 Board Governance and Administration	\$71,000
2.2 Organizational Structure and Staffing	\$110,000
2.3 Investment Policy and Oversight	\$150,000
2.4 Legal Compliance	\$74,000
2.5 Risk Management and Controls	\$83,000
2.6 IT Operations	\$65,000
Program Management, Reporting and Final Presentation	\$55,000
Travel - Kickoff and interview for four staffs 3 days / 2 nights travel and expenses.	\$7,000
Travel – Final report for four staffs	\$7,000

Total fees not-to-exceed: \$622,000

Hourly Rate:

Team Members	Level	Estimated Time	Hourly Rate
Jeffrey Mills, PMP	Senior Vice President & ATC Practice Leader	50	\$585
Nick Perch, ASA, MAAA	Client Relationship Manager and Senior Associate	90	\$400
Melanie Walker, JD	Senior Vice President and Compliance Practice Leader	65	\$585
Meghan Horn	Vice President, Senior Compliance Consultant	45	\$400

Team Members	Level	Estimated Time	Hourly Rate
Laura Keller	Associate, Compliance	45	\$400
Scott A. Miller, JD, NAF	Senior Consultant	265	\$400
Amy S. Timmons, PMP, CFA, FSA, MAAA, EA	Senior Vice President	100	\$585
Karen Chavez	Senior Consultant	155	\$400
Jay Preal	Senior Consultant	125	\$400
Rosemary Elly Guillette	Senior Vice President	185	\$475
Geoff Strotman, CFA	Senior Vice President and Head of Alpha Investment Research Group	70	\$475
Rosa Limas	Senior Consultant	70	\$425

Travel and lodging, data processing costs, materials and other estimated costs

Segal's cost proposal will identify any anticipated travel and lodging, data processing costs, materials or other direct expenses necessary to complete the fiduciary performance audit. To the extent these expenses are expected, they will be included in the not-to-exceed fee quote below so that ORSC has a clear understanding of the total proposed cost for the engagement.

Any additional services or expenses outside the agreed scope will be discussed with ORSC in advance and performed only with prior authorization. If additional work is requested, Segal will describe the proposed scope, timing, fee basis and any applicable not-to-exceed amount before work begins.

Exhibits

The following exhibits are included to provide additional information regarding Segal's qualifications and experience. These exhibits contain professional biographies of the proposed engagement team, as well as sample reports and work products that illustrate the methodologies, analyses, findings and recommendations delivered on comparable engagements. Together, these materials demonstrate the depth of experience, technical expertise and multidisciplinary capabilities that Segal would bring to the ORSC fiduciary performance audit.

Exhibit 1 - Team Professional Biographies

Jeffrey Mills, PMP

*Senior Vice President, Administration and
Technology Consulting Practice Leader,
Chicago*

Project Role: Executive Sponsor



Expertise

Jeff is a Senior Vice President and Administration and Technology Consulting Practice Leader, based in the Chicago office. In his role as Practice Leader, Jeff is responsible for helping the ATC practice provide a wide variety of services to public sector and multiemployer clients. These services help clients create operational efficiencies, improve member services, reduce administrative costs and compliance, and increase internal controls.

Jeff has nearly 30 years of experience in providing operational and technology consulting to retirement, benefits and health and welfare organizations. Over the course of his career, he has consulted to over 30 public pension and benefit plans at both the state and local levels, and as a result, he is highly knowledgeable in benefits administration process and technology best practices.

Jeff has guided organizations through major pension administration system implementations. Most engagements have included assessing an organization's technology needs, followed by the selection, evaluation and implementation of benefits administration systems and supporting technology. Roles during implementation have included Project Manager, Project Oversight or Independent Verification and Validation, Risk Manager or Quality Assurance Director. He has worked from project initiation to project closure on numerous multi-year benefit system implementations, with five different benefit administration software providers.

He is experienced in assessing and analyzing situations and developing approaches – and delivering meaningful recommendations that are understandable and actionable by technical, operational and executive staff.

Professional background

Before joining Segal, Jeff was the Managing Director of LRWL Inc. He had more than 17 years of experience with LRWL, participating in or leading projects that involved all LRWL service offerings to public benefit systems including project feasibility studies, project management and oversight for benefit administration systems, business process reengineering and organizational studies.

Before LRWL, Jeff worked at Calibre CPA (formerly Thomas Havey LLP) Management Consulting Services, supporting Taft-Hartley/multiemployer clients with their technology needs in retirement, health, welfare and benefits areas. He also was a certified implementer of multiple financial systems: Dynamics and Blackbaud accounting for nonprofits.
Education/professional designations

Jeff earned a BS in Economics from Missouri State University and a MS in Technology Management – Project Management Program from the University of Maryland. He is a Project Management Professional (PMP) and is a member of the Southwest Missouri Chapter of the Project Management Institute.

Publications/speeches

Jeff's presentations include:

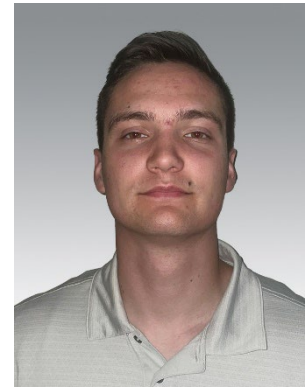
- “How to Protect the Plan and Members,” National Conference on Public Employee Retirement Systems (NCPERS) Chief Officers Summit, June 2022
- “What to Do After a Breach Occurs,” NCPERS Chief Officers Summit, June 2022
- “Cyber Security - Assurance Activities for Insider and Third-Party Partner Risks,” State Association of County Retirement Systems (SACRS) Spring Conference, May 2022
- “Project Management Principles - Employer Reporting Projects,” Public Pension Financial Forum (P2F2) Annual Conference, October 2021
- “Ensuring Quality in IT Projects,” California Association of Public Retirement Systems (CalPRS) IT Round Table, San Jose, CA, Spring 2019
- “Keeping the Ship off the Rocks,” Managing and Employer Reporting Rollout, P2F2 Annual Conference, Savannah, GA, October 2018

Jeffrey Mills, PMP
jsmills@segalco.com
301.908.3014
segalco.com

Nick Perch, ASA, MAAA

Client Relationship Manager and Senior Associate, Chicago

Project Role: Client Relationship Manager, Project Manager



Expertise

Nick is a Client Relationship Manager and Senior Associate in Segal's Retirement practice, based in the Chicago office, with four years of experience. He specializes in evaluating and analyzing multiemployer pension plans. His work includes deterministic and stochastic projections, experience studies, plan design and withdrawal liability determinations. He has valuable experience regarding pricing benefit improvements, variable annuity pension plans, Special Financial Assistance and understanding ERISA regulations.

Professional background

Prior to joining Segal, Nick held internships in the accounting and the construction fields.

Education/professional designations

Nick graduated *summa cum laude* from Bowling Green State University with a BA in Actuarial Science and a minor in Finance. He is an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries.

Nick Perch, ASA, MAAA
nperch@segalco.com
312.984.8586
segalco.com

Melanie Walker, JD

Senior Vice President, National Compliance

Practice Leader, Denver

Project Role: Client Delivery Manager, Compliance



Expertise

Melanie is a Senior Vice President and National Compliance Practice Leader. Based in the firm's Denver office, she has over 25 years of compliance experience.

Melanie is Segal's primary subject matter expert on public sector retirement plan compliance, serves as a national resource on many issues and is a member of our Public Sector Leadership Group (PSLG). She also provides ongoing and special compliance consulting services to employee benefit plans (both retirement and health) in all three of Segal's major markets.

Melanie's specialized expertise includes:

- Performing comprehensive compliance reviews for public sector defined benefit and defined contribution plans
- Analyzing, drafting and reviewing governing plan documents such as state/local statutes, administrative rules and policy manuals
- Researching and analyzing statutory, regulatory and agency guidance on tax rules and employee benefit laws
- Providing advice and training on fiduciary rules and plan governance structure
- Consulting with public entities on retiree health plan design and funding options
- Assisting public plans with administrative and operational issues relating to plan design and plan reform

Professional background

Prior to joining Segal, Melanie worked in employment law at a firm in Denver.

Education/professional designations

Melanie received a BA in Political Science and International Affairs with an area of concentration in the former Soviet Union at the University of Colorado at Boulder and a JD from the University of Colorado School of Law. She is a licensed attorney in the State of Colorado.

Melanie is an active member of the National Association of Public Pension Attorneys (NAPPA), where she serves on the Tax & Benefits Committee and as a co-leader of the DC/Hybrid Plans Forum. She is also a member of the National Association of Government Defined Contribution Administrators (NAGDCA) where she currently serves on the Legislative Committee.

Publications/speeches

Melanie frequently authors publications for distribution to Segal's public sector clients. As an active member of the National Association of Public Pension Attorneys (NAPPA) and the

National Association of Government Defined Contribution Administrators (NAGDCA), Melanie has written articles for both associations' newsletters and is a frequent speaker at NCPERS, NAPPa and NAGDCA conferences and other employee benefits organizations, including the International Foundation of Employee Benefit Plans (IFEBP), the National Coordinating Committee for Multiemployer Plans (NCCMP) and the Defined Contribution Institutional Investment Association (DCIIA).

Melanie Walker, JD
mwalker@segalco.com
303.241.5880
segalco.com

Meghan C. Horn, JD, LLM
*Vice President, Senior Compliance Consultant,
Washington, DC*
Project Role: Compliance Support



Expertise

Meghan is a Vice President and Senior Compliance Consultant in Segal's Washington, DC office with over 15 years of experience working with employee benefits law. As a member of the National Compliance Practice, Meghan provides technical expertise for Segal's compliance staff, consultants and clients, on qualified and nonqualified retirement plans, health and welfare benefit plans, executive compensation arrangements and employee fringe benefits, in the multiemployer, public and corporate sectors.

Professional background

Prior to joining Segal, Meghan served as in-house counsel for the retirement division of a major municipality, representing its defined contribution and defined benefit plans. Prior to that role, Meghan was a law firm associate, representing multiemployer health and retirement plans. Before practicing law, she completed a clerkship with the Appellate Court of Maryland. She participates in a volunteer program providing tax planning services and preparing income tax returns.

Education/professional designations

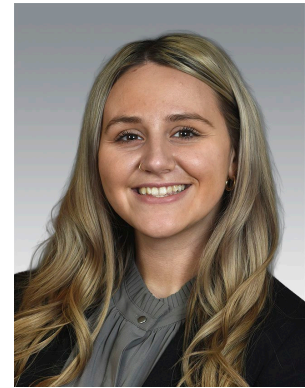
Meghan graduated *magna cum laude* from Salisbury University, Salisbury, MD, with a BA in English with a concentration in Rhetoric and Writing. She received a JD from the College of William and Mary School of Law, Williamsburg, VA and an LLM in taxation from the University of Baltimore School of Law, Baltimore, MD. Meghan is licensed to practice law in the State of Maryland and the District of Columbia and before the United States District Court for the District of Maryland and the United States Court of Appeals for the Fourth Circuit.

Meghan C. Horn, JD, LLM
mhorn@segalco.com
202.699.2654
segalco.com

Laura A. Keller, JD

Associate, Compliance, Washington, DC

Project Role: Compliance Support



Expertise

Laura is a Compliance Associate, based in Segal's Washington, DC office. She is responsible for drafting client memorandums, drafting and reviewing health and retirement plans, and researching recent federal and state regulatory matters. She advises employers, multiemployer plans and nonfederal governmental plans on matters including mental health parity rules, retiree-only plan requirements, fiduciary training, state and local paid leave mandates, and annual reporting and disclosure requirements.

Professional background

Prior to joining Segal, Laura completed an internship in Segal's National Compliance practice. While in law school, Laura also completed an internship with an individual health insurer's Enterprise, Risk and Governance division. She was also involved in the Urban Development pro bono clinic, helping to provide pro bono legal assistance related to real estate and economic development in distressed communities in the Pittsburgh region.

Education/professional designations

Laura graduated from the University of Pittsburgh, with a BA in Political Science and minors in both Spanish and the Administration of Justice. She received a JD from the Thomas R. Kline School of Law of Duquesne University in Pittsburgh, PA. Laura is licensed to practice law in the District of Columbia.

Laura A. Keller, JD
lkeller@segalco.com
703.407.4705
segalco.com

Scott A. Miller, JD, NAF

*Senior Consultant, Administration and
Technology Consulting, Minneapolis*

**Project Role: Client Delivery Manager, Board
Governance / Organization**



Expertise

Scott is a Senior Consultant in Segal's Administration and Technology Consulting (ATC) practice, based in the Minneapolis office. He is responsible for helping the ATC practice provide a wide variety of services to help public sector and multiemployer clients create operational efficiencies, improve member services, reduce administrative costs and increase internal controls.

Scott brings nearly 30 years of experience working with multiple-employer pension and benefits systems and other institutional investors in legal, consulting and executive roles. Over the course of his career, Scott has developed a thorough knowledge of pension and benefit plan best practices and has the ability to convey that knowledge in a professional and accessible manner.

Professional background

Before joining Segal, Scott was the Executive Director of the North Dakota Public Employees Retirement System, where he oversaw the delivery of all employee benefits to state employees, including defined benefit and defined contribution retirement plans and health, dental and life insurance benefits.

Prior to North Dakota, Scott held positions at the City of Phoenix Employees' Retirement System, the Chicago Teachers' Pension Fund and the Montana Public Employee Retirement Administration. He has held positions as in-house and outside counsel, external fiduciary and governance consultant, and director. He has worked on projects with over 50 different benefits boards and their staffs, including five of the 10 largest public institutional investors in the U.S.

Education/professional designations

Scott has a BBA in Economics from the University of North Dakota and earned his JD from the Willamette University College of Law. He holds the NCPERS Advanced Fiduciary (NAF) certification from the National Conference on Public Employee Retirement Systems (NCPERS) and has the honor of being appointed to the Public Employees Board of the International Foundation of Employee Benefit Plans (IFEBP).

Publications/speeches

Scott is a frequent speaker at national and local meetings on a variety of benefit topics including plan governance and fiduciary responsibility. A recent article and recent presentations include:

- “Navigating a Challenging Public Sector Environment,” International Foundation of Employee Benefit Plans (IFEBCP) 71st Annual Employee Benefits Conference, Honolulu, HI, November 2025
- [“Artificial Intelligence and Plan Governance Considerations,”](#) NCPERS *PERSist*, Winter 2025
- “Headline Risk: Keeping Public Employee Plans Out of the News,” IFEBCP 70th Annual Employee Benefits Conference, San Diego, CA, November 2024
- “Artificial Intelligence: What ‘Good’ Is It?,” Oklahoma Public Fund Trustee Education Conference, Tulsa, OK, September 2024
- “Legislators as Board Members,” National Association of Public Pension Attorneys, Fort Lauderdale, FL, June 2024
- “Artificial Intelligence and Plan Governance Considerations,” National Conference on Public Employee Retirement Systems, Seattle, WA, May 2024

Scott A. Miller, JD, NAF
smiller@segalco.com
 701.204.8717
segalco.com

Amy S. Timmons, PMP, CFA, FSA,
MAAA, EA

*Senior Vice President and Senior Consultant,
Administration and Technology Consulting,
Denver*

**Project Role: Organization/IT/Risk Management
Support**



Expertise

Amy is a Senior Vice President and Senior Consultant in Segal's Administration and Technology Consulting (ATC) practice affiliated with the Denver office. As an efficiency expert, she assists organizations with their operational, organizational and technical needs by leveraging her expertise in technology, change management and process redesign. With over 30 years of experience, Amy has delivered strategic solutions to private, public and international clients. Her background includes actuarial, investment, operational and technology consulting in the administration and management of various benefit programs.

Amy is a seasoned leader, having managed teams in pension, health, technology, member/employer services, disability, actuarial and accounting. She has collaborated closely with participants, employers, staff, senior management, governing boards, industry organizations and legislative groups, providing support in administrative reviews, organizational and governance evaluations, feasibility studies, strategic planning, third-party administrator searches and technology acquisitions and reviews.

Professional background

Amy was a Vice President with The Segal Company from 1996 to 2007 and re-joined Segal's Administration and Technology Consulting Practice in February 2018. Prior to re-joining Segal, Amy was the Retirement Practice Leader for DXC Technology, Inc. (DXC) where she was responsible for identifying emerging market trends in benefit administration and driving projects within the Practice to leverage and standardize offerings. As DXC's Retirement Practice Leader, Amy also served as the client advocate and facilitated interactions and information exchanges between DXC's benefits administration clients (e.g., Oregon PERS, New Mexico PERA, Texas TRS, Michigan ORS) and other industry experts. Amy worked closely with clients and delivery teams to address business process and technology issues and identify strategic initiatives in the retirement environment.

Some of Amy's past and current public sector clients include:

- Alabama Local Government Insurance Board
- Alaska Division of Retirement and Benefits
- Arizona Public Safety Personnel Retirement System
- Georgia Municipal Employee Benefit System

- Illinois Teachers' Retirement System
- Michigan Office of Retirement Services
- New Jersey Division of Pensions and Benefits
- New Mexico Public Employees Retirement Association
- Oklahoma Teachers' Retirement System
- Ohio Public Employees Retirement System
- Oregon Public Employees Retirement System Health Insurance Program
- Texas Teacher Retirement System
- Washington Department of Retirement Systems
- Wisconsin Department of Employee Trust Funds

Education/professional designations

Amy received a BS in Mathematics with minors in Actuarial Science, Computer Science and Economics from the University of Nebraska-Lincoln. She is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, an Enrolled Actuary, a Chartered Financial Analyst and a Project Management Professional.

Amy is the past chairperson of the Society of Actuaries Pension Section Council and the founding chair of the American Academy of Actuaries Public Plan Task Force. Amy is also a member of Segal's Public Sector Leadership Group (PSLG) and the former co-chair of Segal's Women's Leadership Council.

Publications/speeches

Amy is a frequent speaker at national and local meetings on a variety of benefit relevant topics from strategic planning to operational improvement to technology enhancements. Her speaking experience includes:

Amy is a frequent speaker at national and local meetings on a variety of benefit relevant topics from strategic planning to operational improvement to technology enhancements.

- "AI, Your Organization, and You", Interagency Benefits Advisory Council
- "Annual Cyber Security Survey Results", National Council on Teacher Retirement Annual Meeting (2022, 2023, 2024)
- "Changes for Organizational Effectiveness", National Association of State Retirement Administrators
- "Cybersecurity and Your System's Vendors", National Council on Teacher Retirement Trustee Workshop and System Directors Meeting
- "Cybersecurity: How to Protect the Plan and Members", Chief Officers Summit, National Conference on Public Employee Retirement Systems
- "Cybersecurity: What to do after a Breach", Chief Officers Summit, National Conference on Public Employee Retirement Systems
- "Cybersecurity and Your System's Vendors", National Council on Teacher Retirement Trustee Workshop and System Directors Meeting

- “Defensive Data Security and Risk Management in Today’s Cyberworld”, International Foundation of Employee Benefit Plans
- “Defined Contribution Versus Defined Benefits Plans – Which One is Right for You”, Public Retiree Benefits Conference
- “Emerging Technology – Can It Support the Delivery of Benefits Information?,” IPMA-HR Western Region Conference
- “Forging Connections: Women Leaders in Public Funds”, Public Funds Summit
- “Harnessing AI: Risks, Engagement, and Opportunity”, National Association of Government Defined Contribution Administrators
- “HIPAA Privacy and Security Update”, International Foundation of Employee Benefits Webinar
- “Holistic Risk Mitigation”, National Council on Teacher Retirement Trustee Workshop
- “Impact of New Technology on Benefits Administration”, Technical Actuaries Meeting
- “Information Technology and Cyber Security”, National Council on Teacher Retirement
- “IT Project Planning and Management”, Senior Staff Workshop, National Association of State Retirement Administrators
- “Learning from Actuaries: Active Engagement with Your Actuary and Pension Plan”, Public Funds Summit
- “Protecting Your Employees’ Personal Information: Data Security Strategies”, Government Finance Officers Association
- “Ransomware, Hacking, Data Breaches: What are You Doing for Protection?”, National Conference on Public Employee Retirement Systems

Amy S. Timmons, PMP, CFA, FSA, MAAA, EA
atimmons@segalco.com
 303.601.8548
segalco.com

Karen Chavez

*Senior Consultant, Administration &
Technology Consulting, Portland, OR*

Project Role: Organization Consultant



Expertise

Karen is a Senior Consultant in Segal's Administration and Technology Consulting (ATC) practice, affiliated with Segal's Portland office. She has 30 years of public sector experience and more than 22 years' experience as a leader in pension and health benefits administration. Her experience includes business process design and reengineering, as well as quality assurance, risk management, negotiations, database management, RFP development, program design, project management and implementation, change management, human resource management and DEI benchmarking. Karen has helped individuals, teams and organizations through transitions and has a broad understanding of organizational dynamics. She has worked closely with participants, staff, employers, governing boards, senior management, union leadership and industry organizations providing administrative reviews, strategic plans, communications and organizational evaluations and developing solutions.

Professional background

Prior to joining Segal, Karen was the administrator of the Oregon Public Employees Retirement System (PERS) Retiree Health Insurance Program. Previously she was the Human Resources Director, administered the Diversity, Equity and Inclusion program and held a variety of leadership positions in the pension program including in Membership and Employer Relations, IT and central administration.

Education/professional designations

Karen received her BS *cum laude* in Psychology from the University of Oregon (Eugene, OR) and her MPA from Lewis & Clark College (Portland, OR). She is a Change Management Registered Practitioner through AMPG International.

Publications/speeches

- ["Future Pension Plan Leadership Requires Succession Planning."](#) March 10, 2026
- "Change Management and Communication Strategies," IFEBP – Certification of Achievement in Public Plan Policy (CAPPP) Program, Instructor, Boston, MA, August 2024
- ["Organizational Resilience Leads to Change Management Success."](#) August 20, 2024
- "Building Organizational Resilience to Ensure Successful Change Management," PERSist Magazine, Summer 2024 ed.
- "Keeping the Stream Clean," CEM Global Pension Administration Conference, Portland, OR, May 2014

Karen Chavez
kchavez@segalco.com
415.646.3351
segalco.hcom

Jay Preall

Senior Consultant, Chicago

Project Role: IT/Risk Management Consultant



Expertise

Jay is a Senior Consultant in Segal's Chicago office. He has more than 35 years of experience working as a systems integrator across multiple industries, technologies and public sector clients.

Jay works with clients on modernizing business processes and technology solutions including cloud computing, version control systems, disaster recovery, business continuity, HIPAA and cybersecurity assessments, incident response planning and high application availability. He has specialized expertise in leading teams, staff development, systems analysis and design, application portfolio management, project management, business process improvement, business rule mining, database management systems, systems security, application testing, knowledge transfer, vendor and third-party software evaluations and software engineering practices.

Professional background

Prior to joining Segal, Jay served as a Senior IT Consultant for a large global systems integrator. During his tenure in this position, he focused on both private and public sector clients, most recently acting as an account Chief Technology Officer for multiple state agencies to help plan their modernization projects and strategic roadmaps.

Prior to that role, Jay worked with several federal agencies to evaluate their ability to modernize systems including moving to the cloud, ensuring that applications met national security uptime and security requirements and identifying critical business rules and requirements embedded in legacy systems.

He has also served as a Corporate Director for a health care company, leading the data acquisition team for ingesting billing information from hundreds of hospitals and before that, he worked with a state retirement agency to plan its system modernization roadmap.

Education/professional designations

Jay holds a BA in Computer Science from Potsdam State University of New York. He received Segal's One Company Award for 2022, recognizing colleagues who exemplify the attitudes and behaviors of teamwork and collaboration that are inherent in our One Company philosophy.

Jay Preall
jpreall@segalco.com
636.248.7270
segalco.com

Rosemary Elly Guillette

*Senior Vice President and Senior Consultant,
Boston*

Project Role: Client Delivery Manager, Investment Review



Expertise

Rosemary is a Senior Vice President and Senior Consultant in Segal Marco Advisors' New York office with over 25 years of retirement investment consulting experience. She specializes in public sector plans with a focus on both defined contribution and defined benefit plans. Rosemary helps clients develop efficient plan structures that take full advantage of the various asset class options available to defined benefit plans, including value added real estate/opportunistic, hedge fund of funds, private equity funds, private credit funds and absolute return strategies. Rosemary joined Segal Marco in 2000.

Rosemary is the consulting member of the Committee on Diversity Investing (CDI) at Segal Marco, which meets twice a month to focus on emerging and diverse money managers in the industry. CDI held an Emerging Manager conference in our Chicago Office in 2024, which Rosemary helped plan and execute. CDI will continue to have these conferences regularly along with its regular initiatives of expanding our opportunity set of diverse and emerging managers more broadly. Rosemary is a firm believer that diversity is a major contributor to better outcomes and innovation.

Rosemary is also a founding member of Segal's first Business Resource Group (BRG), the Women's Leadership Council where she helped develop goals, policies and ongoing educational opportunities for all Segal staff. The Women's Leadership Council, which was launched in 2019, aims to strengthen leadership and opportunity for women at Segal and help attract and retain a strong multicultural workforce. As part of the Women's Leadership Council, Rosemary provides all company educational sessions on Finance 101 topics including information regarding the Segal Pension and 401k savings programs.

Rosemary is also a member of other BRGs at Segal including PRIDE@Segal, Segal CARES, Sustainability@Segal and BOLD. PRIDE@Segal supports a diverse and inclusive environment at Segal and helps establish Segal as a leader and employer of choice in the LGBTQIA+ community. BOLD is dedicated to the support, inclusion and celebration of racial and ethnic cultural diversity with a focus on the BIPOC (Black, Indigenous and People of Color) community. Segal CARES connects, supports and advocates for all caregivers. Sustainability@Segal focuses on increasing sustainability awareness and action across the firm as well as creating and supporting sustainability in the communities where Segal employees live and work.

Professional background

Prior to joining Segal Marco Advisors, Rosemary specialized in estate planning, advising high net worth individuals at two prominent insurance companies.

Education/professional designations

Rosemary is a *magna cum laude* graduate of Regis College with a BA in Mathematics and a BA in Economics. She spent an undergraduate semester at American University studying Economic Policy. Rosemary has also studied Statistical Modeling at the Institute for Advanced Study (IAS) in Princeton, NJ.

Rosemary is a member of the National Association of Securities Professionals (NASP).

Rosemary was recognized by the Defined Contribution Institutional Investment Association (DCIIA) as a 2023 Rising Star.

Publications/speeches

Rosemary is a regular speaker at many public fund conferences and events throughout the country including the National Conference on Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR). In 2025, she spoke on Emerging Managers at NCTR and taught Real Assets at the NCPERS PATS Advanced Trustee workshop. Rosemary also attended the NASP 5th Annual Women's Forum in early 2025 and the NCTR Trustee Workshop in Williamsburg in the summer. Segal is a member of NIRS (National Institute for Retirement Security), which she attends regularly.

Rosemary is also regularly called on by the press to opine on various investment topics. She was quoted in a Bloomberg article [Calpers, Other US Public Pensions Pump Billions Into Private Credit - Bloomberg](#).

Rosemary Elly Guillette
rguillette@segalmarco.com
931.359.8143
segalmarco.com

Geoff Strotman, CFA
*Senior Vice President, Alpha Investment
Research, Chicago*
Project Role: Manager Research Consultant



Expertise

Geoff is a Senior Vice President and head of Segal Marco Advisors' Alpha Investment Research Group, located in the Chicago office. The Alpha Investment Research group is responsible for all fundamental/quantitative manager research across all asset classes.

Geoff has over 25 years of experience in the financial services industry and has led research teams at consulting firms for over 18 years. He is a member of the Investment Committee as well as the Alpha Manager Review Committee, which oversees manager selection. He is also responsible for providing support to firm consultants and clients.

Professional background

Prior to joining Segal Marco Advisors, Geoff led the public assets research team at Fiducient Advisors (formerly DiMeo Schneider and Associates) where he was a member of their Investment Committee and led their Discretionary (OCIO) Committee. He also held positions as the head of manager research at Altair Advisers working with high net worth individuals and the head of research working with institutional clients at Disabato Associates.

Education/professional designations

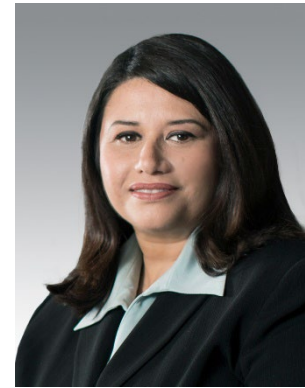
Geoff received his BBA in Accounting from the University of Notre Dame and his MBA with concentrations in Finance, Economics and International Business from the University of Chicago — Booth School of Business. Geoff is a CFA Charterholder and a member of the CFA Institute and the CFA Society of Chicago.

Geoff Strotman, CFA
gstrotman@segalmarco.com
312.612.8551
segalmarco.com

Rosa Limas

Vice President and Director, Chicago

Project Role: Custodial Services Consultant



Expertise

Rosa is a Vice President and Director in Segal Marco Advisors' Chicago office and has 30 years of consulting and institutional custody experience. She manages custodian services for the firm, utilizing her well-developed network across many custodial providers, to evaluate custodian banks and direct search activities. Within this role, she evaluates multiple aspects of custody banks, including securities lending programs, transition management, benefit processing, fees and custom reporting solutions. Rosa is also responsible for the due diligence of Defined Contribution (DC) and Defined Benefit consulting services, including providing research support for DC investment vehicles, such as mutual funds, ETFs, target-date funds and custom investment programs.

Rosa is a founding member of Segal Marco's Diversity Investing Working Committee, dedicated to the research, advocacy and incorporation of small, emerging and minority-owned organizations in clients' portfolios. In addition, she supports Segal Marco's Corporate Governance Practice, leading corporate engagements on board diversity and informing the firm's approach on proxy voting to promote diversity. Rosa has also been named a "2021 DEI Rising Star" by the Defined Contribution Institutional Investment Association.

Professional background

Rosa's prior consulting and banking experience includes heading an institutional trust department, treasury management, trade processing and performance evaluation.

Education/professional designations

Rosa received her BS in Finance and Business Administration from DePaul University in Chicago.

Publications/speeches

Rosa has made frequent speeches at industry conferences on DEI and custody topics, highlighting the importance of recognizing and utilizing available talent across the investment industry. She addressed the 2024 National Association of Securities Professionals (NASP) 6th Annual Consultant & Manager Conference Retreat (October 2024) on diverse and emerging manager initiatives and investment strategy search activities we are seeing in client portfolios both within the private and public markets. She moderated a panel "Broadening the DEI Lens" at the 2024 Diversity in Investments Forum (October 2024) sponsored by the Office of the Illinois State Treasurer.

Rosa has been quoted in industry publications, including *Chief Investment Officer* and *Fundfire* on these topics. In addition, Rosa co-authored a research paper entitled, ["Disrupting the Status Quo."](#)

Rosa Limas
rlimas@segalmarco.com
312.612.8407
segalmarco.com

Exhibit 2 - Sample reports

The following pages contain representative sample reports that illustrate Segal's approach to conducting assessments, documenting findings and communicating recommendations. These examples are provided to demonstrate the quality, structure and presentation of deliverables that may be developed as part of the proposed fiduciary performance audit.

Employees' Retirement System

Operations and Administration Study

Report

June 2, 2026 / Scott Miller / Karen Chavez

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Section I: Executive Summary

1. Introduction

In February 2026, the Employees' Retirement System (ERS) engaged Segal to perform an objective organizational review of ERS's administration and operations. This study focused on key areas of ERS's governance framework, organizational structure, staffing and compensation, operational processes, and the use of current and potential technology solutions.. Established in XXXX, the ERS has evolved into five defined benefit plans covering general employees, appointed officials, and park police personnel (Plans A, B, C, D, and E).

ERS is overseen by an XX-member Board of Trustees comprising Commission appointees, ex-officio Commission leaders, elected employee representatives, and public and union representatives, all of whom serve as fiduciaries for the sole benefit of ERS participants. Day-to-day administration is carried out by a dedicated staff led by an Executive Director and Deputy Executive Director. This team is responsible for member services, benefit administration, and operational support, with personnel costs representing about 43% of ERS's operating budget. Together, the Board, leadership, and staff form a committed governance and administrative structure charged with delivering pension benefits efficiently and in alignment with best practices.

In 2025, ERS had a transition to a new leadership team after a long-time Executive Director retired. Over the last five years, the ERS has added positions for succession planning, including the Deputy Executive Director position and two additional positions that were added for succession and career advancement purposes. The Board took the transition as an opportunity to evaluate the administration of ERS through this organizational assessment.

2. Key Findings

ERS's current governance and administrative practices have successfully delivered core services to members and retirees in the face of organizational challenges that, if addressed, will strengthen its long-term effectiveness and alignment with public pension best practices. Key findings from our review include the following overarching themes:

1. **Organizational Capacity and Staffing:** The small ERS team has demonstrated strong commitment in meeting member needs. However, several critical roles are either missing or understaffed. Notably, ERS lacks dedicated specialized positions – for example, as of March 2026, when we conducted our staff interviews, there was no dedicated human resources specialist, IT/pension systems manager, or communications/outreach professional on staff (some of these roles are vacant or are handled ad-hoc). This has led to informal redistribution and “scope creep” of duties – certain staff members perform tasks beyond their job descriptions (such as HR tasks being handled by non-HR personnel and technical system duties being performed by benefits

staff). While required work is getting done, these gaps and overlaps are causing overextension of key individuals and potential single points of failure in operations. To bolster resiliency and service continuity, ERS should consider augmenting its capacity – for instance, by filling or creating positions in human resources, IT and data management, finance, and member communications – and ensure staff compensation remains competitive with peer systems in the [Region] public sector market to attract and retain the talent needed for these roles. We understand that hiring is imminent for both the senior accountant position and the communication and digital specialist position, which will help resolve issues related to those positions.

2. **Governance Structure and Board Authority:** ERS benefits from a multi-member Board of Trustees that includes diverse stakeholder representation, aligning with public pension governance best practices. This XX-member Board structure – with representatives of the Commission, plan members, and others – helps ensure a broad perspective in overseeing ERS.
3. **Performance Management and Accountability:** The review identified the need for a more structured and transparent approach to performance management for both ERS staff and leadership. The current employee performance evaluation process is viewed as cumbersome and not fully effective – the evaluation form uses numerous factors and complex scoring, and its rating definitions (e.g., what constitutes “Satisfactory” performance) are counter-intuitive. Performance reviews are not consistently linked to outcomes like professional development or merit adjustments, potentially reducing their credibility and impact. Likewise, the Executive Director’s performance assessment is handled through an informal, narrative process without a standardized evaluation instrument or predefined criteria. To promote a culture of accountability and improvement, ERS should implement a streamlined, best-practice performance management system. This would include updating and clarifying job descriptions, adopting a simpler evaluation form and clear rating scale, and establishing measurable performance goals and service level metrics for staff. For the Executive Director, the Board should introduce a formal annual evaluation framework with agreed-upon key performance indicators (KPIs) and a simple rating scale (e.g. “Exceeds Expectations / Meets / Needs Improvement”). These changes will ensure that expectations are clear from the start of each year, that feedback is regular and evidence-based, and that both employee development and any compensation or bonus decisions are directly tied to performance outcomes. Strengthening the performance management process in this way will reinforce accountability, improve morale through fair recognition of achievements, and help the Board and management team drive the ERS toward its strategic objectives.
4. **Operational Efficiency and Technology:** ERS’s transaction processing and member service functions rely on several manual or ad hoc processes, indicating significant opportunities to improve efficiency through better use of technology and data. For example, ERS uses a pension administration software (Pension Software), but many benefit calculations are still performed and double-checked manually by staff – a time-consuming approach given the complexity of the plans. In addition, ERS has limited automated tracking of service performance metrics (such as call response times, case backlogs, or processing turnaround), relying mostly on manual record-keeping for member inquiries and workflow monitoring. Enhancing the utilization of available technology – such as fully leveraging Pension Software’s calculation and reporting capabilities – and introducing modern workflow tools and member self-service options would reduce errors and administrative burden. We also recommend that ERS develop a set of key performance indicators to regularly measure service quality, efficiency, and outcomes (for instance, member satisfaction rates, call wait times and abandonment rates, benefit processing timeliness, and payment accuracy). By investing in

these operational improvements, ERS can provide faster, more accurate services to participants and better demonstrate its performance to the Board and stakeholders. Over time, these changes will improve operational health and help ERS keep pace with industry standards for customer service and operational excellence.

3. Conclusion

In summary, ERS has a solid foundation of dedicated staff and a representative governance structure that have enabled it to meet its basic obligations to members and beneficiaries. At the same time, this assessment has highlighted numerous areas where ERS can modernize and improve its practices to enhance service delivery, reduce operational risk, and align more closely with public pension best practices. By addressing key issues – such as filling critical staff vacancies, formalizing performance management, and leveraging technology for efficiency – ERS will be better positioned to fulfill its mission in a sustainable, member-focused, and forward-looking manner. These enhancements are timely, given the evolving needs of ERS and its stakeholders, and they will help ensure that ERS continues to provide reliable, high-quality retirement services well into the future.

Looking ahead, the ERS Board and leadership should carefully review and prioritize the recommendations in this report to develop a practical implementation roadmap (we have included one possible roadmap in the Appendix). Some improvements can be undertaken in the short-term using existing resources, while others may require longer-term planning, additional budget consideration, or external expertise to implement effectively. By phasing the initiatives – tackling foundational organizational changes and quick operational wins first, then pursuing more strategic projects – ERS can achieve steady progress without disrupting ongoing services. As these changes are considered, it will be important to maintain open communication with stakeholders (staff, plan members, and the Commission) to build consensus and ensure a smooth transition to any new structures or processes. Segal remains committed to ERS's long-term success and stands ready to support ERS as it moves forward with strengthening its administration and governance.

4. Acknowledgements

Thank you to the ERS employees and trustees who provided such valuable information for this pension administration study. Their cooperation and candor contributed valuable information, insights, and ideas that provided direction to our analysis and depth to our recommendations.

Section II: Project Scope and Approach

1. Core Areas

The scope of work for this project consisted of the following elements:

Comparative Analysis of Organizations

- Provide an overview of the organizational structure and positions/functional areas of comparable pension systems similar in size to the ERS.
- Identify key performance indicators for service level targets that can be used to monitor and measure organization and staff performance.

