



**Proposal to Provide  
Consulting Actuarial Services**

to the

**Minnesota Legislative Commission  
on Pensions and Retirement**

Prepared by **Cheiron**  
June 11, 2014

**LCPR JUN 12 2014**



Classic Values, Innovative Advice

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June 11, 2014

Lawrence A. Martin, Executive Director  
Legislative Commission on Pensions and Retirement  
55 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, Minnesota 55155

***Re: RFP for Provision of Consulting Actuarial Services***

Dear Mr. Martin:

Cheiron is pleased to present our proposal for actuarial consulting services to the Minnesota Legislative Commission on Pensions and Retirement (the "Commission"). As you review our proposal, we hope the following will stand out:

- **Extensive Public Sector Experience:** Our consultants have years of experience addressing the unique needs of some of the largest public pension funds in the country. Current and past accounts include the statewide retirement systems of Maryland, California, Florida, Maine, Delaware, Montana, Kansas, Connecticut, Vermont, Illinois, as well as the counties of Fairfax and Arlington, Virginia, and the city retirement systems of San Diego, San Francisco, San Jose, Los Angeles, Philadelphia, Miami, Phoenix, St. Louis, Kansas City, Baltimore, and the District of Columbia.
- **Unique:** Cheiron's success is based on creating imaginative, sophisticated and clearly understandable solutions to financial challenges that enable our clients to make the best policy, funding and design decisions. While other firms' actuarial reports and studies often focus on the present and the past, Cheiron's standard reports present projections under alternative economic scenarios and discuss the system's risks to allow our clients to focus on their risk management.
- **Dynamic:** Our interactive modeling skills are perhaps the single greatest differentiator between our firm and others. These dynamic models permit "what-if" scenarios to be presented instantaneously at meetings, educating all interested parties of the impact of alternative assumptions and designs on the pension plan's funded status and contribution requirements. Thus, by the end of the meeting, you can make knowledgeable decisions based on the likelihood of the desired result.
- **Focused:** Our focus is on our clients. For more than 30 years, our consultants have developed lasting relationships with our clients and gained their respect through high-quality work and value-added services. That client orientation has been rewarded by the steady growth of our client base.
- **Integrity and Independence:** Cheiron's bedrock consulting philosophy is to always provide unbiased results. That philosophy has been strictly maintained, despite occasional challenges by interested parties. We approach each assignment with a singular focus on providing objective results.

Please refer to the Table of Contents for a listing of the information provided in this proposal.



Lawrence A. Martin

June 11, 2014

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We are confident that we can do a superior job in performing this service for the Commission, and thank you for considering Cheiron. We look forward to answering any questions you may have. By my signature I state I am authorized to bind Cheiron, Inc. contractually.

Sincerely,  
Cheiron



Gene Kalwarski, FSA, FCA, MAAA, EA  
Principal Consulting Actuary

#### **IV. Minimum Qualification Standards and Important Qualification Factors**

**The Commission requires that the actuarial firm to be retained must meet the definition of an approved actuary in Minnesota Statutes, Section 356.215, which requires a fellow of the Society of Actuaries.**

All five of the proposed consultants who would be assigned to the Minnesota Legislative Commission are Fellows of the Society of Actuaries, the highest level of professional accreditation that an actuary can achieve. We understand that the Minnesota Statutes, Section 356.215 requires that the actuarial firm to be retained has at least one Fellow of the Society of Actuaries, and as we state above, five consultants who would be assigned to you meet this criteria.

**The Commission also will consider the following elements in retaining a reviewing or auditing consulting actuarial firm:**

- 1) Sufficient Firm Size. The extent to which the consulting actuarial firm has the capability to meet the Commission's needs as well as the needs of any other firm clients is an important factor.**

*We have 49 credentialed actuaries with public plan experience.*

Cheiron is an actuarial consultancy that provides services in two specialty areas: pension and health. Cheiron's staff includes 100 employees, 49 of whom are credentialed actuaries, with offices in Washington, DC, Charlotte, NC, Chicago, IL, Los Angeles, CA, New York, NY, Philadelphia, PA, San Diego, CA, and San Francisco, CA. All these employees are involved in providing actuarial and benefit consulting services. Of these, 30 consultants are fully credentialed Fellows of the Society of Actuaries (FSA), the highest level of professional accreditation that an actuary can achieve.

- 2) Prior Public Pension Experience by Actuarial Firm. The experience of the actuarial firm in evaluating and forecasting the financial condition of large defined benefit pension plans for public employees is an important factor.**

*We provide similar consulting services for the audit, review and replication of state retirement systems including the States of Illinois, Pennsylvania, Maryland and Washington.*

Cheiron has been providing consulting services to public sector retirement systems since it was founded in November 2002. The consulting team at Cheiron has experience assisting major statewide and local retirement systems. Our team's experience includes consulting services to the statewide retirement systems of Maryland, New York, Delaware, New Jersey, CalPERS, CalSTRS, Oregon, Washington, Illinois, Pennsylvania, Florida, Maine, Kansas, Utah, Arkansas, and Connecticut, the Cities of Baltimore, Philadelphia, Phoenix, Alexandria, Los Angeles, San Diego, San Francisco, San Jose, St. Louis, Norfolk, Kansas City, Annapolis, Washington DC, and Miami, and Fairfax and Arlington Counties (VA). We also

have experience in special projects providing consulting services in connection with statewide retirement systems in New York. We have served several of these clients for decades, including 29 years of uninterrupted service for Maine PERS. Beyond basic pension valuation work for various classes of state employees, this experience includes performing hundreds of annual municipal valuations, GASB analysis and reporting, gain/loss analysis, actuarial projections, evaluating health, life, and disability programs, experience studies, cost of living adjustment certifications, estimating the impact of proposed fiscal notes from the legislature, creating state of the art analytical tools, dealing with portability provisions, and in particular performing asset allocation studies for various state systems.

Cheiron evaluates and forecasts the financial condition of every plan utilizing our *P-Scan* tool, which is described in more detail later in this proposal.

- 3) **Prior Public Pension Experience by Assigned Firm Personnel.** Because continuity is very important in establishing sound public policy in the pension area, the prior public pension plan experience of the firm personnel primarily assigned to the Commission's work and the potential for a long-term relationship with the Commission and continuity is an important factor.

*Our co-lead practice ensures availability and continuity for every Cheiron client and is in place before starting work.*

Janet Cranna, FSA, FCA, MAAA, EA, Co-Lead Actuary

- Pennsylvania Public School Employees' Retirement System
- New Jersey Retirement Systems
- Connecticut Municipal Employees' Retirement System

Kenneth Kent, FSA, FCA, MAAA, EA, Co-Lead Actuary

- Pennsylvania Municipal Retirement System
- Illinois Office of the Auditor General
- Maryland State Retirement and Pension System
- State of New Jersey Pension and Health Benefits Review Commission
- New York State Teachers Retirement System
- City of Miami (FL)
- City of Philadelphia Municipal Retirement System
- City of Phoenix Employees Retirement System
- City of Baltimore Employees Retirement System
- City and County of San Francisco Employees Retirement System
- City of Wilmington (DE) Pension System
- Los Angeles Fire and Police Pension Plan

- 4) **Prior Reviewing/Auditing Actuary Experience.** The prior experience of the actuarial firm and of the actuarial firm personnel proposed for assignment to Commission work in reviewing or auditing the work product of other actuaries is an important factor.

Cheiron's consultants have extensive consulting experience with dozens of multi-billion dollar, jointly and single trustee pension funds and health and welfare programs. Our largest specialty consulting area is for pension plans. Cheiron has a great depth of experience assisting major federal, statewide and local retiree benefit programs. Representative clients for whom we have performed actuarial audits include the following systems:

- The Washington State Pension Funding Council
- The California Public Employees Retirement System
- The California State Teachers Retirement System
- The Missouri Department of Transportation & Highway Patrol Employees Retirement System
- The Utah Retirement System
- The Maryland State Retirement and Pension System
- The Employees Retirement System of Rhode Island
- The Los Angeles City Employees' Retirement System
- The Los Angeles Fire and Police Pension System
- The Wichita Retirement Systems
- The Illinois Office of the Auditor General
- The New York State Teachers Retirement System
- The San Luis Obispo County Pension Trust
- The City of Richmond (VA) Audit Office
- The Miami (FL) Fire Fighters' and Police Officers' Retirement Trust
- The Pennsylvania Municipal Retirement System
- The Sonoma County Employees' Retirement Association

In addition, we have also performed in effect, audit functions on all of the pension plans we have transitioned to since forming Cheiron in 2002. We have recreated the former actuary's results, as required by our standards of practice, for dozens of defined benefit pension plans. Cheiron's public sector engagements have included projects with Maine Public Employees Retirement System, Delaware State Retirement System, Pennsylvania Municipal Retirement System, Montana Public Employees Retirement Board, the Maryland State Legislature, Oregon PERS, San Diego City Employees Retirement System, City and County of San Francisco, the Cities of Annapolis and Baltimore, MD, the Philadelphia Retirement Board, the District of Columbia, the City of Chattanooga, the Army Non-Appropriated Fund, the Pension Benefit Guaranty Corporation, the U.S. Department of Defense, and the Counties of Arlington and Fairfax, Virginia.

- 5) **Accessibility.** The availability of the firm personnel assigned to the Commission work to meet with the Commission, often on short notice during the legislative session between January and May, annually, is an important factor.

*Having performed these same services for other State Legislatures, we are aware of both the timing and need to have our consultants available to testify before legislative bodies with very short notice, and our team is committed to meet the needs as defined in the RFP.*

We certify to the accessibility and availability of the Cheiron team we are proposing to serve as your consultants as having the capacity to meet your needs. We further attest to the availability of all necessary resources for performing all required services and providing deliverables in a timely fashion. Our approach to staffing your account with multiple senior level actuaries assures that we will always have the dedicated resources to meet tight deadlines and attend required legislative sessions.

6) **Absence of Contractual Liability Limits and Contractual Third-Party Reliance Disclaimers.** The extent to which the consulting actuarial firm seeks to limit its liability with respect to errors in its actuarial work or to disallow reliance on actuarial results by third parties is an important factor.