Structure, Staffing Levels, and Performance Management

- Assess current staff positions to determine if staffing levels are adequate to meet the strategic goals and objectives of the ERS.
- Review position descriptions to assess whether roles and responsibilities are clearly defined, if there are areas of redundancy, or gaps in job functions.
- Assess management structure and whether current hierarchal structure effectively supports staff and workflows; provide recommendations for enhancements to organizational structure.
- Recommend the creation of new staff positions designed to support member needs, administrative operations, and organizational priorities.
- Evaluate staff performance evaluation process. Identify key qualitative and quantitative metrics that can be incorporated to overhaul the performance evaluation process.

Executive Director Performance Evaluation Process

- Review the existing performance evaluation process for the Executive Director and provide recommendations for process improvements.
- Identify essential performance indicators that the Board may utilize to assess the Executive Director's annual performance, as well as establish clear parameters for determining compensation and bonus structures.

Executive Director and Staff Compensation Review

- Identify comparable pension systems to the ERS or located within the same region that can be utilized for assessing the Executive Director compensation and bonus structures.
- Review staff compensation compared to other similar-sized public pension plans within the geographic region.

2. Methodology

Our approach to assisting ERS with this project involved three distinct phases: information gathering, including data provided by ERS staff pursuant to our data request, online research, and conducting in-person interviews; analysis of the information we acquired and comparing it to industry best practices; and report writing. We employed generative artificial intelligence (AI) to assist us in performing research, compiling and analyzing data, and editing various aspects of this report. As required by our AI use policy, we independently verified the AI-generated information before including it in this report. We also enabled Enterprise Data Protection during all AI usage to ensure the confidentiality of information provided to AI for research and analysis.

Information Gathering

Segal requested a variety of data from ERS, including copies of plan documents, forms, updated staff job descriptions for each ERS employee, and transaction volume for all work performed by the staff, to gain a more in-depth understanding of the current state.

Segal also conducted a series of interviews with the Executive Director and each ERS employee. Through those interviews we gained a more comprehensive understanding of the existing operational and organizational structure and environment, the services provided, and the challenges and complexities faced by ERS. One employee was unavailable for an interview due to being on leave.

Segal conducted interviews in the ERS office as follows:

- February 25, 2026 – Kick off, Executive Director and management.
- February 26, 2026 – Individual staff interviews and Executive Director debrief.

Analysis

Segal analyzed the information acquired and compared it to our extensive public pension system experience and knowledge of best practices.

Report Development

At the conclusion of the staff interviews and our analysis, we drafted this report summarizing our findings and recommendations. The report addresses all the areas outlined in our proposal, including:

- A comparative analysis of peer pension systems identified from our research and with ERS input, including key performance indicators for service targets used to manage organizational and staff performance.
- Review of organizational structure, staffing levels and performance management practices and determine staffing gaps, if any.
- Recommendations for the creation of new staff positions, assessment of the management structure, and determination of whether staffing levels are adequate to meet the strategic goals of ERS.
- Evaluation of the staff and Executive Director performance management processes, providing recommendations for process improvements and clear parameters for Executive Director compensation and bonus structures.
- Guidance on conducting Executive Director and staff compensation reviews.

Report Review

Segal is prepared to discuss the findings and recommendations with the ERS leadership team, Commission, Trustees and other key stakeholders, and provide further details related to the observations or recommendations made in this report.

Please note that an Organizational Review often serves as the foundation or roadmap to future pathways for improved operations. Segal is prepared to assist with the implementation of any of these recommendations if the Trustees so choose.

Section III: Findings and Recommendations

1. Organizational Structure

a. Overview of ERS

The Employees' Retirement System (ERS) serves employees of the Commission.

ERS is governed by an XX-member Board of Trustees. Trustees serve for three-year terms and elect a Chair and Vice Chair to serve for a two-year term. The Board's primary fiduciary responsibility is to prudently manage, protect, diversify, and administer the assets of ERS for the exclusive benefit of its members and beneficiaries, ensuring that sufficient assets are available to pay promised benefits.

Day-to-day operations and administration of ERS are carried out by a professional staff of XX employees. ERS staff are responsible for administering benefits, supporting Board governance, overseeing service providers, and managing the operational functions necessary to ensure compliance with applicable laws, regulations, and plan provisions. For fiscal year 2026, the ERS operating budget includes approximately \$XX million allocated to personnel services, representing about 43 percent of the total operating budget, reflecting ERS's reliance on internal staff to support its fiduciary, administrative, and operational responsibilities.

The ERS Organizational Chart is below:

REMOVED

To help understand and evaluate the ERS organizational structure, it is helpful to look at other retirement systems and compare their characteristics and structure to ERS. The list below of comparative retirement systems consists of systems ERS requested and other systems we identified through a nationwide search.

Pension Plan & Location

County Employee Retirement Plans (County, State)

County Pension Plans (County, State)

City Employees' Retirement System (City, State)

State Retirement & Pension System (State)

Retirement Board (State)

County Retirement Systems (County, State)

Educational Employees' Supplementary Retirement System (County Public Schools, State)

Retirement System (State)

City Employees' Retirement System (City, State)

City Employees' Retirement System (City, State)

County Employees Retirement System (City, State)

Firemen & Policemen's Pension Fund (City, State)

The [Region] peers demonstrate that regional cost-of-living and competition for talent influence pay. ERS, based in the [Region] area, faces the same labor market. For instance, if ERS loses an accountant to County for a higher salary, it indicates a need to re-examine ERS's pay scale. Thus, staying in step with regional public-sector salary trends is important.

i. Current State/Observation

- ERS is governed by an XX-member Board of Trustees.
- The ERS Board has delegated the day-to-day administration of the retirement plans to an Executive Director, who reports directly to the Board. The Executive Director leads a group of XX additional staff, for a total of thirteen.
- ERS is a single-employer plan operating somewhat autonomously within the bi-county agency structure.
- ERS currently contracts with the [name of organization] for its IT needs.
- The ERS Board selects the investment consultant that is responsible for investing the ERS trust fund monies.

- The Executive Director, through delegation by the Board, has the authority to hire the necessary staff to administer the retirement system.

ii. Best Practices

- In our experience, having between seven and eleven Board members, and always an odd number to avoid tie votes, is the most advantageous.

iii. Recommendations

- None.

b. Comparative Organization Structures

i. Current State/Observation

- The peer retirement systems we are using to provide comparable information that are governed by Boards of Trustees have between nine and sixteen Board members.
- Some peer systems function as independent pension agencies, while others are embedded in general government operations. For example:
 - The [organization] is led by an Executive Director who reports to the Chief Administrative Officer rather than to the Board.
 - The ERS division is housed within the HR department and relies on HR and Finance staff. The Pension Plans' Board of Trustees oversees the investment program, but not the administrative staff.
 - The [organization] is an independent state agency with a XX-member Board to which the Executive Director reports.
 - The [organization] consists of XX separate retirement systems overseen by XX separate Boards of Trustees and administered by a single unified staff. The Executive Director reports to all XX Boards.

ii. Best Practices

- The duty of loyalty and the exclusive benefit rule require retirement boards and their administrative staff to act in the sole best interests of the plan members and beneficiaries. That is much easier to accomplish when plans are governed by a single Board of Trustees that has the necessary independence and autonomy to do so.

iii. Recommendations

- None.

c. KPIs for service level targets

i. Current State/Observation

- ERS has not historically tracked member service KPIs, although it has begun some manual tracking of calls and caseload.
- ERS has not had the technology available to automatically track call statistics.

ii. Best Practices

- Peer organizations and most other public retirement offices track and use many of the following KPIs to evaluate their delivery of services to their membership:
 - Member Satisfaction Rate: A high member satisfaction score is a key indicator of service quality. Many public pension plans survey new retirees or active members who use their services (counseling, workshops, etc.) to gauge satisfaction.
 - Call Center Responsiveness: Monitoring the performance of member calls is crucial for service levels. Two complementary KPIs are common: average call wait time and call abandonment rate.
 - Benefit Processing Timeliness: This KPI measures how quickly the organization processes critical transactions like retirement applications, pension benefit commencements, and refund payouts. Members highly value getting their first payment on time after retirement. Peers often set specific turnaround targets.
 - Benefit Payment Accuracy: Ensuring that calculations are correct and payments are accurate the first time is paramount in pension administration. A suitable KPI is benefit calculation accuracy, with a target near 100%. This can be tracked by internal audit reviews or quality control sampling – for instance, checking a sample of new retiree calculations for errors, or monitoring the number of post-audit adjustments needed. Peers implicitly emphasize accuracy.

iii. Recommendations

- Research technology improvements, including implementing more Pension Software functionalities (see Section 4. Other Items of Note, below), that will assist ERS in automatically tracking as many of the above-listed KPIs as possible and consider the cost-versus-benefit of implementing those improvements.
- Implement a short survey for retirees and beneficiaries (or periodically for active members after interactions) and aim for at least 90% satisfaction. This KPI will track how well ERS staff are meeting member needs in areas like responsiveness, courtesy, and clarity of communication.
- Adopt a target such as “80% of calls answered within 3 minutes” or an average wait of less than three minutes, and keep abandoned calls under 10% of total calls. These KPIs incentivize adequate staffing and efficiency in the call center. A low abandonment rate and short wait time indicate that members can reach ERS staff readily, improving overall satisfaction.
- Establish a benefit processing timeliness metric, e.g., “% of new retirements processed and first payment issued by the first pay cycle after retirement.” A realistic target might be 95% on-time (aspiring to 100% ultimately). This would be measured by tracking all retirements each quarter and calculating what fraction had their pension benefit fully in

place by the expected date. Another related measure could be the turnaround time for refund distributions or purchase-of-service requests (e.g., “95% of contribution refunds issued within 30 days of separation”). Overall, having a KPI on processing timeliness focuses ERS staff on efficiency and identifies process bottlenecks if targets are not met.

- Quantify a benefit payment accuracy metric, such as by aiming for “zero material errors” – e.g., 99%+ of benefit computations require no correction after final audit. Another indicator is the absence of audit findings related to benefits. By tracking errors or corrections, ERS can identify training needs or process improvements. The KPI can be reported as “% of benefits processed without error” or simply monitoring that 100% of monthly payments are issued correctly (any anomalies trigger a root cause analysis). Maintaining near-perfect accuracy not only builds retiree trust but also avoids costly retroactive fixes.
- In selecting KPIs, it is wise to focus on a balanced set that covers customer service, operational efficiency, and financial outcomes. The metrics above are grounded in what peer funds monitor and represent best practices in public retirement system management. They are specific, measurable, and aligned with ERS’s mission. We suggest reporting these KPIs to the ERS Board quarterly or annually, complete with trend data and peer comparisons where available.

2. Structure and Staffing Levels

a. Position description accuracy

i. Current State/Observation

- We conducted a detailed comparison between employee self-reported duties and their formal position descriptions (PDs).
- Our analysis revealed several areas of role misalignment, scope creep, and functional gaps that may impact operational efficiency, staff workload balance, and organizational resilience.
- Many employees are performing duties that extend beyond their formal PDs.

ii. Best Practices

- The leadership team must have a clear understanding of the collective efforts required to administer a retirement plan.
- Have a staffing plan that identifies how each position enables the organization to meet the mission and goals.
- Develop PDs that are based on operational goals and needs, not on who can do various tasks or the work they would like to perform.

- Document job duties of each position clearly, defining the responsibilities of each position, the operational metrics and the skills and abilities necessary to effectively perform in the assigned role.
- If it is unclear if an employee is working outside of their official job duties, consider performing a desk audit to identify and correct classification misalignment and make compensation corrections, if needed.
- Staff are accountable for the duties in their official PD. Additional duties that are not held within the employee's PD should be assigned officially and formally by a PD update or official memo, with a start and end date and clear expectations of the work that is to be performed. Incorporate this additional information into the annual evaluation process.
- Review PD's annually and update before the following review cycle to ensure coverage of all necessary activities within the organization and to clearly communicate changing responsibilities and expectations to staff.
- Job classification and compensation reviews may be necessary if duties are extended into higher job families or classification tiers.

iii. Recommendations

- Please see the recommendations in section III(2)(c), below.

b. Adequacy

i. Current State/Observation

- Our analysis identified several roles that are either explicitly missing or currently vacant (as of our meeting in March):
 - There is no dedicated Human Resources Manager, leading to fragmented and inconsistent HR practices, impacting employee performance and position management activities such as updating job descriptions and management effectiveness.
 - The full-time Accountant position was vacant, leaving a gap in financial oversight and internal controls. We understand that hiring an individual for this position is imminent.
 - There is no dedicated IT resource, resulting in technical duties being absorbed by non-technical staff.
 - A Communication and Digital Specialist position has been approved but was vacant, leaving member engagement and digital communications underdeveloped. We understand a person has been hired for this position.
 - The Member Relations Assistant role was unstaffed due to extended leave. We understand that person is now back to work.
- As a result, staff have had roles and activities both added to their position and removed and given to a different position in an effort to get the necessary work done. This has resulted in the areas of role misalignment, scope creep, and functional gaps that we identified.
- Notably, the required work is getting done but could most likely be accomplished more efficiently.

ii. **Best Practices**

- All critical roles within an organization should be filled by someone with the required skills and experience to perform the job duties.
- A staff position for every role is not strictly necessary – contracting for specific roles is a common practice across the country, even for very large systems.
- For long-term absences, contracting with a temp agency for one or more of the less specialized roles can help take pressure off staff who would otherwise have to absorb some of those job duties.

iii. **Recommendations**

- Please see the recommendations in section III(2)(c), below.

c. **Structure Enhancements**

i. **Current State/Observation**

- The current organizational structure (see page 8) is relatively vertical.
 - The Executive Director has two direct-reports – the Deputy Executive Director and the Administrative Specialist.
 - The Deputy has three direct-reports – the Accounting Manager (with one person below them), the Communication and Digital Specialist, and the Member Relation Manager.
 - The Member Relation Manager has five direct reports, and one staff below one of those direct reports.
- As noted, the Executive Director's span is very tight. This is a strength, as it allows the Executive Director to focus on strategic issues (funding policy, Board relations, intergovernmental relations, major contracts) while entrusting day-to-day operational oversight to the Deputy.
- The organizational structure is lean but generally well aligned with ERS's size, asset level, and complexity. Based on our review of similar-sized peer systems, staffing levels and functional groupings are comparable to those peer plans. Notably, the staff size has increased from XX in [year] to XX.
- The Board–Executive Director–Deputy Executive Director reporting structure is clear and consistent with public pension best practices, supporting accountability and effective fiduciary oversight.
- A significant amount of operational responsibility flows through a small number of senior staff positions, particularly the Deputy Executive Director, creating some key person and capacity risk.
- The small staff size means limited redundancy and heightened reliance on key individuals.
- ERS's use of external consultants for investments, actuarial, legal, and audit services is appropriate for its size and mirrors peer practice, but it places added importance on strong board oversight and contract management.
- Leveraging the broader Commission for certain support functions enhances efficiency and reduces overhead, though it requires continued clarity around roles, service expectations, and fiduciary independence.

ii. Best Practices

- Boards focus on fiduciary oversight and policy, while professional staff manage day-to-day operations under clearly delegated authority.
- Even in small organizations, finance, benefits administration, IT, and investment oversight should be structurally separated to support internal controls and reduce risk.
- Organizational structures should be able to evolve as plan size, complexity, or regulatory demands increase, without requiring wholesale redesign.
- Smaller plans typically rely on external consultants and specialists (e.g., actuaries, investment consultants, and attorneys) but must have sufficient internal expertise to be able to prudently oversee the delegation of those responsibilities.

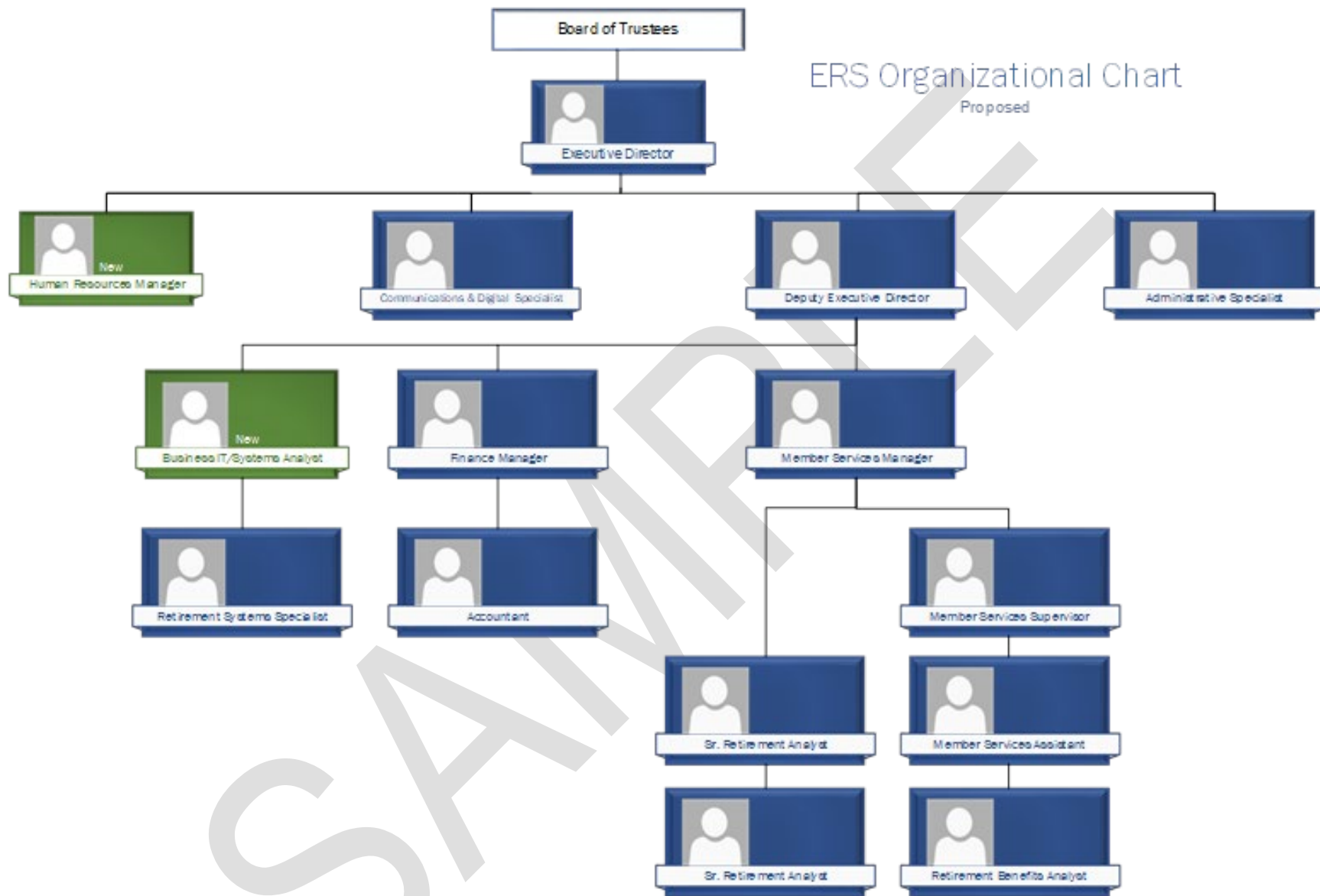
iii. Recommendations

- Consider periodic independent operational reviews (or a focused board committee) to supplement the annual financial audit and strengthen risk management.
- Where ERS relies on Commission resources (e.g., IT, legal), we recommend reviewing the current agreements and updating them to reflect ERS's current needs.
- Incorporate periodic organizational reviews into the Board's strategic planning cycle to ensure the structure continues to align with ERS's mission, risk profile, and long-term needs. Typically, that would happen every five years. However, in this case we would recommend a review in two to three years because of the number of changes that may be implemented because of this report.
- Based on the comparison of official duties from PDs and the work employees report they are doing daily, we suggest transitioning the positions as provided in the following table (and modifying their PDs accordingly) (note that the new position titles are consistent with the [organization's] survey positions):

Current Position Title	New Position Title
Member Relations Manager	Member Services Manager
Member Relations Supervisor	Member Services Supervisor
Member Relations Assistant	Member Services Assistant

- Hire an HR Manager (or a temporary HR Manager for two years and re-evaluate whether to make the role permanent after one year) who can build a workforce strategy and help the Executive Director implement the following:

- Position management: update/revise PD's, create a standard PD format to be used consistently across all staff, implement a schedule for review, develop hiring and onboarding standards, build new PD's for IT and HR specialists and help hire the positions.
- Performance Management: Develop, document and roll out a new performance evaluation policy / practice / schedule, implement coaching practice and a performance goal model, progressive discipline policy, monitor improvements, and create a recognition program.
- Talent Development: Establish training program/expectations for each position, create a learning library to include training to meet performance goals, implement development plans and SMART goal training.
- Management Support: Provide ongoing daily support to manager and staff.
- Update Employee Handbook and policies.
- Consider modifying the organizational structure as follows:



3. Performance Management

Performance management is a set of policies and processes that guide and support employee performance through clear expectations, consistent supervision, and fair practices. It includes recognition, rewards, and corrective actions to help employees excel and address issues as needed.

These systems clarify standards, outline ways to improve, and foster ongoing collaboration between management and staff. Effective performance management relies on clear expectations and regular feedback or evaluations.

a. Employee Performance Evaluation Process and Form

An effective performance evaluation process sets clear expectations, reinforces accountability, and aligns individual performance with organizational goals. It provides a structured method for feedback, supports development, informs staffing and compensation decisions, and reduces risk. For governing boards, it translates strategy and oversight into measurable outcomes. Overall, it promotes transparency, consistency, and trust while connecting daily performance to long-term organizational health.

Accurate, up-to-date job descriptions and a straightforward evaluation form are essential. Annual updates clarify expectations from the start, and a simple form encourages management participation. If regular coaching is not part of the culture, this process may be the only opportunity for constructive feedback.

The evaluation form should focus on observable behaviors and results, be user-friendly, and provide documentation for decisions about development, corrective actions, or compensation. Ratings must be evidence-based and applied consistently to ensure fairness and defensibility.

i. Current State/Observation

- We reviewed the ERS performance evaluation process and form in conjunction with interview feedback and general performance management standards.
- The ERS form evaluates policy compliance, service orientation, dependability, teamwork, productivity, problem solving, communication, and management/supervision where applicable. These map strongly to standard measures such as job knowledge, quality, productivity, communication, teamwork, dependability, and compliance. This is important because it shows alignment with job-related criteria and reduces legal risk by focusing on observable behaviors rather than traits.

- ERS uses a multi-stage performance cycle which aligns with best practice emphasizing ongoing feedback and “no surprises.”
- The current ERS form is used across all staff roles and distinguishes between general performance factors and position-specific job functions which supports position-appropriate evaluation.
- Definitions (e.g., “satisfactory”) are counterintuitive and blur the distinction between meeting and not meeting expectations, with “Satisfactory” defined as occasionally falls short of expectations.
- The form is overly complex requiring scoring up to 10 general factors, multiple position specific factors, averaging calculations, and basic math to determine an overall rating. This creates a situation of lowering the usability for supervisors, inconsistent scoring due to fatigue or misunderstanding, and may not encourage meaningful feedback.
- Performance evaluation results are not clearly linked to compensation or recognition decisions in a consistent, transparent manner. The ERS form calculates scores but does not explicitly tie results to merit increases, bonuses or corrective actions. The risk is that it undermines the credibility of the ERS performance management process, and compensation decisions appear subjective rather than systematized based on merit.
- Quantitative operational metrics (e.g., timeliness, accuracy, service levels) are not consistently embedded in evaluations.

ii. **Best Practices**

- Update and review job descriptions with employees annually, before evaluations. Set and review performance standards at the start and mid-year; ERS follows this practice.
- The evaluation form should state the employee, period, evaluator, and confidentiality and use a simple rating scale with clear definitions to ensure consistency. Limit factors for easier administration.
- Give continuous feedback throughout the year; don’t wait until the evaluation to address issues. ERS supports this approach. Link performance outcomes, development actions, and rewards.

iii. **Recommendations**

- Establish a performance management system that combines annual job description reviews, regular coaching, supervision, recognition, and progressive discipline. Clearly communicate this approach to all employees to set performance expectations. Measure progress during evaluations and link compensation to outcomes through policy.
- Replace mathematical averaging with management judgement ratings based on evidence; use math for analytics, not decision thresholds. Apply quantitative metrics such as meeting deadlines, error rates, work volume, and attendance reliability, along with qualitative measures like service quality, teamwork, responsiveness, judgment, and initiative—all tied to job descriptions.

- Hold quarterly check-ins for updates and coaching. Develop SMART goals (Specific, Measurable, Achievable, Relevant, and Time-bound) collaboratively with staff to boost clarity and engagement.
- Add an optional self-evaluation before management review to improve fairness and expedite corrective actions, despite increasing review time.
- Leverage technology, including HRIS and online forms, to streamline the process and secure documentation. Consult an HR professional to develop policies, procedures, handbooks, and assist with implementation for employees and the Board.
- Have Legal counsel review any process, procedure, policy or form prior to implementation.

b. Executive Director

i. Current State/Observation

The Executive Director position includes strategic, governance-focused, and outcome-driven responsibilities that do not appear to be included in the current evaluation process. The evaluation process for the Executive Director is not tied to the job description, but rather an annual work plan or annual strategy that is presented to the Board. The current methodology impacts the Board's ability to assess compensation in a fair and consistent manner.

- The Executive Director is evaluated informally without a standardized tool, and the Board has limited insight into performance outside of meetings and reports.
- Performance expectations and success criteria are not currently set in advance, and there is no formal scorecard tied to documented duties, which cause evaluation delays and perceptions of subjectivity.
- Trustees seek a straightforward evaluation method, but performance expectations are not consistently documented in advance.
- Compensation decisions have sometimes lacked clear metrics or criteria, and evaluation results are not routinely linked to evidence or a structured compensation framework.

ii. Best Practices

- Using a Board-level Executive Director scorecard tailored to fiduciary, governance, and strategic responsibilities.
- Aligning Executive Director performance criteria directly to the job description and statutory/Board delegated responsibilities.
- Applying a simple, intuitive rating scale (e.g., Exceeds / Meets / Needs Improvement) suitable for trustee use.
- Establishing clear criteria that must be met before any consideration of bonuses or special compensation.
- Documenting performance conclusions and compensation decisions through formal Board or committee action.

iii. Recommendations

- Implement a formal Executive Director performance scorecard covering standard key performance indicators. See Sample Executive Director evaluation in Appendix.
- Require that ratings be supported by artifacts routinely seen by the Board (e.g., board packets, monthly reports, vendor oversight summaries) to increase transparency and provide evidence and justification for compensation decisions.
- Adopt a simple outcome rating scale with clear definitions. The rating scale can be a set of numbers (e.g. 1-5) with associated rating criteria or a scale such as “Exceeds/Meets/Needs Improvement” whichever is consistent with Board preference. See Sample Executive Director evaluation in Appendix.
- Review annually and require all executive compensation or bonus decisions to be explicitly approved and recorded by the Board, with reference to performance outcomes.
- Establish explicit parameters for compensation and bonus eligibility.
- Consider developing a similar scorecard for the Deputy Executive Director using the same simple scorecard format but related to the duties and responsibilities outlined in that position description.
- Explore ways technology can help simplify this process. There are many HR information systems (HRIS) and applications that provide templates and confidential means to complete and confidentially store an evaluation and the supporting documents. Create fillable forms that can be done online.
- Consider getting help from a Human Resources professional to help stand up a performance management process including writing policies, procedures, updating handbooks and forms and assisting in the rollout to employees and the Board.
- Have Legal counsel review any process, procedure, policy or form prior to implementation.

c. Compensation

i. Current State/Observation

To establish the market salary range for the various positions, we cross-referenced annual base salaries for equivalent positions using the following data sources:

- Segal’s Trust Fund Office Salary survey data, which includes data from Segal’s 2024 Multiemployer Trust Fund Office Salary Survey. We have increased our 2024 data by 3% annually to reflect 2026 salaries. Since Segal’s salary data covers the entire US, we applied a 10.7% increase over the US average to reflect the [general location] market, as published by Salary.com as of March 2026.

- Salary.com's CompAnalyst (a commercial subscription service), which provides general industry salary data for positions where a fund office may be competing with the general market for that position. The Salary.com data is for all industries in the [City, State] metro market where available. We understand that the ERS must compete with all organizations for candidates; therefore, we believe that considering published market data, such as Salary.com, for this benchmark is appropriate.
- The National Conference of Public Employee Retirement Systems 2025 Compensation Study, which provides public retirement plan salary data for 90 positions found within a public retirement system office, as well as comprehensive data on benefits, salary increases, and bonuses.
- Online research for available public information from the peer systems that are identified earlier in this report.
- Compensation practices for senior executives in public pension plans depend to a great extent on Board autonomy in setting plan salaries; Boards that can deviate from the entity's compensation ranges typically pay higher and offer more perquisites than Boards that must comply with the plan sponsor's usual compensation ranges.
- Cash compensation for Executive Director-level positions in the identified peer retirement plans vary widely:

Pension Plan & Location	Salary
County Employee Retirement Plans (County, State)	• Position recently advertised with salary range \$200,000–\$223,880 plus up to a 25% annual performance bonus.
County Pension Plans (County, State)	• The County's pension division is led by an HR Retirement Manager (classified as "Human Resources Manager – Retirement Services"), which in 2018 had a salary range of \$90,000–\$130,000. By 2025, this role's salary is estimated around the mid-\$100k level.
Employees' Retirement System (City State)	• The Executive Director of [City] ERS had a salary of \$207,782 in 2023.
State Retirement & Pension System (State)	• The [organization's] Executive Director's salary was approximately \$288,000 in 2023.
Retirement Board (State)	• The [organization's] Executive Director salary was \$275,000 in FY2024 with total compensation (including deferred/benefits) being \$307,000; the incumbent did not receive bonus payments.
County Retirement Systems (County, State)	• \$234,529 (2024 annual salary) for the Executive Director who directs all three county retirement plans.

Pension Plan & Location	Salary
County Organization (County Public Schools, State)	The Executive Director (who also functioned as a CIO) earned \$194,263 in 2021. (The position was advertised in 2022–2023 with a hiring range around \$120k–\$180k, reflecting a potential restructuring of duties.)
State Retirement System (State)	The Director had a base salary of ~\$350,000 in 2024, and with a modest bonus brought the total to around \$380k in recent years.
City Employees' Retirement System (City, State)	\$201,622 annual salary in 2024. This role is classified within the city's civil service; the salary is comparable to a mid-level city department head.
City Retirement System (City, State)	Approx. \$220,000–\$230,000 (est. 2025). (City ERS is not subject to the city's salary database, but its board reports indicate the Executive Director's pay is in this range, consistent with similar-sized plans.) The prior Executive Director's salary was about \$210k in 2022, with raises approved by the Board bringing it into the low-\$200ks by mid-decade.
County Employees Retirement System (County, State)	\$311,631 base salary; total 2022 compensation \$527,853 including benefits.
Firemen & Policemen's Pension Fund (City, State)	The Executive Director (sometimes titled Plan Administrator) position salary is roughly \$180,000–\$200,000 in recent years (not publicly posted, but estimated from the Fund's administrative budget and comparable State plans).

Sources: Official salary disclosures and budgets from each entity or jurisdiction were used where available. Key references include: Information removed for proprietary reasons.

- The average Executive Director salary from the ERS database for the [location] area is \$262,019, and the median salary is \$250,092.
- The average Executive Director salary for regional multi-employer plans according to Segal's survey is approximately \$260,000, and according to Salary.com for a "Vice-President of Benefits" is \$247,000.
- Approximately one-third of the peer systems provide bonus incentives for Executive Directors, with the average (as provided in the NCPERS study) in the area being \$5,030.
- Some plans offer other non-cash compensation benefits such as additional time off (the [City] Executive Director receives an additional five days of vacation leave), and car and electronics allowances (although this is rarer).

- The ERS Executive Director's base salary sits near the middle of the peer group, though just below the broader regional medium for similar positions in the area.
- While ERS is not a large plan, the fact there are so many retirement plans in the area competing for talent will tend to put upward pressure on the compensation package.

ii. Best Practices

- Fund assets can only be used to pay benefits and the reasonable administrative costs of providing those benefit payments.
- "Reasonable administrative costs" include providing a salary and benefits package that is thoughtfully designed to attract and retain qualified individuals.
- When setting the compensation structure, the Board needs to balance its Duty of Prudence with the risk of failing to attract or retain a good, qualified Executive Director.
- Documenting a prudent process for setting compensation for staff, and then documenting that the process is followed, is necessary to show compliance with fiduciary requirements.

iii. Recommendations

The below table reflects three options for the Board – conservative, market median, and high/competitive:

Scenario	Base Salary Range (Annual)	Performance Bonus Opportunity	Non-Cash Benefits (Perks)
Conservative / Lower-End (≈25th percentile) – Aligns with smaller public plans or strict government pay scales.	\$200K–\$210K (maintain current level with minimal increase)	None (base salary only; aligns with prevalent practice among county-run plans)	Standard [organization] benefits (pension, health, leave); no extra perks (avoids any special provisions).
Market Median (≈50th percentile) – balances competitiveness and fiscal prudence.	\$220K–\$230K (mid-range of peers)	Possible modest annual bonus, e.g. up to ~10% of base pay for meeting key performance goals (at Board discretion)	Standard benefits plus consider 5 extra vacation days per year as a retention perk. No other allowances.

Scenario	Base Salary Range (Annual)	Performance Bonus Opportunity	Non-Cash Benefits (Perks)
High / Competitive (≈75th percentile) – Leverages full board autonomy to match top-tier peers.	\$240K–\$260K (approaching upper peer range)	Robust performance incentive (e.g. 15–25% of base pay at target, similar to the County’s plan)	Standard benefits, extra leave, and deferred compensation/retention bonus arrangement (multi-year vesting) for long-term retention. Consider a one-time relocation allowance or professional degree support.

We recommend setting the compensation structure for the Executive Director at a level consistent with the Market Median option, at a minimum.

b. Staff

i. Current State/Observation

The table below provides available information on peer system Deputy Executive Director compensation:

Pension Plan & Location	Salary
County Employee Retirement Plans (County, State)	Consistent with county pay scales, with manager-level positions in the \$130k–\$150k range.
County Pension Plans (County, State)	Unknown.
City Employees’ Retirement System (City, State)	Deputy administrators and finance managers typically fall in the \$150k–\$180k salary range based on city pay data.
State Retirement & Pension System (State)	Deputy executive directors and chief counsels at SRPS typically earn in the \$200k+ range.
Retirement Board (State)	Chief Benefits Officer and Chief Operating Officer (Pension Administrator) each earned around \$220,000 (often with ~\$10k performance bonuses).

Pension Plan & Location	Salary
County Retirement Systems (County, State)	Management positions (Benefits Manager, Information Systems Manager, etc.) typically earn between \$130k and \$175k in this agency, per county HR data.
Educational Employees' Supplementary Retirement System (County, State)	PS added a Deputy Executive Director position in 2023, budgeted around \$150k–\$160k.
Retirement System (State)	Not specifically known, but most likely in the \$200–\$275k range based on available information.
City Retirement System (City, State)	Salary in the \$150k–\$170k range.
City Retirement System (City, State)	The Chief Benefits Officer earns roughly \$175k–\$185k (per 2023 budget documents).
County Employees Retirement System (County, State)	Two Deputy CEOs earned base salaries of \$276k–\$291k (total comp ~\$465k–\$496k).
Firemen & Policemen's Pension Fund (City, State)	Deputy Administrator earns between \$120k–\$150k.

The study provides the following Average Salary and Median Salary for the [regional area] for positions roughly equivalent to those within ERS:

[Organization] Position	ERS Position	Average Salary	Median Salary
Administrative Assistant	Administrative Specialist	\$78,734	\$74,507
Benefits Counselor/Analyst III	Senior Retirement Benefits Analyst	\$88,060	\$88,038
Benefits Manager	Member Relations Manager	\$131,230	\$129,355
Benefits Specialist/Analyst	Retirement Systems Analyst	\$91,300	\$78,048

[Organization] Position	ERS Position	Average Salary	Median Salary
Benefits Supervisor	Member Relations Supervisor	\$111,043	\$114,054
Chief Finance Officer	Accountant (Lead)	\$193,859	\$193,004
Communications Manager/Director	Communication and Digital Specialist	\$167,817	\$187,973
Deputy Executive Director	Deputy Executive Director	\$196,508	\$193,781
Member Service Representative III	Member Relations Assistant	\$90,494	\$74,958
Benefits Counselor/Analyst I	Retirement Benefits Analyst	\$78,000	\$73,652

The Deputy Executive Director and the Member Relations Assistant (assuming that this position is similar to the Member Service Representative III position) appear to be the only positions that are more than 10% below the [Organization]-reported average salaries.

ii. **Best Practices**

- The same best practices noted above are applicable to staff.

iii. **Recommendations**

- Evaluate which positions the Board would like to ensure are compensated at regional levels and take appropriate action.

4. Other Items of Note

a. **Technology**

i. **Current State/Observation**

- Pension Software, the ERS pension administration system, was implemented over five years ago, yet some of its functionality is not being used to its fullest extent.
- Retirement benefits continue to be calculated manually (when Pension Software could do it automatically), and then those manual calculations are being verified by someone else, who is also doing it manually.

- Performing manual benefit calculations is time-consuming.
- ERS staff is gradually learning how to use more of Pension Software's functionality.
- ERS does not have the technology to automatically track phone call statistics, and will have difficulty implementing some of the member service KPIs discussed above.
- We estimate that acquiring a telephone system that would allow ERS to automatically track phone call statistics would cost:
 - For a cloud-based VoIP phone system, initial costs for set-up and headsets of \$1,500-4,500, and ongoing subscription fees of up to \$600 per month.
 - For an on-premises PBX phone system, initial costs for set-up and handsets of \$3,000-10,000, and ongoing support and maintenance of up to \$1,000 per year.

ii. **Best Practices**

- Ensuring the plan characteristics are appropriately uploaded into Pension Software and then using it to perform the benefit calculations is preferable to manual calculations.
- Regular audits of Pension Software calculations must occur.
- Acquiring and tracking information regarding KPIs, including phone call statistics, is important to ensure appropriate and timely customer service.

iii. **Recommendations**

- Audit the Pension Software-calculated benefits to ensure they are accurate and begin using Pension Software to perform those calculations with ongoing regular, random auditing.
- Determine what other Pension Software functionality would be beneficial for ERS staff and develop a workplan to learn and implement that functionality.
- Consider acquiring a system that would allow management to automatically track phone call statistics.