*We have never and will never ask for liability limitations in our contracts with any clients. All work will be performed by Cheiron employees.*

Cheiron does not impose liability limitations and therefore, we are fully accountable for our work. The founding Cheiron consultants worked together previously for many years in the Washington, DC office of a major international actuarial firm. Cheiron was formed after its founders took exception to the efforts in our industry to unilaterally impose liability limitations on clients without engaging in an open dialog on the issue in advance. We believe there are other and better ways of dealing with this issue of risk. Our disagreement led to Cheiron's consultants leaving their former employer and creating a new consulting firm, which continues to offer consulting services, and without liability limitations.



## V. Firm Information

In addition to indicating how the actuarial firm meets the minimum conditions described in section IV, the Commission requires the actuarial firm to demonstrate its qualifications through a narrative presentation of the following information:

- 1) **Firm's Structure, Operational Method, and Communication Capability.** Describe the structure of the actuarial firm and its operational method. Include in the description an indication of how the actuarial firm communicates pension fundamentals in an understandable manner to audiences of diverse and non-technical backgrounds.

Cheiron is an employee-owned corporation of financial consultants and actuaries advising a national client base of public employers, Taft-Hartley plans, non-profits and corporations, from offices in Washington, DC, Charlotte, NC, Chicago, IL, Los Angeles, CA, New York, NY, Philadelphia, PA, Portland, OR, San Diego, CA, and San Francisco, CA. Our engagements range from focused, one-time projects that supplement and augment the work of the current actuary or investment advisor, to serving as the plan or plan sponsor's primary consultant. Our clients include several very large complex pension and health and welfare systems.

At the heart of these services is helping clients understand the risks within their systems and the implications of decisions. Our training and hiring of consultants has always emphasized searching for or training new consultants that hold the same principals as the company. Those principals include our national reputation for communicating difficult and technical subjects in ways that allow our clients to understand and use the information and work products we provide. We often use dynamic modeling like our proprietary *P-Scan* model for pension plans as a tool to illustrate these technical concepts. Each *P-Scan* is customized so that it reflects the current operation of the plan and can have a variety of policy options programmed in to facilitate the Board's discussion of alternatives.

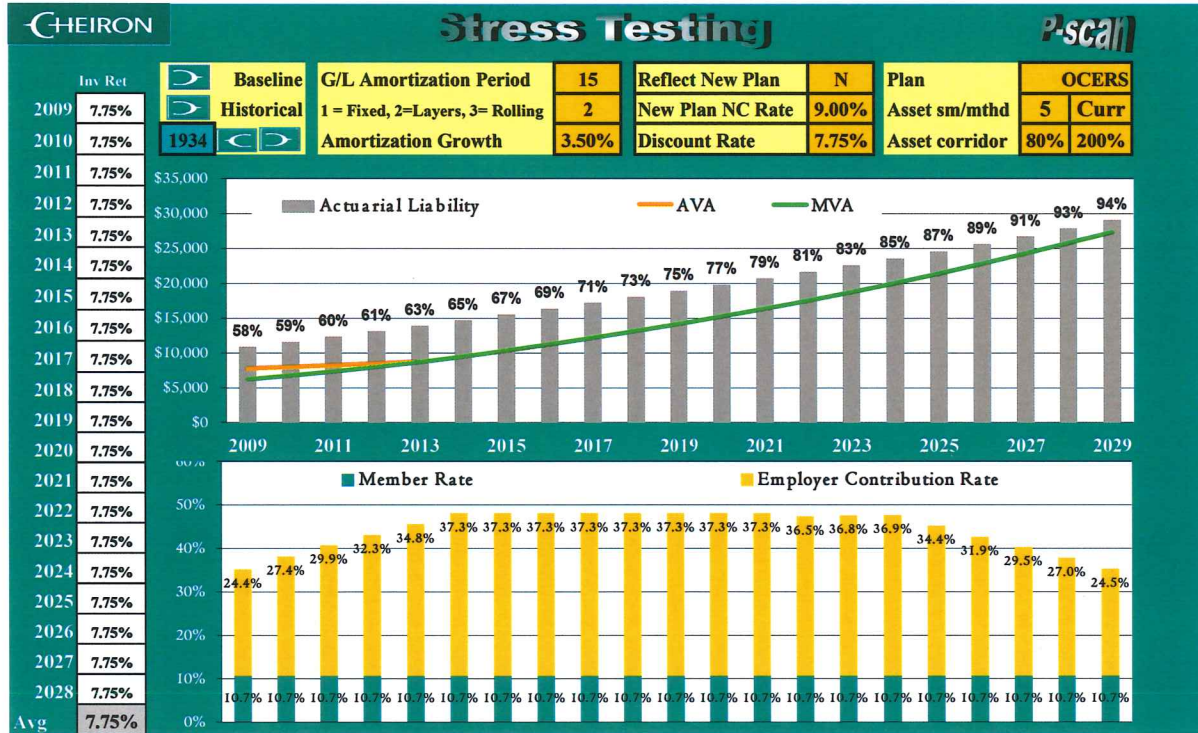
### *Our P-Scan Interactive Model*

The following screenshots from *P-Scan* are intended to help illustrate its capabilities and how our consulting using this tool is different from what our competitors provide. If selected for a finalist presentation, we would be happy to demonstrate the interactive capabilities of this tool.

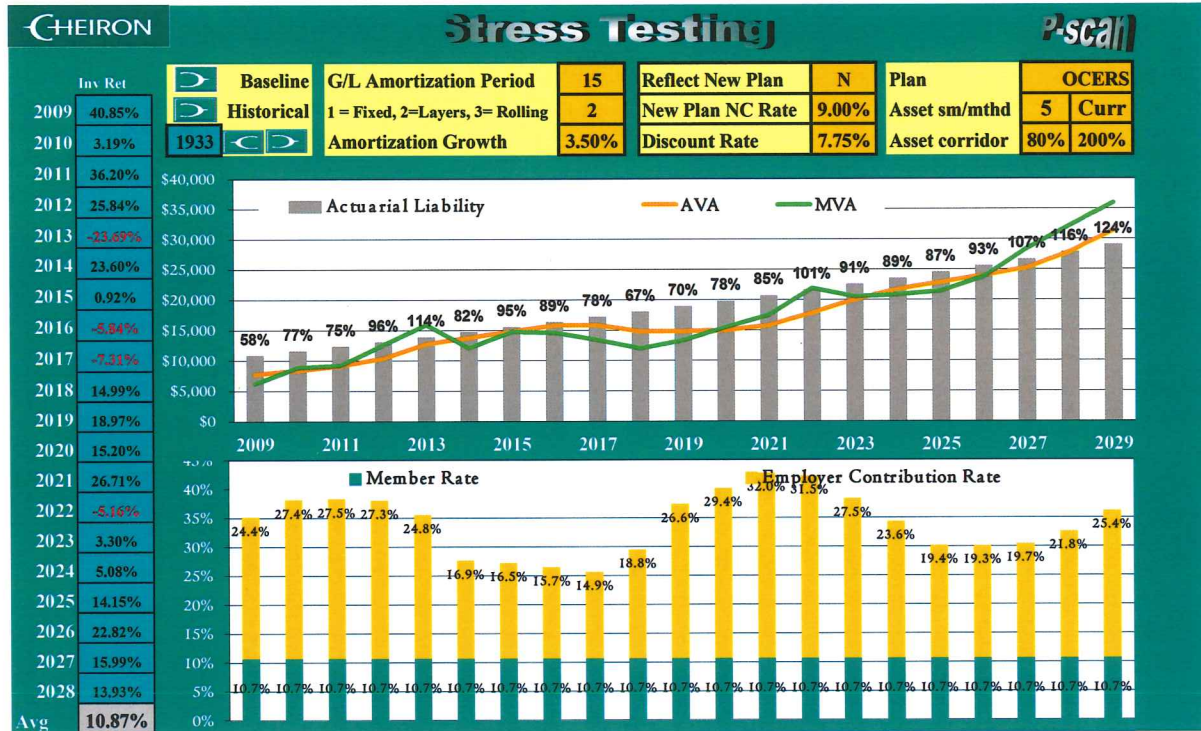
The first screenshot is the Stress Test page. In general, the boxes across the top represent variables tailored for a system and programmed into the model that can be changed during the presentation.

The first graph shows the projected actuarial liability (gray bars) and the actuarial and market value of assets (orange and green lines). The numbers at the top of the bars represent the projected funded status. The bottom graph shows the projected contribution rates for both the members and the employers.

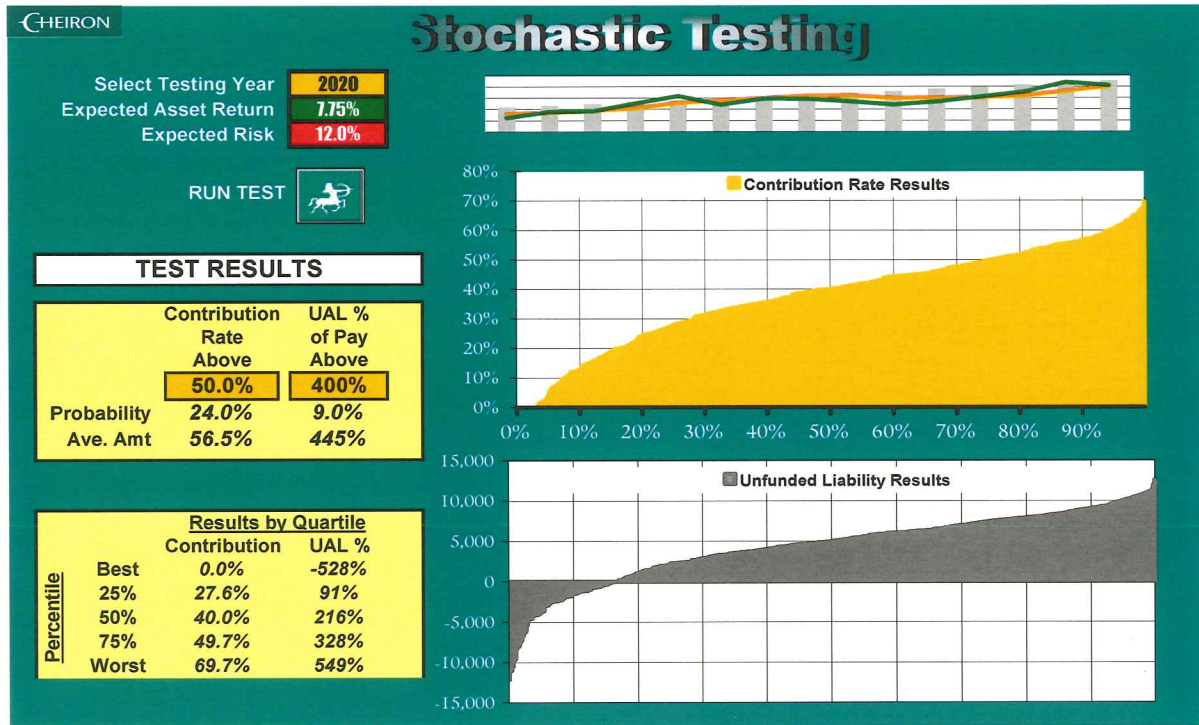
On the left hand side of the screen, the actual investment return is shown for each year of the projection. These returns can be changed to develop different economic scenarios. This particular scenario is the baseline projection using the assumed rate of return.



The next screenshot shows the same Stress Test page, but using historical investment returns beginning in 1933. That is, the investment return shown for 2009 is actually the historical investment return for 1933 for a portfolio invested 70% in equities and 30% in bonds. The equity/bond allocation can be adjusted based upon the system's asset allocation.

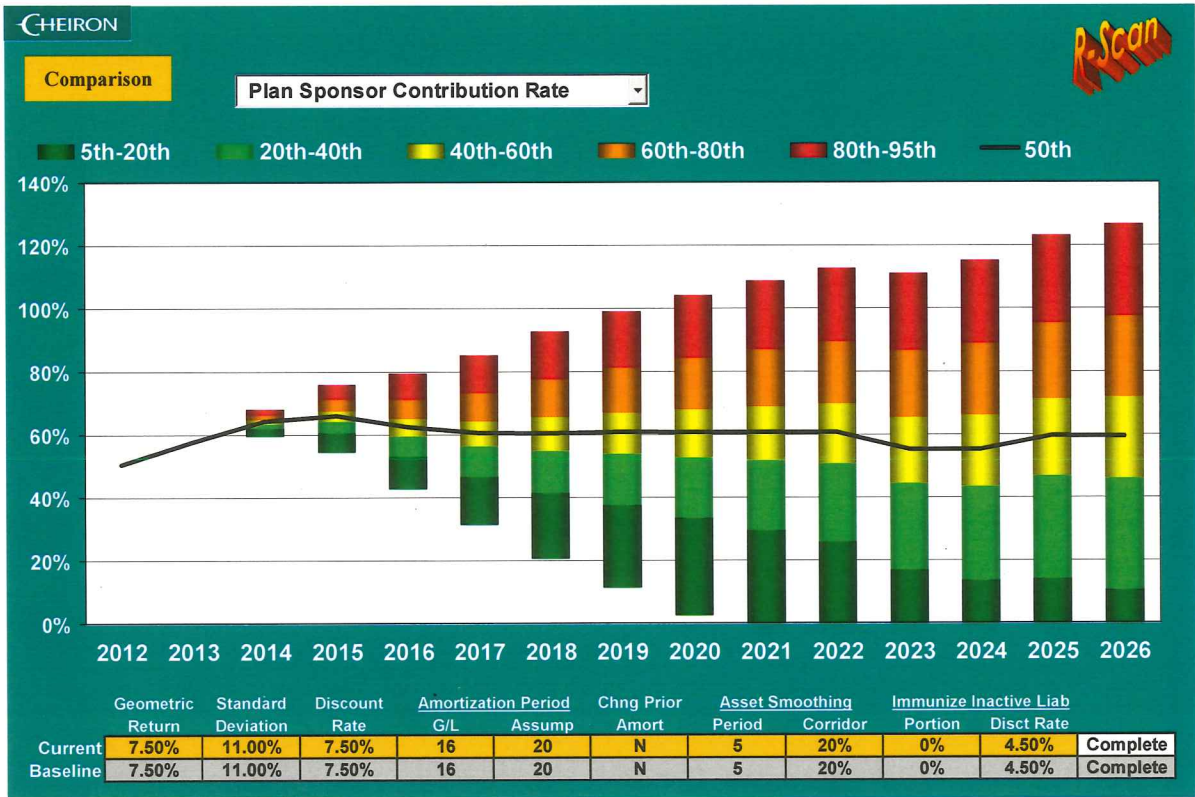


The final screenshot is from the Stochastic Testing page of *P-Scan*. Based on a given expected investment return and standard deviation, this test shows the distribution of contribution rates and unfunded actuarial liability (UAL) for a selected testing year (in this case 2020). Specific risk criteria can be entered in the test results box on the left to assess the likelihood of exceeding the specified criteria. For example, if the Board wants to avoid a contribution rate above 50% of payroll, the box in the middle on the left shows a 24% probability of exceeding this rate, and the average contribution rate from those stochastic trials that exceed 50% is 56.5%. The graphs and box on the lower left show the distributions at percentile points.

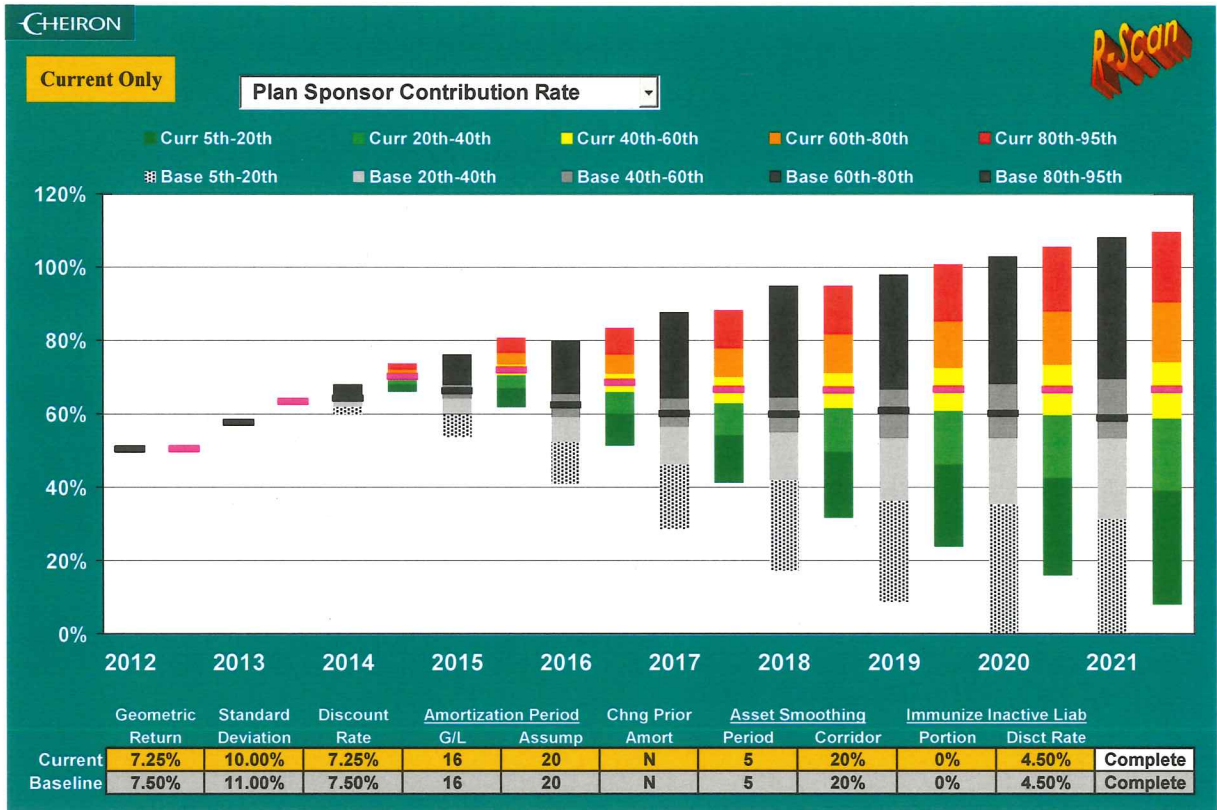


### Our R-Scan Interactive Model

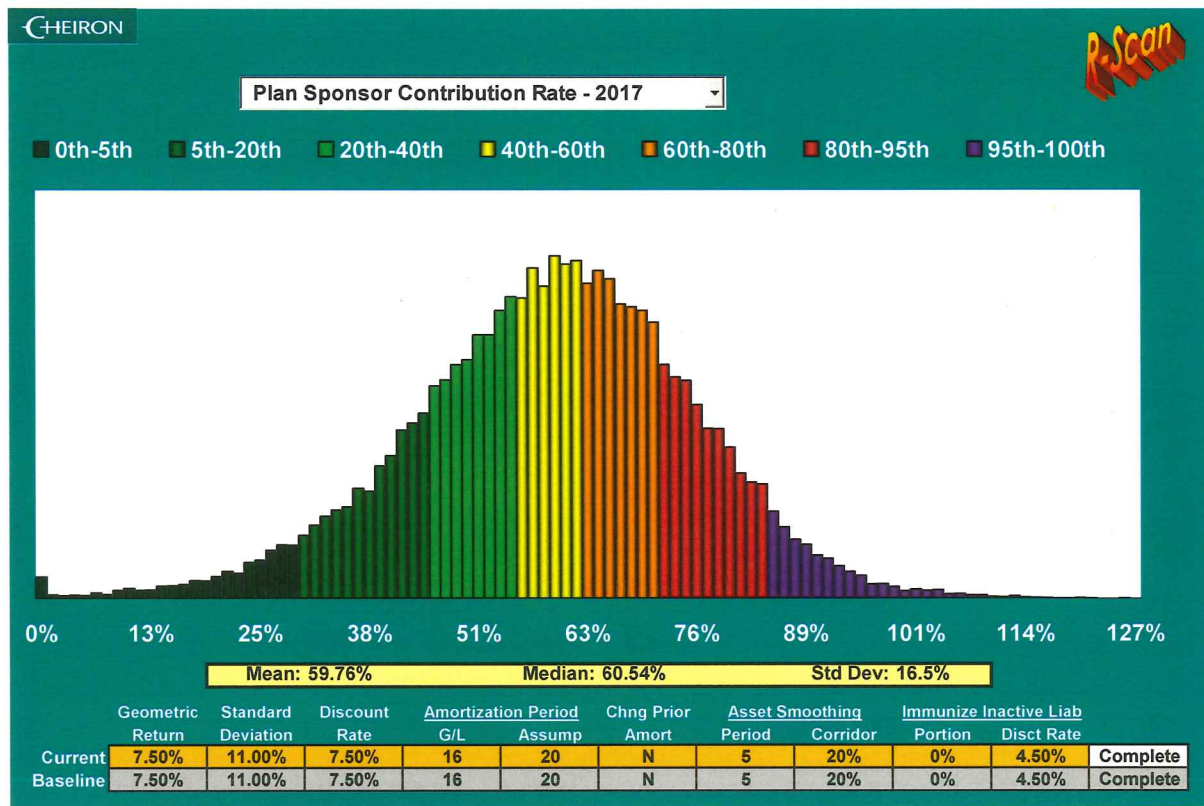
Cheiron has recently modified its stochastic projection model to provide more options and more visual information. Cheiron's *R-Scan* platform uses our base *P-Scan* model to demonstrate a likely range of potential future outcomes and how that picture changes if the funding, investment, or benefit policies are adjusted. The colored bars in the graph below represent the percentiles of possible results of a plan sponsor's future contribution rates for the next fifteen years. Consultants can program any number of statistics (funded percentages, contributions rates, compounded returns, etc.) that are of interest to the client and quickly switch between them.