Appendix A – Roadmap

ERS Implementation Roadmap – Phased Summary

Phase	Primary Focus & Actions	Recommendations Addressed	Primary Responsibility
Phase 1: Foundational Improvements (Next six months)	• Formalize governance and performance infrastructure (Executive Director evaluation framework; streamlined staff performance process; updated job descriptions and role clarity). • Address immediate capacity risks, using interim solutions if necessary – HR and IT/pension system support should be two areas of focus. • Implement quick operational wins using existing tools (better use of current pension system; baseline KPIs; basic service tracking).	• Performance management • Staffing gaps and capacity issues • Improve use of current technology • Performance metric tracking • Updating outsourced resource agreements	Board: approval of new positions, governance, Executive Director evaluation. Management: internal processes, interim solutions. Joint: policy refinements.
Phase 2: Capacity Building & System Enhancements (Next twelve months)	• Add or formalize critical roles. • Align compensation with peer markets to support recruitment and retention. • Enhance technology and workflows (expanded system functionality, workflow tools, member-facing capabilities). • Implement automated KPI reporting and management	• Recruit and onboard critical new staff positions • Compensation strategy • Refine performance management and HR practices • Implement technology and process improvements • Additional KPI implementation	Board-led: approval of new positions, compensation direction, technology investments. Management-led: hiring, implementation, training. Joint: budgeting, vendor selection, Commission coordination.

Phase	Primary Focus & Actions	Recommendations Addressed	Primary Responsibility
	dashboards. • Provide staff training and change-management support.		
Phase 3: Strategic Optimization & Continuous Improvement (Next 2-3 years)	• Reassess governance effectiveness; consider formal structural changes if warranted. • Evaluate organizational structure over time; implement succession planning. • Plan for longer-term system modernization if operational needs evolve. • Institutionalize continuous performance monitoring and periodic independent reviews.	• Periodic operational reviews • Longer-term analysis of recommendation implementation effects and possible modification • Long-term technical modernization and resulting service enhancements	Board-led: governance evolution, long-term strategy. Management-led: execution and optimization. Joint: strategic planning and evaluation.

Appendix B – Performance Templates

Segal strongly recommends that all new performance management related templates, policies, processes and procedures be reviewed and evaluated by legal counsel prior to implementation.

Sample: Executive Performance Evaluation

Standard Executive Rating Scale

Rating	Definition
Exceeds	Consistently exceeds executive expectations; delivers outstanding results with significant positive organizational impact.
Meets	Consistently meets executive-level responsibilities and achieves expectations.
Unsatisfactory	Performance consistently fails to meet the requirements of the role.
Needs Improvement	Meets some expectations, but improvement is needed in one or more material areas. Notes should reflect areas of attention for future review and compensation.

Ratings should reflect impact, outcomes, and leadership effectiveness, not effort.

Executive Performance Measures

Category	Definition
Strategic Leadership & Direction	Provides clear strategic direction; aligns agency operations, resources, and leadership actions with board policies, statutory mandates, and organizational priorities.
Organizational Performance & Results	Achieves organizational goals, service levels, and performance outcomes agreed upon by the board or appointing authority.
Governance & Board Relations	Maintains effective working relationships with the board; communicates transparently; follows board policies and governance protocols.
Financial Stewardship & Risk Management	Demonstrates sound stewardship of public funds, budget oversight, internal controls, and risk management practices; Manages investments and provides oversight to service providers.
Talent Leadership & Organizational Culture	Builds and sustains a capable leadership team; promotes accountability, ethical conduct, and respectful workplace culture.

Category	Definition
Decision Making & Judgement	Exercises sound judgment in complex, high impact decisions; balances operational needs, public accountability, and long-term implications.
Stakeholder & Public Accountability	Effectively engages external stakeholders (e.g., public, regulators, partners) while maintaining trust, credibility, and transparency.
Compliance, Ethics & Public Service Standards	Adheres to laws, regulations, policies, and ethical standards expected of senior public officials.

Executive Performance Evaluation: Confidential Scorecard

Executive Name: _____

Title: _____

Department / Agency: _____

Reviewer (Board / Appointing Authority): _____

Review Period: _____

Date: _____

Executive Scorecard

Category	Rating			Goals/Expectations for Next Review Period
	E	M	U	
Strategic Leadership & Direction				Comments (strategy, execution, outcomes):
Organizational Performance & Results				Comments (metrics, outcomes, trends):
Governance & Board Relations				Comments (responsiveness, trust, role clarity):
Financial Stewardship & Risk Management				Comments (budget discipline, audits, risk oversight):
Talent Leadership & Organizational Culture				Comments (leadership effectiveness, succession, culture):
Decision Making & Judgement				Comments (decision quality, risk awareness):

Category	Rating			Goals/Expectations for Next Review Period
	E	M	U	
Stakeholder & Public Accountability				Comments (communications, issue management):
Compliance, Ethics & Public Service Standards				Comments (compliance history, tone at the top):
Overall Performance				

Executive Overall Assessment - Key Executive Strengths:

Board / Appointing Authority Expectations for Next Review Period: As noted above.

Acknowledgment

Signature confirms this evaluation was reviewed and discussed, and acknowledges receipt, not agreement. *Results may inform compensation, recognition, or corrective action. Evaluations do not guarantee pay adjustments or continued employment.*

Executive Signature: _____ **Date:** _____
Reviewer Signature: _____ **Date:** _____

Executive Director Comments:

Sample Staff Performance Evaluation: Confidential

Name: _____
Title: _____
Department / Agency: _____
Reviewer (Board / Appointing Authority): _____
Review Period: _____
Date: _____

Standard Rating Scale

Rating	Definition
5 – Exceptional Performance	Consistently exceeds expectations; delivers outstanding results with significant positive organizational impact.
4 – Meets	Consistently meets responsibilities and achieves expectations as outlined in current position description.
3 – Mixed Performance	Meets some expectations, but improvement is needed in one or more material areas.
2 – Below Expectations	Frequently fails to meet requirements or standards.
1 – Unsatisfactory	Performance consistently fails to meet the requirements of the role.

Ratings should reflect impact, outcomes, and effectiveness, not effort.

Performance Measures

Category	Definition
Job Knowledge (Technical Competence)	Understanding of job duties, policies, tools, and the required technical skills; Ability to apply knowledge correctly and independently in day-to-day work Produces accurate, thorough, and reliable work that meets established public sector standards.
Quality of Work	Accuracy, completeness, and reliability of work output; Attention to detail and adherence to standards; Produces accurate, thorough, and reliable work that meets established public sector standards.

Category	Definition
Productivity	Meets productivity goals; meets efficiency expectations in completing assigned tasks within expected timeframes; Completes assigned work efficiently, meets deadlines, and manages workload appropriately.
Communications	Internal and external communications are effective, clear, timely; Communicates clearly and professionally with supervisors, colleagues, constituents, and stakeholders. • Clarity and effectiveness of written and verbal communication • Ability to listen, share information, and adapt communication to the audience
Teamwork	Contributes to a safe, inclusive, trusting environment; Works cooperatively with others and demonstrates respect, professionalism, and appropriate workplace behavior. • Ability to collaborate, support colleagues, and contribute to group objectives • Respectful and professional interaction with others
Problem solving	Willingness to identify problems and take appropriate action; Identifies issues appropriately, follows established authority levels, and proposes effective solutions.
Reliability, Time Management & Attendance	Reliability in reporting to work and meeting deadlines. • Reports to work as scheduled • Follows leave procedures • Can be relied upon to fulfill responsibilities. • Effective use of work time and adherence to schedules
Compliance with Policies and Standards	Adheres to workplace policies, safety rules, confidentiality requirements, and public service standards. • Ethical and professional conduct

Note:

- Evaluate performance outcomes, projects or objectives in alignment with job description
- Where available, use quantitative metrics tied to role
- provide specific examples supporting each rating
- Document strengths, achievements and improvement areas
- Avoid vague or conclusive language.

Performance Scorecard

Category	Rating					Strengths/Areas of Improvement
	1	2	3	4	5	
Job Knowledge (Technical Competence)						
Quality of Work						
Productivity						
Communications						
Teamwork						
Problem solving						
Reliability, Time Management & Attendance						
Compliance with Policies and Standards						

Overall Performance Summary:

- **Key Goal Achievements This Period:** Exceeds/Meets/Did Not Meet established performance objectives, service standards, or assigned goals for the review period. Presumes you have a goal setting on an annual basis as part of your performance review process.
- **Goals from Last Review:**
 - Goal 1: [Met / Partially Met / Not Met]
 - Goal 2: [Met / Partially Met / Not Met]
- **Describe Progress** toward established goals, KPIs, or objectives and Alignment of individual outcomes with organizational priorities
- **Professional Strengths demonstrated**
 - Summary of Strengths:

- **Areas for Improvement (job-related only):**

- Corrective Actions (if applicable):

Employee Comments

Employee Acknowledgment

Employee signature confirms this evaluation was reviewed and discussed with management and acknowledges receipt, not agreement. *Results may inform compensation, recognition, or corrective action. Evaluations do not guarantee pay adjustments or continued employment.*

Employee Signature: _____ Date: _____
Reviewer Signature: _____ Date: _____



Monitoring Report – March 31, 2026

Client Pension Fund

Current PF and Legacy PF

May 6, 2026

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- I. Executive Summary**
- II. Asset Allocation Tracking and Compliance / Current PF Investment Compliance**
- III. Performance Analysis**
- IV. Current PF Fee Analysis**

Executive Summary

Asset Allocation Tracking and Compliance / Current PF Investment Compliance

- Client Pension Fund Board of Trustees adopted a new long-term asset allocation (Legacy PF portfolio) with an anticipated year over year glidepath designed to achieve the long-term asset allocation target by 2028/2029. The path to the long-term target will be managed dynamically through asset class returns, repositioning of select existing asset classes and positive net cash flows (contributions) while the Current PF portfolio pays benefits and administrative expenses (part way through 2031, projected by the actuary). Given positive cashflows are currently going to public equity and assuming notable redemptions for hedge funds will occur in 2025, the Legacy PF portfolio is moving in the right direction towards its long-term target asset allocation target.
- The four Current PF fixed income managers (Invesco, JP Morgan, Legal & General and Loomis) are in compliance with their specific investment guidelines and by extension are in compliance with Current PF investment guidelines.
- On a combined basis (Current PF portfolio and Legacy PF portfolio) there is a sufficient amount invested in investment grade fixed income to pay for 1 full year of benefit payments + administrative expenses.

Executive Summary

Performance Review

- The Total Fund Legacy PF -1.5% for the Quarter ended March 31, 2026. Total Fund Legacy PF returned 6.8%, 7.2%, 4.6% and 6.3% over the trailing 1-, 3-, 5-, and 10-year periods ended March 31, 2026.
 - The Total Fund Legacy PF experienced \$128.4 million in net cash inflows during the first quarter and \$510.5 million for the trailing 1-year period. The SSgA Russell 1000 Index and the SSgA MSCI EAFE Index Funds were the recipients of inflows for the quarter.
- The Total Fund Current PF returned 0.3% for the quarter and 4.5% for the 1-year period ended March 31, 2026.
 - The Total Fund Current PF experienced \$201 million in net cash outflows during the first quarter and \$800.5 million in net cash outflows for the trailing 1-year period.

Current PF Fee Analysis

- Fees for the four Current PF managers (Invesco, JP Morgan, Legal & General and Loomis) are in the top 5th percentile (lowest fee percentile, most competitive) when compared to eVestment's US Short Duration Government / Credit Fixed Income Universe for asset sizes of \$1.125 billion.

| Asset Allocation Tracking and Compliance / Current PF Investment Compliance

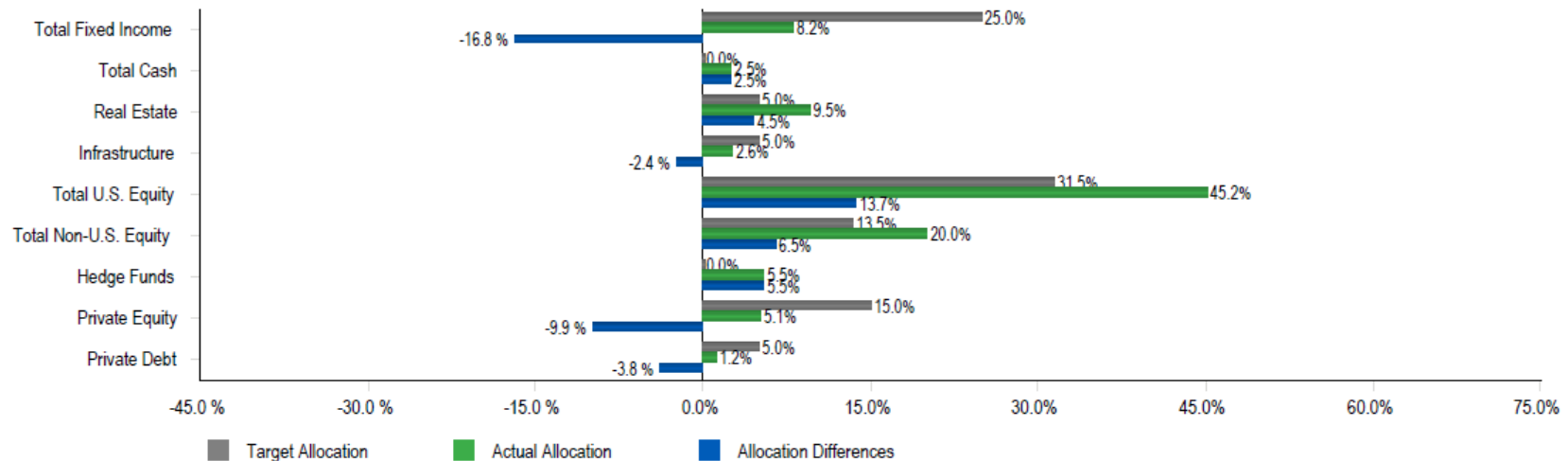
Asset Allocation Compliance

- The Legacy PF Portfolio's asset allocation is within Policy Range Guidelines approved from the 2025 IPS

Total Fund Composite

As of March 31, 2026

Allocation vs. Targets				
	Market Value (\$)	% of Portfolio	Policy (%)	Policy Range (%)
Total Fund	2,835,270,076	100.0	100.0	
Total Fixed Income	231,924,264	8.2	25.0	5.0 - 35.0
Total Cash	71,654,091	2.5	0.0	0.0 - 10.0
Real Estate	270,632,974	9.5	5.0	0.0 - 20.0
Infrastructure	73,325,949	2.6	5.0	0.0 - 15.0
Total U.S. Equity	1,282,661,960	45.2	31.5	18.0 - 55.0
Total Non-U.S. Equity	568,062,560	20.0	13.5	5.0 - 27.0
Hedge Funds	155,851,638	5.5	0.0	0.0 - 10.0
Private Equity	145,864,033	5.1	15.0	0.0 - 45.0
Private Debt	34,682,525	1.2	5.0	0.0 - 15.0

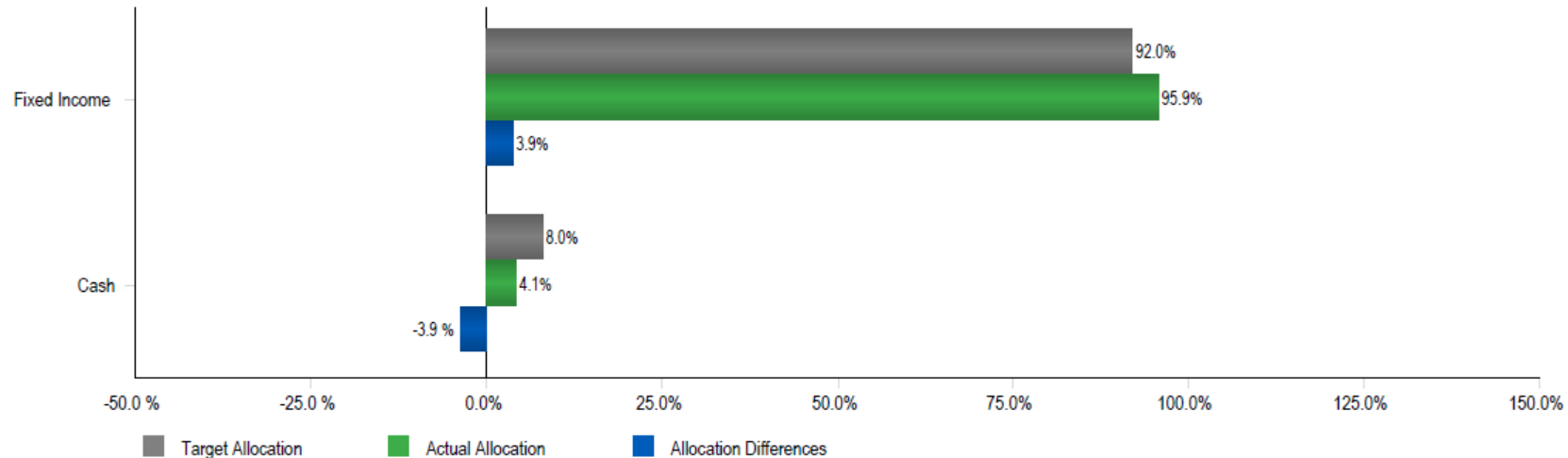


Asset Allocation Compliance

- The Current PF portfolio is 100% invested in high-quality fixed income and credit securities, thus well below the 33% threshold for risk assets as mandated by the investment guidelines.
- The four underlying fixed income manager (Invesco, JP Morgan, Legal & General and Loomis) hold a roughly equal weight within the Current PF portfolio, manage a custom cash flow match strategy and have the same investment guidelines.
- All four managers have greater than 50% weight in US Treasuries (required by their guidelines). See fixed income manager characteristics in the performance section of this report.
- None of the Current PF managers have 144a securities
- The Current + Legacy PF Portfolios (combined) have enough Investment Grade Fixed Income to pay for 1 year of benefit payments and administrative expenses.

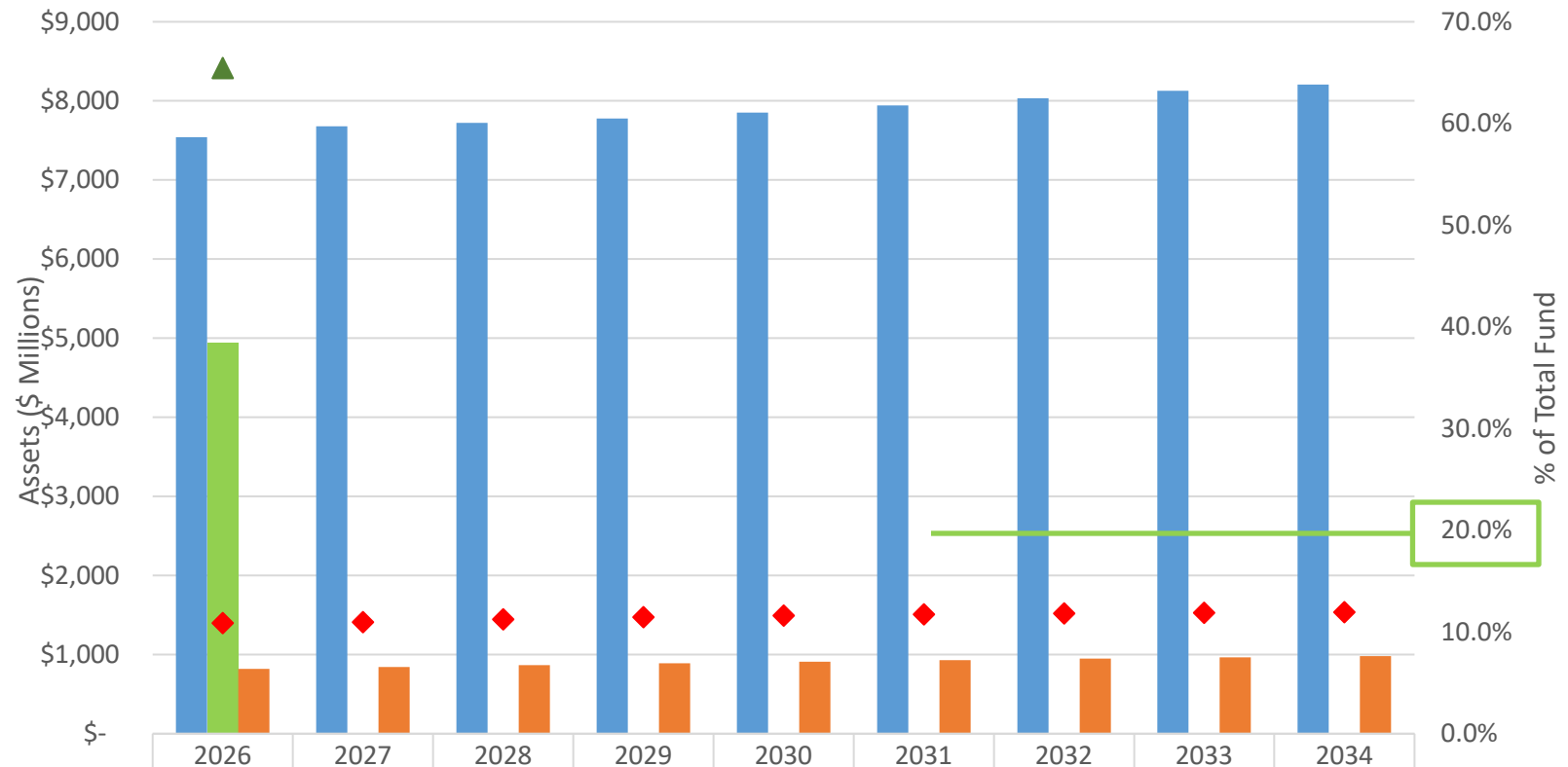
Total Fund Composite - Current PF Assets (as of March 31, 2026)

Allocation vs. Targets			
	Market Value (\$)	% of Portfolio	Policy (%)
Total Fund	4,705,605,355	100.0	100.0
Fixed Income	4,510,833,009	95.9	92.0
Cash	194,772,345	4.1	8.0



Current PF Rule: At Least 1 Year of Benefit Payments + Admin Expenses in Investment Grade Fixed Income

Client Pension (Current and Legacy PF) Investment
Grade Fixed Income Amount (\$ & %) Analysis



■ Current Assets (\$)*

■ Current Assets (\$) in IG FI**

■ Annual Benefit Payments + Admin (\$)***
(Minimum Needed in IG FI)

▲ Current % in IG FI

◆ Minimum % Needed in IG FI****

*Current Assets as of the period end date of this report. Assets beyond the current year are Projected Assets from the actuary.

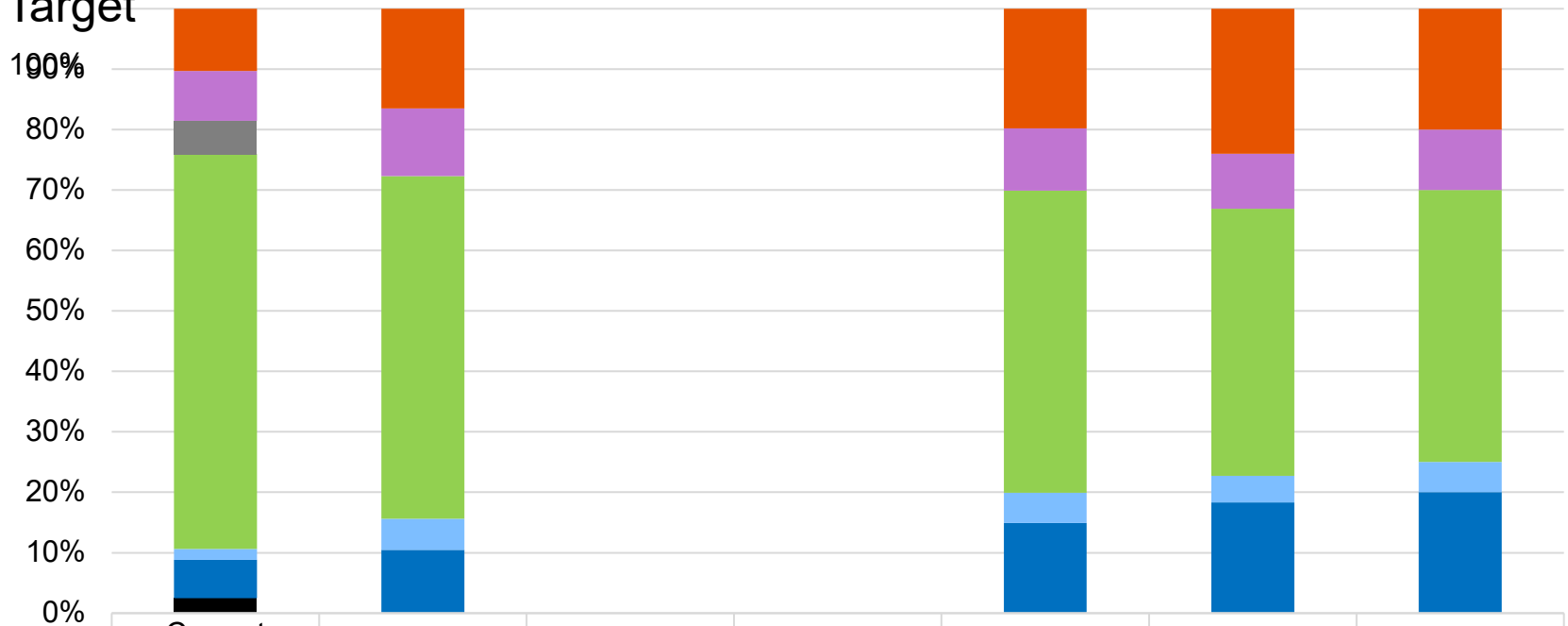
**For separate accounts, provides a look through. For commingled and mutual funds, assumes the average credit rating of the portfolio applies to all assets (e.g. the average credit rating is AA or investment grade then all underlying assets are AA or investment grade)

***Projected from the actuary

****Minimum % based off projected annual benefit payments + admin expenses divided by current assets (or projected assets by the actuary)

Current Allocations (Legacy PF) vs Projected Future Allocations

Legacy PF Portfolio Current Allocation vs. Glidepath to Target



	Current Legacy PF (3/31/2026)	2026	Difference		2027	2028	Target
■ Closed-End Private Markets	10.3%	16.5%	-6.2%		19.8%	24.0%	20.0%
■ Open-End Real Assets	8.2%	11.2%	-3.0%		10.3%	9.1%	10.0%
■ Hedge Funds	5.5%	0.0%	+5.5%		0.0%	0.0%	0.0%
■ Public Equity	65.3%	56.7%	+8.6%		50.0%	44.2%	45.0%
■ Opportunistic Fixed Income	1.8%	5.1%	-3.3%		5.0%	4.4%	5.0%
■ Core Fixed Income	6.3%	10.5%	-4.2%		14.9%	18.3%	20.0%
■ Cash	2.5%	0.0%	+2.5%		0.0%	0.0%	0.0%

Totals may not sum to 100% due to rounding

Current Allocations Legacy PF) vs Projected Future Allocations (working towards 2026)

Moving from Current to Target will be a dynamic process accounting for asset class returns, allocating incoming contributions and selectively withdrawing funds for reallocation.

	Current (3.31.2026)		2026 (Majority Calendar Year) EoFY 2025 Pro-Forma Target		Difference From Current
	%	\$	%	\$	\$
Private Markets (PD, PE & PRE)	10.3%	\$292,625,011	16.5%	\$534,584,762	\$241,959,751
Open-Ended Real Assets (RE & Infra)	8.2%	\$231,934,847	11.2%	\$362,869,656	\$130,934,809
Hedge Funds	5.5%	\$156,407,343	0.0%	\$0	-\$156,407,343
Public Equity	65.3%	\$1,850,724,520	56.7%	\$1,837,027,636	-\$13,696,884
Opportunistic Fixed Income	1.8%	\$52,125,309	5.1%	\$165,235,290	\$113,109,981
Core Fixed Income	6.3%	\$179,798,955	10.5%	\$340,190,303	\$160,391,348
Cash	2.5%	\$71,654,091	0.0%	\$0	-\$71,654,091
Total	100%	\$2,835,270,076			
Total (EoFY)*			100%	\$3,239,907,647	

*Based on FY 2025 (10.01.2025 - 9.30.2026) Cash Flow
Projection Supporting 2025 Certification-Legacy PF Assets.

*Between 9/2025 – 12/2025:
Trustees approved 3 PE
Investments, \$75 mil in total*

*Manager A \$131 mil sold
and came out of Private
Markets (Private RE)*

**4/2026: Trustees approved 2
additional PE investments,
\$45 mil in total**

*11/2025: Trustees approved 2
Infrastructure Investments,
\$75 mil in total*

**4/2026: Trustees approved 1
additional Infrastructure
investment, \$50 mil in total**

*2/2026: Trustees approved
2 Opportunistic FI
investments, \$90 mil in total*

| Performance Analysis

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
Total Fund Non-SFA	2,835,270,076	100.0	100.0	-1.5	-1.5	0.4	12.6	8.9	5.6	7.2	6.8
Total Plan Index											
7.5% Static Return				1.8	1.8	3.7	7.5	7.5	7.5	7.5	7.5
Total Fixed Income	231,924,264	8.2	25.0	0.0	0.0	1.1	4.9	5.4	1.7	2.6	2.7
Blmbg. U.S. Aggregate				0.0	0.0	1.1	4.3	3.6	0.3	1.6	1.7
SSgA U.S. Aggregate Bond Index	74,770,090	2.6		0.0	0.0	1.0	4.3	3.6	0.3	1.5	1.7
Blmbg. U.S. Aggregate				0.0	0.0	1.1	4.3	3.6	0.3	1.6	1.7
Ziegler Capital Mgmt	53,193,133	1.9		0.0	0.0	1.1	4.6	3.7	0.5	1.9	1.9
Blmbg. U.S. Aggregate				0.0	0.0	1.1	4.3	3.6	0.3	1.6	1.7
Great Lakes	51,835,733	1.8		0.1	0.1	1.3	4.5				
Blmbg. Intermed. U.S. Government/Credit				0.0	0.0	1.2	4.4	4.2	1.3	2.2	2.0
Standish Mellon Opp Fixed Income	16,888,474	0.6		-0.8	-0.8	0.2	4.2	7.8	4.8	4.5	
Blmbg. U.S. Aggregate				0.0	0.0	1.1	4.3	3.6	0.3	1.6	1.7
Crescent High Income Fund	35,236,835	1.2		-0.2	-0.2	1.3	6.7	7.7	4.0	4.6	5.0
Crescent Index				-0.4	-0.4	0.9	6.0	7.8	4.9	5.4	5.7
Total Cash	71,654,091	2.5	0.0								
BNY Mellon Checking Account	51,241,825	1.8									
State Street (Transition)	20,412,266	0.7									

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
Real Estate	270,632,974	9.5	5.0	2.2	2.2	0.8	1.2	-0.2	3.4	2.8	2.6
NCREIF - ODCE NET				1.0	1.0	1.7	3.1	-2.8	2.3	2.5	3.8
Intercontinental U.S. REIF	48,076,880	1.7		0.8	0.8	0.8	2.7	-5.0	0.8	2.1	4.4
NCREIF - ODCE NET				1.0	1.0	1.7	3.1	-2.8	2.3	2.5	3.8
RREEF America REIT II	63,547,961	2.2		1.3	1.3	2.4	4.2	-1.8	3.2	3.3	4.5
NCREIF - ODCE NET				1.0	1.0	1.7	3.1	-2.8	2.3	2.5	3.8
AFL-CIO BIT	31,607,460	1.1		0.0	0.0	1.0	2.9	-9.2	-5.8	-3.9	-1.1
NCREIF - ODCE NET				1.0	1.0	1.7	3.1	-2.8	2.3	2.5	3.8
Principal Enhanced Property Fund	33,864,515	1.2		1.5	1.5	2.9	7.0	0.1	3.9		
NCREIF - ODCE NET				1.0	1.0	1.7	3.1	-2.8	2.3	2.5	3.8
Blackstone Real Estate Partners VII	2,364,661	0.1		0.0	0.0	4.2	-0.2	-14.6	-4.9	-5.1	-1.8
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Blackstone Real Estate Partners VIII	7,840,722	0.3		0.0	0.0	-3.2	-3.0	-6.8	4.1	6.8	10.2
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Blackstone Real Estate Partners IX	11,706,270	0.4		0.0	0.0	-2.6	-3.0	-5.2	8.4		
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Blackstone Real Estate Partners X	9,307,406	0.3		0.0	0.0	3.0	11.7	20.4			
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Strategic Partners Real Estate VII	15,347,880	0.5		0.0	0.0	0.7	-0.3	-2.2	11.8		
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
TerraCap Partners IV	1,851,529	0.1		0.0	0.0	-26.4	-29.2	-41.1	-25.6		
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
TerraCap Partners V	3,038,518	0.1		0.0	0.0	-5.4	-32.2	-29.2			
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Lupoli Capital Real Estate Fund I	27,397,747	1.0		0.0	0.0	0.0	-0.4				
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Internal Properties	14,681,425	0.5		36.0	36.0	32.1	32.1	10.6	6.6	0.8	2.4
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Burlington Park Office	14,681,425	0.5		0.0	0.0	0.0	0.0	-3.2	-6.9	-8.6	-5.0
NCREIF Property Income				1.2	1.2	2.3	4.7	4.7	4.4	4.4	4.5
Infrastructure	73,325,949	2.6	5.0	0.7	0.7	2.2	6.1	9.0	8.6	6.6	2.5
SOFR 90-Day Average + 400 bp				1.9	1.9	4.0	8.4	9.1	7.5	6.8	
Astatine Infrastructure Fund I, L.P.	18,487,917	0.7		0.0	0.0	-0.9	2.0	10.3	14.9	13.4	
SOFR 90-Day Average + 400 bp				1.9	1.9	4.0	8.4	9.1	7.5	6.8	
ULLICO Infrastructure	24,985,632	0.9		0.0	0.0	1.7	5.6	8.4	7.4	6.7	
SOFR 90-Day Average + 400 bp				1.9	1.9	4.0	8.4	9.1	7.5	6.8	
IFM Infrastructure	29,852,400	1.1		1.7	1.7	4.6	9.5	8.3			
SOFR 90-Day Average + 400 bp				1.9	1.9	4.0	8.4	9.1	7.5	6.8	
Total U.S. Equity	1,282,661,960	45.2	31.5	-3.5	-3.5	-1.3	17.2	16.9	10.4	12.7	12.0
Russell 3000 Index				-4.0	-4.0	-1.6	18.1	17.9	10.9	13.8	13.7

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
SSgA Russell 1000 Index	1,161,255,636	41.0		-4.2	-4.2	-1.8	17.4	18.1	11.3		
Russell 1000 Index				-4.2	-4.2	-1.9	17.7	18.1	11.3	14.2	14.0
Boston Partners	37,724,566	1.3		0.4	0.4	-0.2	15.0	11.9	6.3	9.3	9.1
Russell 2000 Value Index				5.0	5.0	8.4	28.1	13.8	5.8	9.1	9.6
GAMCO	43,781,167	1.5		8.1	8.1	10.9	31.1	19.0	9.7	10.1	9.9
Russell 2000 Value Index				5.0	5.0	8.4	28.1	13.8	5.8	9.1	9.6
Russell 2000 Index				0.9	0.9	3.1	25.7	13.0	3.8	8.6	9.9
Artistotle Small Cap Equity	39,900,592	1.4		1.6	1.6	3.6	10.4	5.8	2.7	6.2	
Russell 2000 Index				0.9	0.9	3.1	25.7	13.0	3.8	8.6	9.9
Total Non-U.S. Equity	568,062,560	20.0	13.5	-0.6	-0.6	3.5	25.7	15.2	7.1	9.4	8.8
MSCI AC World ex USA (Net)				-0.7	-0.7	4.3	24.9	14.5	7.0	8.5	8.4
MSCI EAFE Index				-1.1	-1.1	3.7	21.9	14.2	8.5	9.4	8.9
SSgA MSCI EAFE Index	387,261,672	13.7		-1.1	-1.1	3.7					
MSCI EAFE (Net)				-1.2	-1.2	3.6	21.3	13.6	7.9	8.9	8.4
Driehaus Capital	56,831,550	2.0		-4.1	-4.1	-2.9	26.1	11.9	3.9	9.6	9.7
MSCI AC World ex USA Small Growth Index (Net)				-0.9	-0.9	0.7	27.1	11.7	3.3	7.7	7.4
SSgA Emerging Mkts Small Cap Active NL	60,172,378	2.1		1.1	1.1	3.9	23.4	17.6	10.2	11.0	
MSCI Emerging Markets Small Cap (Net)				-0.7	-0.7	0.9	24.6	13.7	6.7	9.1	8.1
ABS Direct Emerging Markets Equity Fund	63,796,959	2.3		4.0	4.0	8.4					
MSCI EM (net)				-0.2	-0.2	4.6	29.6	14.8	3.7	6.6	7.8