The next graph illustrates how *R-scan* can be used to compare potential outcomes under two different sets of policies. In this case, the two policies represent two different investment portfolios with correspondingly different discount rate assumptions.



The final graph shows the probability distribution for a single year's results. This information can be isolated for any given test statistic and any year in the projection.



The costs of a defined benefit plan are fundamentally uncertain until investment returns, longevity, retirement behavior and other factors are known. Understanding the possible ranges of those costs is the first step in developing the appropriate policies to ensure the sustainability of the pension plan.

*These models are a part of our proposal and not intended as an add-on because they 1) help validate the results and 2) provide the forward-looking approach we bring to every assignment.*

- 2) Firm's Prior Public Pension Experience.** Provide a description of any major public employee pension plan actuarial valuation and related experience by the actuarial firm rendered during the last five years and the degree of any consulting or other involvement by the actuarial firm with other elected public bodies.

The following is a list of Cheiron's public sector clients for which we have provided actuarial services similar to that requested in the RFP during the last five years. For the majority of this list, Cheiron is the actuary to the system, providing the full scope of consulting services presented in the RFP. Through these clients, we have demonstrated superior service in the performance of annual actuarial valuations, presentations to boards and legislators, and provided insightful, professional consulting advice on all the systems' administrative needs.

### **State & Federal Government**

- Administrative Offices of the United States Courts
- California Public Employees Retirement System
- California State Teachers Retirement System
- DART Contributory Pension Plan
- Delaware Public Employees Retirement System (9 plans)
- Department of the Treasury Office of DC Pensions
- Illinois Office of the Auditor General
- Maine Public Employees Retirement System (4 plans)
- Maryland General Assembly Department of Legislative Services
- Maryland Transit Administration
- MoDOT & Patrol Employees' Retirement System (MPERS)
- Montana Public Employee Retirement Administration (8 plans)
- New York State Teachers Retirement System
- Oregon Health & Science University
- Pennsylvania Municipal Retirement System
- Pennsylvania Public Employee Retirement Commission
- Rhode Island Employees Retirement System
- State of New Jersey Division of Pensions and Benefits
- State of New Jersey Pension and Health Benefits Review Commission
- State Retirement and Pension System of Maryland
- Texas State Auditor's Office
- U.S. Court of Appeals for Veterans Claims
- United States Army Nonappropriated Fund Employee Retirement Plan
- United States Tax Court Survivors Annuity Plan
- Utah State Retirement System
- Washington State Council of Fire Fighters
- Washington State Investment Board
- Washington State Pension Funding Council

### **Local Government**

- Alameda-Contra Costa Transit District Employees Retirement Plan
- Alexandria City Public Schools Pension Plan
- Amalgamated Transit Union Local 85
- Amalgamated Transit Union Local 900 Pension Plan
- Arlington County Retirement System
- Beverly Hills Police Officers Association Supplemental Benefit Trust
- Borough of Edwardsville
- City and County of San Francisco Employees Retirement System
- City of Alexandria Firefighters and Police Officers Pension Plan
- City of Allentown Pension Plans
- City of Annapolis Fire and Police Retirement System
- City of Baltimore Fire and Police Employees



## **Local Government**

- City of Chattanooga
- City of Falls Church Pension Plans
- City of Hampton Employees Retirement System
- City of Harper Woods, MI
- City of Kansas City, Missouri Employees Retirement System
- City of Kansas City, Missouri Firefighters Pension System
- City of Lansing Employees Retirement System
- City of Miami Fire Fighters and Police Officers Retirement Trust
- City of Norfolk Employees Retirement System
- City of Peoria Police Pension Fund
- City of Philadelphia Municipal Retirement System
- City of Phoenix Employees Retirement System
- City of Richmond VA
- City of Roanoke Pension Plan
- City of San Jose Federated City Employees Retirement System
- City of San Jose Police and Fire Department Retirement Plan
- City of Torrington Pension Plans
- City of Vienna VA
- City of Wilmington Pension System
- City of Yorba Linda
- County of Los Angeles
- DC Retirement Board
- District of Columbia Department of Human Resources
- Employees Retirement System of the City of Baltimore (3 plans)
- Employees Retirement System of the City of St. Louis
- Fairfax County Retirement Systems (3 plans)
- Fresno County Employees Retirement Association
- Golden Gate Transit-Amalgamated Retirement Plan
- Imperial County Employees Retirement System
- Knoxville Utilities Board Pension Plan
- Los Angeles City Employees Retirement System
- Los Angeles Fire and Police Pension Plan
- Luzerne County Employees Retirement System
- Marin County Employees Retirement Association
- Merced County Employees Retirement Association
- Metropolitan Police Relief Association of the District of Columbia
- Metropolitan Washington Council of Governments
- Newport News Employees Retirement Fund
- Oakland Police and Fire Retirement System
- Pasadena Fire Fighters Association Benefit Trust
- Port Authority of Allegheny County Retirement and Disability Allowance Plan for Employees Represented by Local 85 of the Amalgamated Transit Union
- Retirement Plan for Pace West Division Employees

### **Local Government**

- Sacramento Regional Transit District
- Saint Louis Police Retirement System
- San Diego City Employees Retirement System (3 plans)
- San Diego Transit Corporation Pension Plan
- San Joaquin County Employees Retirement System
- San Luis Obispo County Pension Trust
- Santa Barbara County Employees Retirement System
- Santa Clara Valley Transportation Authority ATU Pension Plan
- Santa Monica City Employees Coalition Benefit Trust
- Santa Monica Fire Fighters Association Benefit Trust
- Sonoma County Employees Retirement Association
- Stanislaus County Employees Retirement Association
- Supplemental Retirement Program for Employees of Chesterfield County Public Schools
- Washington Metropolitan Area Transit Authority Retirement Plan (3 plans)
- Wichita Employees Retirement System
- Wichita Police and Fire Retirement System

**3) Function of Assigned Firm Personnel and Prior Experience. For each non-clerical employee of the actuarial firm proposed to be assigned to Commission work, identify the Minnesota public employee pension plans or functions with which the person will be involved and indicate the person's prior public employee pension plan experience.**

In this Section we present the names and qualifications of the professional personnel who will be assigned to this project, including the primary role assigned to each person. Below are brief biographical sketches for each person. Please refer to the Minimum Qualifications Standards section, Item No. 3, above for listings of each person's public employee pension plan experience. Complete résumés providing professional experience and education of the proposed team members can be found in Appendix A.

Cheiron proposes a project staff that has five senior actuaries who have worked in this unique and highly effective fashion for several large public retirement systems during the past decade. The staff listed below will be involved in all 12 of the Minnesota public employee pension plans. Each proposed staff member is aligned with a back-up to ensure the work will get done in a timely manner. By taking this approach, not only does responsiveness time increase; accessibility and quality of servicing improves with clients gaining the full perspective of highly qualified public sector actuaries.

- **Janet Cranna, FSA, FCA, MAAA, EA**, Principal Consulting Actuary, is the proposed co-lead actuary for this engagement. Janet has over 25 years of retirement consulting and actuarial experience with public sector and corporate clients. Her experience includes the New Jersey Retirement Systems and the Pennsylvania Public School Employees' Retirement System. Janet is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries,

and an Enrolled Actuary under ERISA. Janet is located in Cheiron's New York City office and presently serves five clients.

- **Kenneth A. Kent, FSA, FCA, MAAA, EA, Principal Consulting Actuary**, is the proposed co-lead actuary on this engagement. Ken has over 35 years of actuarial consulting experience. He joined Cheiron in 2005 from a large international consulting firm. Ken's expertise in managing the complex financial, regulatory, legal and administrative issues surrounding pension and defined contribution plan design and funding strategies has helped scores of public sector and multiemployer plans since 1976. Ken's public sector experience includes work with the Pennsylvania Municipal Retirement System, State of Maryland Audit and Legislative Review, State of New Jersey Legislative Review Commission, State of Washington Biennial Audits, State of Illinois and the Cities of Philadelphia, Baltimore, Miami, San Francisco, and Phoenix. Ken is the past Chairman of the Public Plan Subcommittee of the American Academy of Actuaries, Vice President of Pensions for the American Academy of Actuaries, and has testified before Congress on issues of pension funding and reform. Ken is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. Ken is located in Cheiron's Washington, DC office and presently serves 10 clients.
- **Gene Kalwarski, FSA, FCA, MAAA, EA, Principal Consulting Actuary**, is proposed as a special resource for this engagement. Gene has over 35 years of experience and is a national specialist in public sector funding of retirement programs. Gene is the President and CEO of Cheiron and one of its founders, as well as the developer of Cheiron's consulting tools and methodologies. Gene has been the lead actuarial consultant to the retirement systems of Maine, Maryland, Delaware, Florida, Illinois (serving the Auditor General of the State), Kansas, as well as retirement systems for the cities of San Francisco, San Jose, Kansas City, and the District of Columbia. He has testified on several occasions before U.S. Senate Committees and regularly addresses state legislatures and boards of trustees on behalf of the numerous statewide pension funds he has represented. He is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. Gene is located in Cheiron's Washington, DC office and presently serves 10 clients.
- **Richard Hudson, FSA, FCA, MAAA, EA, Principal Consulting Actuary**, is proposed as a special resource for this engagement. Richard has over 24 years of actuarial experience working with a variety of pension plans. He is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. He has assisted public and private sector clients in areas of plan design, asset/liability modeling, labor negotiations, projection modeling, and experience studies. Richard is located in our New York City office and presently serves eight clients.
- **Michael J. Noble, FSA, FCA, MAAA, EA, Principal Consulting Actuary**, is proposed as a special resource for this engagement. Mike has over 15 years of experience consulting with clients on issues relating to accounting disclosures, plan administration,

plan design, and pension and retiree medical valuations for both private and public sector clients. Since joining Cheiron he has worked on several significant public and multiemployer plan projects, including a large public plan analyzing the impact of alternative plan designs on member benefits and funding requirements and the audit of an actuarial risk assessment for a large state retirement system. He also worked on the audit of GRS' long-term projections for the Utah Legislature. His clients have included the Employees Retirement System of the City of St. Louis, the St. Louis Police Retirement System, the Maine Public Employees Retirement System, and the Illinois Office of the Auditor General. Mike is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. Mike is located in our Chicago IL office and serves seven clients.

- 4) **References.** List five major retirement systems or businesses with defined benefit pension plans by which the actuarial firm previously has been retained, complete with the name and telephone number of a contact person, as references who can be contacted about the prior performance of the actuarial firm in providing actuarial services.

<b>Client:</b>	Pennsylvania Municipal Retirement System
<b>Contact Information:</b>	James B. Allen, Secretary P.O. Box 1165 Harrisburg, PA 17108-1165 717-787-2065

<b>Client:</b>	Philadelphia Board of Pensions and Retirement
<b>Contact Information:</b>	Francis X. Bielli, Executive Director Two Penn Center Plaza, 16th Floor Philadelphia, PA 19102 215-496-7410

<b>Client:</b>	Illinois Office of the Auditor General
<b>Contact Information:</b>	Jim Schlouch, Director, Performance Audits 740 East Ash St., Iles Park Plaza Springfield, IL 62703 217-782-0812

<b>Client:</b>	Maryland General Assembly, Department of Legislative Services
<b>Contact Information:</b>	Michael Rubenstein, Principal Policy Analyst 90 State Circle Annapolis, MD 21401 410-946-5520

References (cont'd.)

<b>Client:</b>	California State Teachers Retirement System (CalSTRS)
<b>Contact Information:</b>	Rick Reed, System Actuary P.O. Box 15275 Sacramento, CA 95851 916-414-1300

- 5) **Client Additions and Subtractions.** Provide a list of all new clients added by the actuarial firm and all former clients lost by the actuarial firm during the most recent five-year period.

**The following are clients that have hired Cheiron since May 2009:**

**2009**

- Teamsters Local 639 - Employers Pension Trust
- Teamsters Local 639 - Employers Health Trust Fund
- Arkansas Employee Benefits Division
- Washington Metropolitan Area Transit Authority, Local 2 Retirement Plan
- Washington Metropolitan Area Transit Authority Retirement Plan
- Hampton Employees Retirement System
- Teamsters Union Local No. 73 Pension Plan
- Building Materials Drivers Union Local 436 Pension Fund
- City of Hampton Post-Retirement Benefit Plan and Hampton City Schools
- Hampton City Schools
- Union PSCE
- City of Philadelphia Board of Pensions and Retirement

**2010**

- Employees Trust Fund of Local 731, International Brotherhood of Teamsters
- Covington & Burling LLP
- Local 731, I.B.T. Textile Maintenance and Laundry Craft Pension Fund
- City of Philadelphia and Local 22 of the International Association of Fire Fighters, AFL-CIO
- American Association of University Professors
- Newport News Employees Health Plan
- City of Philadelphia Municipal Retirement System
- Washington State Pension Funding Council
- Newport News Employees Retirement Fund
- Greater Richmond Transit Company
- City of Allentown Pension Plans
- City of San Jose Federated City Employees Retirement System

- Western States Insulators and Allied Workers Pension Fund
- Fresno County Employees Retirement Association
- Employees Retirement System of the City of St. Louis
- Keightley & Ashner LLP
- Newport News Public Schools
- City of Alexandria Firefighters and Police Officers Pension Plan
- City of Alexandria OPEB Trust
- City of Alexandria Schools Health Plan
- Newport News / Williamsburg International Airport Postretirement Benefit Plan
- Western States Asbestos Workers Health Plan
- Western States Insulators and Allied Workers Individual Account Plan
- Bituminous Coal Operators Association

### **2011**

- Newspaper Guild of New York Consumers Union of United States, Inc. Pension Plan
- Newspaper Guild of New York Publishers Pension Fund
- Pennsylvania Public Employee Retirement Commission
- Motion Picture Industry Health Plan
- Greater Boston Hospitality Employers/Local 26 Benefits Administration LLC
- Amalgamated Transit Union Health and Life Insurance Plan for Pensioned Employees
- Construction Employees Association
- The City of San Jose Police and Fire Department Plan
- City of San Jose Police and Fire Department Retirement Plan
- Morgan Lewis
- UFCW Kroger Pension Plan
- Newspaper Guild of New York - The New York Times Pension Plan
- Communications Workers of America
- Oregon Health & Science University
- Westchester County Health Care Corporation
- PepsiCo, Inc.
- City of Phoenix Employees Retirement System
- Maryland General Assembly Department of Legislative Services
- Martin & Bonnett, PLLC
- Alston & Bird, LLP
- Knoxville Utilities Board Pension Plan
- Masters, Mates and Pilots Pension Plan
- City of Wilmington Pension System

### **2012**

- City and County of San Francisco OPEB Plan
- Greater Boston Hotel Employees / Local 26 Trust Funds
- Knoxville Utilities Board Post-Retirement Benefit Plan
- Chicago Area I.B. of T. Pension Trust Fund
- PLCA Pension Plan Trust

- Supplemental Retirement Program for Employees of Chesterfield County Public Schools
- City and County of San Francisco Employees Retirement System
- City of Baltimore Fire and Police Employees
- Diocese of Allentown
- FELRA Mid-Atlantic Pension Funds
- UNITE HERE Yale University
- The Police Retirement System of St. Louis
- Association of Flight Attendants United Airlines
- Indiana/Kentucky/Ohio Regional Council of Carpenters Pension Fund
- Maine Municipal Association
- Maine Municipal Employees Health Trust
- Long Island Power Authority
- Nassau Health Care Corporation
- Duluth Missabe and Iron Range Railway
- Wichita Employees Retirement System
- Wichita Police and Fire Retirement System
- Local Union No. 226 IBEW Open End Pension Trust
- Illinois Office of the Auditor General
- Steelworkers Pension Trust Employees Post-Retirement Health Insurance Plan and Trust
- Construction Industry Laborers Pension Fund
- Pension Trust Fund of the Joint Industry Board of the Electrical Industry
- San Luis Obispo County Pension Trust
- IAM National Pension Fund
- Multnomah County Postretirement Medical and Life Insurance Plan

### **2013**

- Alameda-Contra Costa Transit District Employees Retirement Plan
- City of Hayward
- California Public Employees Retirement System
- California State Teachers Retirement System
- Santa Barbara County Employees Retirement System
- Santa Clara Valley Transportation Authority Retiree Healthcare Benefit Plan
- San Joaquin County Post-Retirement Medical Plan
- City of Yorba Linda
- Health Professionals and Allied Employees Retiree Medical Trust
- Employer-Teamsters Local Nos. 175 and 505 Pension Trust Fund
- Los Angeles City Employees Retirement System
- Marin County Employees Retirement Association
- Maryland Transit Administration Retiree Healthcare Plan
- Merced County Employees Retirement Association
- Metropolitan Police Relief Association of the District of Columbia
- Pittsfield Charter Township Other Post-Employment Benefits Plan
- Maryland Transit Administration
- Pasadena Fire Fighters Association Benefit Trust

- Sacramento Regional Transit District
- Santa Clara Valley Transportation Authority ATU Pension Plan
- San Joaquin County Employees Retirement System
- Santa Monica Fire Fighters Association Benefit Trust
- Santa Barbara County Employees Retirement System
- San Diego Transit Corporation Pension Plan
- Stanislaus County Employees Retirement Association
- City of Torrington Pension Plans
- Administrative Offices of the United States Courts
- National Education Association of Rhode Island
- Bryan Cave LLP - Hanover
- Screen Actors Guild and the American Federation of Television and Radio Artists
- Rhode Island Carpenters Pension Fund
- Golden Gate Transit-Amalgamated Retirement Plan
- Pension Consulting Alliance
- Peace Officers Research Association of California Retiree Medical Trust
- Washington State Investment Board
- Beverly Hills Police Officers Association Supplemental Benefit Trust
- Riverside Police Officers Association Retiree Health Trust
- UFCW Local 2013 Pension Fund
- UFCW Local 2013 Health and Welfare Fund
- IBT Airline Division
- New York State Teachers Retirement System
- City of Cupertino
- IBT Voluntary Employee Benefits Trust
- Laborers International Union of North America Local 872
- West Virginia Housing Development Fund Retiree Healthcare Benefit Plan
- Los Angeles Fire and Police Pension Plan
- Rhode Island Employees Retirement System
- City of Los Angeles Fire and Police Pension Plan OPEB Program
- City of Miami Fire Fighters and Police Officers Retirement Trust
- California Winery Workers Pension Trust Fund
- Virginia A. Hemelt, MD MSHA DB Plan
- UFCW Unions and Employers Midwest Pension Plan
- City of Philadelphia Board of Pensions and Retirement Special Pension Commission
- Southwest Carpenters Health and Welfare Trust
- Southwest Carpenters Pension Trust
- Cotton Incorporated Pension Plan
- Newspaper Guild-Consumer Reports Adjustable Retirement Plan
- UFCW and Participating Food Industry Employers Local 1262 Pension Fund
- City of Roanoke Pension Plan
- City of Roanoke Other Post-Employment Benefit Plan
- Southern California Edison Health & Wellness Plans
- Santa Barbara County Association of Governments