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
Hedge Funds	155,851,638	5.5	0.0	1.1	1.1	5.0	20.6	12.2	3.9	6.6	6.3
<i>HFRF Fund of Funds Composite Index</i>				0.7	0.7	3.9	11.7	8.5	4.9	5.8	5.3
Entrust Capital Special Opportunities Fund III	4,211,129	0.1		0.0	0.0	-9.7	-8.2	-5.8	-10.0	-3.2	-0.5
<i>HFRF Fund of Funds Composite Index</i>				0.7	0.7	3.9	11.7	8.5	4.9	5.8	5.3
Entrust Capital Special Opportunities Fund IV	10,929,917	0.4		0.0	0.0	-6.0	-3.7	0.0	-4.2	-0.7	
<i>HFRF Fund of Funds Composite Index</i>				0.7	0.7	3.9	11.7	8.5	4.9	5.8	5.3
ABS Alpha Ltd.	74,727,334	2.6		-1.4	-1.4	4.1	18.5	11.9	5.9	7.9	7.0
<i>HFRX Equity Hedge Index</i>				-1.5	-1.5	0.1	8.2	7.4	5.7	5.8	4.9
ABS Crossover Growth Fund	43,253,347	1.5		4.2	4.2	11.4	40.9	22.0	7.1		
<i>MSCI World</i>				-3.5	-3.5	-0.4	19.4	17.3	10.8	12.8	12.4
ABS Emerging Markets Portfolio	22,729,911	0.8		2.7	2.7	5.3	19.3	11.8	4.6	7.6	7.8
<i>HFRF Emerging Markets (Total) Index</i>				0.5	0.5	2.3	16.1	11.5	4.9	6.4	6.6

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
Liquidating Managers	555,705	0.0		-0.1	-0.1	3.9	7.5	23.5	-32.1	-24.9	
Entrust Capital - Peruvian Bonds	555,705	0.0		-0.1	-0.1	3.9	7.5	23.5	-32.1	-24.9	
Private Equity	145,864,033	5.1	15.0								
BBH Capital Partners IV, L.P.	3,503,363	0.1									
BBH Capital Partners V, L.P.	5,717,150	0.2									
Crescent Mezzanine Partners VI	519,961	0.0									
Crescent Mezzanine Partners VII	506,486	0.0									
Levine Leichtman Capital Partners IV, L.P.	58,483	0.0									
Oaktree Mezzanine Fund IV	301,552	0.0									
Partners Group Private Equity 2 LLC	81,385,235	2.9									
Siguler Guff Small Buyout Opp Fund IV, L.P.	20,071,641	0.7									
Siguler Guff Small Buyout Opp Fund V, L.P.	21,762,823	0.8									
Siguler Guff Small Buyout Opp Fund VI, L.P.	3,700,000	0.1									
Capital Dynamics Mid-Market Direct VI (Cayman), L.P.	8,337,338	0.3									
Liquidating Managers	54,377	0.0									
Levine Leichtman Private Capital Solutions II, L.P.	10,776	0.0									

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
St. Cloud Capital Partners II, L.P.	43,601	0.0									
Private Debt	34,682,525	1.2	5.0								
AB Middle Market Direct Lending Fund II Feeder, L.P.	20,169,892	0.7									
Pennant Park PCOF IV	14,512,632	0.5									

Total Fund Allocation and Performance

As of March 31, 2026

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	Quarter	Year To Date	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
Total Fund SFA	4,705,605,355	100.0	100.0	0.3	0.3	1.5	4.5				
SFA Composite				0.3	0.3	1.5	4.0				
Fixed Income	4,510,833,009	95.9	92.0	0.2	0.2	1.4	4.5				
Blmbg. 1-3 Year Gov/Credit				0.3	0.3	1.4	4.0	4.3	2.0	2.3	2.0
Invesco	1,127,175,377	24.0		0.2	0.2	1.4	4.4				
Blmbg. 1-3 Year Gov/Credit				0.3	0.3	1.4	4.0	4.3	2.0	2.3	2.0
JP Morgan	1,128,536,012	24.0		0.3	0.3	1.5	4.5				
Blmbg. 1-3 Year Gov/Credit				0.3	0.3	1.4	4.0	4.3	2.0	2.3	2.0
Legal & General	1,125,419,984	23.9		0.3	0.3	1.5	4.5				
Blmbg. 1-3 Year Gov/Credit				0.3	0.3	1.4	4.0	4.3	2.0	2.3	2.0
Loomis Sayles	1,129,701,636	24.0		0.2	0.2	1.4	4.5				
Blmbg. 1-3 Year Gov/Credit				0.3	0.3	1.4	4.0	4.3	2.0	2.3	2.0
Cash	194,772,345	4.1	8.0	0.9	0.9	1.9	4.1				
90 Day U.S. Treasury Bill				0.8	0.8	1.8	4.0	4.7	3.3	2.7	2.3
State Street Cash	194,772,345	4.1		0.9	0.9	1.9	4.1				
90 Day U.S. Treasury Bill				0.8	0.8	1.8	4.0	4.7	3.3	2.7	2.3

Characteristics History

	Q1-26		Q4-25	
	Portfolio	Index	Portfolio	Index
Portfolio Characteristics				
Yield To Maturity	4.0	4.0	3.8	-
Years to Maturity	3.0	2.1	3.2	-
Average Duration	2.8	1.9	2.9	1.9
Effective Duration	2.8	1.9	2.9	-
Modified Duration	2.8	1.9	2.9	-
Average Quality	AA	AA	AA	AA

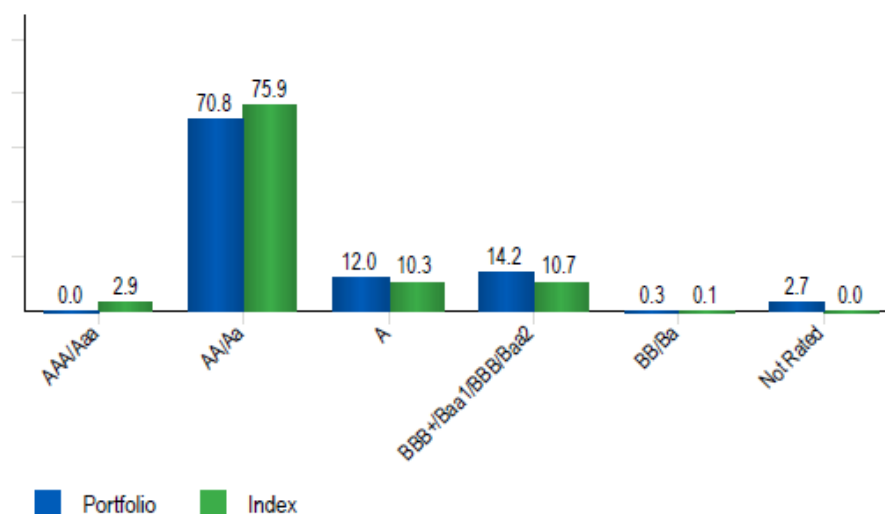
Duration Allocation



Sector Allocation



Credit Quality Allocation



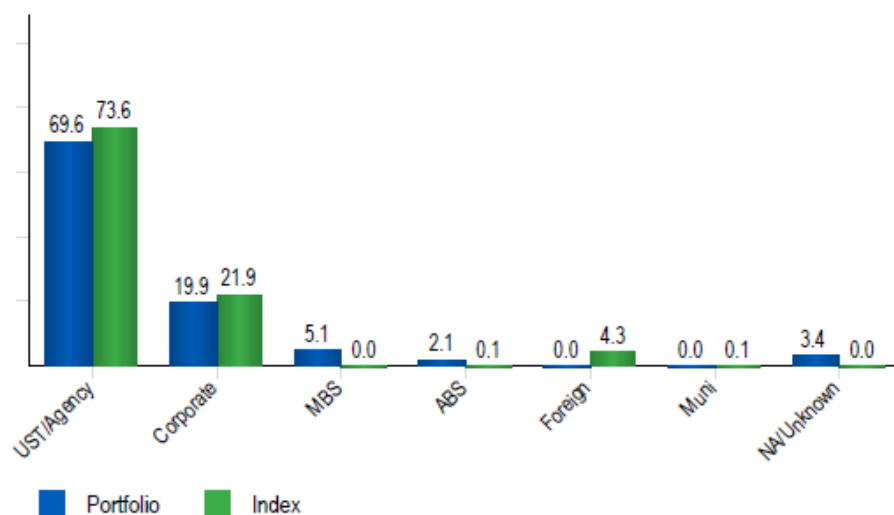
Characteristics History

	Q1-26		Q4-25	
	Portfolio	Index	Portfolio	Index
Portfolio Characteristics				
Yield To Maturity	4.0	4.0	3.8	-
Years to Maturity	3.0	2.1	3.1	-
Average Duration	2.7	1.9	2.8	1.9
Effective Duration	2.7	1.9	2.8	-
Modified Duration	2.7	1.9	2.8	-
Average Quality	AA	AA	AA	AA

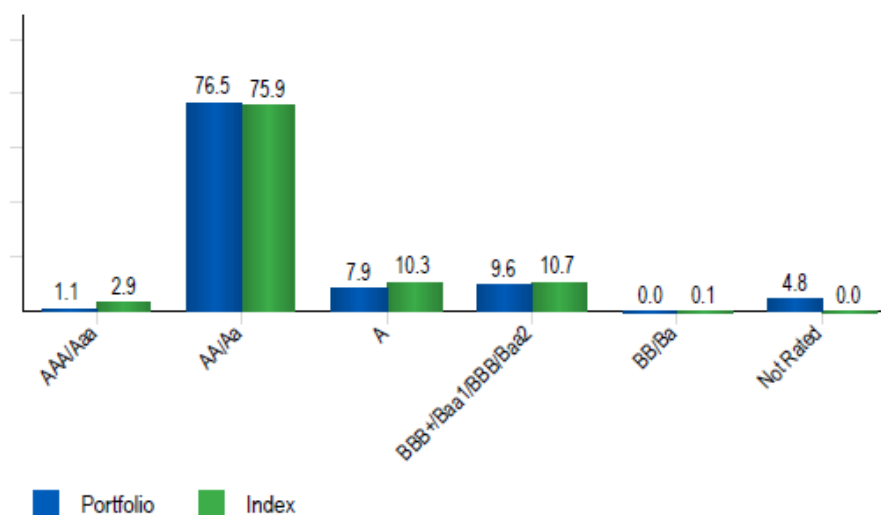
Duration Allocation



Sector Allocation



Credit Quality Allocation



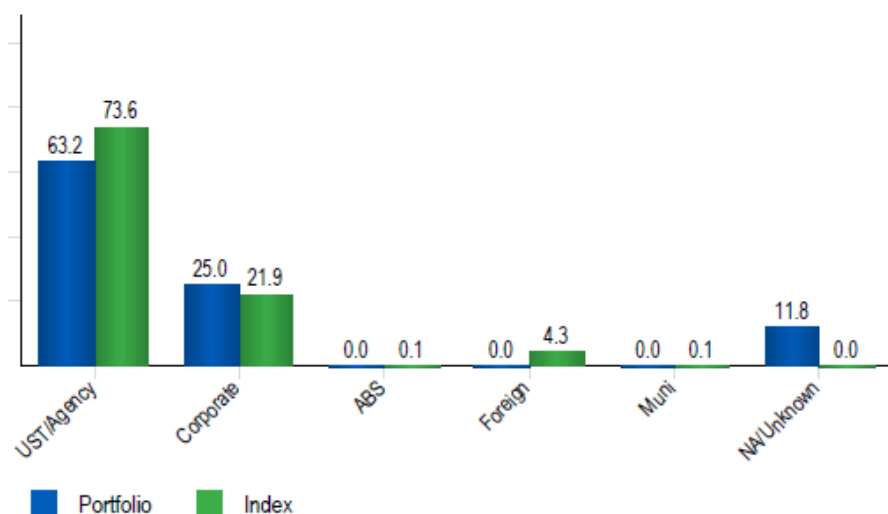
Characteristics History

	Q1-26		Q4-25	
	Portfolio	Index	Portfolio	Index
Portfolio Characteristics				
Yield To Maturity	4.0	4.0	3.7	-
Years to Maturity	3.0	2.1	3.1	-
Average Duration	2.7	1.9	2.8	1.9
Effective Duration	2.7	1.9	2.8	-
Modified Duration	2.7	1.9	2.8	-
Average Quality	AA	AA	AA	AA

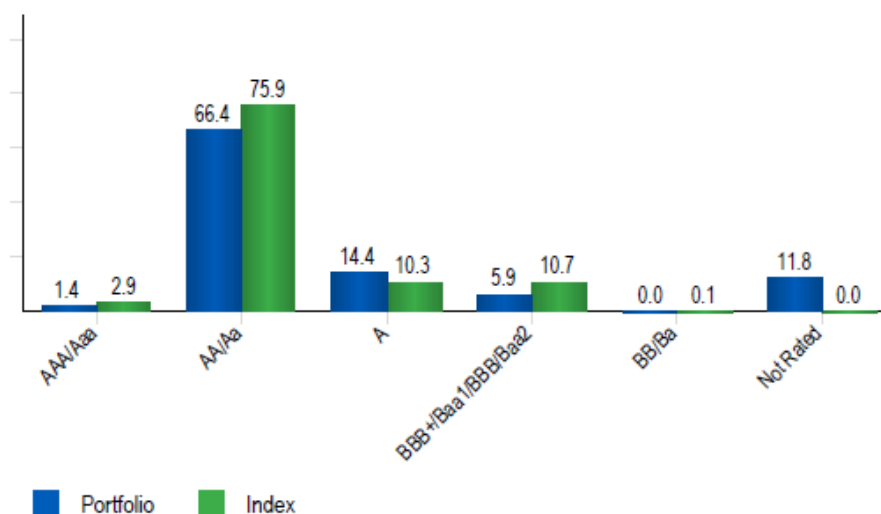
Duration Allocation



Sector Allocation



Credit Quality Allocation



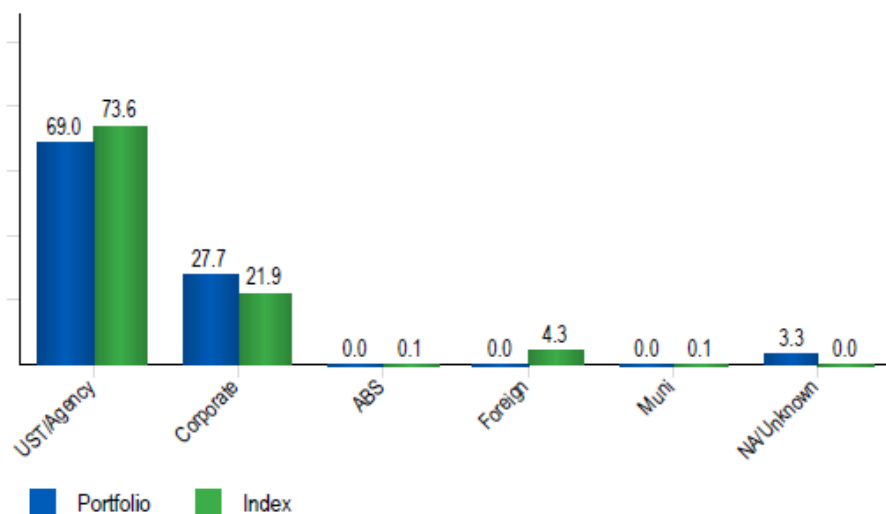
Characteristics History

	Q1-26		Q4-25	
	Portfolio	Index	Portfolio	Index
Portfolio Characteristics				
Yield To Maturity	4.1	4.0	3.8	-
Years to Maturity	2.9	2.1	3.0	-
Average Duration	2.7	1.9	2.8	1.9
Effective Duration	2.7	1.9	2.8	-
Modified Duration	2.7	1.9	2.8	-
Average Quality	A	AA	AA	AA

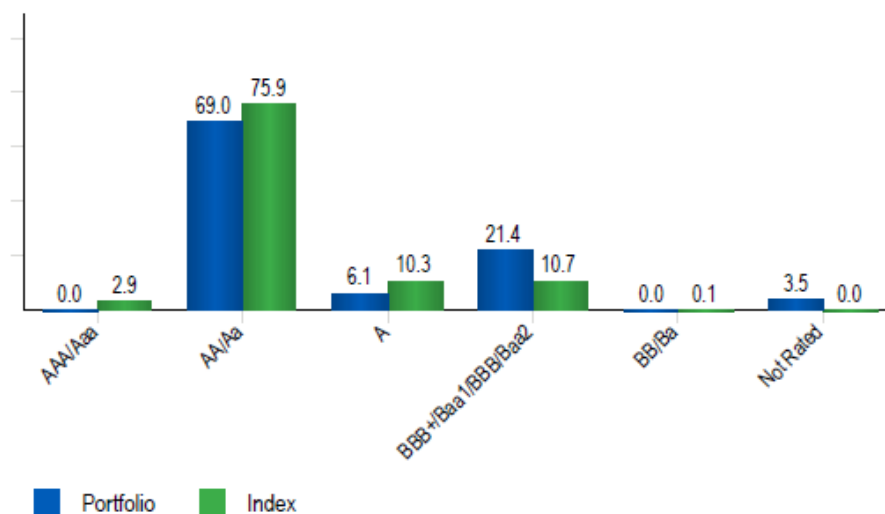
Duration Allocation



Sector Allocation



Credit Quality Allocation



| Current PF Fee Analysis

Current PF Fee Analysis

	Fee Schedule		eVestment Fee Rankings (Percentile)
Invesco	All Assets	5 bps	Top 5 th Percentile
JP Morgan	All Assets	5 bps	Top 5 th Percentile
Legal & General	All Assets	5 bps	Top 5 th Percentile
Loomis Sayles	All Assets	5 bps	Top 5 th Percentile

Separate Accounts, \$1.125 billion				
	95th Percentile	Median	5th Percentile	# Observations
eVestment US Short Duration - Gov/Cred Fixed Income	26 bps	15 bps	8 bps	182
eVestment US Short Duration - Government Fixed Income	24 bps	15 bps	4 bps	23



Client XYZ 401k & 457 Plans

November 2020

Wendy Carter, *Vice President & DC Director, Public Sector*

Craig Chaikin, *Vice President*

Rosemary Guillette, *Vice President*

Melanie Walker, *Senior Vice President*



 **Segal Marco Advisors**



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Executive Summary

- Review the State's 401(k) and 457(b) plans (the Client Program) against similar programs with a hybrid design structure:
 - XXX
 - XXX
 - XXX
 - XXX
- The review found that the Program's compliance, design, operation and processes are substantially similar to others reviewed as well as market best practices:
 - Plan documents are substantially in compliance with applicable IRS requirements for written plan documents and XXX (the Program's service provider (SP)) has addressed any operational changes required under the SECURE Act, CARES Act, Tax Cut and Jobs Act of 2017 and Bipartisan Budget Act and required plan document updates are in progress
 - Key recommendations include:
 - Developing internal controls to maintain operational and documentary compliance with federal laws and regulations
 - Conducting periodic operational reviews should include a transactional audit of plan features where errors commonly occur
 - Developing and implementing a process for periodically updating plan documents
 - Considering the benefits of a contribution auto-increase feature
 - The Program's service provider (SP), XXX, is nationally recognized and provides comprehensive DC services to the Program. As part of the next RFP process for SP services we would recommend:
 - Comparing the current high touch service model to ensure value is commensurate with cost
 - Evaluating the cost/benefit of having local governments remit both DB and DC payroll to the State during the next RFP process
 - Requesting and/or considering different service model configurations addressing items such as asset retention services

Client XYZ 401(k)/457 Program Administrator

- XXX is the exclusive service provider (SP) for the defined contribution (DC) aspects of the hybrid program.
- XXX is one of the nation's leaders in DC plan administration:
 - Has provided services to public sector DC plan for over 40 years
 - Has a public sector DC plan average client relationship duration is approximately 12 years
 - As of June 30, 2020, XXX has approximately \$643 billion in assets under administration
 - Has significant presence in the large public DC plan arena with more than 28 plans with more than 9,000 participants and \$62 billion in assets under administration. These large plans represent 85.3% of XXX's assets under administration.
- XXX is a growing company and has recently announced significant acquisitions:
 - Acquired the recordkeeping business of MassMutual, which will increase XXX's participant base to more than 12.2 million and assets of approximately \$834 billion
 - Transaction is expected to close in the fourth quarter of 2020
 - Definitive agreement to acquire Fifth Third Bank's retirement plan service business where XXX already provides recordkeeping services (FasCore)
 - Fifth Third will continue to serve in a plan-level investment advisory capacity for most of the plans
 - No conversions will be required
- XXX has appropriate liability coverages including appropriate E&O and cyber-crime coverage.

Hybrid Comparator Programs

- For purposes of our analysis of the Program, we selected 4 state-level, public sector hybrid programs for comparison to the Program:
 - XXX
 - XXX
 - XXX
 - XXX
- Administering a state-level hybrid program is a complex undertaking and requires a service provider (SP) with significant experience providing recordkeeping/administration services to very large DC programs. Public sector DC programs, especially state-level programs, often have hundreds of payroll locations, which dramatically increases the operational complexity.
- A summary of the key features of each program as well as high level statistics are summarized on the following pages:
 - The comparator programs vary considerably as outlined in this report
 - All of the comparator programs have a single DC SP
 - The SPs relationships are unbundled, and the SP is paid on a fee for service basis
 - Fees for investment fund management services are part of the overall investment expense ratio
 - Each program also offers an opportunity for additional voluntary savings (e.g. 401(k) and/or 457)
 - 403(b) savings programs may also be available to members (e.g. schools or higher education) but have not been addressed in this report.

Hybrid Comparator Programs

Below are key features for the Client Program and the comparator programs.

	Employer DC Plan contributions	Employee DC Plan Contributions	DC Plan Investment Options	Default DC Plan Investment Options	School Employees	Voluntary DC Savings Options	TPA
XXXX	ER contributes 5% to the DC plan	EEs are auto enrolled at 2%, with opt-out feature	TDFs and 17 options	Age-appropriate TDF	Yes	401(k) & 457	XXX
XXXX	100% ER match 1st 1% of salary and 50% on next 4% of salary for a maximum ER contribution of 3%	EEs are auto enrolled at 5%, with opt-out feature	TDFs and 13 options	Age-appropriate TDF	No	401(k) & 457	XXX
XXXX	Optional	6% if earning <\$30,000. If >\$30,000 : 3.5% or 5.25% depending on date of hire.	IAP – TDF series SGP – TDFs and 10 options	Age-appropriate TDF	Yes	457	XXX
XXXX	Mandatory ER contributions of 1% - increases with EE contributions up to 3.5% maximum	EEs may contribute up to 5% to the DC plan (1% mandatory minimum)	TDFs and 10 options	Age-appropriate TDF	Y	457	XXX
XXXX	None	5% to 15% of salary	TDFs and 8 options (including Total Portfolio Allocation)	Age-appropriate TDF	Y	457	XXX

Hybrid Comparator Programs

Below are key statistics for the Client Program and the comparator programs.

	Client 1	Client 2	Client 3	Client 4	Client 5
Service Provider	Provider	Provider	Provider	Provider	Provider
Hybrid DC Program					
Program Assets	\$3,971,002,916	\$14,912,952,242	\$10,300,000,000	\$1,247,324,912	\$1,336,237,750
Total Accounts	162,402	250,341	281,764	281,592	70,801
Avg Acct Balance	\$24,452	\$59,571	\$36,555	\$2,678	\$18,873
Voluntary Savings Plan(s)					
Plan Type(s)	401(k) & 457	457	457*	457	401(k) & 457
Assets	\$603,748,053	\$4,860,833,233	\$2,473,725,802	\$3,271,494,038	\$666,763,990
Total Accounts	13,842	93,208	33,352	87,033	12,154
Avg Acct Balance	\$43,617	\$52,150	\$74,170	\$37,033	\$54,860
Roth Feature	Yes	No	Yes	Yes	Yes

* Administered by a different agency.

Comparator Plans – Operations & Compliance

Client 401k & 457 Program

- **Plan Operations:** For demographic data upon enrollment and allocation of contributions, the Client Program submits member data electronically. The Client submits data directly to the SP; however, approximately 330 participating employers submit data and contributions through the sponsor portal. The SP administers all Plan transactions pursuant to a contract that includes service level agreements and utilizes a detailed administration guide for this purpose.
- **Plan Compliance:** To ensure accuracy of enrollment data and contributions (including periodic changes), the SP follows a robust quality control process where employee data submitted by employers is verified against their data and the system automatically reconciles payroll data in real time and reports any discrepancies to be resolved by employers.
- Given the complexity of supporting a large number of participating local governments, the SP also provides significant resources and services educating, supporting and troubleshooting to employer, including:
 - Extensive employer training materials, as well as regular employer educational sessions and outreach
 - An employer service support center to resolve problems, as well as an employer plan service center guide
 - Onboarding training for new employers that join the Client Program with 45-day follow up to ensure errors are not occurring and training for new administrators at existing employers
 - Conducts enrollment audits on employers with frequent errors or problems
- The SP reports errors for money-in, money-out and participant account maintenance quarterly. In the most recent 12 months, there has been 3 money-out, 1 money-in and 0 participant maintenance errors.
- The SP monitors Internal Revenue Code (IRC) limits for the Plans, including 402(g) elective deferrals, 457(b)(2) annual deferrals, and catch-up contribution limits.
 - Rely on employers to monitor IRC 415(c) limits (total annual contributions)
 - Do not monitor IRC 401(a)(17) compensation limits
 - Comply with IRC 457(b)(4) first-of-the-month rule, except when employee stops deferrals
- XXX has not used the IRS correction program (Employee Plans Compliance Resolution System or EPCRS) to correct any operational or plan document errors.
- **Staffing and Resources:** The Client 401k & 457 Program is administered by utilizing 13 State employees and 47 SP staff members dedicated solely to this Program.
- **Compliance Risks:**
 - Participating employers fail to accurately determine who is an eligible employee and enroll new employees on a timely basis (moderate)
 - The Client Program relies on SP to self-report and correct errors; does not conduct a periodic audit of transactions for compliance with Plan rules and IRC qualified requirements (moderate)
 - The Client Program relies on employers to monitor some IRS limits (low)

Comparator Plans – Operations & Compliance

Client XYZ

- **Plan Operations:** The client administers a 401(k) Plan as part of a hybrid retirement plan, as well as a voluntary 457 Plan. Enrollment, demographic, contribution and employment data, as well as investment elections, are sent by approximately 1,300 participating employers by to the Client daily as part of overall hybrid plan administration and transmitted by the Client to the SP on a daily basis. The employers submit data electronically through the Client portal and submit contributions directly to the Client, who transmits the money to a custodian. Some small employers use a different interactive file to submit data to the Client.
- Employers do not communicate directly with the SP. The SP executes investment elections, allocating contributions as directed, and pays distributions after verifying eligibility with the Client. Any forms, letters or other communications provided to participants by the SP are reviewed and approved by the Client.
- **Plan Compliance:** The relies on employers to report who is eligible for the hybrid plan and who has elected to enroll in the 457 plan. A number of employers elected to automatically enroll employees in the 457 plan. To ensure accuracy of contributions (including periodic changes), the Client reconciles contribution data with monies received, but must deposit contributions then fix any errors and communicate with the SP. All employer reporting edits are monitored by the Client. In addition, the Client internal auditors conduct annual financial audits of the Client plans.
- Given the complexity of supporting a large number of participating employers, the Client provides significant resources towards educating, supporting and troubleshooting employers, including:
 - Employer handbook and reporting procedures
 - Payroll training sessions and short training videos
 - Employer support services line
- The Client does not track error rates on enrollments, contributions or distributions, but generally stated that incidences of errors that are not corrected before it affects a participant's account are low and not a concern.

Comparator Plans – Operations & Compliance

Client XYZ

- **Plan Compliance:** *continued*
- Currently, the Client monitors Internal Revenue Code (IRC) limits for the Plans, including 402(g) elective deferrals, 457(b)(2) annual deferrals, catch-up contribution limits, and 415(c) annual additions; however, they are shifting this responsibility to the SP in the future.
 - Rely on employers to monitor IRC 401(a)(17) compensation limits on the DC Plans
 - Comply with IRC 457(b)(4) first-of-the-month rule through monthly 457 deferral change report
- The Client has not used the IRS correction program to correct any operational or plan document errors in the DC Plans
- **Staffing and Resources:** The Client does nearly all of the administration of the 401(k) and 457 Plans internally utilizing 250 State employees (only a few are dedicated solely to the DC Plans) and 9 SP staff members are dedicated solely to these Plans (plus 50 staff members that provide shared services, such as IT, legal and call center).
- **Compliance Risks:**
 - Participating employers fail to accurately determine who is an eligible employee and enroll new employees on a timely basis (moderate)
 - The Client system cannot automatically reconcile payroll data in real time; thus, payroll reporting discrepancies are flagged for employer or the Client correction (moderate)

Comparator Plans – Operations & Compliance

Client Individual Account Plan and Deferred Compensation

- **Plan Operations:** The Client administers a 401(a) Plan as part of a hybrid retirement plan. The Client receives demographic data and member contributions directly from the State and approximately 900 participating employers via the Client portal and remits the data to the SP. The SP provides only limited services to the IAP, such as maintaining member data provided by employers, serves as a custodian, pays distributions and maintains a member website with limited data. The SP does not provide any investment services. The Client is considering taking on the full administration of the IAP and eliminating the SP's services because they could do this with existing staff and save money.
- The State's voluntary 457 Plan is part of a separate entity under XXX. The SP provides full administrative services for this Plan.
- **Plan Compliance:** To ensure accuracy of enrollment data and contributions (including periodic changes), the Client Department of Treasury verifies that correct contribution amounts are allocated to individual accounts, as well as annual earnings credits. These functions are coordinated with the defined benefit portion of the hybrid plan, so the SP cannot provide these services. The Client then sends the contribution rate data and contributions to XXX to maintain account balance information.
- Given the complexity of supporting a large number of participating employers, the Client provides significant resources towards educating, supporting and troubleshooting employers on reporting functions, including:
 - Employer manual with detailed instructions for reporting
 - An employer advisory group provides support and troubleshooting information to employers
- The Client does not track or report specific error rates on enrollments, contributions or distributions, but generally stated that incidences of distribution errors are low, while employer errors on enrollments and contribution rates are high.

Comparator Plans – Operations & Compliance

Client XYZ

- **Plan Compliance:** *continued*
- Currently, the Client monitors Internal Revenue Code (IRC) limits for the IAP, including 402(g) elective deferrals, 457(b)(2) annual deferrals, catch-up contribution limits, and 415(c) annual additions, while XXX monitors these limits for the XXX 457 Plan.
- Neither the Client nor XXX (for 457 Plan) has used the IRS correction program (EPCRS) to correct any operational or plan document errors in the DC plans
- **Staffing and Resources:** The Client administers the IAP internally utilizing 7 State employees and 4 SP staff members dedicated solely to this Plan. We did not receive staffing information from XXX on the 457 Plan.
- **Compliance Risks:**
 - Participating employers fail to accurately determine who is an eligible employee and enroll new employees on a timely basis (moderate)
 - The Client system cannot automatically reconcile payroll data in real time; thus, payroll reporting discrepancies are flagged for employer correction (moderate)
 - Error rates on the accuracy of employer contributions are relatively frequent, but are eventually corrected (low)

Comparator Plans – Operations & Compliance

Client XYZ

- **Plan Operations:** The Client administers a 401(k) Plan as part of a hybrid retirement plan, as well as a voluntary 457 Plan. Enrollment, demographic, contribution and employment data, as well as investment elections, are sent by approximately 600 participating employers by to the Client daily as part of overall hybrid plan administration and transmitted by the Client to the SP (ICMA-RC) on a daily basis. The employers submit data electronically through the Client *Navigator*, an employer self-service portal and submit contributions directly to the Client, who transmits the money to a custodian. The SP executes investment elections, allocates contributions as directed, and pays distributions after verifying eligibility with the Client.
- **Plan Compliance:** The Client relies on employers to report who is eligible for the hybrid plan and who has elected to enroll in the 457 plan. To ensure accuracy of contributions (including periodic changes), a team of the Client employees reconciles contribution data with monies received. The amount of employer contributions varies according to the employee's elective deferrals, and thus the employee and employer contribution rate may change frequently, which adds a layer of complexity. In addition, the SP uses data provided from the portal to ensure they have received the correct amount of contributions for each individual member.
- Given the complexity of supporting a large number of participating employers, the Client provides significant resources towards educating, supporting and troubleshooting employers, through the Employer's Hybrid Plan Resource Center, which includes a detailed administration and reporting manual and training sessions.
- The Client does not track error rates on enrollments, contributions or distributions, but generally stated that due to the number of employers and complexity of plan contribution design, there are many errors that must be corrected, particularly with respect to contribution amounts.

Comparator Plans – Operations & Compliance

Client XYZ

- **Plan Compliance:** *continued*
- The Client monitors Internal Revenue Code (IRC) limits for the DC plans, including 402(g) elective deferrals, 457(b)(2) annual deferrals, catch-up contribution limits, and 415(c) annual additions.
- The Client has not used the IRS correction program (EPCRS) to report a correction of any operational or plan document errors in the DC plans, but does make self corrections, including making up missed employee contributions with employer contributions at a 50% rate plus earnings
- **Staffing and Resources:** The Client administers the DC Plans internally utilizing 12 State employees (including 6 employees dedicated solely to reconciliation of employer data/contributions and approximately 18 SP staff members dedicated solely to this Plan (including 9 field agents, 2 employer support staff, two relationship managers, and dedicated call center staff).
- **Compliance Risks:**
 - DC plan contribution complexity leads to large number of contribution errors (high)
 - Participating employers fail to accurately determine who is an eligible employee and enroll new employees on a timely basis (moderate)

Comparator Plans – Operations & Compliance

Client XYZ Reserves Plans

- **Plan Operations:** The Client Plans consist of the 401k portion of the hybrid retirement plan and a voluntary 457 plan. For demographic data upon enrollment and allocation of contributions, the employers submit member data electronically. The client submits data directly to the SP; however, approximately 250 participating employers with 485 payroll locations submit data and contributions through the XXX sponsor portal, a two-way data interface. The SP administers all Plan transactions pursuant to a contract that includes service level agreements and utilizes a detailed administration guide for this purpose.
- **Plan Compliance:** To ensure accuracy of enrollment data and contributions, the SP is required to provide a robust payroll testing process that includes reconciling data and contributions received, and responsible for posting payroll transmissions, including edits, validation, and posting enrollment and contribution data to interface for XXX access. The 401(k) plan provides automatic enrollment at 5% of pay, which simplifies this process. The SP does not receive compensation data, so the employer must determine correct employee dollar amount to contribute; SP can verify amount with XXX (defined benefit plan system).
- Given the complexity of supporting a large number of participating local governments, the SP is required to provide significant resources and services educating, supporting and troubleshooting to employer, including dedicated employer support services, online access tools and instructions, and data quality control features in employer payroll/demographic files.
- The Client Plans do not track error rates, but the system is set up to ensure employers correct any errors before money is allocated to member accounts. The SP is responsible for monitoring employer action from error warnings.

Comparator Plans – Operations & Compliance

Client XYZ Plans

- **Plan Compliance:** *continued*
- The SP monitors Internal Revenue Code (IRC) limits for the DC plans, including 402(g) elective deferrals, 457(b)(2) annual deferrals, catch-up contributions XXX researches amounts for special catch-up), and 415(c) annual additions. The employers are responsible for monitoring these limits to the extent they offer non-PSR Plans, as well as for the IRC 401(a)(17) compensation limit.
- XXXX used the IRS correction program (EPCRS) to report corrections under the Voluntary Compliance Program (VCP) regarding incorrect automatic enrollments to the 401(k) Plan.
- **Staffing and Resources:** The Client Plans are administered by utilizing 1.5 FTE employees and 5.25 SP staff members dedicated solely to this Program, plus a number of staff that provide shared services (e.g., call center, IT, legal, QC).
- **Compliance Risks:**
 - Participating employers fail to accurately determine who is an eligible employee and enroll new employees on a timely basis (moderate)
 - XXXX relies on the SP to self-report and correct errors; does not conduct a periodic audit of transactions for compliance with Plan rules and IRC qualified requirements (moderate)

Operations & Compliance Recommendations

- Develop **internal controls** to maintain operational and documentary compliance with federal laws and regulations via three steps:
 1. Periodic review of operational compliance
 2. Develop processes to regularly update plan documents for changes in law and plan operations
 3. Timely correct any operational or documentary errors that are identified
- Periodic operational reviews should include a transactional audit of plan features where errors commonly occur, such as:
 1. Offering an election to enroll in the plan
 2. Ensuring timely and accurate contributions
 3. Testing IRS limits (e.g., IRC 402(g), 457(b), 415(c), 401(a)(17))
 4. Complying with IRS and plan rules regarding loans and hardships/unforeseeable emergency distributions
 - Elements of auditing enrollment processes:
 - Identification of eligible employees
 - Review timing and content of plan descriptions and election forms
 - Verify timing of actual enrollment and ensure contributions begin.
 - Elements of auditing contributions and payroll processes:
 - Accuracy of salary deduction amounts and timely allocation of funds to plan and trust
 - Compliance with plan terms and IRC compensation and contribution limits.
 - Elements of auditing distributions:
 - Verify eligibility for a distribution under plan terms
 - Ensure approval process followed
 - Review tax withholding and required notice compliance and accuracy.

Operations & Compliance Recommendations

- In order to maintain compliance with Internal Revenue Code requirements for governing plan documents, the best practice is to develop and implement a process for periodically updating plan documents.
- The Client 401(k) & 457 Program is governed by prototype plan documents maintained by the SP. Based on our review of the current provisions of these Plan documents, they are substantially in compliance with applicable IRS requirements for written plan documents.
 - Both Plans should address new plan document and operational requirements and optional provisions for IRC section 401(k) and 457(b) plans under the SECURE Act (P.L. 116-94), enacted on December 19, 2019 and the CARES Act (HR 748), enacted on March 27, 2020, particularly with respect to changes related to required minimum distributions under IRC section 401(a)(9).
 - In addition, the 401(k) Plan should address new plan document and operational requirements and optional provisions under the Tax Cut and Jobs Act of 2017 and the Bipartisan Budget Act of 2018, which made a number of changes to the rules for hardship distributions.
- It is our understanding that XXX has addressed any operational changes required under these Acts and required plan document updates are in progress.

Program Administration – Local Governments

- For the Program, while DC contributions for State and higher education institutions are sent directly to XXXX by the Program, local governments use XXXX's web-based portal to report a demographic data, contributions on-line contributions are remitted directly to XXXX using its Plan Sponsor Service Center (PSC).
- Given the complexity of supporting the 330 participating political sub-divisions with 15,295 members and assets totaling \$296,557,549, XXX provides significant service and resources to educating, supporting and trouble-shooting including:
 - A detailed handbook covering such topics as
 - Registration and deactivation
 - Forgotten credentials
 - Security
 - Updating and uploading files
 - Generating reports
 - Employer onboarding training and regular employer educational sessions and outreach
 - An employer service support center that can be reached via email or telephonically to resolve problems
 - Outreach to non-participating local governments regarding adopting the Program.
- XXXX also addresses portal transmission security and provides training to payroll and HR staff.
Note: not all local governments have auto-enrollment; therefore, materials and training are customized.

Observations/Recommendations: For the 4 comparator programs, participating local governments send one remittance with both DB and DC contributions to the retirement system. Given the effort and cost of supporting data and payroll processing of the DC contributions, the Program may wish to conduct a cost/benefit analysis of the 2 transmission options.

Program Administration – Auto-Enrollment

For DC member contributions, the comparator plans have a variety of design approaches:

- The Client Program has auto-enrollment but does not have auto-escalation:
 - 14,969 were auto-enrolled
 - 7% or 3,015 members opted out
 - 1,845 made an alternate election
- XXX has both auto-enrollment and auto-escalation:
 - 35,369 members were auto-enrolled
 - 129 opted out of the 5% contribution.
 - The auto-escalation feature automatically increases the members contribution by 0.5% (payroll deduction) annually until reaching 4%.
- The Client does not have auto-enrollment.
- The Client: Members are auto-enrolled as well as auto-escalated (increases 0.5% every 3 years up to 4%). For the most recent period:
 - 71% of members were auto-enrolled (or are within their election window)
 - 9% opted out
 - 20% took active control
- The Client: Does not have auto-enrollment but members can elect from 6 contribution rate options:
 - 5% all ages
 - 5% up to age 35 6% ages 35 through 44 7.5% age 45 and older
 - 6% up to age 35 7.5% ages 35 through 44 8.5% age 45 and older
 - 7% all ages
 - 10% all ages
 - 15% all ages
 - The Client has recently added auto enrollment into its 457 which has a 77% auto enrollment rate with 23% making an active choice.



Observations/Recommendations: Older hybrid plans were established before auto features were prevalent. Newer programs have adopted auto features, including auto-escalation. We would recommend the Program evaluate the pros and cons of adding an auto-escalation feature.

Program Administration – Call Center Services

- The Program's call center services are unique:
 - The Program's call center handles calls for both the DB and DC portions of the Program.
 - XXX has on-line access to the Treasurer's Office Concord system for informational and journaling purposes.
 - For more detailed DB questions and research requests, such as death and disability claims, XXX warm transfers calls to the XXX.
 - If the transferred call is not answered by the XXX within 3 minutes, XXX sends a message with relevant information to the XXX.
- XXX's call center for the Program:
 - Is staffed with 22 licensed call center representatives.
 - Handled a total annual call volume of 154,156 calls split relatively evenly between DB and DC calls.

Observations/Recommendations: All of the comparator program retirement systems' call center staff answer DB program calls and DC-specific calls are handled by the SP. For these critical and expensive services, a review of technology developments and potential costs may provide useful information.

For example, XXXX issued an RFP in 2019 that requested proposals for SPs to provide fully outsourced DB and DC call center services (similar to the Program's current approach) but elected not to outsource existing DB call center services largely due to cost. The XXX may want to take advantage of its future RFP for program services to conduct a review process of internal vs. external call center services.

Program Administration – Member Educational Services

- XXX conducts weekly and monthly meetings with the Client Director of Outreach and who manages a team of 9 Treasury associates located around the XXX who align with the RPAs to meet with employers regarding both DC and the Client plan needs.
- The Client Program has a strong commitment to retirement readiness, robust in-person member education services with a particular focus on one-to-one retirement readiness reviews and counseling. This level of activity is significant and demonstrates the XXX's commitment to financial security.
- Both the Client Program and the comparator plans have their SP conduct a variety of in-person educational sessions. For the comparator program, the annual volume of in-person DC member educational meetings varies considerably. For each program, the SP:
 - XXX: Touched 25,089 members (year ending June 30, 2020).
 - XXX: Does not use its SP to provide in-person education.
 - XXX: Touched 2,212 members (year ending June 30, 2020).
 - XXX: Touched 29,744 members (year ending December 31, 2019).
 - XXX: Touched 7,329 member (year ending December 31, 2019).

Observation/Recommendation: The Client Program receives “high touch” services. As part of the RFP process, the Client Program may wish to consider requesting service fee proposals for more than one educational service-level model to measure the cost/benefit of different staffing models.

Comparator Plans – Investments

Defined Contribution Investment Structure

- According to the NAGDCA 2019 Participants in Practice Survey the median number of options offered by 457(b) and 401(a) plans was 24.
- Vanguard's 2020 How America Saves found the average number of options offered was 17 and average participant usage was 2.4.
- Deloitte's 2019 Defined Contribution Benchmarking Survey Report found that 75% of plans had between 0 to 25% in proprietary assets.
- Vanguard's study also found the 64% of plans offered an index core (a passive option across equity and fixed income).

Asset Class	XXX	XXX	XXX	XXX	XXX	XXX
Stable Value	1	-	-	1	1	-
Money Market/Capital Preservation	-	3	-	-	1	1
Core Fixed Income	2	1	-	1	1	1
TIPS/Real Asset/High Yield	-	-	-	1	1	-
Global/International Fixed Income	-	-	-	-	-	-
Tactical Allocation	-	-	-	-	-	-
Balanced	2	-	-	-	1	2
US Equity	-	-	-	2	-	-
Large Cap Value	1	2	-	1	-	-
Large Cap Core	2	1	-	-	1	1
Large Cap Growth	2	1	-	1	-	-
Mid Value	1	-	-	-	-	-
Mid Core	-	1	-	-	-	-
Mid Growth	1	-	-	-	-	-
Small/SMID Cap Value	1	-	-	-	-	1
Small/SMID Cap Core	-	1	-	1	1	-
Small/SMID Cap Growth	1	-	-	-	-	-
Global Equity	-	-	-	-	-	1
International Equity	2	2	-	1	1	-
Emerging Market Equity	-	-	-	-	-	1
Specialty	-	1	-	-	1	-
Target Date Funds	1	1	1	1	1	1
Self-directed	1	-	-	1	1	-
Total Investment Options	18	14	1	11	11	9

Comparator Plans – Investments

Defined Contribution Investment Fees

- Deloitte's 2019 Defined Contribution Benchmarking Survey Report found that 75% of plans had weighted average expense ratios under 0.50%
- The 2019 study by the Investment Company Institute found in 401(k) plans the average equity fund expense ratio was 0.39% and fixed income fund was 0.35%
- Morningstar's 2020 Annual Fund Fee study found that across U.S. funds, the asset-weighted average expense ratio was 0.45%; for active funds it was 0.66% and passive funds 0.13%

Asset Class	XXX	XXX	XXX	XXX	XXX	XXX
Stable Value/Capital Preservation	0.41%	-	-	0.23%	0.25%	-
Money Market	-	0.10%	-	-	0.08%	0.19%
Core Fixed Income	0.04% & 0.42%	0.07%	-	0.29%	0.03%	0.12%
TIPS/Real Asset/High Yield	-	-	-	0.34%	0.03% & 0.40%	-
Global/International Fixed Income	-	-	-	-	-	-
Tactical Allocation	-	-	-	-	-	-
Balanced	0.13% & 0.53%	-	-	-	0.59%	0.45% - 0.48%
US Equity	-	-	-	0.14% & 0.29%	-	-
Large Cap Value	0.77%	0.05% & 0.35%	-	0.14%	-	-
Large Cap Core	0.02% & 0.58%	0.05%	-	-	0.01%	0.11%
Large Cap Growth	0.85% & 0.87%	0.05%	-	0.14%	-	-
Mid Value	0.92%	-	-	-	-	-
Mid Core	-	0.06%	-	-	-	-
Mid Growth	0.66%	-	-	-	-	-
Small/SMID Cap Value	0.88%	-	-	-	-	-
Small/SMID Cap Core	-	0.23%	-	0.51%	0.02%	0.13%
Small/SMID Cap Growth	1.25%	-	-	-	-	-
Global Equity	-	-	-	-	-	0.16%
International Equity	0.39% & 0.78%	0.10% & 0.83%	-	0.66%	0.06%	-
Emerging Market Equity	-	-	-	-	-	0.23%
Specialty	-	0.13%	-	-	0.09%	-
Target Date Funds	0.09%	0.08%	0.41% - 0.72%	0.19%	0.08%	0.25% - 0.26%
Self-directed	-	-	-	-	-	-

Program Administration – Ancillary Features & Services

- Program sponsors make different decisions regarding what ancillary services to offer to members. The key ancillary services for the comparator plans are summarized below.

	XXX	XXX	XXX	XXX	XXX
Loans	Yes	No	Yes (457 plan)	Yes (457 plan)	Yes
SDBO	Yes	No	Yes (457 plan)	Yes (457 plan)	Yes

- While not used by most members, annuity shopping services are provided through the SP. Most notably, XXX offers members the ability to annuitize their TAP account through the State Investment Board.

- Minimum Purchase Price: \$25,000
- Single or joint & survivor options
- Automatic 3% annual COLA
- The SP provides the recordkeeping services for the annuity payouts
- In 2019, 628 members annuitized \$140,477,287 of DC assets

- Managed accounts are offered by most of the comparator plans as well as by 60% of the DC program surveyed by NAGDCA.

Six out of 10 plans offer managed account services, with a median of \$25,780 in assets per managed account.

Fig 22



Observation/Recommendation: Ancillary services generate additional revenue for the SP the cost of which should be evaluated during the upcoming RFP process.

Program Administration – Ancillary Features & Services

- Public sector retirement program sponsors pay considerable attention to maximizing a member's ultimate retirement income and frequently educate members on the benefits of keeping their assets in the plan. Both the Client Program and the comparator plans have institutionally-priced DC investment options and understand the benefit to participant of low investment and administrative costs.
- In addition to educational initiatives to attract assets by promoting the ability to roll-in DC or IRA accounts, the Client Program and the comparator plans educate members on the benefits of retaining assets in the program.
- XXX conducted a pilot IRA rollout counseling service:
 - XXX's retirement education consultants provide distribution education services. These consultants:
 - Contact participants who are eligible to receive distributions from the plan.
 - Provide information regarding distribution options under the Program.
 - Provide information on the rollover services and products offered by XXX.
 - The Client Program recently tested XXX's government-only IRA model. In this test the XXX IRA was not mentioned by XXX's retirement service group representatives as a distribution option. The results of the pilot program were:
 - Pre-pilot: 49% of assets stayed in the Client Program
 - Pilot Phase: 71% of assets stayed in the Client Program
 - Post-pilot: 46% of assets stayed in the Client Program.

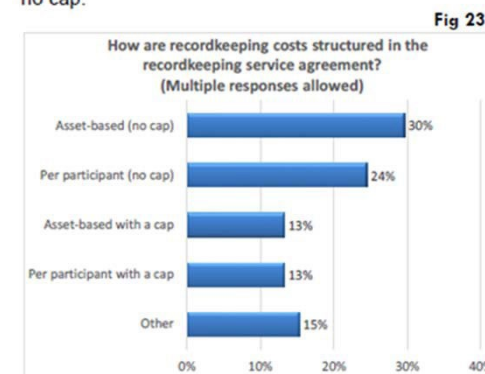
Like the comparator plans, XXX has performance standards with financial penalties.

Observation/Recommendation: Keeping assets in the Program, with its institutional pricing, can be a benefit to members. We recommend fully exploring options as part of the RFP process.

Program Administration – TPA Service Cost Comparison

- Contractual DC provider services and charges vary considerably:
 - XXX's current contractual DC Program administrative fee is 0.18996% annually which equates to a per member fee of \$46.45 or \$7,543,317.
 - **Note:** XXX also provides call center services for the DB portion of the hybrid program which are not included here.
 - XXX recently completed an RFP process and the new contract fee with its SP is expected to be approximately \$33 per member.
 - XXX pays a hybrid program fee of \$9.36 per year to XXX. XXX Savings Growth Program pays 0.0482% to XXX for administration of the 457 program which is approximately \$35.75 per participant.
 - XXX pays ICMA a per-account fee of \$30.50.
 - XXX contractual fees paid to XXX are:
 - For the TAP (Plan 3): 0.047%, which is approximately \$34 per participant
 - For the Self-Direct (Plan 3): 0.084%, which is approximately \$51 per participant
 - For the DCP/JRA: 0.056%, which is approximately \$11 per participant
- As the programs' design and operations are very different, service fees also vary. In addition, relatively speaking, the "more mature" a plan is the lower the fee.
- The Client Program and XXX both became effective in 2014 while the XXX program commenced in 2004. XXX' administrative cost is lower likely due, in large part, to the fact that XXX collects, scrubs and transmits participant data and transfers it to the SP.

In terms of how recordkeeping costs are structured, three in 10 plans use an asset-based structure with no cap.



Observation/Recommendation: The XXX program is the most similar to the Client's program. Both Programs started at about the same time and have a similar structure; however, one of the key differences is that XXX receives DB and DC data and sends one feed to the SP while the Client Program local employers transmit information and funding using XXX's PSC application.



*Crosscheck*sm Review

Sample Public Employees Retirement Systems

Segal

7951 E. Maplewood Avenue
Greenwood Village, CO 80111-4774

This Sample report is provided for informational purposes only. The report was produced in collaboration with external legal counsel and thus is not the sole work product of Segal. The contents of this Sample report were produced under certain circumstances during a specific timeframe and thus may no longer be accurate and cannot be relied upon. This information is not intended to provide legal or tax advice.

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Executive Summary

Legal Counsel and Segal were engaged by the Sample Public Employees Retirement System (PERS or the System), to perform an independent review of the administrative operations and practices of their Internal Revenue Code (IRC) §401(a) defined benefit retirement plans, IRC §401(a) defined contribution plans and IRC §457 deferred compensation plan, and the administrative operations and practices of the System and to determine whether it meets standards set forth in the plan documents and to determine the level of compliance with applicable federal laws.

This Executive Summary describes our findings and analysis from the comprehensive compliance review, which includes a review of Plan documents, governance structure and administrative functions, compliance with applicable federal laws and consistency of administration with Plan rules, as well as provides recommendations and suggestions for improvements in Plan administrative functions and operational compliance with federal tax law.

We wish to thank the administrators for their immense cooperation and support during the project. The System was gracious and candid and provided full access to staff and documents during the review process.

As a result of our compliance review, we conclude that the Plan is substantially in compliance with the requirements under IRC §401(a) and §457(b) and related Treasury Regulations and other applicable federal laws. We have identified a few areas of administration of the Plan that may be of concern to PERS and could warrant further review and/or modification. Overall, however, it appears that administration of the Plan is generally consistent with Internal Revenue Service (IRS) rules and governing Plan documents. During a compliance review of any plan, we often find operational and compliance issues and areas for improvement to the administrative processes. Retirement plan administration is inherently difficult by nature due to the number of constantly changing regulations required to be followed, and no plan document is free from ambiguity and the need for interpretation. From our review, it is apparent that PERS administers their Plan pursuant to rigorous and thorough internal control procedures developed for and consistently applied to Plan operations.

Legal Counsel and Segal's compliance review services, known as **Crosscheck**, is a comprehensive review of plan operating procedures to determine whether they comply with applicable requirements of the Internal Revenue Code and other federal legislation and regulatory guidance, as well as with the provisions of the Plan documents. The goal of a **Crosscheck** review is to:

1. **Assess** the current state of plan administration.
2. **Confirm** that procedures correspond to what the plan documentation states.
3. **Review** operational compliance with the Internal Revenue Code and other federal laws.
4. **Identify** potential risks and penalties associated with noncompliance.

Plan Review and Analysis

Our review and analysis of plan documents and operations included an extensive examination of federal laws and regulations, as described below.

- IRC requirements for qualified §401(a) retirement plans and §457(b) deferred compensation plans, including the following areas:
 - Written plan requirements
 - Trust and exclusive benefit requirements
 - Vesting rules for governmental plans
 - Eligible employers
 - Eligible employees
 - Contributions and deferral elections/limitations
 - Definitely determinable benefit requirements
 - Normal retirement age rules
 - Section 401(a)(8) forfeiture rules
 - Section 401(a)(9) minimum and required distributions
 - Section 401(a)(25) actuarial assumption rules
 - Section 415 limits for governmental plans (including excess benefit arrangements, aggregation of plans and purchase of service rules)
 - Section 401(a)(17) limit on recognized compensation
 - Employee and employer contribution requirements
 - Re-employment rules
 - IRC rollover and direct rollover rules
- Permitted distribution rules
 - Anti-alienation provisions and domestic relations orders
 - Benefit cashouts and lump sum payments
 - Special rules and exemptions for governmental plans
- IRC income tax reporting and withholding requirements
- Age Discrimination in Employment Act (ADEA)
- Veterans' reemployment rights (including USERRA and HEART Act rules)
- Family and Medical Leave Act (FMLA)
- Americans with Disabilities Act (ADA)
- Fiduciaries responsibilities and delegation of duties
- Claims and appeals procedures
- Disclosure to participants and beneficiaries
- Benefit processing, including:
 - Eligibility for and calculation of retirement benefits
 - Disability and survivor benefits
 - Application for benefit payments

- Notices and benefit statements to participants
- Benefit calculation procedures
- Plan distributions, including lump sum payments and optional forms
- Tax withholding requirements and basis recovery methods
- Required minimum distributions

Project Methodology

To understand our findings and recommendations, it is important to describe our process and methodology. As background, our review of PERS followed our **Crosscheck** compliance review and analysis methodology, which was individually tailored for the Plan's specific compliance needs.

Step One: Data Collection

Prior to the on-site visit at the PERS offices, various Plan documents were requested and collected from PERS and official Board policies and procedures. In addition, we reviewed all Plan communications, publications, forms and financial, actuarial and audit reports contained on the Plan's website.

Step Two: Documentation Review and Analysis

A brief familiarity review was performed of the Plan documentation, in order to prepare for on-site interviews with PERS staff. In addition, Plan documentation was thoroughly analyzed by Legal Counsel and Segal. A **Crosscheck** workbook, with questions specific to the type of plan, was used as a guide during the interview process.

Our documentation analysis also reviewed the consistency of Plan documents, including:

- "Fit" of participant communications with governing documents, including recent revisions;
- Consistency of operational processes and procedures, as well as other written materials with governing documents and employee communication materials; and
- Consistency of administrative actions with governing documents and written policies and procedures for Plan administration.

Step Three: On-site Interviews

The on-site visit to the PERS offices consisted of interviews with the key individuals who are responsible for the day-to-day operation of the Plan over the course of two days. The goal of the interview process is to ensure that Legal Counsel and Segal, as well as those involved with administration of the Plan, understand the rules of the Plan, and that PERS staff actually administer those rules according to Plan documentation. As indicated above, we covered an extensive array of questions that were designed by Legal Counsel and Segal regarding Plan administration and operational issues. The interviews also provided an educational opportunity

for PERS staff to address questions to our team of compliance experts on matters related to pension administration.

Step Four: Written Report

At the conclusion of our review, we prepared this written report of our findings, which identifies and outlines action items, including identification of areas requiring further inquiry, and recommendations on corrective action, if indicated. Subject to review and approval by PERS staff, the final report will be presented to the PERS Board of Trustees.

If PERS wishes to act on any of the results of the **Crosscheck** review, we can assist in developing solutions. The accuracy of the review and the resulting report is a direct function of the quantity and quality of data available for review.

We thank PERS once again for selecting Legal Counsel and Segal to conduct this compliance review and look forward to discussing our findings and recommendations.

Section 1. Issues Affecting All Plans

This report refers to the five qualified plans administered by the System, each being referred to as a “Plan”, and collectively as the “Plans”. The defined contribution plans for employees who elected to remain members in such defined contribution plans are treated together with the cash balance plans of which they are a part are considered single plans in accordance with IRC §414(k), consistent with how they have been filed with the IRS for determination letters.

The following points are to discuss compliance issues identified from the process above.

A. Cash or Deferred Arrangement Issue on Repayments for All Plans

Overview

Most of the qualified plans of the System allow members to make payments via irrevocable payroll deduction authorization to the Plans, including to pay a refund, purchase service credit, and repay of benefits required upon return to work. Pursuant to State statutes and Plan rules, these payments are made on a pre-tax basis utilizing employer pick up under IRC §414(h)(2). However, such payment arrangements may constitute impermissible cash or deferred elections under IRC §401(k). If these payroll deductions constitute a cash or deferred arrangement (“CODA”), then the payments do not meet requirements for pre-tax employer pick up under IRC §414(h)(2).

The Plan allows employer pick up under IRC §414(h)(2) for member repayment of refunds purchase of past service credit pursuant to an irrevocable payroll deduction authorization under applicable State statutes.

In addition, the PERS Board may set rules for repayment of benefits for specific Plans. It is our understanding that the Board allows irrevocable payroll deductions that are picked up by the employer under IRC §414(h)(2) for such repayment of benefits.

The Plan statutes do not specify how members may repay refunds, and there is no purchase of service provisions in these statutes.

Another Plan requires that retired members repay retirement benefits received if the termination of employment is not valid because the member returns to work within 120 days of ceasing employment. However, there is no description of the methods that may be used to repay benefits. Likewise, State statutes allow members who received a refund of contributions to repay the refunded amount in order to restore their benefits and service under the another Plan. State statutes also indicate that the Plan will accept transfers from other retirement plans to repay a refund as purchase of permissive service credit under IRC §415, but no other methods of repayment are described in the statute.

Other Plans have similar statutes regarding repayment of benefits, which is required if the retired member returns to work within 120 days of ceasing employment. The repayment of benefits may be made via a binding, irrevocable payroll deduction authorization. Both Plans also permit former members who return to work after withdrawing their benefits to repay the withdrawal amounts and restore benefits under the Plans, including via irrevocable payroll deduction authorization. It is our understanding that such payroll deduction payments are made on a pre-tax basis as an employer pick up under IRC §414(h)(2).

Finally, section 2.16 of the Deferred Compensation Plan document in requires members to repay benefits distributed to a member who returns to work within 120 days of ceasing employment.

Analysis

Governmental employers are not permitted to adopt a CODA after May 5, 1986. The establishment of a CODA jeopardizes the qualified status of a retirement plan under IRC §401(a). IRC §401(k)(4)(B)(ii) provides that:

A cash or deferred arrangement shall not be treated as a qualified cash or deferred arrangement if it is part of plan maintained by a State or local government

A cash or deferred arrangement is defined in Treas. Reg. §1.401(k)-1(a)(3) as:

... any direct or indirect election by an employee to have the employer either – (A) provide an amount to the employee in the form of cash (or some other taxable benefit) that is not currently available; or (B) contribute an amount to a trust, or provide an accrual or other benefit, under a plan deferring the receipt of compensation.

Essentially, a CODA provides an employee the ability to choose between cash compensation in the present or a benefit under a plan that defers the inclusion of such benefits in the income of an employee until a later date.

However, a cash or deferred election does not include a one-time, irrevocable election made no later than the employee's first becoming eligible under the plan or any other plan or arrangement of the employer that is described in IRC §219(g)(5)(A). See Treas. Reg. §1.401(k)-1(a)(3)(B)(v).

Based on this definition of a one-time, irrevocable election, it appears that the irrevocable payroll deduction authorizations for repayment of refunds, to purchase service credit, and for repayment of benefits required upon return to work permitted under State statutes and Plan rules do not meet the requirements for this exemption from being a cash or deferred arrangement. The opportunity to elect a payroll deduction can be made more than one time and for multiple purposes, and although the authorization is irrevocable once made, such election to defer compensation would normally be made later than the date the employee is first eligible under the applicable Plan. Therefore, these irrevocable payroll deduction authorizations generally do not meet the requirements for a one-time, irrevocable election under Treas. Reg. §1.401(k)-1(a)(3)(B)(v).

Furthermore, an irrevocable payroll deduction authorization to make such repayments permitted under State statutes and Plan rules are impermissible cash or deferred arrangements, only to

the extent the payroll deductions are contributed on a pre-tax basis. When members agree to an irrevocable payroll deduction authorization in order to purchase service credit or repay a refund or repay benefits to the Plans on a pre-tax basis, they are choosing to receive a benefit under a plan that defers compensation, such as qualified plan under IRC §401(a) or a deferred compensation plan under IRC §457(b), in lieu of receiving cash compensation. This is because the payroll deduction amounts are being treated as picked up by the employer as pre-tax contributions to the Plans in accordance with IRC §414(h)(2) and State statutes and Plan rules.

In Rev. Rul. 2006-43, the IRS clarified what it believed the requirements to be for a valid “pick-up” of employee contributions to be treated as employer contributions (pre-tax):

[C]ontributions to a qualified plan established by a State government will not be treated as picked up by the employing unit under §414(h)(2) unless the employing unit:

(1) Specifies that the contributions, although designated as employee contributions, are being paid by the employer. For this purpose, the employing unit must take formal action to provide that the contributions on behalf of a specific class of employees of the employing unit, although designated as employee contributions, will be paid by the employing unit in lieu of employee contributions. A person duly authorized to take such action with respect to the employing unit must take such action. The action must apply only prospectively and be evidenced by a contemporaneous written document (e.g., minutes of a meeting, a resolution, or an ordinance).

(2) Does not permit a participating employee from and after the date of the ‘pick-up’ to have a cash or deferred election right (within the meaning of § 1.401(k)-1(a)(3)) with respect to designated employee contributions. Thus, for example, participating employees must not be permitted to opt out of the “pick-up”, or to receive the contributed amounts directly instead of having them paid by the employing unit to the plan.

Since the irrevocable payroll deduction authorizations do not meet requirements for a one-time, irrevocable election under Treas. Reg. §1.401(k)-1(a)(3)(B)(v) for the reasons described above, these authorizations are a CODA and do not satisfy the requirement in item (2) above.

It should be recognized that this issue has developed over time. In prior years, IRS rulings allowed more than one salary reduction election by an employee to purchase service credit on a pre-tax basis (for example, see Private Letter Ruling 9750053). However, beginning in 2005, the IRS generally would no longer provide an opinion on the validity of an employer pick up transaction in Private Letter Rulings. Moreover, recent rulings from the IRS clearly indicate that voluntary elections by employees to increase their contribution amounts to a retirement plan cannot be picked up and would be CODA if paid on pre-tax basis. See Private Letter Rulings 201532036 and 201601013.

With regard to the Deferred Compensation Plan, neither the CODA prohibition of IRC §401(k)(4)(B)(ii) nor the pick-up provision of IRC §414(h)(2) applies. But by the same token, there is no provision for the repayment by pre-tax salary reduction (other than as a new elective deferral) when the person has not had a distributable event such as a bona fide termination of employment. As with overpayments from qualified plans generally under IRS correction procedures in EPCRS, unless the repayment is made by a transfer from a qualified plan, IRA or

another governmental 457(b) plan (for example, if the amount had been rolled over by the member), then the repayment is made on an after-tax basis. We would note that, however that there is special relief for operation violations of IRC section 457(b) plan that essentially allows operational violations of 457(b) to be retroactively corrected.¹ Governmental 457(b) plan operational violations can also be corrected under EPCRS on a “provisional,” basis consistent with general correction principles.²

Conclusion

Therefore, it appears that the irrevocable payroll deduction authorizations allowed under State statutes and Plan rules to purchase service credit, repay refunds, or for repayment of benefits do not satisfy the definition of a pick-up in order to be treated as pre-tax employer contributions under IRC §414(h)(2) and are also (except in the case of the Deferred Compensation Plan) impermissible cash or deferred arrangements, and should no longer be utilized. However, these authorizations are only an impermissible CODA to the extent the payroll deductions are contributed on a pre-tax basis via employer pick up. This means that irrevocable payroll deduction authorizations could continue for the purposes of purchasing service credit, repaying refunds, or repaying benefit amounts received before a valid termination of service, so long as a member’s payroll deduction amounts were contributed to the Plan on an **after-tax basis**. Alternatively, the Plans could discontinue accepting payment from members through payroll deduction and accept only lump sum payments or rollovers for the purpose of purchasing service credit, repaying refunds, or repayment benefits. Please note, however, that it is not common for public retirement systems to accept only rollovers or lump sum payments for these purposes because many members do not have the ability to pay large lump sum amounts.

B. Earnings on Repayment of Overpayments

As noted above, there are a number of provisions of the Plans which provide for the repayment by members of benefit amounts that were incorrectly paid by the Plans. For example,

If the board determines that termination of employment has not occurred and a retirement benefit has been paid to a member of the retirement system pursuant to section 84-1321, the board shall require the member who has received such benefit to repay the benefit to the retirement system....

Such incorrect payments are referred to by the IRS as “overpayments”. See IRS Rev. Proc. 2019-19, Section 5.01(3)(c) (“The term ‘Overpayment’ means a Qualification Failure due to a payment being made to a participant or beneficiary that exceeds the amount payable to the participant or beneficiary under the terms of the plan”).³

¹ Under language between IRC §457(b) and (c) (so-called “flush language”), “A plan which is established and maintained by an employer which is described in subsection (e)(1)(A) and which is administered in a manner which is inconsistent with the requirements of any of the preceding paragraphs shall be treated as not meeting the requirements of such paragraph as of the 1st plan year beginning more than 180 days after the date of notification by the Secretary of the inconsistency unless the employer corrects the inconsistency before the 1st day of such plan year.”

² Rev. Proc. 2019-19, Section 4.09.

³ This assumes, consistent with our understanding, that the requirement to repay is imposed because the original requirement of a bona fide termination of employment allowing the payment in the first instance was not met, as opposed to the original distribution having been valid under the terms of the plan, but subject to a repayment if rehired with a set period.

In order to correct an overpayment, the plan sponsor is to take “reasonable steps to have the Overpayment (*with appropriate interest*) returned by the recipient to the plan and reduce ... future benefit payments (if any) due to the employee.... To the extent the amount returned by the recipient is less than the Overpayment, *adjusted for Earnings at the plan's earnings rate*, then the Plan Sponsor or another person contributes the difference to the plan.” Rev. Proc. 2019-19, Sections 6.06(3) [regarding correction for overpayments for defined benefit plans], 6.06(4) [for defined contribution plans], and Appendix B, Sections 2.04(1) and 3. Overpayments to a participant or beneficiary of \$100 or less do not have to be recovered. Id., Section 6.02(5)(c).

This emphasis in the IRS correction procedures for overpayments being recovered with earnings is founded in the general principle of correction under Rev. Proc. 2019-19 that “The correction method should restore the plan to the position it would have been in had the failure not occurred, including restoration of current and former participants and beneficiaries to the benefits and rights they would have had if the failure had not occurred.” Id., Section 6.02(1).

In the case of a defined benefit plan, therefore, including a cash balance plan, the earnings component for requesting return of an overpayment is the rate of earnings of the plan itself for the period involved, which is what would restore the plan to the position it would have been in had the overpayment not occurred. On the other hand, in the event of recoupment of an overpayment by reducing future annuity payments, the actuarial present value of the reduction should equal the amount of the overpayment plus interest at the interest rate used by the plan to determine actuarial equivalence. Id., Appendix B, Section 2.04(1).

In the case of a defined contribution plan, if a plan permits employees to direct the investment of account balances into more than one investment fund, the earnings rate is based on the rate applicable to the employee's investment choices for the period of the failure. For administrative convenience, if most of the employees for whom the corrective contribution or allocation is made are non-highly compensated employees, the rate of return of the fund with the highest rate of return under the plan for the period of the failure may be used to determine the earnings rate for all corrective contributions or allocations. If the employee had not made any applicable investment choices, the Earnings rate may be based on the rate of return under the plan as a whole (that is, the average of the rates earned by all of the funds in the valuation periods during the period of the failure weighted by the portion of the plan assets invested in the various funds during the period of the failure). For administrative convenience, the earnings rate applicable to the corrective contribution or allocation for a valuation period with respect to any investment fund may be assumed to be the actual earnings rate for the plan's investments in that fund during that valuation period. Further, the earnings rate applicable to the corrective contribution or allocation for a portion of a valuation period may be a pro rata portion of the earnings rate for the entire valuation period, unless the application of this rule would result in either a significant understatement or overstatement of the actual earnings during that portion of the valuation period. Id., Appendix B, Section 3.

The procedure also allows an option of using a Department of Labor (DOL) online calculator to determine the interest, found at <https://www.dol.gov/agencies/ebsa/employers-and-advisers/plan-administration-and-compliance/correction-programs/vfcp>. However, this is generally to be used when “it is not feasible to make a reasonable estimate of what the actual investment results would have been.” Rev. Proc. 2019-19, Section 6.02(5)(A). We also note that EPCRS does not address whether earnings can be negative – i.e., where the plan has had

losses. The more conservative interpretation is that, by analogy to IRS Rev. Rul. 91-4 dealing with refunds of erroneous contributions, if earnings would be negative, then the overpayment sought to be recovered would not be adjusted for earnings.

As a result, we would recommend that when an overpayment is sought to be recovered from a member on the grounds that the individual was not entitled to the payment, that the amount be adjusted for lost earnings. PERS may find it useful to adopt a policy for determining earnings in the event of correction of an overpayment, depending on the plan and the facts in question.

C. Return of Contributions Made by Mistake

We discussed with PERS the appropriate correction when an employer makes a contribution by mistake – for example, due to failure to limit compensation to the IRC §401(a)(17) limit. (We note that mandatory pre-tax employee salary reduction contributions are treated as “employer” contributions for tax purposes because they are deducted from salary and paid to the trust by the employer, rather than directly by the employee. IRC §414(h)(2).) Qualified plans such as the Plans are required to hold all assets in trust for the exclusive benefit of the participants and beneficiaries. IRC §401(a)(2). This is known as the “exclusive benefit” rule. The IRS has long interpreted this rule to allow a return of contributions to an employer only if the contribution was due to a mistake of fact and if returned within one year of the contribution. Such reversions are not to be increased for earnings, but may be reduced for losses. See IRS Rev. Rul. 91-4.

There is a workaround, however, as the rule only prohibits payments out of the plan back to the employer. If an overpayment does not meet the Rev. Rul. 91-4 criteria for repayment, the plan could instead provide a credit to the employer in the amount of the overpayment that the employer could apply to future contributions. For example, if it is found that an employer contributed \$1000 to the plan two years ago in error, the plan would not return \$1000 to the employer, but by agreement with PERS, the employer could reduce its next contribution to the plan by the \$1000 amount. We note that, where part of that contribution included mandatory salary reduction contributions that were picked up under IRC §414(h)(2), the plan should not return those to the employee. Rather, whether the employer – the entity which sent the money to the plan – receives a refund within one year or a credit against future contributions, making up any such erroneously picked up contributions to the employee would be the responsibility of that employer, which would then report them as wages to the employee on a Form W-2.

We would recommend that PERS consider adopting a rule to refund mistaken contributions only in accordance with Rev. Rul. 91-4, and to provide a credit to the employer who made them in other situations.

D. Reasonable Allocation of Expenses

As noted above, the IRC requires that the assets held in trust for a qualified plan must be used exclusively for the benefit of the participants and beneficiaries of that plan. See IRC §401(a)(2). This effectively also means that plans should only pay expenses allocable to that plan. Where expenses arise in connection with administering the plans as a whole, they should also be reasonably allocated among those plans, to avoid using the assets of one plan to subsidize the expenses of another plan. Proper allocation of expenses to qualified plans is an area that has

been receiving more attention lately. There is little clear guidance on how to make such allocations, but it must be reasonable, and the process to determine it should be documented. We note that the contract with administration for administration of the Plans includes both per member annual charges (which vary by plan) and per event, per member charges (such as a charge for a distribution). It may be advisable for the Board to confirm with Administration that they believe that charging expenses to the plans in question in this manner is a reasonable allocation of expenses among each Plan for purposes of the exclusive benefit rule, and as expenses are incurred, to review and document whether they are being reasonably allocated among the various Plans consistent with the exclusive benefit rule.

E. Cybersecurity

Cybersecurity is an increasing concern with retirement plan accounts, not only for the systems of recordkeepers and service providers, and PERS' own systems, but in the area of hacking of plan members' own information (e.g., account usernames and passwords) which can then lead to unauthorized plan distributions. In this case, we note that the State Treasurer, rather than PERS, is responsible for cybersecurity over the funds held under PERS. In the area of participant requests for distributions, currently, paper distribution forms that are notarized are required by PERS, which likely assists in protection against unauthorized distribution requests. However, PERS should continue to monitor developments in this evolving area to stay on top of potential cyber-threats to participant information and funds.

F. Due Diligence in Searching for Lost Participants

Qualified plans under IRC §401(a), as well as eligible deferred compensation plans under IRC §457(b), have a duty to make reasonable efforts to locate missing participants when a minimum distribution is required to be paid in accordance with IRC §401(a)(9). Failure to exercise due diligence in administration of the plans with respect to locating missing participants or beneficiaries may lead to a variety of problems, including an excise tax (up to 50%) on late payments of required minimum distribution amounts, improper tax reporting, payment of benefits to the wrong person and noncompliance with required minimum distribution rules, which is an operational violation potentially leading to disqualification of the plan.

All of the System's statutes and Plan documents contain sufficient language for complying with required minimum distribution rules in form. The operational function of making required minimum distributions from the Plans is performed by PERS staff. In our interview with PERS, staff described a formal process for making required minimum distribution payments to participants on a timely basis, including the process for locating lost participants, and for participants who cannot be located, processing uncashed checks, and eventually sending benefits that cannot be distributed to the State's unclaimed property fund. The System's process for dealing with uncashed checks also includes treating such checks as a distribution and reporting the distribution on Form 1099-R, which is consistent with recent IRS guidance on uncashed checks. In Rev. Rul. 2019-19, the IRS confirmed that the employee's failure to cash a distribution check the plan issued does not alter the plan administrator's obligation to withhold income tax or to report the distribution on Form 1099-R.