- IAM Grand Lodge Pension Plan
- Graphic Communications Conference of the IBT
- IBT Inter-Local Pension Fund
- Tri-County Metropolitan Transportation District of Oregon
- Oakland Police and Fire Retirement System
- City of Harper Woods, MI
- City of Falls Church Pension Plans
- Bergen Regional Medical Center
- City of Falls Church Other Post-Employment Benefits Plan
- Contra Costa County
- Graphic Communications Benevolent Trust Fund
- County of Los Angeles
- Hotel Employees Restaurant Employees Pension Trust
- New York Newspaper Guild
- Sheet Metal Workers Local No. 20 South Bend Area Pension Fund
- Cochise Combined Trust
- Arizona Local Government Employee Benefits Trust
- TriMet Pension Plan
- Irvine Benefit Trust
- Public Safety Employees Benefit Trust

#### 2014

- Happy Hour
- Woolco
- Imperial County Employees' Retirement System
- Florida Education Association Postretirement Benefits Plan
- St. Francis Hospital
- Sacramento Police Union
- Texas State Auditor's Office
- Washington State Council of Fire Fighters

#### **In the past five years, the following seven accounts were lost:**

- Indiana Construction Trades Health and Welfare Fund Painters Local 1118 – Moved to lower fee provider
- Roofers Pension Plan - Merger with National Plan
- American Planning Association - Asset manager bundled actuarial services at no cost
- Chicago Newspaper Publishers' Drivers Union Pension Plan - Moved to lower fee provider
- New England Teamsters & Trucking Industry Pension Fund - Trustees preferred another firm
- Catholic Holy Family Society - Moved to lower fee provider
- Midwest Heart Specialists - Switched to an asset provider that provides an in-house actuary

- 6) **Firm's Valuation System.** Describe the valuation system of the actuarial firm, indicate whether the software proposed to be used has been obtained from an outside vendor or is proprietary software developed by the actuarial firm, and indicate the capabilities and procedures of the actuarial firm to retain prior actuarial valuation and related data.

Cheiron utilizes actuarial valuation software leased from Winklevoss Technologies (WinTech) called ProVal. WinTech provides similar lease arrangements to consulting firms and insurance companies nationwide. ProVal is one of the most widely accepted high-end defined benefit valuation systems available today, easily handling large valuation cases on a PC or LAN. The WinTech pension product can value plans using select and ultimate interest rates, multiple funding methods, cash balance benefit formulas, multiple decrements, actuarial gains and losses by source, and open and closed group forecasts. ProVal's full functionality includes built-in reporting, contribution and expense determination, extensive documentation, and a host of other features. ProVal's capabilities include the ability to store historical data and actuarial valuations. Recent enhancements include the use of generational mortality tables and an expanding suite of funding report capabilities. With WinTech's superior actuarial valuation system as our foundation, Cheiron's innovations such as *P-Scan* become powerfully effective products. Also, from a quality control point of view (risk management), this arrangement is beneficial to our clients and to our firm since many of the basic computations will be performed by industry-trusted software.

#### Equipment & Data Retention

Cheiron uses InfoRouter, a web-based enterprise document management system that allows for efficient content, workflow, collaboration, knowledge, records, and portal management. This web-browser based system allows for a secure storage of client documents, as well as allowing authorized staff to safely collaborate on, contribute to, and manage content regardless of location.

Cheiron owns all computer hardware that is used in the course of providing actuarial work and maintaining, securing, and archiving data including multiple servers and backup equipment located in multiple locations and all computers and laptops.

All Cheiron employees have desktop or laptop computers with fully encrypted hard drives, using PGP encryption software. Our flexible use of technology allows our organization to be fluid in distribution of work assignments. Our secure internet access to our paperless filing system means we have access to all corresponding reports and work files on site at client meetings to access answers to questions that may emerge at a meeting.

Sharing of data, as well as backup and archiving operations, are handled through secure network attached storage in our Washington, DC location, which can be accessed externally through secure VPN connections. In this manner, data can be securely accessed by authorized Cheiron employees anywhere in the world, files can be stored and backed up offsite for disaster recovery purposes, and project files can be moved to offline storage on

non-volatile media such as CDs and tapes for archival purposes. We regularly use the backup system to restore files as necessary.

We have implemented complete encryption of all computers and servers, including laptop PCs as well as two-factor authentication via RSA-secure tokens in order to ensure that all data remains secure throughout Cheiron.

Safeguards currently in place to maintain the confidentiality of participant information include:

- Data containing confidential participant information is generally kept on a centrally secured server.
- Passwords are used to control access to the data centrally and also in the cases where the data must be manipulated on individual computers.

Cheiron's e-mail system also uses encrypted communications, and PGP encryption software is available to provide an extra level of security using public key encryption technology.

- 7) **Firm's Potential Conflicts of Interest. If the actuarial firm previously has been retained by a statewide or local Minnesota public pension plan, a Minnesota governmental employing unit, a Minnesota public employee labor union, or a comparable party interested in Minnesota public pension policy development, those relationships should be indicated. If the actuarial firm intends to continue any of these prior relationships during the course of a contract with the Commission, address the extent that the relationship constitutes a potential conflict of interest when providing services for the Commission and how the actuarial firm will deal with any actual conflicts.**

Cheiron currently serves no statewide or local Minnesota public pension plans, Minnesota governmental employing unit, a Minnesota public employee labor union, or any comparable party interested in Minnesota public pension policy development, therefore sees no potential conflict of interest entering into this engagement.

- 8) **Most Recent Audited Annual Financial Report. If the actuarial firm is publicly held, provide a copy of the firm's most recent audited annual financial report.**

With regard to Cheiron's most recent annual Financial Report, as a private company, Cheiron will be happy to share detailed financial statements should we be selected as a finalist for this RFP, if this is a material consideration. Cheiron deems the financial information requested to be extremely confidential.

## VI. Approach and Work Plan

The actuarial firm must specify how it will provide the required and requested actuarial services within the specified timeframes and must indicate how its staff and the various projects will be organized to carry out the required tasks.

### 1) Review Standards for Actuarial Work

Cheiron will review the Standards for Actuarial Work for conformity with actuarial standards of practice and Minnesota statutes. We will provide a written report of our findings and any recommendations prior to January 30, 2015 and present our results to the Commission.

### 2) Review or Replicate Annual Actuarial Valuations

A review of an annual actuarial valuation would entail:

- Collect and analyze historical trend information. We will build up our history of the Plans with information from the Minnesota statutes, SPDs, prior actuarial valuation reports and studies for at least the past five years. This information is used to build what we call a *Trend Model*. The model compares the historic results to highlight a consistent reflection of past experience and changes for each Plan.
- Review key valuation results for reasonableness with regard to changes in census, trust assets, plan provisions, and assumptions.
- Analyze future trends through our *P-Scan* model and compare to the plan actuary's conclusions.
- Review application of the assumptions and methods and check for reasonability.
- Check each valuation report's conformity with the applicable requirements of Minnesota S, Section 356.215, of the Commission's Standards for Actuarial Work.
- Check each valuation report for conformity with actuarial standards of practice.
- Identify any differences and inconsistencies in each valuation report.
- Present results to the Commission, including an interactive *P-Scan* model.

A replication of an actuarial valuation would include all of the steps completed during the review process as listed above. In addition, a replication would include parallel actuarial calculations utilizing Cheiron's actuarial valuation software. The valuation replication assumes that no census data reconciliation occurs, but rather a review of census changes, reasonableness, and methodology. Cheiron would then produce a detailed report identifying any differences and inconsistencies with the Plan actuary's reports.

Cheiron will complete the actuarial review/replication work by April 1 of the year following the actuarial valuation date under each of the work plans listed for plan years beginning with the July 1, 2014 valuations.

### **3) Review Quadrennial Experience Studies for Three Largest Pension Plans**

Based on the results reports of the plan actuary, we will make recommendations concerning the reasonability and appropriateness of each assumption. We will then review the plan actuary's estimated effect on plan liabilities and costs of the proposed changes. The study will also focus on the appropriateness of the actuarial cost method and the asset valuation method. Plan costs will be analyzed on the basis of other methods and compared to the costs under the current methods. Cheiron will review the studies for conformity with the applicable requirements of the Minnesota Statutes and with applicable actuarial standards of practice. Any inconsistencies or differences with the plan actuary will be noted in our report.

Cheiron's review will be completed within 60 days following the date on which the last of the three experience studies is filed with the Commission.

### **4) Review Actuarial Cost Estimates of Proposed Legislation**

We understand that legislative proposals often require fast turnaround, and that legislators are frequently looking for a single number for budget purposes. We are very familiar with this process, having been under contract with the States of New Jersey, Pennsylvania, Virginia, and Maryland solely for the purpose of evaluating proposed legislation on their retirement and health plans. Because we develop and tailor each *P-Scan* model to the needs of our clients, we can build in the facility to measure the current and future financial impact of many of the benefit structural changes that could be addressed in legislative proposals. This will provide the Board with the ability to receive rapid turnaround on legislative proposals as well as be informed on the long-term implications on both the funded status and financial cost. Our review of the cost note for reasonableness of the assumptions, methodology and results will be conducted within seven days following the date on which the actuarial cost estimate is provided to us.

### **5) Review of Optional Annuity Form Table or Annuity Reserve Factor Changes**

Changes in the actuarial assumptions used in the valuation may require changes to the tables and factors used in the administration of the plans. Our review of the optional annuity form tables and annuity reserve factors would consist of the following:

- An overview of the optional annuity forms of payment allowed under the statutes
- A review of the current optional annuity form tables and annuity reserve factors and the purpose of what they are to accomplish
- A review of the statutes with respect to the selection of optional annuity form tables and annuity reserve factors
- Possible alternatives
- An illustration of the impact that a change in the optional annuity form table or annuity reserve factor would have on sample member/beneficiary age combinations
- Any financial impact a change in the optional annuity form tables or annuity reserve factor would have on the contribution requirements and funded levels
- Our recommendations given the System's objectives

We could provide our review within 30 days of the receipt of the assignment from the executive director of the Commission.