Recently, the DOL and IRS have focused enforcement efforts on the issue of timely payment of required minimum distributions, and in particular the issue of locating lost participants in order to make required payments. In October 2017, the IRS published a memorandum that directed auditors of employee plans not to challenge a qualified plan as failing to satisfy required minimum distribution standards under IRC §401(a)(9) if the plan has taken the following steps:

1. Searched plan and related plan, sponsor, and publicly-available records or directories for alternative contact information;
2. Used any of the following search methods: a commercial locator service, a credit reporting agency, or a proprietary internet search tool for locating individuals; and
3. Attempted contact via United States Postal Service certified mail to the last known mailing address and through appropriate means for any address or contact information (including email addresses and telephone numbers).

If a plan has not completed the steps above (and show documentation that it has been done), the IRS auditor may challenge a qualified plan for violation of required minimum distribution standards or for the failure to commence or make a distribution to a participant or beneficiary to whom a payment is due. From our interviews with PERS staff on the System's procedures for locating lost participants, we note that these procedures follow the steps set forth in the IRS guidance, other than it appears that the System attempts to contact lost participants via first-class mail, rather than *certified* mail.⁴ Considering the focus on enforcement of required minimum distributions by the IRS, we recommend that the System modify their procedures for locating lost participants to include attempting at least one contact with lost participants via certified mail. Based on the IRS memorandum, it appears that a single attempt to contact a participant or beneficiary via certified mail is sufficient to satisfy the IRS guidance relating due diligence in making a required minimum distribution.

G. Alternatives to State Unclaimed Property Fund

Related to the issue of missing participants, we discussed with PERS staff an alternative method for dealing with benefits from the Plans for which the member cannot be located or will not cash a check other than transferring assets to the State's unclaimed property fund pursuant to the statutory rules. A method commonly used by statewide retirement systems for dealing with such benefits is that such benefit are forfeited and the related assets then remain in the trust fund of the Plan, subject to restoration and distribution of a benefit to a lost participant or beneficiary who contacts the System.

Regulations under the vesting provisions of the IRC provide that "a right is not treated as forfeitable ... merely because the benefit is forfeitable on account of the inability to find the participant or beneficiary to whom payment is due, provided that the plan provides for reinstatement of the benefit if a claim is made by the participant or beneficiary for the forfeited benefit." Treas. Reg. section 1.411(a)-4(b)(6). If that exception applies to private sector plans subject to the strict vesting rules of ERISA, it should apply to governmental plans subject to the less strict pre-ERISA vesting rules.

⁴ Prior guidance had indicated that first class mail could be adequate. See, e.g., **DOL Field Assistance Bulletin 2014-01**.

Currently, all qualified Plans of the System are required by statute to transfer any benefits that the Plan is unable to distribute to a member by their required beginning date, in accordance with IRC §401(a)(9), to the State Treasurer to be held in the State's unclaimed property fund. For example, the State statutes indicate:

The board shall make reasonable efforts to locate the member or the member's beneficiary and distribute benefits by the required beginning date as specified by section 401(a)(9) of the Internal Revenue Code and the regulations issued thereunder. If the board is unable to make such a distribution, the benefit shall be distributed pursuant to the Uniform Disposition of Unclaimed Property Act and no amounts may be applied to increase the benefits of any member would otherwise receive under the Retirement Act.

Similar language is set forth in statutes governing the other Plans of the System. The provisions of the Property Act ("the Act") describe when benefits must be delivered to the State Treasurer, what penalties apply if such delivery is not made, and when benefits are presumed to be abandoned.

As discussed, following is a brief description of some of the relevant issues for the System to consider with respect to maintaining forfeited assets in the System rather than transferring such assets to the State's unclaimed property fund.

1. Currently, benefits forfeited after a member's required beginning date are required by law to be transferred to the State's unclaimed property fund. No further action is necessary. However, in order for the System to be permitted to maintain assets related to forfeited benefits in the Plans' trust funds, a statutory change would be required. The System would need to develop and communicate to stakeholders persuasive arguments that this change would be beneficial to members, including preparing a response to any counterarguments.
2. Pursuant to the provisions of the Act, the unclaimed property fund absolves the System of all liabilities and responsibilities with respect to any forfeited benefits under the Plans once assets are delivered to the State Treasurer. This reduces the administrative burden of the System to continue to search for lost participants who have attained their required beginning date. However, the Plans are required to make reasonable efforts to locate missing participants or uncashed checks before either turning assets over as unclaimed property or forfeiting them. And if that has been done, there is also no further obligation to locate the missing participants after forfeiture – as there is no benefit to be paid. Thus, the practical difference between the two methods of dealing with the assets of lost participants is which entity gets to keep the unclaimed assets.
3. Generally, keeping forfeited assets (and the investment income thereon) in the System to offset plan liabilities likely would be beneficial to the funding status of the Plans. However, it may not be beneficial to the System overall to be responsible for keeping participant records for some time with any attendant monetary costs and administrative burden of such maintenance. Members who do not make an effort to receive a distribution of their accrued benefits prior to becoming forfeitures often have small account balances.
4. We do not have sufficient information to determine whether members are more likely to eventually recover their accrued benefits from the unclaimed property fund or the System. However, if forfeited benefits remain in the System, PERS could retain the records and assets of forfeited benefits for as long as desired. Thus, forfeited assets maintained by the System would not be considered abandoned property after a specified period, as they are

under the Act. Maintaining forfeited assets with the System may be especially beneficial for members who have recently reached their required beginning date under a Plan, as such members are more likely to contact the System which just corresponded with them on this matter, rather than a different State agency. Typically, state retirement systems using the forfeiture approach will adopt a procedure for locating missing participants before forfeiture, expressly limit the period during which a participant can reappear and claim a benefit, and provide that there is no interest paid on reclaimed benefits.

Section 2. Issues Affecting the Defined Benefit Plans

A. Bona Fide Termination of Employment

Overview

As detailed below, all of the Plans require a retirement and termination of employment to receive a benefit. No Plans allow a distribution while a member is still in service. Though it would be permissible in some cases for plans to be amended to provide for certain in-service distributions, the Plans do not currently permit it.

In discussions with PERS staff, the issue was raised that, while the plan documents may comply with the IRC, in operation, some members being paid on the basis of having retired and terminated employment might not have terminated employment in fact. This is a tax qualification issue because, as noted above, the IRS takes the position that a failure to follow the plan document is an operational failure resulting in disqualification of the plan unless and until corrected. Paying an amount to which a member is not entitled under the plan terms is such a violation, referred to in the IRS guidance as an “overpayment”, which generally must be corrected by making efforts to recover the overpayment.

As with many other public plans, the Plans have adopted various “return-to-work” provisions in order to make it less likely that a non-bona fide termination of employment can occur resulting in an overpayment and a potential disqualification of the plan if not corrected.

Connected with the possibility that a particular claimed termination of employment may not have been bona fide, is that some individuals may claim to return to work as independent contractors when they are in fact employees. Such misclassification can result in such person being paid while not having had an actual termination of employment or to have returned to work but not treated as having done so under that particular plan’s return to work rules.

Summary of Recommendation

PERS could identify those classes of employees where compliance in operation with the bona fide termination of employment and return to work rules has been questioned and put procedures in place to ensure better compliance by participating employers.

Analysis

1. Summary of Current Termination of Employment and Return to Work Rules
 - a. A, B and C Plan Rules

The Plans are substantially similar in this regard. Each pays benefits only upon a retirement following a “termination of employment.”

Each of these Plans also provides a 120-day “hold-out” period during which a rehire of a terminated employee, also known as a return-to-work, is not to occur if the termination is to be considered valid. For example, one Plan provides as follows:

(36) Termination of employment occurs on the date on which the agency which employs the member determines that the member's employer-employee relationship with the Sample is dissolved. The agency which employs the member shall notify the board of the date on which such a termination has occurred. Termination of employment does not occur if an employee whose employer-employee relationship with the Sample is dissolved enters into an employer-employee relationship with the same or another agency of the Sample and there are less than one hundred twenty days between the date when the employee's employer-employee relationship ceased with the state and the date when the employer-employee relationship commenced with the same or another agency. It is the responsibility of the employer that is involved in the termination of employment to notify the board of such change in employment and provide the board with such information as the board deems necessary. If the board determines that termination of employment has not occurred and a retirement benefit has been paid to a member of the retirement system pursuant to State statute, the board shall require the member who has received such benefit to repay the benefit to the retirement system....

Other Plans have similar 120-day hold-out rules.

b. Plan D

This Plan similarly pays benefits only upon retirement following a “termination of employment”. However, unlike the other Plans, the return to work provisions of this Plan are unique. The Plan provides as follows:

(44) Termination of employment occurs on the date on which the member experiences a bona fide separation from service of employment with the member's employer, the date of which separation is determined by the end of the member's contractual agreement or, if there is no contract or only partial fulfillment of a contract, by the employer.

A member shall not be deemed to have terminated employment if the member subsequently provides service to any employer participating in the retirement system provided for in the Employees Retirement Act within one hundred eighty days after ceasing employment unless such service:

(a) Is bona fide unpaid voluntary service or substitute service, provided on an intermittent basis; or

(b) Is as provided in State statutes

Nothing in this subdivision precludes an employer from adopting a policy which limits or denies employees who have terminated employment from providing voluntary service within one hundred eighty days after termination.

A member shall not be deemed to have terminated employment if the board determines that a claimed termination was not a bona fide separation from service with the employer or that a member was compensated for a full contractual period when the member terminated prior to the end date of the contract; and

(45) Voluntary service or volunteer means providing bona fide unpaid service to any employer.

c. The Deferred Compensation Plan

Consistent with the IRC, the Deferred Compensation Plan (the "DCP") provides that "any amount shall not be available to the participant or beneficiary prior to (a) the calendar year in which the participant attains age seventy and one-half years, (b) when the participant is separated from service with the state, or (c) when the participant has an unforeseeable emergency as determined by the Public Employees Retirement Board." This Plan also permits certain de minimis in-service distributions of small inactive accounts, consistent with IRC §457(e)(1)(A)).

The DCP at section 2.16 provides a definition of "Severance from Employment" or "Separation from Service" as:

The date on which a Participant experiences a bona fide dissolution of the employment relationship with the Participant's current Employer, the date of which dissolution is determined by the Employer. The Employer will notify PERS within 15 calendar days after the date such separation has occurred. Separation from service does not include ceasing employment if the Participant enters another employment relationship with the State within one hundred twenty (120) calendar days after ceasing employment or if it is determined by the Board that a purported separation was not bona fide. If the Board determines that a separation from service has not occurred and a termination benefit has been paid, the Board will require the Participant who received a termination benefit to repay the benefit to the Plan with any interest that may be required by the Code.

2. The IRS Definition of Termination of Employment

The IRC requires that a §401(a) pension plan, such as each of the Plans (other than the DCP, though it is subject to a similar rule), cannot make a distribution (other than a return of after-tax contributions) prior to the earlier of a termination of employment or the attainment of normal retirement age as defined under the plan, and assuming that such definition of normal retirement age satisfies applicable regulations. See IRC §401(a)(36); Treas. Reg. §1.401-1(b); and the IRS regulations on normal retirement age found at Prop. Treas. Reg. §1.401(a)-1(b)(2)(v) (which, though only proposed, can be relied upon).

However, a plan must also comply with its terms, even if those are stricter than the IRC would allow, e.g., if the plan requires a termination of employment to commence a benefit either before or after normal retirement age, then a termination of employment is always required to commence a benefit distribution. Violation of a plan term is an "operational failure" which would disqualify the plan for federal tax purposes unless corrected. See IRS Rev. Proc. 2019-19, section 5.01(2).

The IRS has defined “termination of employment” for purposes of §409A plans in Treasury Regulations, and in at least one private letter ruling, (PLR) has applied the definition in the regulation to §401(a) plans such as those of PERS as well. See PLR 201147038 and Treas. Reg. §1.409A-1(h)(1).

That regulation provides that:

Whether a termination of employment has occurred is determined based on whether the facts and circumstances indicate that the employer and employee reasonably anticipated that no further services would be performed after a certain date or that the level of bona fide services the employee would perform after such date (whether as an employee or as an independent contractor) would permanently decrease to no more than 20 percent of the average level of bona fide services performed (whether as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services to the employer if the employee has been providing services to the employer less than 36 months). Facts and circumstances to be considered in making this determination include, but are not limited to, whether the employee continues to be treated as an employee for other purposes (such as continuation of salary and participation in employee benefit programs), whether similarly situated service providers have been treated consistently, and whether the employee is permitted, and realistically available, to perform services for other service recipients in the same line of business.

Note that this definition treats employment and services as an independent contractor the same. However, in the case of a §401(a) plan, service as a bona fide independent contractor likely does not count as continued service because, unlike a §409A plan, in which both employees and independent contractors are permitted to participate, independent contractors are not permitted to participate in a §401(a) plan. See, e.g., Rev. Proc. 2002-21. However, note that purported independent contractor status can raise a number of issues, as described in further detail below.

3. Application of the Definition of Termination of Employment under the Plans

Each of the Plans has a provision that termination of employment is required to commence a benefit. A benefit cannot commence while the member is still employed, and a termination occurs on the date on which the participating employer determines that the member's employer-employee relationship with the employer and any other agency of the Sample is dissolved.

Moreover, each Plan provides that termination of employment does not include ceasing employment with the participating employer if the member returns to regular employment with the employer or another agency of the State and there are less than 120 days between the date when the employee's employer-employee relationship ceased and the date when the employer-employee relationship re-commenced with the employer or another state agency.

In the case of another Plan, the hold-out period is 180 days after ceasing employment, but there are certain exemptions:

- bona fide unpaid voluntary service or substitute service, provided on an intermittent basis; and

- as provided in State statute certain employees who return to employment in a position covered by the Plan.

For this purpose, voluntary service or volunteer means providing bona fide unpaid service to any employer. Substitute service is as defined above.

However, the statute also provides that in any event, a member shall not be deemed to have terminated employment if the board determines that a claimed termination was not a bona fide separation from service with the employer or that a member was compensated for a full contractual period when the member terminated prior to the end date of the contract.

4. Common Use of Hold-out Periods

Because in a state retirement system situation, unlike the private sector, a retirement board as plan administrator is more removed from the participating employer, it can be difficult for the board to have much knowledge of what the intention of the employer and the employee are at the time of a purported termination of employment. For that reason, it is common for public retirement systems to provide for the types of “hold-out” periods described above during which no return to employment is permitted. This is not to satisfy a bright line test for what constitutes a bona fide termination of employment, but rather to make it difficult to “game” the system” with phony terminations where there is an intent to return to employment. The use of such hold-out periods has been reported on and surveyed by the National Association of State Retirement System Administrators, or “NASRA.”⁵

5. Returning to Service after Termination of Employment as an Independent Contractor

Because of statutory prohibitions against in-service distributions, sometimes referred colloquially to as “double-dipping,” and hold-out periods, it is not uncommon in public retirement administration to see members terminating employment and the returning to work claiming to not be common law employees, but instead independent contractors.

Unfortunately, the test for independent contractor status is inherently factual and thus hard to administer. This can put much pressure on retirement boards to correctly assess whether a particular retired member has returned to work as a bona fide independent contractor. However, in theory, a retired member can return to work as a bona fide independent contractor and still be considered to have had a termination of employment originally.

a. IRS Tests for Independent Contractor versus Employee

Nationwide Mut. Ins. Co. v. Darden, 503 U.S. 318 (1992), is the seminal case holding that “employee,” for purposes of the employee benefit plan rules, is determined under traditional agency law principles, and cites the 20 factor test for employee status under IRS Rev. Rul. 87-41.

As the IRS subsequently explained in Rev. Proc. 2002-21:

⁵ See, e.g., “Balancing Objectives in Public Employee Post-Retirement Employment Policies: Reassessing Barriers to Continued Work” NASRA, Nov. 2018 (using the Nebraska School Plan as a case study), <https://www.slge.org/assets/uploads/2018/11/slge-nasra-post-retirement-employment.pdf>, see also “Public Retirement System Postretirement Employment Policies”, https://docs.google.com/spreadsheets/d/1-YCKLc8a2Q3C5IJ7ZssN6N2KSW6jKbR6C69fGdebw_A/edit#gid=0

The employment relationship between workers and the employer maintaining a plan is fundamental to whether a plan is qualified under § 401(a) of the Internal Revenue Code. The determination of whether an employment relationship exists depends on the facts and circumstances of each particular case.... The issue of whether a worker is an employee of a particular entity for employment tax purposes is determined by reference to § 3121(d), which incorporates the common law definition of employee. The Supreme Court has also applied this common law definition of employee for purposes of determining whether a worker is an employee entitled to receive benefits under a retirement plan. See *Nationwide Mutual Insurance Co. v. Darden*, 503 U.S. 318 (1992). Courts have also found that common law factors are applicable to determine which of two entities is the employer for purposes of retirement plans. The critical issue in determining who is the employer of an individual is which entity has the right to direct and control the individual performing the services.

Whether a purported independent contractor is doing the same work as the member did as an employee is also an important factor indicating that the person is performing services as an employee rather than an independent contractor. In our experience, the IRS often treats such a circumstance as dispositive.

This is based in part on section 530(a) of the Revenue Act of 1978, as amended by section 269(c) of the Tax Equity and Fiscal Responsibility Act of 1982, which provides, for purposes of the employment taxes under the IRC, a safe harbor that if a taxpayer did not treat an individual as an employee for any period, then the individual shall be deemed not to be an employee, unless the taxpayer had no reasonable basis for not treating the individual as an employee. For any period after December 31, 1978, this relief applies only if both of the following consistency rules are satisfied: (1) all federal tax returns (including information returns) required to be filed by the taxpayer with respect to the individual for the period are filed on a basis consistent with the taxpayer's treatment of the individual as not being an employee (the "reporting consistency rule"), and (2) the taxpayer (and any predecessor) has not treated any individual holding a substantially similar position as an employee for purposes of the employment taxes for periods beginning after December 31, 1977 (the "substantive consistency rule").

b. IRS Guidance on Independent Contractor versus Employee Status in the Governmental Context

Further, the IRS has issued some guidance specific to whether certain governmental workers are employees or independent contractors under certain facts and circumstances. For example, IRS Publication 963, the Federal-State Reference Guide, provides as follows:

In many worker classification cases, some facts will support independent contractor status and others will support employee status. Independent contractors are rarely totally unconstrained in the performance of their contracts, and employees almost always have some degree of autonomy. The determination of a worker's status, therefore rests on the weight given to the facts as a whole, keeping in mind that no one factor is determinative.

Form SS-8, Determination of Worker Status for Purposes of Federal Employment Taxes and Income Tax Withholding

In difficult cases, the IRS can provide a determination as to whether a worker is an employee or an independent contractor. To obtain a determination from the IRS, file Form SS-8. Either a governmental entity or a worker may submit Form SS-8. The IRS will acknowledge receipt of the Form SS-8 and will also request information from the worker. If a contract has been executed between the worker and the entity, a copy of the contract should be submitted with Form SS-8. In some cases, the IRS will contact the State Social Security Administrator to determine whether the entity and position are covered by a Section 218 Agreement. The IRS will generally issue a formal determination to the entity and will send a copy to the worker.

In another illustration of the issues that can arise regarding proper classification of school employees, the IRS, in Chief Counsel Advice 200147006, the IRS analyzed the situation of a school superintendent claiming to be an independent contractor:

In this case, there is a written contract stating that the parties envisioned an independent contractor relationship. A and B have also formed limited liability company and a regular corporation, for which no information reporting is required.

The realities of the situation suggest otherwise, however. The school districts have sufficient behavioral control over the two school superintendents under State statute to create an employer-employee relationship. This statutory right to control cannot be waived by private contract. The contracts recognize this risk by incorporating a clause which shifts to the superintendents the anticipated risk of the contract's being set aside.

It is clear from the contract and the August 28, 2000, memorandum that School District A intended to retain the services of Mr. A of company to employ Mr. A, except by reason of death or disability, constitutes a breach of the contract. The choice of the Designee in School District B's contract also indicates the desire to retain the services of a specific individual, though suggesting a stratagem intended to avoid giving that impression. The contracts make it clear that both individuals will continue to work in their offices on school district property, with very little change in their working conditions.

It also appears likely that the circumstances of employment of A and B require them to hold themselves out to others as employees and agents of their school districts. They hire, evaluate, and fire teachers. They represent the school districts in negotiations with teachers' unions. Documents and letters prepared on school district stationery also give an administrator apparent authority as an agent of a school system.

Under these facts, we conclude that the attempt to create an independent contractor relationship by contract is unsuccessful and that the school superintendents are employees of the school districts.

Specific Issues Raised

While we have in the past noted that terminations of employment for purposes of plan distributions must be bona fide, in this review, we were apprised of several areas where questions have arisen as to whether bona fide terminations of employment have occurred or the return to work hold-out requirements being satisfied, particularly involving common law employee versus independent contractor questions. For example:

1. A full-time teacher participates in a Plan. On the side, the teacher performs officiating duties for athletic events for compensation from the school district. Some school districts report the additional compensation paid to the teacher for officiating on a 1099-MISC, claiming that the teacher is an independent contractor. Other school districts report that compensation as employee compensation on the W-2. This raises an issue as to whether compensation is being correctly determined for purposes of plan contributions and benefits.
2. In similar cases, under another entity, such as a mentoring program, a teacher may be performing additional duties outside of traditional teaching. In some instances, compensation for these services is being paid to the teacher by the school district, in other cases, it may be paid by the other entity. Whether such compensation is treated as employee compensation for purposes of retirement benefits has apparently been inconsistent.
3. Apparently, some "community partners" and schools seek out teachers who recently terminated employment and have them perform similar duties to when they were employees, but treat the individuals as independent contractors. This raises issues as to whether the individuals had a bona fide termination of employment, or are in violation of the relevant holdout rule.
4. We understand that there may be other instances of plan members "retiring" and commencing benefits but returning to work as purported independent contractors within the relevant hold-out period, sometimes immediately.

Conclusion

To attempt to reduce noncompliance with the termination of employment and return to work rules, PERS could identify those classes of employees where compliance in operation with the those rules has been questioned and put procedures in place to ensure better compliance by participating employers. For specific categories, such as officiating at athletic events and mentoring programs, the facts could be determined and appropriate uniform treatment adopted.

1. More Outreach to Employers

One step PERS may want to consider is more outreach and education to employers and their human resources personnel and auditor on these issues to reduce misunderstandings and to enhance compliance.

2. Use of IRS Form SS-8

As discussed in IRS Publication 963 quoted above, for difficult situations where the system and the participating employer and purported employee or independent contractor differ on whether the individual is in fact an employee or independent contractor, it may be possible to have a Form SS-8 filed to resolve the question based on the facts. We would note, however, that a Form SS-8 can only be filed by the employer or the individual. The system would not have standing to file. But the system could require that the employer and/or individual filing allow the system to review it first. In addition, an SS-8 can be filed for a class of employees. However, one of the questions in the SS-8 is "Did the worker perform services for the firm in any capacity before providing the services that are the subject of this determination request? ... If "Yes," what were the dates of the prior service? If "Yes," explain the differences, if any, between the current

and prior service.” If there are not material differences, it can be expected that the IRS will rule that the person is an employee.

3. Possibility of a Private Letter Ruling on Return to Work

Another possible avenue for obtaining more clarity on whether particular facts for a return to work situation would be to seek a private letter ruling from the IRS, similar to PLR 201147038 discussed above. The IRS has the discretion to decide not to rule and return a ruling request, but we believe the IRS would likely entertain another ruling request in this area.

4. Plan Amendment

Finally, though it is a matter at the discretion of the legislature, if there is a desire by the legislature to allow in-service distributions without a termination of employment for certain categories of plan members, the statutes could be amended consistent with the IRC to permit that, but only after the individual has attained normal retirement age under the plan in question.

B. Cash or Deferred Arrangement Issues for a Plan

Overview

Currently, Plan members contribute 9.78% of compensation to the Plan. Pursuant to State statute, these member contributions are picked up by the employer in accordance with the requirements set forth in IRC §414(h)(2). Contributions picked up by the employer in this manner are treated as employer contributions for purposes of federal income tax, and thus are not included in the gross income of the member until such amounts are distributed under the terms of the Plan.

In discussion with PERS staff, the issue was raised whether an election made by employees in the Plan relating to employer-provided health benefits may be an impermissible cash or deferred arrangement (“CODA”) under applicable federal law. According to PERS, some participating school district employers offer what is called a “dual option negotiated agreement” to current employees who do not receive health insurance coverage from the employer. In such circumstances, the dual option offers current employees a choice between two options. Current employees are subject to Option 1, unless they make a one-time election to switch to Option 2 before a certain date. All future hires are only eligible for Option 2.

Under Option 1, the employee receives a base salary plus a specific amount of “flat” salary, which the employee may or may not use to purchase health and dental insurance through the school district’s IRC §125 cafeteria plan, at the employee’s election. Under Option 2, the employee receives a different base salary plus employer-provided health and dental insurance which we understand is not treated as taxable. There is no flat salary amount paid under Option 2. The benefit received under the Plan will thus be different under the election because compensation for purposes of calculating the benefit will be more or less depending on the election made.

Analysis

It is important to determine whether a current employee’s ability to make an election to switch from Option 1 to Option 2, thereby reducing the total amount of compensation and contributions to the Plan in exchange for nontaxable health insurance, is a cash or deferred election because governmental employers are not permitted to adopt a CODA after May 5, 1986. Establishing a CODA jeopardizes the qualified status of a retirement plan under IRC §401(a). IRC §401(k)(4)(B)(ii) provides that:

A cash or deferred arrangement shall not be treated as a qualified cash or deferred arrangement if it is part of plan maintained by a State or local government

A cash or deferred arrangement is defined in Treas. Reg. section 1.401(k)-1(a)(3) as:

... any direct or indirect election by an employee to have the employer either – (A) provide an amount to the employee in the form of cash (or some other taxable benefit) that is not currently available; or (2) contribute an amount to a trust, or provide an accrual or other benefit, under a plan deferring the receipt of compensation.

Essentially, a CODA provides an employee the ability to choose between cash compensation in the present or a benefit under a plan that defers the inclusion of income on compensation until a later date.

However, a cash or deferred election does not include a one-time, irrevocable election made no later than the employee's first becoming eligible under the plan or any other plan or arrangement of the employer that is described in IRC §219(g)(5)(A). Note that IRC §219(g)(5)(A) includes a qualified plan under IRC §401(a). See Treas. Reg. §1.401(k)-1(a)(3)(B)(v).

Based on the definition of a one-time, irrevocable election, it appears that the opportunity for current employees to elect to change from Option 1 to Option 2 does not meet the requirements for this exemption from being a cash or deferred arrangement. Although the opportunity to elect into Option 2 can only be made one time and is irrevocable once made, such election can be made later than the date the employee is first eligible under the Plan. Therefore, the opportunity to elect into Option 2 is not a one-time, irrevocable election under Treas. Reg. §1.401(k)-1(a)(3)(B)(v).

Though there is little guidance on these facts to point to, we have seen this issue raised by the IRS in connection with elections that result in more or less salary being paid in exchange for other nontaxable benefits when it has an impact on the amount of pension benefits.

In addition, there is a separate constructive receipt issue as to whether a current employee's ability to continue to receive an additional flat salary amount or to elect to receive less salary in exchange for employer-provided health and dental insurance in a plan that does not meet the requirements of IRC §125 permits the difference in flat salary to be treated as a pre-tax employer contribution for health and dental insurance. However, this is a complex issue for the employer, not for the Plans, so we will not address it further here.⁶

Conclusion

Therefore, it appears that the "dual option negotiated agreements" between employers and employees that participate in the Plan, which provides employees a choice between additional flat salary amounts under Option 1 and employer-provided health and dental insurance under Option 2, may present an impermissible cash or deferred arrangement as defined in Treas. Reg. §1.401(k)-1(a)(3).

⁶ See, e.g., PLR 200704005: "Taxpayer's employees will have the option to have contributions made to the [medical] Plan in lieu of receiving a portion of regular compensation or accrued leave, or both. Contributions will be pursuant to an election. Once the election is made, the Plan provides that the election is irrevocable; it cannot be reversed or revoked by the employee, and the employee cannot receive cash refunds of the contributions. Employees will have 30 days from initial eligibility within which to make a one-time irrevocable election to participate in the Plan. Employees who have not previously elected to participate will have an annual period of 30-60 days in which to make a one-time irrevocable election.... Based on the representations made and authorities cited above, we conclude that, pursuant to employees' elections, contributions that are made to the Plan in lieu of employees receiving a portion of their regular compensation or accrued leave, or both, are not excludable from employees' gross income under section 106 of the Code. Contributions to the Plan are includable in employees' gross income under section 61 of the Code." See also Rev. Rul. 75-539. But see also Chief Counsel Advice (CCA) 201640015.

Section 3. Issues Affecting the Defined Contribution and Cash Balance Plans

A. Eligible Employers – Plan C

As noted in prior compliance reviews, the IRS has continued to have the definition of governmental plan under study and has been developing proposed regulations that would address when an entity is an agency or instrumentality of the state or a political subdivision of the state eligible to participate in a governmental plan (or whether a de minimis number of non-governmental employees might be permitted to participate under some circumstances).

The Plan is the plan most likely to have entities that may be in the “grey area” of whether participation is permitted or not. We do understand that a subcommittee of the PERS Board has been monitoring some such employers, including at least one county hospital, a healthcare entity, and certain athletic/fitness facilities. In a related area, some Plan employers have terminated employees and leased them back from leasing companies or professional employer organizations (PEOs). We understand that, upon an employer ceasing to participate, these employees are vested automatically as in a partial termination.

Currently, in the absence of proposed or final regulations from the IRS (which when issued may well have transition relief for any grey area employers who fall on the non-governmental side of the line), we would not recommend changing these practices, but would recommend continuing to monitor grey area employers and action may need to be taken when the regulations are proposed, or if the agency or instrumentality relationship with a governmental entity clearly ceases to exist (for example, in a privatization). We note that there has begun to be some litigation in the area, including a suit by participants in a county hospital plan, and a suit involving the another employer, as to whether their plans were governmental plans. Though not directly involving a state retirement system, the legal analysis is substantially the same, so this litigation trend is worth following.

B. Submission of the Cash Balance Plans for IRS Determination Letters before September 1

Under IRS Rev. Proc. 2019-20, the IRS will accept a determination letter application for an individually designed “statutory hybrid plan” as defined in Treas. Reg. §1.411(a)(13)-1(d)(5), during the 12-month period beginning September 1, 2019, and ending August 31, 2020. The cash balance plans meet that definition, and we have informally confirmed with the IRS that, although governmental plans are not subject to the requirements of IRC §411 (so long as they meet the pre-ERISA vesting requirements), the IRS would accept determination letters from governmental statutory hybrid plans. An IRS determination letter can be relied upon by third

parties that the plans in form meet the tax qualification requirements. In addition, the recipient of a determination letter can generally request relief under IRC §7805(b) from retroactive disqualification for a provision on which the IRS has issued a determination letter if it has relied on the letter in good faith. See Rev. Proc. 2020-1, Sections 11 and 13. Accordingly, since the filing of a determination letter application is available for these two plans prior to September 1, 2020, we would strongly advise that such a filing be made.

Section 4. Issues Affecting the §457(b) Deferred Compensation Plan

A. Contributions to the DCP

Section 6.2 of the Deferred Compensation Plan provides for investment changes elected by participants to be made only in percentages, but in practice, the DCP allows investment changes in specified dollar amounts. The Deferred Compensation Plan should be amended to allow both.

B. Suspension of Deferrals Due to Unforeseeable Emergency Distribution

Currently, section 7.6.7 of the Deferred Compensation Plan restricts participants who receive an unforeseeable emergency distribution from making elective deferrals to the Plan for a period of six months. This rule mirrors a rule formerly applicable with respect to hardship distributions from IRC §401(a) and §403(b) plans. However, pursuant to sections 41113 and 41114 of the Bipartisan Budget Act of 2018 and applicable final Treasury Regulations, such plans are now prohibited from suspending a participant's contributions as a condition of obtaining a hardship distribution. For this reason, we recommend that the Deferred Compensation Plan eliminate the rule suspending deferrals after an unforeseeable emergency distribution.

Appendix. Additional Issues

In addition to the above, PERS had a number of specific questions. Although we have responded in email, our answers (in substantially the same form) are reproduced here.

A. DCP Online Enrollment

PERS requested guidance in implementing an online enrollment option for the §457(b) Deferred Compensation Plan. Specifically, you asked for implementation guidance on how the timing of elections affects the timing of payroll deferrals and to which annual deferral limit payroll deferrals apply.

Timing of Election

A §457(b) deferred compensation plan must provide that compensation for a given month may be deferred only if the deferral is elected before the first day of that month. The regulation interpreting the first of the month rule provides as follows:

To be an eligible plan, the plan must provide that compensation for any calendar month may be deferred by salary reduction only if an agreement providing for the deferral has been entered into before the first day of the month in which the compensation to be deferred under the agreement would otherwise be paid or made available, and any modification or revocation of such an agreement may not become effective before the first day of the month following the month in which the modification or revocation occurs. However, a new employee may defer compensation in the first calendar month of employment if an agreement providing for the deferral is entered into on or before the first day the participant performs services for the eligible employer. An eligible plan may provide that if a participant enters into an agreement providing for deferral by salary reduction under the plan, the agreement will remain in effect until the participant revokes or alters the terms of the agreement.

Prop. Treas. Reg. §1.457-4(b)(1).⁷

Thus, the rule is essentially that:

1. Existing employees can elect in month 1 to defer an amount provided that it is not payable before month 2, i.e., it is not payable in month 1. Thus, where a payroll period begins in month 1, but the pay cannot be paid until the end of the payroll period in month 2, an election in month 1 can be made for the month 2 payment, even though it covers some money earned in the month 1 period.
2. Under a clarification added by the proposed regulation, the existing employee rule applies to later changes in the election as well. For example, under the same facts as in 1., if that employee then elects at the beginning of month 3 to stop deferrals, that cannot be applied

⁷ Although we quote the proposed regulation, this language is substantially similar to the current regulation and can be relied upon.

to any payroll period that ends in month 3; it has to wait to be applied in the first payroll period ending in month 4.

3. For new employees, an election that is made “on or before” the first day of employment (“performs services”), if it is made in month 1, can be applied to compensation paid in month 1.

But, note the practical issue that influences how this is satisfied and often delays salary reduction further. It is typically difficult to implement a new election or change an election once a payroll period has begun. Thus, as a practical matter, administrators will often not be able to implement a §457(b) election unless it is received a certain period before a payroll period begins in addition to the requirement that the payroll period not end before the following month. This means that, in practice, a §457(b) election will often not be implemented in the month following the election unless it is received well before the beginning of the month, or alternatively, will not be implemented until the payroll period that begins in the following month – even though under the IRS rule, it could technically be applied to compensation that is paid in month 2 but was earned earlier in the part of the payroll period at the end of month 1.

Of course, for new employees, it can also be hard to get an election on the first day of hire to use that rule.

In addition to technical compliance, it is important that when elections will be applied be communicated properly, so a participant know when their salary will start to be reduced.

What Year a Deferral Counts Toward the §457(b) Limit

Under Treas. Reg. §1.457-4(a), the applicable annual limit is that for “the year deferred or contributed.” For a salary reduction deferral, that would be the time it would otherwise be paid as salary but is instead deferred. (“Contribution” refers to employer nonelective contributions, which are also subject to the same limit.)

B. Certain Plan Athletic Officials

PERS asked for guidance related to whether a full-time teacher, who is an employee of a school district, would also be considered an employee while officiating athletic events for the school district. As we understand it, there are various scenarios where this may arise, but PERS has asked us to review the particular factual situation below. While there is some guidance on whether a teacher may be separately treated as an independent contractor while officiating school athletic events, this is ultimately a facts and circumstances-based question. However, given that PERS indicated that most other school districts treat teachers who officiate athletic events as employees (and include the related wages on a Form W-2), and based on the authority discussed below, we believe the better view would be that the teacher is an employee in that activity because of the likelihood that work as a teacher can be said to be interrelated with work as a referee at school sporting events, and to apply that practice in all school districts and require the reporting of officiating-related wages to PERS as compensation for retirement purposes.

As a preliminary matter we note that, based on the outlined fact pattern and the definitions under State statutes, unless the alternative duties of a teacher as an athletic official would be reasonable to exclude from the definition of “Service” (because such duties do not constitute “employment”) and/or the teacher’s duties are not part of his or her work as a “Regular employee” (because the teacher is not acting as an “employee” during such time), such definitions of “Regular employee,” “Service,” and “Compensation,” which are otherwise relatively broad, would likely require the inclusion of compensation tied to officiating duties for retirement purposes under PERS. The issue therefore essentially boils down to one item: whether there is a credible argument that the teacher might be considered both an employee and an independent contractor, for different services at the same time.

As a general matter, to determine whether an individual is an employee, Sample courts have considered ten factors, with the “right of control” being recognized as the “chief factor distinguishing an employment relationship from that of an independent contractor.” This emphasis on the “control” exercised over the individual generally aligns with similar worker classification standards used by the IRS (*see generally*, Internal Revenue Manual section 4.23.5⁸; *see also* Rev. Rul. 87-21, and the IRS Federal-State Reference Guide, Publication 963), the Tax Court (*see, e.g.*, Schramm v. Commissioner, T.C. Memo. 2011-212), and the Supreme Court (*see* Nationwide Mut. Ins. Co. v. Darden, 503 U.S. 318 (1992)).

While the D.C. Circuit in *PIAA v. NLRB* did hold that athletic officials were independent contractors, this holding was largely based on “the few times on which PIAA actually pays the officials and the short duration of the officials’ employment.” And, as noted by PERS, that case was concerned with the relationship between the officials and the athletic association, not with the school districts (and even noted the fact that the schools directly paid the officials for most of their games was a point against finding the officials to be employees of the athletic association). *See* Pennsylvania Interscholastic Athletic Association, Inc. v. National Labor Relations Board, 926 F.3d 837 (D.C. Cir. 2019). Though not entirely on point, this holding that a referee was not an employee of the athletic association is generally consistent with most other courts, and guidance from the IRS, that have examined similar issues with respect to athletic associations. *See, e.g.*, IRS FSA 1995 WL 1918516 (which details the distinction between Rev. Rul. 67-119 and 57-119, both of which dealt with athletic associations, but reached different conclusions based on the differences in control exercised over the officials), and Collegiate Basketball Officials Ass’n, Inc. v. N.L.R.B., 836 F.2d 143 (1987).

Additionally, mostly in the context of worker’s compensation-related determinations of employee vs. independent contractor status, state courts have largely held that athletic officials be treated as independent contractors for both the school district and the school itself; *see also* NASO Special Report: Officials & Independent Contractors, which is somewhat dated, but provides a good general overview and additional cases that are reasonably on point).

But please note that these cases do not appear to conduct the independent contractor analysis in the context of teacher who is also employed full-time by the same school district or school (and notably, there is dicta in *Brighton* indicating that the court’s decision there was at least partially based on the fact that the official in question “was not hired by the School District on a regular or continuous basis” – which the PERS teacher is).

⁸ https://www.irs.gov/irm/part4/irm_04-023-005r

In any event, the IRS has also indicated that an individual can work for the same entity in separate capacities (i.e., as both an employee and an independent contractor), provided that those are “separate and distinct,” not “interrelated” as to duties or remuneration, and that the applicable common-law facts and circumstances analysis is properly applied to each role. See IRS CCA 200206053 Q&A 34; *see also* IRS Rev. Rul. 58-505 (but note that this conflicts with some guidance from the states, such as an opinion from the Attorney General’s office indicating that “whether such person is employed by the board of education in another capacity is irrelevant to the determination of whether, for purposes of officiating, they are an independent contractor”).

As the guidance outlined above primarily trends in favor of treating athletic officials as independent contractors (as a general matter), without the additional fact that the athletic official is a full-time employee of the same school or school district, treating an official as an independent contractor would likely be a reasonable determination. However, there does not appear to be much in the way of direct guidance or case law on the specific issue of teachers who are full-time employees moonlighting as athletic officials (at the same school or for the same school district). Here, as the individual in question is such a full-time teacher, if his or her teaching duties and officiating duties are treated as “interrelated... which, as a whole, contain the elements establishing the existence of a common law relationship of employer and employee” then he or she would be considered an employee “with respect to *all* services performed...”. See IRS Rev. Rul. 58-505.

The IRS has noted in CCA 200206053 that a teacher who separately edits the school district’s newsletter conducts “two types of work [that] are sufficiently different that it is possible, though not certain, that the employee is working in two capacities.” And in Publication 963, that “a teacher may be retained to remove snow from school property. This individual may be an employee as a teacher but an independent contractor for the snow-removal activity.” Here, while the duties of teacher and athletic official do not appear very close in nature, it is also a closer call than a teacher who also runs a snow-removal business on the side.

We can also look to the remuneration agreement or contract between the teacher and the school, which the IRS notes as another factor in determining whether positions are “interrelated” – here, is the officiating done under a separate contract where the referee pay is identified as being for an independent contractor? This is one of the dividing lines used by the Worker’s Compensation Division in making similar determinations for statutory worker’s compensation coverage purposes (see Q&A 6: “What if a school hires a teacher or other school district employee to referee a sporting event. Is that referee an employee or an independent contractor? Answer: It depends upon the contractual agreement made between the two parties and the referee’s status under the nine-point independent contractor test. Under this scenario, a separate contract covering the refereeing duties is key... If a school district employee referees events **as part of his or her teaching contract or under no contract at all**, the referee is considered an employee of the school district and the referee is covered under the Act. If a school district employee referees events under a separate contract for each event he or she referees, and he or she meets the nine-point independent contractor test...” (emphasis added)). And note that there are other states with similar worker’s compensation statutes, which generally exempt independent contractors (and in some cases specifically identify athletic officials as contractors) from coverage, unless they are officiating a game run by the entity that normally employs them (see NASO Special Report, page 10).

Given the above, this appears to be a close call, but on balance, as PERS has indicated that most other school districts treat teachers who officiate athletic events as employees (and include the related wages on their Forms W-2), we believe the better view would be to continue this past practice in all school districts and require the reporting of officiating-related wages to PERS as compensation for retirement purposes (particularly if similar facts in the past have specifically caused a particular school district to reach a different conclusion on employee versus independent contractor status, as a change in treatment could potentially invite IRS interest).

We also note that there are no explicit carve-outs for “independent contractors” in the applicable definitions under State statutes, and so even given that some of the guidance discussed above would allow for separate treatment as an independent contractor when officiating games for Internal Revenue Code purposes, the argument outlined by PERS as being made by a particular school district that the Interscholastic Athletic Association case supports independent contractor status is arguably less persuasive when specifically applied to the provisions of PERS.

And as a final matter, we note that while employee vs. independent contractor determinations are ultimately based on the relevant facts and circumstances, as the tax-related consequences of misclassification are ultimately more negative when an employee is improperly treated as an independent contractor, the general conservative position in these circumstances is erring on the side of classifying the individual as an employee. As also outlined above, the employer and the teacher in question, presumably with the involvement of PERS, could also file a form SS-8 to obtain IRS review of the status as well.

C. De Facto Cash or Deferred Arrangement and DROP

The IRS tends to examine public plans very closely to determine whether a DROP election includes a potential cash or deferred arrangement (CODA) as described above. The following is an example from a public plan other than PERS.

The DROP provision in question provided that DROP participants were eligible to receive lump sum annual leave payments and to have these payments included as compensation in their retirement calculations upon entry into DROP. As it happened, participants who did not elect to participate in DROP were entitled to receive leave payouts upon termination of employment and have those amounts included as compensation in their retirement benefit calculation at their later actual retirement. The IRS questioned whether this made the DROP election a CODA, since one choice or the other might lead to a larger annuity benefit.

The state plan argued that the same amount of leave is paid (or available to be taken as actual leave, which the plan argued is the same thing) regardless of the DROP election being made or not. Though one choice may result in a higher determination of compensation at a particular time and therefore a higher benefit than the other, the election did not result in a difference in leave available to be paid out in cash. Thus, the plan argued that there was no direct or indirect election by an employee to have the employer either provide an amount to the employee in the form of cash or some other taxable benefit in exchange for an additional

pension benefit within the meaning of Treas. Reg. §1.401(k)-1(a)(3). That is, participants received the same leave available to take as leave or as cash, whether or not their accrual is increased under the plan by the election, so it was not a CODA. After some back and forth, the IRS accepted that argument and issued a favorable determination letter; however, it is difficult to predict whether the outcome would be the same today or for other plans. This issue is important for PERS to keep in mind, though, with respect to any employee elections.

D. Rollovers into DCP

PERS also asked for guidance about permitting rollovers into the §457(b) deferred compensation plan by terminated participants.

Currently, the DCP document allows the Plan to accept rollover contributions that are an eligible rollover distribution from an eligible retirement plan. The Plan's definition of eligible retirement plan includes a "qualified trust described in Code section 401(a)". Thus, the DCP document already allows the Plan to accept rollover contributions from a §401(a) cash balance plan. (Of course, the distribution still has to be an eligible rollover distribution, which does not include amounts that are required minimum distributions (after 70 ½ or 72, as applicable) or being paid in annuity form. (The CARES Act has also made some changes to rollovers with respect to coronavirus-related distributions.)

With respect to the Plans, the DCP may accept rollovers at any time after termination. The Plans allows participants to defer distribution of their benefits (including cash balance amounts) until required beginning date. The DCP can take a rollover of any distribution that is an eligible rollover distribution, so unless a trust-to-trust transfer, that incorporates the indirect rollover time limit (generally, 60 days).

Different considerations apply for rollovers from the DROP Plan. IRS guidance indicates a lump sum distribution of a DROP account will be an eligible rollover distribution to the extent that it is not a required minimum distribution. Generally an extraordinary distribution from a DB plan is not considered a series of substantially equal periodic payments because the lump sum amount is substantially larger than a regular monthly pension payment, however, there are also rules under Treasury regulations for determining how much is eligible for rollover when a lump sum payment is made at the same time an annuity from the same plan commences. See Treas. Reg. §1.402(c)-2, A-6. (In addition, as noted above, the DCP document accepts rollover contributions from §401(a) qualified trusts, which would include a DROP account.)

Unlike the Plans, the plan document requires that DROP accounts be distributed within 60 days of termination of employment (i.e., a bona fide retirement in fact). The DCP should not, therefore, accept rollovers from the DROP Plan after that window.

The DCP plan document should be amended to include the limitation that it will not accept rollover contributions of after-tax and Roth amounts. See IRC §402(c)(2).⁹ The phrase "other amounts not eligible for rollover as directed by the Code" may suffice for this purpose. Alternatively, you may want to consider adding language to the effect that the DCP will accept a rollover contribution of an eligible rollover distribution, except the portion of any distribution that

⁹ See also https://www.irs.gov/pub/irs-tege/rollover_chart.pdf for a chart illustrating rollovers from and to different types of plans.

is not includible in gross income or is a Roth rollover. PERS may wish to be more detailed in any employee communications to avoid confusion.

Example Company

DOL Best Practices Assessment

Date xx/xx/xxxx

Confidential

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Section 1: DOL Guidance Overview

The DOL has issued three (3) pieces of non-regulatory guidance for plan sponsors, plan fiduciaries, record keepers and plan participants on best practices for maintaining cybersecurity as of April 14, 2021. This is the first time the department's Employee Benefits Security Administration (EBSA) has issued cybersecurity guidance. This guidance arises against a recent increase in attacks against organizations that have resulted in identify theft for participants, fraudulent distributions, and rising concern about the cybersecurity of nonpublic plan data and information. This guidance is directed at plan sponsors and fiduciaries regulated by the Employee Retirement Income Security Act (ERISA), and plan participants and beneficiaries. However, this guidance about best practices addresses important cybersecurity practices for any entity subject to ERISA, including ERISA group health and welfare plans.

Although governmental retirement plans are not subject to ERISA fiduciary rules or DOL requirements, the DOL guidance on cybersecurity practices provides recommendations and best practices, which can serve as practical and valuable guidance to governmental retirement plans, as well. In short, any municipal, state, county or federal entity can use these best practices as a minimum benchmark against which to measure their cybersecurity practices.

The Guidance

The three (3) pieces of guidance are:

- **Cybersecurity Program Best Practices** — Assists plan fiduciaries and record-keepers in their responsibilities to manage cybersecurity risks. Additionally, plan sponsors should share these best practices for reducing cybersecurity risks with recordkeepers and other service providers that have access to non-public plan-related data, information, and technology. This includes participant data and information as well as Trust and plan data and information related to assets (and asset management).
- **Tips for Hiring a Service Provider with Strong Cybersecurity Practices** — This publication is intended to help plan sponsors and fiduciaries prudently select a service provider with strong cybersecurity practices and monitor their activities, as ERISA requires, in an ongoing manner. These action items for plan sponsors and fiduciaries help them evaluate the strength of a service provider's cybersecurity program upon initial contracting with that vendor and then ensure those protections are maintained in a continuous manner.

- **Online Security Tips** — These are steps individuals can take to help protect their plan benefits and personal information from cybercriminals online. They are not only helpful for participants interacting with plan web or mobile properties but good, general, tips for interacting with any third-party in a secure manner.

The guidance answers several questions for ERISA plan sponsors and fiduciaries. It states that “responsible plan fiduciaries have an obligation to ensure proper mitigation of cybersecurity risks.” It also clarifies that the sponsor or fiduciary needs to evaluate, select, and contract with affected service providers that take steps to minimize cybersecurity risks and monitor the provider to ensure compliance with contract terms.

The guidance does not specify minimum requirements for the sponsors and fiduciaries to follow. Instead, in accordance with the DOL’s longstanding facts-and-circumstances approach, the guidance advises sponsors and fiduciaries of best practices and leaves it to them which ones to apply in accordance with the facts and circumstances of their plans. ERISA’s duty of prudence requires fiduciaries to act “with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.”

Finally, the guidance “...complements EBSA’s regulations on electronic records and disclosures to plan participants and beneficiaries. These include provisions on ensuring that electronic recordkeeping systems have reasonable controls, adequate records management practices are in place, and that electronic disclosure systems include measures calculated to protect Personally Identifiable Information.”

Cybersecurity Program Best Practices

This publication of 12 guidelines is directed at ERISA plan recordkeepers and other service providers who have access to plan-related IT systems and plan data. This guidance provides 12 best practices that plan sponsors and fiduciaries should follow and ask plan service providers to follow, along with a discussion of each practice. These best practices are a minimum framework for having strong cybersecurity practices. Additionally, they generally parallel the privacy rules for group health plans under the Health Insurance Portability and Accountability Act of 1996 (HIPAA). They include such practices as having a formal, well-documented cybersecurity program. Retirement plans may wish to consult experts with ERISA administrative and technology expertise in addition to HIPAA security knowledge, when deciding what practices they may need to adopt to improve their existing cybersecurity practices. Some of the DOL suggested best practices go further than the related HIPAA rules, including, for example, the best practice recommendations that risk assessments be conducted annually and be performed by an independent third party. Satisfying HIPAA security is not enough, in some respects, to meet the new DOL best practices.

Tips For Hiring a Service Provider with Strong Cybersecurity Practices

This guidance provides six (6) tips to help fiduciaries identify service providers that maintain plan records and secure participant data and plan accounts. They include asking about the service provider's data security standards, practices, and policies and audit results and then encouraging fiduciaries to benchmark those against industry standards. They also speak to assessing the service provider's security standards and security validation practices. They state that fiduciaries should ask about past security events and responses.

Online Security Tips

The final piece of guidance is for participants and beneficiaries. It provides a list of basic rules that help to reduce the risk of fraud and theft individuals may be exposed to when using online tools (websites, mobile applications, etc.). These tips are not only good for participants when interacting with a plan's online properties, but they also are good – general – advice for interacting with other third parties that a participant may interact with (including other financial service or health-related tools or properties). For example, the DOL's recommended practices are like those generally recommended to protect private data. They include using strong passwords and multi-factor authentication, avoiding free, non-secure Wi-Fi, and being suspicious of emails that could be phishing attacks. Plan fiduciaries are encouraged to share these tips to better satisfy their fiduciary obligations, and better protect themselves and their participants in the event of a cybersecurity event, by emphasizing the importance of following these tips.

Section 2: Assessment Summary

Scope and Objectives

Segal was retained by the Example Company ("ExCo") to help it act in accord with the above elements of the DOL's cybersecurity guidance. Separately, Segal is supporting the ExCo in its efforts to educate participants to improve their online cybersecurity practices (using the DOL's "Tips") and in assisting the ExCo in evaluating its service providers' cybersecurity practices (again, per another DOL best practice).

Additionally, as stated above, the DOL guidance includes a recommendation that fiduciaries perform a cybersecurity assessment related to the twelve (12) cybersecurity best practices. As such, the ExCo retained Segal to perform a cybersecurity risk assessment of its own current cybersecurity practices within its IT environment.

The goal of this assessment is to analyze the ExCo's cybersecurity maturity and to identify gaps or inadequacies in its current cybersecurity controls as compared to standards and applicable obligations (regulatory, contractual, etc.). Specific objectives were to identify if the ExCo:

- Has a formal, well documented cybersecurity program.
- Has the necessary controls in place to protect the organization from cyberattacks.
- Is prepared to respond effectively if a cybersecurity incident should occur.

Methodology

Our approach for this DOL assessment started with a data request to the ExCo. This request included approximately 45 artifacts covering such diverse areas as account management, data encryption, human resources policies and many others. We then analyzed the documentation provided to prepare this written report of our findings and recommendations.

Each DOL best practice is weighted during the assessment evaluation to illustrate its importance to the overall protection of data and the ability to react to a cybersecurity incident should one occur. There are twelve (12) best practice categories with associated weightings ranging from 5% to 18% out of a 100% total.

We believe the recommendations provided in this report are appropriate for the size and operations of the organization as they relate to the DOL best practices. That stated, security is an ongoing responsibility, and this report reflects a point in time. The review and recommendations provided are based on the information provided by the ExCo and our professional expertise at the time of the assessment activities. Importantly, this report offers suggestions for improving the ExCo's cybersecurity practices which we encourage the organization to consider.

Assessment Score and Results

The DOL Best Practices were assigned scores with each percentage being converted to a numerical score so that one hundred (100) is the highest and best possible total score. The table below shows the top possible scores for each DOL Best Practice area (Top Possible Score), your organization's cybersecurity assessment score (Your Assessment Score), and the potential amount of business risk incurred by the ExCo based on their cybersecurity assessment score.

The **ExCo has an overall Very High risk** of a cybersecurity incident based on this assessment and the ExCo's current cybersecurity activities as illustrated in the table below. Improvement opportunities appear later in this report.

	Top Possible Score	Your Assessment Score	Your Risk Rating for this Area
Overall Usage of Best Practices versus DOL Guidelines	100.00	5.07	Very High
Formal, Well Documented Cybersecurity Program	7.00	0.90	Very High
Conduct Prudent Annual Risk Assessments	5.00	0.44	Very High
Have a Reliable Annual Third Party Audit of Security Controls	10.00	0.00	Very High
Clearly Defined Information Security Roles and Responsibilities	5.00	0.13	Very High
Have Strong Access Control Procedures	15.00	0.00	Very High
Ensure Assets or Data Managed by a Third Party Have Independent Security Reviews	5.00	0.00	Very High
Conduct Periodic Cybersecurity Awareness Training	5.00	0.50	Very High
Implement and Manage a Secure System Development Life Cycle (SDLC)	5.00	0.00	Very High
Effective Business Resiliency Program	8.00	0.40	Very High
Encrypt Sensitive Data Stored and in Transit	12.00	2.25	Very High
Implement Strong Technical Controls	18.00	0.45	Very High
Appropriately Respond to Past Cybersecurity Incidents	5.00	0.00	Very High

Tiers

The DOL Best Practices enable Segal to generate an organizational rating mechanism through the use of four (4) Tiers, with the first tier being the least comprehensive in its cybersecurity practices to the fourth tier, which is the most comprehensive. The **ExCo is rated Tier 1** for this assessment, as shown in the shaded area below. Due to the valuable data ExCo protects and is entrusted with, it is recommended that the organization should seek to improve this level moving forward.

Tier 1	This is a Partial implementation, meaning that cybersecurity is done through informal practices, has limited awareness across the organization, and demonstrates limited or no cybersecurity coordination among organizational entities.
Tier 2	This is a Risk Informed implementation, meaning there are management approved processes and prioritization but they are not deployed organization-wide; a high level of cybersecurity awareness exists; adequate security resources are provided; and there is informal sharing of best practices and coordination across the organization.
Tier 3	This is a Repeatable implementation, meaning that formal policies define risk management practices with regular reviews and updates and there is an organization-wide approach to manage cybersecurity risk with fully implemented processes and regular formalized coordination.
Tier 4	This is an Adaptive implementation, meaning that cybersecurity practices actively adapt based on lessons learned and predictive indicators; cybersecurity is implemented and is part of the organizational culture; and there is active risk management and information sharing.

The positive actions and artifacts included in the rating are:

- Employees are annually trained in cybersecurity safety.

Top 12 Recommendations

The DOL Best Practices evaluation shows there is still room for the ExCo to improve by continuing to address current issues and by being better prepared if a cybersecurity incident were to occur.

The ExCo has the potential to reduce their overall risk score by addressing the single highest area for improvement for each of the twelve (12) DOL Best Practices as shown below. Further specific details for the area can be found in Section 3 of this report, along with details for every artifact analyzed in this evaluation process.

Item ID	Best Practice	First Item to Focus On
1.	Formal, Well Documented Cybersecurity Program	Data Protection Policy. See detailed report item number(s) 1, 52.
2.	Conduct Prudent Annual Risk Assessments	Risk Assessment Process. See detailed report item number(s) 22, 33.
3.	Have a Reliable Annual Third Party Audit of Security Controls	Internal Third Party Audit Results. See detailed report item number(s) 25.
4.	Clearly Defined Information Security Roles and Responsibilities	Incident Response Plan. See detailed report item number(s) 27, 48, 60.
5.	Have Strong Access Control Procedures	Identity and Access Management Audit Results. See detailed report item number(s) 31.

6.	Ensure Assets or Data Managed by a Third Party Have Independent Security Reviews	Supplier Cybersecurity Audit Results. See detailed report item number(s) 38.
7.	Conduct Periodic Cybersecurity Awareness Training	Security Training Audit Results. See detailed report item number(s) 17, 28, 40.
8.	Implement and Manage a Secure System Development Life Cycle (SDLC)	Vulnerability Scan Audit Process and Reports. See detailed report item number(s) 42.
9.	Effective Business Resiliency Program	Disaster Recovery Plan Test Results. See detailed report item number(s) 45.
10.	Encrypt Sensitive Data Stored and in Transit	Data Encryption Tooling and Procedures. See detailed report item number(s) 50.
11.	Implement Strong Technical Controls	Monitoring Tool Names and Procedures For Detecting Malicious Code. See detailed report item number(s) 53.
12.	Appropriately Respond to Past Cybersecurity Incidents	Incident Response Plan Test Results. See detailed report item number(s) 46, 59.

Section 3: DOL Best Practices Evaluation Detailed Results

The DOL Best Practices Evaluation Detailed Results are illustrated in the tables below. The results are organized by each best practice within the DOL guideline. It should be noted that if an artifact was not provided for a particular category, then the risk was always set to be a Very High risk for that artifact. The Cyber Security Risk column was translated to a point score based on the table shown below then summed and multiplied by the weighting for each category to determine the overall scores presented at the aggregate levels earlier.

Scoring for each line item in the report detail tables was calculated for each artifact reviewed for this assessment. The artifact scores were then totaled for each DOL Best Practice area and multiplied by the assigned weighting factor (for that area) to produce the assessment scores. A perfect overall cybersecurity score would be 100.

Artifact Risk Value	Description	Number of Points Scored
Not Provided	The artifact was not provided for the assessment because it was not available or does not exist.	0
Very High Risk	The artifact was provided but was found to be very highly deficient in what is reasonably expected for such an item. An artifact is labeled a very high risk if it scores less than 50 points out of the possible 100 points.	1

High Risk	The artifact was provided but was found to be lacking in many requirements reasonably expected for such an item. An artifact is labeled a high risk if it scores between 50 and 65 points out of the possible 100 points.	2
Medium Risk	The artifact was provided but was found to be lacking in some minor requirements reasonably expected for such an item. An artifact is labeled a medium risk if it scores between 66 and 85 points out of the possible 100 points.	3
Low Risk	The artifact was provided and was found to meet the requirements for what is reasonably expected for such an item. An artifact is labeled a low risk if it scores 86 points or more out of the possible 100 points.	4
Not Applicable	The artifact was not applicable for this assessment.	4

Detailed Report

The detailed results are shown below.

Best Practice 1 - Formal, Well Documented Cybersecurity Program: This is the written policies and procedures used to govern how cybersecurity is handled within the organization. These policies include such items as how assets are destroyed, how user accounts are assigned and deleted, when software patches are applied and many others.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
1.	Data Protection Policy	Not Provided.	Consider including such items as: - A statement requiring all data on the workstation to be encrypted; - A statement that the email system should automatically identify and encrypt PHI and PII data in emails; and - A statement that user workstations and laptops should automatically lock the screen after a set period of time of inactivity of no more than 30 minutes.	Very High
2.	Patches and Upgrades Management Policy and Procedures	Not Provided.	Consider including such items as: - Configuring workstations, laptops, and servers to automatically	Very High

			update when new patches are available; - Applying new patches or upgrades at least weekly; and - Requiring the administrator to use a formal change management procedure when implementing patches or upgrades.	
3.	Password Management Policy and Procedures	Not Provided.	Consider including such items as: - Requiring passwords to be encrypted when stored and transmitted at all times; - Automatically locking out systems for a period of time after a specified number of invalid password attempts; and - Disabling user passwords after a specified number of invalid password attempts and requiring a help desk call to re-enable the password.	Very High
4.	Access Control Policy	Not Provided.	Consider including such items as: - A statement requiring all systems with protected data to have an authentication process;	Very High

			- A statement explicitly stating that all users must have unique user IDs; and - A statement that all users, both internal and external, should receive the least privilege/access required to do their jobs.	
5.	Account Management Policy and Procedures	Not Provided.	Consider including such items as: - A statement requiring all applications to have a documented business owner; - A statement requiring each application to have documented procedures for adding a new user including who must approve the addition; and - A statement requiring each application to have documented procedures for changing a user's permissions including who must approve the change.	Very High
6.	Asset Management and Disposal	The information was provided in document <i>Example Asset List</i> and included such items as: - A complete inventory of all assets including workstations, servers, all network equipment (such as	Consider including such items as: - Recording the serial number of each asset on all asset inventory lists;	High

		firewalls, switches, VPN, optimizers, etc), printers, copiers, faxes, mobile devices, software, documentation, company-supplied removable media, internet circuitry, etc; - A monthly inventory report to show that the asset inventory is being reviewed on a regular basis; and - Labelling all authorized hardware with an identifier tag for inventory and audit purposes.	- Recording where assets are physically located; and - Recording when the assets were purchased.	
7.	Business Continuity Plan	The information was provided in document <i>Example Business Continuity Plan</i> and included such items as: - A prioritized recovery order for business functions, systems, applications, data and the critical personnel needed to recover them; - A Business Continuity Plan policy that requires all significant systems to develop a Business Continuity Plan; and - A list of events that will trigger the Business Continuity Plan to be executed.	Consider including such items as: - Formally documenting the approach to business continuity for each potential business continuity issue such as loss of critical equipment, people, applications, or data, loss of power, loss of office space, etc.; - A section documenting repeatable steps that can be used to implement business continuity procedures; and - Identifying what can be done in advance to prepare for critical events failing.	Very High

8.	Data Encryption Policy	Not Provided.	Consider including such items as: - A policy statement that all protected data stored on every organization asset must be encrypted and protected by access control mechanisms including workstations; - A requirement that all documents containing PHI or PII must be encrypted before sending whether that is through email, file transmissions, etc.; and - A requirement that all encrypted data must have the decrypting password sent via a separate email.	Very High
9.	Data Retention Policy and Procedures	Not Provided.	Consider including such items as: - A statement prohibiting the disposal of documents involved in litigation, government, or regulatory investigations, inquiries, audits, civil or criminal actions, or enforcements; - Retention policies for the storage of all databases; and	Very High

			- Retention policies for the storage of computer networks and application log and audit files.	
10.	Acceptable Computer Use Policy	The information was provided in document <i>Example Use Policy</i> and included such items as: - A statement saying that users are not allowed to disable hardware or software that protects against attacks (anti-virus, anti-spyware, firewall, and intrusion detection); - A statement saying users cannot load or download unapproved software onto their workstation, mobile device, or the network; and - A statement discussing acceptable use of the internet.	Consider including such items as: - A statement saying users should not reveal their passwords to anyone else; - A statement discussing acceptable use of text messaging; and - A statement discussing acceptable use of voice messaging.	Very High
11.	Cybersecurity Insurance Policy Documentation	The information was provided in document <i>Example Cyber Insurance Policy</i> and included such items as: - Obtaining cybersecurity insurance to help mitigate risk.	Consider including such items as: - Enough cybersecurity insurance to cover your largest potential loss; - Cybersecurity insurance that provides a forensics team if an incident occurs; and - Cybersecurity insurance that provides legal counsel if an incident occurs.	Very High

12.	Cybersecurity Policy	Not Provided.	Consider including such items as: - A statement that all directories, files, and data should be controlled through identity and access management procedures and tooling; - A statement that the organization should restrict, disable, and prevent the use of nonessential programs, functions, ports, protocols, and services; and - A statement that application blacklisting (deny-by-exception) or whitelisting (permit by exception) is required on all systems and access.	Very High
13.	Network Monitoring Policy	Not Provided.	Consider including such items as: - A documented policy to indicate that the network must be monitored; - A statement that the network should be monitored continuously at all times; and - Denying all network communication traffic by default (deny all, permit by exception unless specifically permitted).	Very High

14.	Remote Access Policy and Procedures	Not Provided.	Consider including such items as: - Stating that multi-factor authentication is required for all remote connections; - A documented remote access policy; and - Stating that authorized users are responsible for preventing network access by unauthorized users from the authorized user's device.	Very High
15.	Removable Media Policy	Not Provided.	Consider including such items as: - Banning the use of all removable media; - Requiring removable media to be encrypted; and - Requiring at least an annual test to validate that removable media restrictions are in place and working as expected.	Very High
16.	Mobile Device Policy	The information was provided in document <i>Example Mobile Device Policy</i> and included such items as: - Requiring all mobile devices to use a password of at least 5 characters or another login type such as a biometric data point like	Consider including such items as: - Requiring all mobile devices to be automatically wiped after a specified number of failed login attempts in a row, for example, ten invalid attempts;	Medium

		a fingerprint or facial recognition before access is allowed; - Ensuring all mobile devices are encrypted; and - Requiring all mobile devices to lock after a specified period of inactivity, for example, 5 minutes.	- Installing software on all mobile devices to prevent them from downloading unauthorized applications; and - Requiring users who use personal mobile devices to access organization networks, email, or data to have the same protections on those devices as if they were corporate owned.	
17.	Security Training Audit Results	Not Provided.	Consider including such items as: - Tracking and recording who has taken security training and the date of their last completed session; - Evidence that security training records are audited to validate that all employees have taken the required security training within the required time window; and - Evidence that security training records are audited on at least an annual basis.	Very High
18.	Vulnerability Management Policy and Procedures	Not Provided.	Consider including such items as: - A policy to perform vulnerability scans at a pre-determined frequency;	Very High

			- A list of the names of tools used to perform vulnerability scans; and - A documented job responsibility for a specific role to review vulnerability scan results.	
19.	Disaster Recovery Plan	The information was provided in document <i>Example Disaster Recovery Plan</i> and included such items as: - Establishing documented criteria for determining the criticality of systems and services in the event of a disaster; - Identifying alternate processing sites while recovering from the disaster; and - Including a prioritized recovery order for business functions, systems, applications, data and the critical personnel needed to recover them.	Consider including such items as: - Keeping a copy of the Disaster Recovery Plan in a safe, off-site location from where the disaster would affect the business; - Identifying immediate actions to be taken in the event of a disaster; and - Requiring system and data backups to be stored in a location that meets the business recovery time objectives (RTO) if the data must be retrieved and restored from the backup.	Very High
20.	Configuration Management Policy	Not Provided.	Consider including such items as: - Requiring that all system and / or application configurations must be documented, kept current, and be stored in a separate location for	Very High

			easier recovery should an incident occur; - Requiring all configuration changes to be approved by at least one manager before being implemented; and - Defining within the configuration management policy how any configuration changes to be made will be communicated to the organization both before the change is made and afterwards.	
21.	Artificial Intelligence Policy	The information was provided in document <i>Example AI Policy</i> and included such items as: - Specifically stating that the AI tool user must review the AI results for accuracy; - Requiring employees to be trained in the appropriate and ethical use of using AI tools; and - Requiring employees to be trained in the proper protection of data when using AI tools.	Consider including such items as: - Identifying the specific AI tools that are approved for use in the organization.	Low
Best Practice 2 - Conduct Prudent Annual Risk Assessments: These are annual discussions about risks to your organization data and systems and what should be done to mitigate those risks.				

Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
22.	Risk Assessment Process	Not Provided.	Consider including such items as: - Requiring an analysis of how the systems currently mitigate identified risks; - Defining the types of risks being assessed for; and - Identifying the impact of each risk type should they occur.	Very High
23.	Risk Assessment Documentation (Risk Register)	The information was provided in document <i>Example Risk Register</i> and included such items as: - Identifying each risk as an individual item to be considered; - Assigning a high, medium, or low likelihood of occurring to each risk; and - A definition of how to assign values to each risk consideration item such as basing it on business impact or likelihood of occurring.	Consider including such items as: - Assigning a business impact to each risk; - Identifying the controls currently in place to mitigate the risk; and - Identifying the additional controls and their cost that could be added to further mitigate the risk.	Very High
24.	Risk Assessment Policy	Not Provided.	Consider including such items as: - Requiring risk assessments to be performed on all infrastructure and	Very High

			information systems that house or access controlled information; - Having the risk assessment policy require all risks to have a mitigation plan or be accepted as is; and - Having the risk assessment policy require all risks to be prioritized.	
Best Practice 3 - Have a Reliable Annual Third Party Audit of Security Controls: This is using an objective, third-party vendor to perform a detailed audit of your IT environment to ensure the policies and procedures described earlier are being followed.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
25.	Internal Third Party Audit Results	Not Provided.	Consider including such items as: - Having a third party audit of the organization, conducted on internal cybersecurity security practices, to identify areas in need of improvement.	Very High
26.	Penetration Test Results	Not Provided.	Consider including such items as: - Hiring an objective third party to perform an external network penetration test; - Hiring an objective third party to perform an internal network penetration test; and	Very High

			- Using the penetration test results to improve the organization cybersecurity protections moving forward.	
Best Practice 4 - Clearly Defined Information Security Roles and Responsibilities: This is validating that organization personnel have the appropriate certifications and skillsets to protect data and systems.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
27.	Incident Response Plan	Not Provided.	Consider including such items as: - Having the Incident Response Plan identify immediate actions to be taken in the event of an incident; - Including an incident log sheet to track all activities performed during the analysis of the incident including which assets and resources were involved; and - Having the Incident Response Plan contain step-by-step procedures to contain, eradicate, and recover from a variety of common incidents including the knowledge base required to perform those steps.	Very High

28.	Security Training Audit Results	Not Provided.	Consider including such items as: - Tracking and recording who has taken security training and the date of their last completed session; - Evidence that security training records are audited to validate that all employees have taken the required security training within the required time window; and - Evidence that security training records are audited on at least an annual basis.	Very High
29.	Human Resources Hiring Procedures	The information was provided in document <i>Example HR Procedures</i> and included such items as: - Background checks for all new employees; and - A hiring step to call all of a new employee's references.	Consider including such items as: - Drug screening for all new employees; - Credit checks for all new employees; and - Verifying the employee identity with a government-issued credential such as a passport, visa, or driver's license.	Very High
30.	List of Employee Security Certifications	Not Provided.	Consider including such items as: - Having at least one employee become certified as a security specialist.	Very High

Best Practice 5 - Have Strong Access Control Procedures: This is ensuring that only authorized users can access systems and that the physical environment, such as the office building, is securely protected.

Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
31.	Identity and Access Management Audit Results	Not Provided.	Consider including such items as: - A document that can be used to track that identity and access management audits are performed on a regular frequency or receiving a monthly report from your external IT provider to show that such audits occur; - An identity and access management audit log sheet that lists the names of the applications and systems to be reviewed such as the 'ISSI user list'; and - An identity and access management audit log sheet that includes the date of when the identity and access management audits were performed.	Very High
32.	List of Detection Tools Used to Monitor for Unauthorized Usage	Not Provided.	Consider including such items as: - Using software tools to monitor for unauthorized system usage by	Very High

			internal actors such as posting confidential data to social media.	
33.	Risk Assessment Process	Not Provided.	Consider including such items as: - Requiring an analysis of how the systems currently mitigate identified risks; - Defining the types of risks being assessed for; and - Identifying the impact of each risk type should they occur.	Very High
34.	Password Management Policy and Procedures	Not Provided.	Consider including such items as: - Requiring passwords to be encrypted when stored and transmitted at all times; - Automatically locking out systems for a period of time after a specified number of invalid password attempts; and - Disabling user passwords after a specified number of invalid password attempts and requiring a help desk call to re-enable the password.	Very High
35.	Network Monitoring Policy	Not Provided.	Consider including such items as:	Very High

			- A documented policy to indicate that the network must be monitored; - A statement that the network should be monitored continuously at all times; and - Denying all network communication traffic by default (deny all, permit by exception unless specifically permitted).	
36.	Access Control Policy	Not Provided.	Consider including such items as: - A statement requiring all systems with protected data to have an authentication process; - A statement explicitly stating that all users must have unique user IDs; and - A statement that all users, both internal and external, should receive the least privilege/access required to do their jobs.	Very High
37.	Human Resources Terminating Employee Procedures	Not Provided.	Consider including such items as: - Identifying who is responsible for notifying IT of an employee termination;	Very High

			- Procedures to revoke user access privileges including access to third party systems; and - Retrieving all hardware the user may have (PC, phone, computer access dongle, etc.).	
Best Practice 6 - Ensure Assets or Data Managed by a Third Party Have Independent Security Reviews: This is verifying that ExCo audits your third-party vendors to ensure that any of your confidential data that the vendor has is also protected against cybersecurity incidents.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
38.	Supplier Cybersecurity Audit Results	Not Provided.	Consider including such items as: - Collecting objective cybersecurity audit results at least every two years from every supplier or vendor who handles your confidential or protected data to show that they are meeting industry standards for protecting against cybersecurity incidents; - A statement in your business partner agreements that business partners are required to provide you with the results of their cybersecurity assessments; and	Very High

			- A statement in your business partner agreements saying that all business partners required to have cybersecurity assessments must provide proof that any critical cybersecurity assessment items found from their audits have been corrected within 30 days.	
39.	Supplier Cybersecurity Audit List	Not Provided.	Consider including such items as: - A list of third-party suppliers or vendors who must be audited by your organization or an objective third-party to ensure they are maintaining adequate cybersecurity protections; - Prioritizing the list of third-party suppliers or vendors to be audited from most to least critical to the organization's business; and - Documenting the last date that each supplier who handles your confidential or protected data provided a third-party cybersecurity audit of their systems.	Very High
Best Practice 7 - Conduct Periodic Cybersecurity Awareness Training: Employees are the last line of defense against cybersecurity incidents, so it is critical to ensure they are trained on how to recognize potential concern areas. This is validating that employees receive that security training on a regular basis.				

Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
40.	Security Training Audit Results	Not Provided.	Consider including such items as: - Tracking and recording who has taken security training and the date of their last completed session; - Evidence that security training records are audited to validate that all employees have taken the required security training within the required time window; and - Evidence that security training records are audited on at least an annual basis.	Very High
41.	Security Training Policy and Procedures	The information was provided in document <i>Example Security Training Policy</i> and included such items as: - Mandating that security training must be completed at least once annually; - Requiring all employees to complete security training within a specified time frame; and - Requiring all employees to sign a declaration that they have	No changes required.	Low

		completed the required security training.		
Best Practice 8 - Implement and Manage a Secure System Development Life Cycle (SDLC): This is for organizations that do internal software development. It verifies that formal processes are followed to minimize risk during the development process.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
42.	Vulnerability Scan Audit Process and Reports	Not Provided.	Consider including such items as: - Performing vulnerability scans on a regular basis, with a recommendation of at least monthly; - A requirement to develop audits and audit reports of your vulnerability scanning process; and - A documented process for auditing your vulnerability scanning functions.	Very High
43.	SDLC Audit Results	Not Provided.	Consider including such items as: - Procuring a commercially available code scanning tool that can identify poor coding practices or potential security issues in homegrown computer code;	Very High

			- Documenting evidence that all new development projects have been audited to ensure they followed the approved system development life cycle processes; and - Documenting evidence that all existing systems with internal maintenance activities have followed an approved system development life cycle process.	
44.	SDLC Methodology Explanation	Not Provided.	Consider including such items as: - Adding steps to ensure the resulting application is secure, such as code peer reviews, threat modeling, training developers on secure coding techniques and running code scans to ensure code vulnerabilities have not been introduced; - Preventing the use of sensitive or confidential client data in the production environment from being used in any non-production environment, such as development, test, training or other environments; and - Having the SDLC cover the entire system development life cycle from	Very High

			initial building of a system to moving it to production.	
Best Practice 9 - Effective Business Resiliency Program: This evaluates how well the organization is prepared to recover from a natural disaster, a cybersecurity incident, or other major issues that would stop the business from running as usual for a long period of time.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
45.	Disaster Recovery Plan Test Results	Not Provided.	Consider including such items as: - Creating formal written documentation showing what the results were of the disaster recovery test plan; - Using the Disaster Recovery Plan test results to improve disaster recovery readiness moving forward; and - Including external partners in the disaster recovery test.	Very High
46.	Incident Response Plan Test Results	Not Provided.	Consider including such items as: - Testing the Incident Response Plan at least once; - Documenting the test results from the most recent Incident Response Plan tests; and	Very High

			- Testing the Incident Response Plan on a regular basis using different test scenarios.	
47.	Business Continuity Plan	The information was provided in document <i>Example Business Continuity Plan</i> and included such items as: - A prioritized recovery order for business functions, systems, applications, data and the critical personnel needed to recover them; - A Business Continuity Plan policy that requires all significant systems to develop a Business Continuity Plan; and - A list of events that will trigger the Business Continuity Plan to be executed.	Consider including such items as: - Formally documenting the approach to business continuity for each potential business continuity issue such as loss of critical equipment, people, applications, or data, loss of power, loss of office space, etc.; - A section documenting repeatable steps that can be used to implement business continuity procedures; and - Identifying what can be done in advance to prepare for critical events failing.	Very High
48.	Incident Response Plan	Not Provided.	Consider including such items as: - Having the Incident Response Plan identify immediate actions to be taken in the event of an incident; - Including an incident log sheet to track all activities performed during the analysis of the incident	Very High

			including which assets and resources were involved; and - Having the Incident Response Plan contain step-by-step procedures to contain, eradicate, and recover from a variety of common incidents including the knowledge base required to perform those steps.	
49.	Disaster Recovery Plan	The information was provided in document <i>Example Disaster Recovery Plan</i> and included such items as: - Establishing documented criteria for determining the criticality of systems and services in the event of a disaster; - Identifying alternate processing sites while recovering from the disaster; and - Including a prioritized recovery order for business functions, systems, applications, data and the critical personnel needed to recover them.	Consider including such items as: - Keeping a copy of the Disaster Recovery Plan in a safe, off-site location from where the disaster would affect the business; - Identifying immediate actions to be taken in the event of a disaster; and - Requiring system and data backups to be stored in a location that meets the business recovery time objectives (RTO) if the data must be retrieved and restored from the backup.	Very High
Best Practice 10 - Encrypt Sensitive Data Stored and in Transit: Encrypting data is one of the best ways to ensure that, even if the data is stolen, it cannot be read by the criminal This section investigates if ExCo data is encrypted appropriately.				

Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
50.	Data Encryption Tooling and Procedures	The information was provided in document <i>Example Encryption Tooling</i> and included such items as: - Tooling to encrypt data at rest for all devices.	Consider including such items as: - Tooling to encrypt data in transit for all situations; and - Tooling to automatically encrypt PII or PHI data in emails.	Very High
51.	Data Encryption Audit Results	Not Provided.	Consider including such items as: - A documented process to prove data encryption audits take place on a regular basis; and - A requirement that there must be an annual audit of the data encryption tooling and processes to ensure they are working correctly.	Very High
52.	Data Protection Policy	Not Provided.	Consider including such items as: - A statement requiring all data on the workstation to be encrypted; - A statement that the email system should automatically identify and encrypt PHI and PII data in emails; and - A statement that user workstations and laptops should	Very High

			automatically lock the screen after a set period of time of inactivity of no more than 30 minutes.	
Best Practice 11 - Implement Strong Technical Controls: This verifies that software and hardware patches are applied in a timely manner, anti-virus software is updated regularly, firewalls are in place, and the network is adequately protected.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk
53.	Monitoring Tool Names and Procedures For Detecting Malicious Code	Not Provided.	Consider including such items as: - Using a commercial anti-virus tool; - Using tooling to identify potential ransomware or other questionable items; and - Using tooling to identify if new executable objects have been loaded onto the system.	Very High
54.	Patches and Upgrades Management Policy and Procedures	Not Provided.	Consider including such items as: - Configuring workstations, laptops, and servers to automatically update when new patches are available; - Applying new patches or upgrades at least weekly; and - Requiring the administrator to use a formal change management	Very High

			procedure when implementing patches or upgrades.	
55.	Evidence That Detection Logs Are Reviewed	Not Provided.	Consider including such items as: - A document that can be used to track that system/network logs are reviewed on a regular frequency or receiving a monthly report from your external IT provider to show that such reviews occur; - A system/network log sheet that lists the names of the logs to be reviewed such as the 'CISCO log'; and - A system/network log sheet that includes the date of when the system/network logs were reviewed.	Very High
56.	Monitoring Tool Names and Procedures For Email Usage	The information was provided in document <i>Example Email Monitoring Tools</i> and included such items as: - Using tools to monitor email for incoming bad items such as phishing messages.	Consider including such items as: - Using tools to monitor email for users sending confidential or harassing data; - A documented procedure for how to respond should an email be found where users are sending confidential or harassing data; and	Very High

			- A documented procedure for how to monitor email for users sending confidential or harassing data.	
57.	Network Architecture Diagrams	Not Provided.	Consider including such items as: - Implementing subnetworks for publicly accessible system components that are physically or logically separated from internal networks; - Eliminating all single points of failure in the network; and - Having development and test hardware components be physically separate from production hardware components.	Very High
58.	Backup Schedule	Not Provided.	Consider including such items as: - Formally documenting the client approved recovery time objective and recovery point objective; and - Formally documenting the backup schedule.	Very High
Best Practice 12 - Appropriately Respond to Past Cybersecurity Incidents: This section evaluates how well the organization responded to any previous cybersecurity incidents, if any occurred.				
Item Reviewed		Current Profile	Target Profile	Cyber Security Risk

59.	Incident Response Plan Test Results	Not Provided.	Consider including such items as: - Testing the Incident Response Plan at least once; - Documenting the test results from the most recent Incident Response Plan tests; and - Testing the Incident Response Plan on a regular basis using different test scenarios.	Very High
60.	Incident Response Plan	Not Provided.	Consider including such items as: - Having the Incident Response Plan identify immediate actions to be taken in the event of an incident; - Including an incident log sheet to track all activities performed during the analysis of the incident including which assets and resources were involved; and - Having the Incident Response Plan contain step-by-step procedures to contain, eradicate, and recover from a variety of common incidents including the knowledge base required to perform those steps.	Very High

Disclaimer

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[Client Name]

Infrastructure and Operations Report

[Date] - Final

[Name / title of Segal Consultant]

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Executive Summary

[Client] is located in [City, State] and administers benefits for approximately XXX active employees and XXX retirees. In [Month, Year], Segal Consulting ("Segal") was engaged by Client to perform a Functionality and Infrastructure Support Review. This review will produce two reports, the first to discuss the business processes and this report to discuss the Infrastructure Support Review.

This report, the Infrastructure Support Review, addresses the following two items:

- Review the existing network design and infrastructure and make recommendations for improvements if needed.
- Evaluate system operating procedures, including patch management, updates, etc.

Project Methodology

Our approach to performing the tasks identified above included:

- A SmartSheet repository was created for sharing [Client] documentation artifacts which included three (3) main topic areas: *Business*, *Communications*, and *Technical*. Segal requested [CLIENT] artifacts ranging from Audit Reports to Business Continuity Plans to Strategic Plans. These documents and artifacts were then compared against industry best practices to determine overall quality.
- On [Month, Date, Year] thru [Month, Date, Year] the Segal team held one-on-one interviews with senior executives and IT Staff as well as several group interviews within IT. During these discussions, [Client] staff pain points, system limitations, and time-consuming tasks that require numerous steps or workarounds. The interviews including the following personnel and topic discussion areas (organized by alphabetic last name):

[Client] Staff	Title	Topics Covered
[Name]	Applications Manager	Group interview with [Name].
[Name]	Data Warehouse – Lead Programmer	Group interview with [Name].
[Name]	Database Management	Data pain points, staffing, documentation, learning curves, change management and peer reviews, maintaining the test environment, patch management, data dictionary, data intake, reporting metrics, data encryption, and monitoring.
[Name]	Security – Lead Network Specialist	Group interview with [Name] and a separate interview to discuss security pain points, staffing, code scanning, change management, security

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		policies and procedures, configuration management, asset management, security training, data protection, identify and access management, incident response, penetration testing, and shadow IT.
[Name]	Systems Information Officer	IT pain points, staffing, service level agreements, IT locations, employee recognition, knowledge management, and project management.
[Name]	Senior Deputy Director – Administrative Services	IT pain points, IT organization, future vision, data quality, employee retention, change management, and project management.
[Name]	Systems Administrator	Group interview with [Name].
[Name]	Systems Manager	Infrastructure and network pain points, staffing, help desk, patch management, network availability and capacity management, configuration management, log file reviews, and learning curves.
[Name]	Projects and Quality Assurance	Project management pain points, stakeholder relations, post project assessments, project management tools, reporting, current projects, strategic planning.
[Name]	Lead Business Systems Analyst	Application development pain points, application staffing, system learning curve, documentation, system complexity, system functionality, request prioritization, requirements gathering and tracking, code quality management, and code maintenance versus new development.

- We provided interview notes from each meeting to the interviewee to ensure we captured their discussion points accurately.
- Segal then analyzed all of the provided documentation and interview notes to create this report. The report establishes an understanding of the current IT environment, records Segal's observations related to each area, and provides recommendations to improving those areas that might benefit from such suggestions.

Summary of Key Observations

The review process documented critical observations that form the basis for our recommendations for this Infrastructure and Operations report. These observations include:

- **Overall** - The [CLIENT] infrastructure and system operations are in reasonably good shape when compared to best practices and other organizations of similar size, staffing, and

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budget. There are only a few areas requiring significant improvements as discussed in the *Summary of Key Recommendations* section later in this document.

- **Network Design** – The network supporting the project environment is designed for high availability, meaning it has multiple CPUs and a load balancer so that even if one CPU fails, the others can continue processing without the business shutting down.
- **Knowledge Management** – There is no formal method for capturing system and application knowledge, with many IT employees being the only ones who know how to perform specific functions. Reasonable documentation was provided with the implementation of Project and since then, documentation has not been sufficiently developed. Documentation was defined as being “not good” and difficult to find when information is needed. There is no data dictionary or data model. This lack of knowledge management contributes significantly to the long learning curves for new employees.
- **IT Environment Complexity** – Both the Project application and the infrastructure are seen as being very complex and difficult to support.
 - [Project] is difficult because it is a one-of-a-kind, customized system so there are no user forums or helpful internet sites to research issues. For example, service purchase, member account, and employer reporting are all custom functions.
 - The infrastructure environment is difficult because there are many hardware items to work with plus software tools to learn for network monitoring, security, system failovers, patching, etc. In the document provided by [CLIENT], there are over 35 different software tools in use. The learning curves for new personnel to become even reasonably proficient are overly long, with estimates of more than two years for Project, one to two years for the databases, nine months for scanning, six months for reporting, and six months for network administration assuming the new hire had a networking background. We did not specifically ask about the Security role learning curve but based on experience, it can be a year or more, again, depending on how familiar the [Person] was with security prior before stepping into the role.
- **Member Self Service** – There are differing opinions in [CLIENT] on this functions readiness for deployment (from a technical perspective):
 - One opinion is that it is complete and ready to go as soon as identity and access management issues are resolved.
 - The other opinion is that the system is designed incorrectly and should be rewritten because members would access the same system as internal [CLIENT] staff use today rather than separating the members from the data with a different approach. - *Segal notes that there is more than one method for securing the data, and this is only one. A recommended approach is included in the line of business report and includes an external security assessment of the configuration of what is currently developed to ensure adequate protection of the production system.*
- **System Security** – Segal was provided with the reports from both the [Month/Year] and [Month/Year] information security assessments performed by [Vendor]. While there were improvements in security from year to year, including a significant reduction in vulnerabilities found, focusing on CIS security standards, and adding a cybersecurity consultant for advice, there were still a large number of high risk vulnerabilities identified in the [Month/Year] report that had not been addressed. Both reports stated that [Vendor] was able to obtain access to the servers and databases containing member data. In [Year], this happened only after

access through the firewall had been loosened specifically for the assessment process. However, once the firewall rules had been loosened, [Vendor] was able to gain access to all data. It should be noted that hackers have other methods of obtaining access to the systems, such as phishing attempts, so it is critical to have protections in place if the firewall is bypassed. Further, IT personnel stated that they perform two to three data fixes for the business each day, which is a major security violation, and that IT does not have enough information to know if those fixes are valid or not. It should be noted that the cost to eliminate the need for IT to make data fixes must be taken into consideration when addressing this issue.

Summary of Key Recommendations

There are five recommendations from this assessment which, if not addressed, leave [CLIENT] with a critically high level of business risk.

1. Third party network penetration tests have accessed confidential data each of the last two years, the most recent only after firewall restrictions were loosened. Improvements have been made since then including regular testing of backups, regular phishing tests, the adoption of CIS cybersecurity standards in late [Year], holding regular IT security meetings, and conducting annual penetration tests to identify improvement areas. Management is in the midst of scheduling new network penetration test to determine if security vulnerabilities still exist.
2. A cybersecurity Incident Response Plan has recently been developed but needs to be tested. Given that network penetration tests have succeeded in the last two years, [CLIENT] should prioritize testing the incident response plan to validate that appropriate responses are prepared should a cybersecurity incident occur.
3. There is a serious lack of documentation for all technical areas. This finding, combined with issues related to IT staff retention and senior IT staff being eligible to retire at any time, leaves [CLIENT] vulnerable. A formal knowledge management plan should be implemented to define the knowledge that should be retained over time, how that knowledge will be identified and captured, and how that knowledge will be transferred to other IT personnel. A formal knowledge management plan includes several items including coding standards for programmers, documentation standards for infrastructure, and defined training curriculums with associated training artifacts for each job role in IT, and defining the processes for how to capture the knowledge ongoing.
4. A comprehensive disaster recovery plan does not exist and a disaster recovery test has never been performed. Consider using an objective, experienced outside organization to lead the effort for creating a comprehensive Disaster Recovery Plan.
5. Regarding the member self-service program, [CLIENT] should perform an outside objective, dedicated design and code review to determine where the system really stands from a technical perspective and identify available options as such a detailed analysis is beyond the scope of this assessment (In Segal's Report 1, related to Business Processes, Segal has made a recommendation regarding this system that must take into account both business needs and technical needs).

Acknowledgements

Thank you to [Name] and the entire staff for the time, cooperation, and professional courtesy extended to Segal throughout our review. Additionally, many thanks to [Name] who spent significant time and effort coordinating activities on Segal's behalf (e.g., facilitating data gathering and transfer to Segal, coordinating meetings, etc.).

SAMPLE

Detailed Findings

The review process consists of identifying the various sub-topics in the main review area and then rating them based on how well they compare to both industry best practices and Segal practical experience.

The rating system uses a “stoplight” rating approach, whereby colored circles provide a visual representation of the overall rating. All ratings for each sub-topic are then tallied to provide an overall rating for the main milestone review area.

Existing Network Design and Infrastructure Review

The first IT-specific milestone was to provide a review of the existing network design and infrastructure and make recommendations for improvement. Our approach to doing this included the following activities:

- Collecting and analyzing existing network diagrams and infrastructure documentation
- Interviewing IT staff to evaluate their understanding of the overall business goals related to system criticality, uptime requirements, data recovery expectations, and future capacity considerations.

Review Area	Gap Rating
Configuration management	
Firewalls and DMZs	
Infrastructure inventory	
IP address usage	
Maintenance windows	
Network design diagrams	
Network monitoring tools	
Network security	
System recovery capability	
System virtualization	
Workload balancing	

Expectation Scoring:

-  Dark green = 4 points (Very Good - meets expectations)
-  Light green = 3 points (Good - mostly meets expectations with some minor issues)
-  Yellow = 2 points (Average - but enough issues to need work)
-  Orange = 1 point (Fair - barely meets expectations, many issues)
-  Red = 0 points (Poor - does not meet expectations)

Overall Rating:

- 40-44 points** Very Good - Area consistently meets expectations
- 33-39 points** Good - Area usually meets expectations
- 18-32 points** Average - Area is acceptable but has some low/mid priority fixes
- 10-17 points** Fair - Area is not acceptable but not highest priority to fix
- 0-9 points** Poor - Area is not acceptable and must be fixed now

Overall Rating	= Average
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The following table provides the detailed best practices used for comparison purposes and the reasons that Segal assigned the area rating for [CLIENT] when compared to those best practices.

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
Configuration management	- Automated tools are used to identify hardware configurations. - Configurations are documented, backed up and available for rapid deployment in the event of new hardware or system restoration. - Application configurations are documented and maintained over time.	- No automated tools are used to identify hardware configurations. - InsightVM is used to identify configuration vulnerabilities. - Some documentation was provided when Project first went live, but there is no documentation for how the various pieces of the system connect or how data travels between them.	
Firewalls and DMZs	- At least two firewalls exist, with one to prevent unwanted external actors from accessing the network as necessary but allow some access to the DMZ and the other firewall to prevent unwanted access from the DMZ to internal systems. - Separate firewalls exist for each application if such security is warranted. - A DMZ exists (if necessary).	- One firewall exists at the State level and a second firewall at the [CLIENT] level. One final level, to reach dark green, would be to put firewalls in front of the Project application itself but this may not be worth the cost required to do so. - A DMZ exists	
Infrastructure inventory	All inventory is identified and tracked as to manufacturer, model, date of purchase, options such as amount of memory, physical location, warranty information, etc.	Hardware and Software inventory tracking spreadsheet was provided including Desktops and laptops, Monitors, Printers, Other Hardware (which included infrastructure items), software, and department applications.	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
		• [CLIENT] has recently procured Lansweeper (an IT assets management software) to collect asset inventory information. • Much of the expected information was captured but sheets were somewhat out of date. For example, it was stated that Darktrace is used but was not listed on the inventory sheet.	
IP address usage	• Public IP addresses are all contained within the DMZ. • Internal connections all have private IP addresses. • No Network Address Translation (NAT) gateways are used to translate private IP addresses to public IP addresses. • Guest networks are assigned public IP addresses. • Loopback IP addresses are private IP addresses.	• Project uses private IP address 10 for internal addressing. • Public addresses are all contained in the DMZ (like https://Project.[Client].state.us)	
Maintenance windows	• Maintenance can be performed without having to shut Production due to a high availability design.	• There is a regular quarterly maintenance window. • It was stated that most of the time the system is taken down for an hour “here or there” by notifying the Business ahead of time. • The system is mostly, but not completely, built for high availability with the ability to lose a node so the high availability pieces do not need a maintenance window but other pieces do.	
Network design diagrams	• Documents are comprehensive, current, and up-to-date. • There is no single point of failure.	• Network diagrams are good and show an update on [Date].	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	• Network is built for high availability if required. • Network is segmented to minimize attack surfaces.	• The Project3 system design documents show as last updated on [Date]. • The production network is built for high availability but is somewhat over-built for the business needs. • The network is segmented. • The NT Process Scheduler is a single point of failure.	
Network monitoring tools	• Tools report in real-time. • Tools can report on trends occurring over time. • Log file aggregator is used to parse multiple log files. • Tools automatically address certain types of issues such as closing ports during a denial of service attack.	• Splunk is used to aggregate system log files, • Darktrace Enterprise Immune System (EIS) is used to monitor for and react to potential cybersecurity incidents. • Additional training is needed to ensure proficiency with the above mentioned software tools before this category can move to the highest rating.	
Network security	• Unused physical ports are disabled. • Unused services are turned off. • Default settings are changed. • Networks are monitored for both external and internal attacks or data ex-filtration (intrusion detection/prevention systems) • Networks are segregated into public and private networks. • Antivirus software is kept current. • Network traffic is encrypted. • Networks are regularly scanned for vulnerabilities, unauthorized devices, or configuration changes. • Network penetration tests occur on a regular	• There is an increased focus on meeting CIS cybersecurity standards. • Phishing test are performed regularly. • Third party penetration tests have gained system administrator access or access to the confidential data for the last two tests (automatic lowest score). • Internal network traffic is not encrypted. • The last security assessment performed one year ago identified more than 1,800 high risk vulnerabilities, down from more than 9,000 identified the previous year. • Darktrace Enterprise Immune System (EIS) is used to monitor for and prevent attacks on the Production environment but not on any other environment.	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	- basis and are unable to access the systems. • System administrator passwords are changed on a regular basis. • Endpoint protection is installed on all endpoints. • User behavior analytics tools are employed. • Uses server based access control lists. • Employees are trained in security tools and procedures. • Security personnel actively stay informed of current threats. • Physical access to network components is limited to authorized personnel only. • All development environments are equally protected.	• Symantec Endpoint Protection is used for anti-virus control. • Darktrace Enterprise Immune System (EIS) is used to evaluate user behavior analytics. • System administrators passwords must be at least 14 characters long and be changed annually. • The team reads continuously to stay abreast of current threats and receives updates from ITS on a regular basis.	
System recovery capability	• The system is designed for high availability (if necessary) and that recovery capability has been tested. • Recovery time objectives (RTO) and Recovery point objectives (RPO) have been established for all data. • System backups are performed within the RPO objective timeframes. • System recovery test plans exist and are tested and improved at least annually. • Data backups are tested for recovery ability at least monthly. • Storage assets are destroyed in a complete	• The system is designed for high availability so should be able to recover even if an entire node is lost. • Formal RTO and RPO business needs have not been documented. • System backups are performed every 4 hours. • Comprehensive Disaster Recovery Plans have not been built or tested. • Data backups are used each month after they payroll cycle to refresh the Test environment.	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	manner when no longer needed, with asset destruction certificates to prove it.		
System virtualization	- Virtual machines are properly isolated - System administrator and network management duties are performed by different people - Virtual environments are managed by access control lists. - Inactive network interface cards (NICs) are disconnected. - Data traffic between the host and the virtual machine is encrypted. - Virtual workloads with different levels of trust are placed in separate hosts.	- System administrator and network administrators are separate people. - The virtual machines are isolated. - Internal network traffic is not encrypted. - Trust levels have not been established. These trust level require data classifications to be determined and assigned, with various data then split between locations to minimize risk.	
Workload balancing	- Load balancers automatically move work between servers based on defined configurations. - At least two load balancers are used to prevent a single point of failure.	One load balancer is in place.	

System Operating Procedures Evaluation

Milestone 6 in the original [CLIENT] Request for Proposal was to evaluate system operating procedures, including patch management, updates, and other activities. Our approach to doing this included the following activities:

- Collecting and analyzing existing system operating procedure documentation.
- Interviewing IT staff to evaluate their approach and procedures for performing a variety of system functions.

Review Area	Gap Rating
Asset management	
Capacity planning	
Change management and testing approach	
Cybersecurity incident response readiness	
Data backups	
Data encryption	
Disaster recovery	
Knowledge management	
Patch Management	
Production and test environment replication	
System failover capability	
System log review process	
System performance, uptime, and usage metrics	
Overall Rating	= Fair

Expectation Scoring:

-  Dark green = 4 points (Very Good - meets expectations)
-  Light green = 3 points (Good - mostly meets expectations with some minor issues)
-  Yellow = 2 points (Average - but enough issues to need work)
-  Orange = 1 point (Fair - barely meets expectations, many issues)
-  Red = 0 points (Poor - does not meet expectations)

Overall Rating:

- 47-52 points** Very Good - Area consistently meets expectations
- 39-46 points** Good - Area usually meets expectations
- 24-38 points** Average - Area is acceptable but has some low/mid priority fixes
- 12-23 points** Fair - Area is not acceptable but not highest priority to fix
- 0-11 points** Poor - Area is not acceptable and must be fixed now

The following table provides the detailed best practices used for comparison purposes and the reasons that Segal assigned the area rating for [CLIENT] when compared to those best practices.

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
Asset management	All assets are tracked including workstations, servers, all network	Hardware and Software inventory tracking sheet was provided including	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	equipment (such as firewalls, switches, routers, VPN, optimizers, etc.), printers, copiers, faxes, mobile devices, software, documentation, and company-supplied removable media. • The asset list is reviewed and updated on a regular basis. • The asset list documents manufacturer, model, serial number, physical location of the equipment, purchase date, equipment owner, and software, firmware, or operating system version numbers. • An asset management policy exists that describes how assets are to be protected, handled during repairs or storage, and disposed of at end of life. • Documentation is considered an asset and tracked as such.	desktops and laptops, monitors, printers, other hardware (which included infrastructure items), software, and department applications. The recent implementation on Lansweeper will make asset tracking easier but [CLIENT] will still have to perform some asset tracking manually. • Much of the expected information was captured but sheets were somewhat out of date. For example, Darktrace Enterprise Immune System was not listed. • Documentation is not tracked as an asset.	
Capacity planning	• System usage is captured and reviewed on a regular basis. • Trends reporting is done to identify increased or decreased capacity needs. • Upcoming strategic business directions or actions are considered for planning future capacity needs.	• The team tried to eliminate infrastructure limitations during the last upgrade so it was basically overbuilt to prevent capacity issues. • No trend reporting is done and it should be.	
Change management and testing approach	• All changes require a peer review process to follow before implementation. • All changes require a risk analysis process before implementation. • All changes require at least one managerial approval before implementation.	• Peer reviews are not a standard process for changes. • Risk analysis forms are not completed before implementing changes so items such as all of the information from the old intranet page being	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	- The organization has a formal change control policy documented and IT employees are all trained on it. - All changes require a documented back out plan to be developed before being implemented. - No changes are first attempted in production.	removed except for an employee directory during the middle of the day caused a link to Project to disappear. - There is a Project system Change Management process documented that appears to be an original document from initial system implementation. It is not clear if this process is followed. Documentation to show that all the steps of the process were followed include functional specifications, change request documentation, tech designs, unit tests, and user approvals. - Upgrades take 2-4 weeks to move through all 4 environments for testing, which is good that the upgrades are tested.	
Cybersecurity incident response readiness	- Organization security governance policies have been established and users trained on those policies, for protecting organization data. - A comprehensive cybersecurity Incident Response Plan has been developed. - A cybersecurity incident response team has been identified and trained on the Incident Response Plan. - Phishing tests are conducted on employees at least quarterly. - A cybersecurity assessment is conducted at least once every three years by an objective outside vendor.	- Security governance policies <u>were created on [Month, Date, Year]</u> but have never been approved and implemented by leadership. The majority of policies as written would benefit from additional detail and several policies are missing, such as a data retention policy. - An Incident Response Plan has been developed but is not yet complete, for example, missing contact information. It needs to be tested and staff need to be trained on it (<i>automatic lowest score assigned.</i>) - Management indicates in [Year], they began work with a cyber security consulting firm to	●

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	- System penetration tests are conducted by an objective outside vendor at least annually. - Data backups are restored at least monthly to verify they are working correctly. - The Incident Response Plan is tested at least once annually with IT, business personnel, management, and legal counsel all participating.	strengthen controls and is working to obtain additional expertise with incident response and readiness. - Phishing tests are conducted on a regular basis. - Cybersecurity assessments are conducted annually. - Penetration tests have been conducted annually with the vendor able to successfully penetrate the systems.	
Data backups	- Data backups occur often enough to meet defined recovery point objectives. - Data backups are encrypted. - Data backup job logs are reviewed daily to verify the backups were successful. - Documented procedures exist as to what should be done if any data backup fails. - Data backups are restored at least monthly to verify they are working correctly.	- Data backups occur every four hours. - Backups are used to refresh the Test environment from Production once each month after the payroll run. - Data backups are encrypted. - No procedures were provided for how to respond if a backup fails.	
Data encryption	- All data has been classified as to its criticality and confidentiality. - All confidential data at rest is encrypted. - All confidential data in transit is encrypted. - Users have the ability of encrypt emails as needed. - All mobile devices are encrypted.	- Data classifications have not been assigned to all data. - Data at rest is encrypted. It is not known if all databases are encrypted or need to be. - Backups are encrypted. - Checks sent to the bank are encrypted. - Data is not encrypted when transmitting over the internal network.	
Disaster recovery	- A comprehensive Disaster Recovery Plan has been developed. - The Disaster Recovery Plan is located in more	- No comprehensive Disaster Recovery Plan has been developed. - Two geographically separate facilities are used	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	than one geographic location. • Data backups are restored at least monthly to verify they are working correctly • Data backups are stored in more than one geographic location • Alternate processing sites have been identified. • The Disaster Recovery Plan is tested at least once annually with IT and business personnel participating.	(the primary and co-location data centers). • Backups are used to refresh the Test environment from Production once each month after the payroll run. • A full Disaster Recovery test has never been performed (<i>automatic lowest score assigned</i>)	
Knowledge management (include knowledge capture and knowledge transfer)	• New IT personnel can 'come up to speed' and be productive in four weeks or less. • Standards relating to coding, documentation, and procedures have been defined and are fully incorporated into all daily support or development processes. • Training plans exist, with supporting artifacts that are kept current, for every role.	• There are no formal knowledge management activities in place. • Some naming standards have been implemented for application development. • Items developed by [Vendor] have good comments. • There is no common shared area that documentation resides in. • Interview comments about documentation range from "It does not exist" to "It only exists in people's heads" and "There is some good documentation but overall, not everything is documented well" to certain areas openly declaring they have no documentation.	
Patch Management	• Patches are applied as quickly as possible in accordance with business needs and resource constraints. • Patch updates are communicated to the business in advance. • Patches are tested in one or more environments	• Interview results in this area ranged from "We don't have our patch management process fully managed" to "We plan patches weeks ahead of time" and "We have countdown timers on the SharePoint Intranet" and "Now it is mutual"	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
	before being moved to production. • Test plans are created for the patches prior to pushing them into any environment. • Risk analysis forms and back out plans are created and approved by Executive Leadership before any patch is moved to production.	<i>agreement and collaboration with the business on getting things done like regular maintenance and vendor patches."</i> • There is a sandbox environment to test patches before moving them to production. • Patches move through 4 environments before being deployed, sometime all in one night for critical patches. • There was no evidence of risk analysis or back out plans being created.	
Production and test environment replication	• A test environment exists that exactly replicates the production environment including all data, applications, monitoring tools, security, configurations, and authorizations. • The test environment data can be refreshed from the production environment in under two hours.	• The test environment is refreshed once each month after payroll runs. This could be improved. • Some improvements have been made to speed the refresh process if applications need it but more can be done to automate the process.	
System failover capability	• The business has identified and documented failover requirements. • The network and systems have been designed to meet the documented failover requirements.	• There are no documented failover requirements. • There are two environments (primary and co-location) in geographically different locations. • There are multiple redundancies for hardware so that one node or server can be lost without impacting production. • There are not full duplicates in each environment due to Oracle licensing costs. • A true failover test has never been performed to	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
		run Production from the co-location data center. Failover for the high availability environment uses Oracle's Real Application Clusters (RAC) for database nodes, and F5 Networks BIG-IP LTM web server failover for PeopleSoft and Web Center. VMWare's vSphere provides non-automated failover for virtual machines.	
System log review process	- IT personnel have been trained in what to look for in the system logs. - All systems logs are reviewed daily. - Documented procedures exist for how to handle issues found within the system logs. - System logs are consolidated using software tools with artificial intelligence (AI) capabilities to identify issues. - An audit process exists to validate that system log files are actually being reviewed as expected.	- Splunk is used to consolidate the system log and the logs are reviewed weekly. - Palo files are reviewed every day. - There is no audit process to verify the logs are being reviewed in a timely manner. - There are no documented procedures for how to handle issues. - It is unclear how well the IT staff has been trained in what to look for in system logs.	
System performance, uptime, and usage metrics	- The system is up when users need it to be. - Service level agreements exist between IT and the Business to identify expectations for system uptime and performance. - Tools and processes exist to capture data related to the system metrics expectations. - Near real-time dashboards are available Executive Leadership to illustrate the current system metrics and trends over time.	- The system is designed for high availability and typically meets user uptime requirements. - Service level agreements do not exist between IT and the business. - Tools are available to capture performance and uptime statistics, they are just not being utilized. - No Executive dashboards exist. Some potential metrics that could be displayed include system uptime, number of users at	

Focus Area	Best Practices	Rating Reasons	Rating compared to Best Practices
		any point in time, disk usage, average time to respond to a change request, number of attacks stopped on the network, etc. Each of those metrics could have trend lines associated with them.	

Findings and Recommendations

Overall, [CLIENT] is doing an acceptable job with their network, infrastructure, and operating procedures for an organization of their size and IT staff, with only a handful of areas requiring significant improvement. However, those areas that do require improvement leave [CLIENT] with a high level of business risk if they are not addressed.

The Findings and Recommendations below are sorted in recommended priority order. The recommendations with a high priority need immediate, significant improvement. The medium and low improvements would benefit from improvements but do not need immediate action.

Finding	Recommendation	Priority
1. Network penetration tests have accessed confidential data each of the last two years and as of the last test in [Month Year], there were still over 1800 high risk vulnerabilities identified.	It has been 12 months since the last network penetration test and improvements have been made. Perform an updated test and address the current risks.	High
2. A cybersecurity Incident Response Plan has been developed but never executed and staff has never been trained on it. Some activities are occurring to indicate a good response is probable including regular testing of backups, regular phishing tests, the adoption of CIS cybersecurity standards in late 2019, holding regular IT security meetings, and conducting annual penetration tests to identify	Given that network penetration tests have succeeded in the last two years, [CLIENT] should immediately conduct Incident Response Plan tests to validate appropriate responses are prepared should a cybersecurity incident occur.	High

Finding	Recommendation	Priority
improvement areas. An outside cybersecurity consultant has also been retained to provide additional direction.		
3. Member Self Service has not been deployed	Perform an evaluation of the code and access process to determine if the solution is still viable and how to implement it if it is (See Segal's Report 1 for more information).	High
4. There is a serious lack of documentation for all technical areas. This finding, combined with issues related to IT staff retention and senior IT staff being eligible to retire at any time, creates an enormous business risk for [CLIENT].	Implement a formal knowledge management plan to define the knowledge that should be retained over time, how that knowledge will be identified and captured, and how that knowledge will be transferred to other IT personnel.	High
5. A comprehensive disaster recovery plan does not exist and a disaster recovery test has never been performed.	Use an objective, experienced outside organization to lead the effort for creating a comprehensive Disaster Recovery Plan.	High
6. The member self-service system has never been implemented, with differing opinions on its readiness; the system is either ready to go once an authentication and authorization solution is implemented or it needs to be reworked to not allow members direct access to the production database.	Perform an outside, objective design, implementation, and code review to determine where the system really stands from a technical perspective and identify available options.	High
7. Data is not encrypted as it moves through the internal network at [CLIENT].	Encrypting data on the internal network is an "insider threat" security precaution so this should be enabled for all internal traffic.	Medium
8. Change management activities rely on individual knowledge or outdated procedures.	Implement the addition of peer reviews to all change actions to both serve as an extra set of eyes	Medium

Finding	Recommendation	Priority
	to validate actions and to promote knowledge transfer.	
	Implement risk analysis forms so the impact of changes is clearly understood and approved by management. These should be adopted for every change across the organization.	
9. Patch management activities have differing understanding by all personnel involved. Some staff indicated concerns with the patch management process fully managed while others indicated there are countdown timers used to notify everyone when patches will be updated.	• IT should deliver a communications presentation so that everyone across the account understands how to identify when patches are planned to be implemented. • All patch implementations should be pre-approved by Executive management before moving to production. • All patch implementation requests for approval should include a back out plan and a risk analysis form.	Medium
10. System failover requirements have not been defined by the business nor tested by IT.	• Identify failover requirements with the business. • Document, test and practice the failover process until it meets the business defined requirements.	Medium
11. While certain system logs are reviewed on a regular basis (Daily for Palo security and weekly for Splunk) it is not clear that all logs are reviewed with such regularity.	• Identify all logs to be reviewed, the review frequency, and who is responsible. • Develop standardized checklists for what each log should be reviewed for and how to respond if anomalies are found. • Implement an independent audit process to verify that all system logs are reviewed as expected.	Medium

Finding	Recommendation	Priority
12. The Test system is refreshed each month from Production after the Payroll cycle is run.	Consider improving the Test refresh process to enable it to run more frequently and in less time.	Low
13. System performance is not tracked over time to show trends and also report metrics to Executive leadership and perform capacity planning.	Identify the critical performance metrics for illustrating system capability to Executive leadership, how to capture them, and then report them on a regular basis.	Low
14. The asset management sheets were slightly outdated and documentation is not tracked as an asset.	• Lansweeper software has been procured to collect asset information off the network. A process should be developed to feed the information collected into the asset tracking spreadsheets. • [CLIENT] should treat documentation as an asset so that its location, version number, and security is tracked and use the asset tracking sheet to perform annual documentation reviews and audits as necessary.	Low
15. The network diagrams provided indicate one workload balancer is used at [CLIENT].	Ensure a second workload balancer is available for fast installation should anything happen to the production unit.	Low