**6) Review of Prior Service Credit Purchase Payment Amount Determinations**

Cheiron will review or audit prior service purchase payment amount calculations. Our review will focus on reasonableness for accuracy and for conformity with Minnesota Statutes, Section 356.551.

**7) Presentations to Commission**

Janet Cranna and Ken Kent as well as other members of the Cheiron team are available to attend Commission meetings to present reports or provided educational sessions as needed. This is not only the area in which Cheiron excels but represents what we believe is our fundamental responsibility to the Commission. And, it is the area of consulting we find most fun and rewarding. Our consultants, including Janet and Ken, frequently make such presentations to public sector and actuarial organizations, in addition to providing educational services to our clients.

**8) Provide General and Specific Advice to the Commission and Commission Staff**

Cheiron will keep the Commission advised on industry developments in Federal legislation and/or regulations regarding financing, benefits, vesting, fiduciary responsibility, taxation, disclosure, etc. While we do not practice law, Cheiron has a full-time employee benefits attorney on staff dedicated to keeping us informed of issues impacting our clients. We also work closely with several regulatory agencies that oversee pensions. Our consultants have working relationships with actuaries at the IRS and have the ability to meet with them on any regulatory or compliance issue. On staff we have the foremost compliance expert at the Internal Revenue Service with Jim Holland, who was their Chief Technical Actuary, to help our clients address what may become increasing Federal attention of public employer retirement systems. With our headquarters located in Washington, DC, we are close to the action and can monitor developments on a daily basis.

Cheiron also subscribes to several online research tools, such as *BNA.com*, *Plansponsor.com*, and *Pensions and Investments* that provide full research capabilities, as well as weekly and daily updates on legislative or other issues of interest in the employee benefits arena.

Cheiron's consultants are also very active in professional actuarial organizations and have served on the Boards of the American Academy of Actuaries and the Conference of Consulting Actuaries. We also participate in national forums. Cheiron was one of the few consulting firms that participated in the IRS roundtable it sponsored to discuss ERISA compliance issues for public plans. Cheiron is also a member of the National Association of State Retirement Administrators (NASRA), which permits us to access NASRA's website regarding research on public sector plans and to attend NASRA conferences.

**9) Prepare Special Studies or Research**

Cheiron will provide any additional actuarial consulting services needed by the Commission.

**Further, the work plan must identify the person who will be assigned overall responsibility for the work and indicate the business office location of that person.**

Janet Cranna, Principal Consulting Actuary and the proposed co-lead actuary for this engagement, will have overall responsibility for the work. Janet is located in Cheiron's New York City office, 1359 Broadway, Suite 602, New York, NY 10018.

**The actuarial firm must set forth its implementation procedures, which must specify:**

**1) how the work of the firm under the contract will be coordinated with the Commission staff;**

As a rapidly growing firm, Cheiron has worked successfully with a number of clients and other actuarial firms on transition/coordination issues. As a first step, we will immediately meet with the Commission staff to determine the appropriate lines of communication. During this meeting we will determine the appropriate lines of communication as well as discuss expectations and intermediate goals/deadlines to ensure the ultimate project deadlines are met. Following the meeting, we will issue a work plan that represents our understanding of the responsible parties and the Commission's expectations and Cheiron's commitment to future deliverables and their timing.

**2) the personnel who will be responsible for presenting reports and results to the Commission; and**

Janet Cranna and Ken Kent will be responsible for presenting reports and results to the Commission.

**3) the personnel who will be assigned as replacements in the event of the subsequent employment termination by or the non-availability of the primary assigned personnel.**

We always assign at least two senior consultants to each of our accounts. As shown in our response to #3 of the Firm Information section of this proposal there are five senior consultants assigned to this account. This way there is always a fully informed, fully credentialed backup person available. The additional resources of Gene Kalwarski, Mike Noble and Rich Hudson are also available and will maintain a working knowledge of all work assignments to allow any one of them to step in for particularly busy events or special projects.

In addition to our focus on continuity of personnel, we take precautions to provide continuity of service in case of disasters by having quality control procedures in place that include storing files on an external network that is backed up. These procedures have been effective and provide for more efficient work in the following year and in transitioning new analysts and consultants into the projects.

## VII. Actuarial Services Compensation

The contract will require that the actuarial firm provide all of the actuarial consulting services required by the Legislative Commission on Pensions and Retirement. The actuarial firm must indicate its specific required compensation amounts for the initial contract year and four subsequent years, as follows:

<b>Service</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Review of the annual actuarial valuation reports for 11 plans annually</b>	\$45,000	\$46,000	\$47,000	\$48,000	\$49,000
<b>Replication of the annual actuarial valuation report for 1 plan annually</b>	\$45,000	\$46,000	\$47,000	\$48,000	\$49,000
<b>Review of the quadrennial experience studies for MSRS-General, PERA-General, and TRA</b>	\$20,000	\$20,500	\$21,000	\$21,500	\$22,000
<b>Review of the actuarial cost estimates for proposed benefit, contribution, actuarial assumption, or other changes</b>	*	*	*	*	*
<b>Review of optional annuity form table or annuity reserve factor changes</b>	*	*	*	*	*
<b>Review of prior service credit purchase payment amount determination</b>	*	*	*	*	*
<b>Review of privatization gains or losses</b>	*	*	*	*	*
<b>Attendance at Commission meetings other than for presenting fixed fee projects</b>	*	*	*	*	*
<b>Provision of advice and counsel to the Commission or the Commission staff on</b>	*	*	*	*	*



Service	Year 1	Year 2	Year 3	Year 4	Year 5
pension benefit design and funding issues					
Preparation of special studies requested by the Commission	*	*	*	*	*

\* Please refer to hourly rate chart below.

The proposal should also contain the following items:

- 1) A schedule of current hourly rates that the actuarial firm charges to its other current clients for each level of personnel anticipated to be assigned to this contract;

Category/Consultant	2014 Hourly Rate
Principal Consulting Actuaries	\$340-\$465
Consulting Actuaries	\$260-\$395
Associate Actuaries	\$180-\$265
Senior Actuarial Analysts	\$170-\$195
Actuarial Analysts	\$145-\$180
Administrative Staff	\$ 85-\$105

Hourly billing rates are expected to increase approximately 2% to 4% per year.

- 2) A description of how any out-of-pocket expenses will be charged, if the out-of-pocket expense is not included in the fixed fee or the hourly fee;

Out-of-pocket expenses not included in the fixed fee or the hourly fee that are incurred by the Actuary on the Commission's behalf are billed at cost to the Commission. Travel time is not charged to our clients.

- 3) A description of how any computer expenses will be charged, if the computer expense is not included in the fixed fee or the hourly fee, with an indication of the items that will be includable as computer costs and an indication of the amount of computer charges per time unit;

Cheiron does not add any separate charges for computer or technology usage outside of our stated fixed fee quotes or hourly rate quotes.

- 4) A description of how development costs will be charged, if not included in the fixed or hourly fees, and the estimate of development costs arising out of the actuarial services contract for:

- a) any necessary changes to the firm's current computer systems;
- b) any necessary changes for data entry;
- c) gaining familiarization with the Minnesota pension plans and systems; and

- d) obtaining other data and information necessary to perform actuarial services tasks;  
and**

All internal development costs have been factored into our fixed fee quotes and our hourly rates.

**5) A description of the firm's billing practices, timing, and procedures.**

Basic retainer services and non-retainer services will be billed monthly. Monthly invoices for non-retainer services will include a detailed listing of services rendered. If a fixed fee quote is provided in advance, a portion of the fixed fee would be billed during the duration of the project.

## **VIII. Affirmative Action**

**In accordance with the provisions of Minnesota Statutes, Section 363A.36, no bid for a contract in excess of \$100,000 may be accepted from an employer having more than 20 full-time employees at any time during the previous 12 months unless the employer has an affirmative action plan approved by the Minnesota Commissioner of Human Rights. The Commission will not accept a proposal unless it includes one of the following:**

- 1) A copy of the actuarial firm's current certificate of compliance issued by the Minnesota Commissioner of Human Rights; or**
- 2) A notarized statement certifying that the actuarial firm has a current certificate of compliance issued by the Minnesota Commissioner of Human Rights; or**
- 3) A notarized statement certifying that the actuarial firm has not had more than 20 full-time employees located in the State of Minnesota at any time during the 12 months prior to submission of the proposal.**

Please see Appendix B for a copy of a notarized statement certifying that Cheiron, Inc. has not had more than 20 full-time employees located in the State of Minnesota at any time during the 12 months prior to submission of this proposal.

## **IX. Workers' Compensation**

**The successful proposer must submit acceptable evidence of compliance by the actuarial firm with the workers' compensation insurance coverage requirements of Minnesota law for any Minnesota employees before the execution of the contract.**

Cheiron presently does not have any Minnesota employees on its staff. Cheiron does not intend to subcontract any portion of this engagement; all services and deliverables will be provided by Cheiron staff.

*Appendix A*  
*Staff Résumés*

**Janet H. Cranna**  
**FSA, FCA, EA, MAAA**

Janet Cranna joined Cheiron in May 2013. She has over 25 years of retirement consulting and actuarial experience with public sector and corporate clients. Prior to joining Cheiron, Janet was with Buck Consultants for 24 years where she completed her tenure as a Principal, Consulting Actuary and a member of the Public Plan Practice Leadership Group. She was the lead actuary for several large state retirement systems, including the New Jersey Retirement Systems and the Pennsylvania Public School Employees' Retirement System. She has supervised, reviewed, and certified actuarial valuations and studies for retirement plans, including FASB disclosure for corporate plans and GASB disclosures for public plans. She has also performed experience studies and recommended changes to actuarial assumptions as needed, consulted on design and interpretation of plan provisions and their relationship to ERISA, IRS regulations, and state statutes.

Janet has presented and testified before boards and legislative committees regarding plan design and funding strategies. She has also been a speaker at professional conferences and organizations, including the National Council on Teacher Retirement Annual Convention and the Conference of Consulting Actuaries Annual Conference.

Janet is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, an Enrolled Actuary under ERISA, and a Member of the American Academy of Actuaries. She graduated with a B.A. degree in Economics and a minor in Political Science from Bryn Mawr College.

**Kenneth A. Kent**  
**FSA, FCA, EA, MAAA**

Kenneth A. Kent, a Consulting Actuary for Cheiron, has over three decades of professional, managerial and public service experience working on challenging retirement plan assignments and public policy issues. His expertise in managing the complex financial, regulatory, legal and administrative issues surrounding pension and defined contribution plan design and funding strategies has helped scores of multiemployer, public sector and corporate plan sponsor clients since 1976.

Ken has more recently led the profession in addressing the ever changing landscape for pension reform. Working with actuaries throughout the country, Ken has orchestrated the development of a unified voice from the profession to guide Congress on issues of single and multiemployer issues to reform the funding rules and expand relief to employers and employees. Ken's wide-ranging expertise on pension matters led to his being called to testify before Congress on pension reform legislative proposals. He has met regularly with IRS officials to help work out interpretations and processes in an effort to expand the flexibility of Plan Sponsors in retaining their programs.

Some of his recent consulting assignments include:

- Developing a comprehensive retirement policy to benchmark and measure changing business needs against financial resources. This project included interviews with all stakeholders of a large public employer plan to develop a series of rules for the legislative body to refer to in addressing demands for benefit and cost change. The process included going back to identify the fundamental value for the system and the public in sponsoring a defined benefit plan and how it could help manage the various labor resources. The rules have been effectively employed in the decision process.
- Creating a standard Government Accounting Report format for meeting the emerging required disclosure of post-employment benefits. As standards of reporting change, they call for creative solutions in communicating the implications so public officials can understand the implication of the rules and emerging financial obligations of the public entity. This project was engaged when GASB was still issuing draft statements for what is now GASB 45.
- Designing a supplemental Executive Retirement Plan to reflect a phantom bonus arrangement within a targeted income replacement program. Financial incentives are a critical component of retention for highly effective management teams. This is just as true for smaller organizations as for Fortune 500 companies. In this case, while the client was a public company, they wanted to avoid the concerns over dilution of shares when issuing performance incentives tied to company performance. A special design was applied to meet these unique sets of goals to meet the company's needs.

- Evaluating cost protocols for Deferred Retirement Option Plans (DROPs). In the public sector arena, DROP plans have grown in popularity, often because they have been perceived as cost neutral benefits. However, they have a cost which is a function of the behavioral change on retirement date selection by plan participants. For one of Ken's large public employers, the plan design required a cost neutral basis to continue after a sunset provision, to ensure limited financial obligation to the employer. Working with the Pension Board, labor representatives and City administration a compromise was developed that held up through the sunset provision.

Ken's experience includes work for the Cities of Philadelphia, Pennsylvania, Miami, Florida, Wilmington, Delaware, the states of Utah and Alaska, the Washington Metropolitan Area Transit Authority, over 20 Police and Fire Fighter funds throughout West Virginia, and many large multiemployer plans throughout the east and southeast.

Ken has been a principal at several of the nation's largest actuarial consulting firms, including prior to joining Cheiron, Mercer Human Resource Consulting, Inc., simultaneously managing large client teams in several major U.S. cities. His civic activities include having served as Vice President of Pensions for the American Academy of Actuaries, President of the Conference of Consulting Actuaries, and Chair of the Joint Committee on the Code of Professional Conduct. He authored a recent white paper titled *Disclosure Under the Code of Professional Conduct -- Concepts on Professionalism*.



**Gene M. Kalwarski**  
**FSA, FCA, MAAA, EA**

For over 30 years, Gene Kalwarski has been one of the nation's leading advisors to multi-billion dollar public sector pension funds. He has served as plan actuary to many such funds and is often retained as a specialist to help them address complex financial issues. He is an industry leader in the development of PC-based financial applications and interactive analytical tools that empower fund trustees to understand, evaluate, and strategize alternative solutions to their financial challenges. Gene's ideas and achievements have been chronicled in many industry publications, *Money* magazine, and at the annual *Business Week* CFO Forum.

Gene is noted for his ability to develop and present creative and complex actuarial strategies understandably to audiences with limited technical expertise. He has testified on several occasions before U.S. Senate Committees, and regularly addresses state legislatures and boards of trustees on behalf of the numerous state-wide pension funds he has represented.

Gene's experience with public sector pension funds includes:

- Serving as ongoing actuary to the San Diego City Employees Retirement System, the San Francisco City and County Employees' Retirement System, the Retirement Division of the City of Kansas City, MO, the San Jose Federated City Employees Retirement System, the retirement systems of Maine, Maryland, Delaware, Florida, Kansas, Connecticut, and West Virginia. In addition, he was actuary to the Vermont Municipal Employees' Retirement System and the retirement systems of the District of Columbia, Fairfax County, Virginia and Arlington County, Virginia.
- On special projects Gene has been retained by several other state-wide retirement systems in Iowa (IPERS), Massachusetts (SERS), New York State, New York City, Oregon, Rhode Island, and California (CalPERS, and CalSTRS).

In addition, Gene has been involved in several high-stakes and complex assignments including:

- Designing and developing interactive pension fund asset allocation tools for several public sector pension funds.
- At the request of the World Bank, creating a simulation strategy tool for Poland when the country was saddled with the mounting financial burden of honoring its Social Security obligations. After analyzing the options Gene presented, Poland confidently dissolved its Social Security system and moved to a defined contribution system that, ten years later, contributed to the country's improved financial stability.
- Designing a real-time Internet-based application for senior officials of the U.S. Department of Defense which allowed government executives to make strategic decisions on the creation of a Social Security-based retiree health insurance fund for all military personnel.

Gene began his career spending four years as an actuary at the Pension Benefit Guaranty Corporation (PBGC), where he first gained a detailed understanding not only of the PBGC, but all federal entities whose regulatory authority impacts pension design and cost. Thanks to his extensive contacts within the federal government that began with his service to the PBGC, Gene is able to help his clients anticipate regulatory actions that will impact their funds.

After the PBGC, Gene served as a consultant with Towers, Perrin for two years. In 1981 Gene began a 21-year career at Milliman, where he established the firm's Washington, DC office, became the firm's youngest Equity Principal in 1984, and by 1990 was the youngest Equity Principal to serve on the firm's Board of Directors. Gene left Milliman in 2002 in response to his concerns over policies relating to liability limitations being set on client work. He and his colleagues formed Cheiron in November 2002.

**Richard Hudson**  
**FSA, FCA, EA, MAAA**

Richard Hudson, a Principal Consulting Actuary for Cheiron, has over 20 years of professional and managerial experience working on challenging retirement plan and employee benefit assignments.

Prior to his employment at Cheiron, Richard was Senior Vice President in the New York office of Aon Consulting, where he was the local retirement practice leader for the New York retirement practice and regional actuarial practice leader of the Northeast actuarial retirement team. His clients have included a wide variety of multiemployer and single employer pension plans.

Richard's area of expertise is pensions, where he has assisted clients in areas of plan design, mergers and acquisitions, due diligence, asset/liability modeling, union negotiations; compliance with ERISA requirements for funding, reporting, and disclosure; and the communication and administration of all types of pension plans.

Some of his recent assignments include:

- Reviewing risk strategy with clients (ALM studies and LDI strategies)
- Establishing and developing actuarial teams, as well as delivering training
- Leading presentations to Boards of Directors and Trustees

Richard holds a BS in Applied Mathematics and a BE in Computer Engineering from Stony Brook University. He is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, an Enrolled Actuary and a Member of the American Academy of Actuaries.

**Michael J. Noble, Jr.**  
**FSA, FCA, EA, MAAA**

Mike Noble joined Cheiron in November of 2007. Mike has over 15 years of experience consulting with clients on issues relating to accounting disclosures, plan administration, plan design, and pension and retiree medical valuations for both private and public sector clients.

He currently is the lead consultant for several public and multiemployer plans providing annual valuation and consulting services. He has also worked on some large special projects including: analyzing the impact of alternative plan designs on member benefits and funding requirements for a large public plan; auditing the long-term projections under various economic scenarios and plan designs for a major state retirement system; implementing Rehabilitation Plans for multiemployer plans in critical status under PPA; assisting in plan terminations for both single and multiemployer plans; and assisting with the potential merger of multi-billion dollar plans.

Prior to joining Cheiron, Mike was an actuarial consultant with large consulting firms where he provided actuarial services to organizations in a variety of industries ranging from small not-for-profit entities to large publicly traded companies on a range of pension and Other Post-employment Benefit issues. Before entering the actuarial profession, Mike was a high school math teacher as well as a football and wrestling coach.

Mike is a Fellow of the Society of Actuaries, an Enrolled Actuary under ERISA, a Member of the American Academy of Actuaries, and Fellow of the Conference of Consulting Actuaries. Mike currently serves as a member of the Career Encouragement Committee. This joint committee of the Society of Actuaries and Casualty Actuarial Society works to increase the recognition of the actuarial profession and build the pool of exceptional actuarial candidates. He has also helped develop the qualification examination for pension actuaries.

Mike has a Masters of Science for Teachers in Mathematics from the University of New Hampshire and graduated *summa cum laude* with a Bachelor of Science in Mathematics from Oral Roberts University. Mike is a full time employee of Cheiron and is expected to be available throughout the project timeline.

*Appendix B*  
*Affirmative Action Form*

June 10, 2014

AFFIDAVIT

I hereby certify that Cheiron, Inc. has not had more than 20 full-time employees located in the State of Minnesota at any time during the 12 months prior to submission of this proposal to the Minnesota Legislative Commission on Pensions and Retirement.

Sincerely,  
Cheiron



Constance Mauro  
Corporate Secretary and Treasurer



City/County of Fairfax  
Commonwealth of Virginia  
The foregoing instrument was acknowledged before me  
this 10<sup>th</sup> day of June, 2014  
by Constance Mauro  
Lauri Ann Elizabeth Nolasc Notary Public  
My commission expires 12/31/2015

