OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM BOARD MEETING

Friday September 25, 2015 1:00 P.M.	PERS 11410 SW 68th Parkway Tigard, OR

	ITEM	PRESENTER
A.	**Administration**	
1.	July 31, 2015 Board Meeting Minutes	RODEMAN
2.	Director's Report	
	a. Forward-Looking Calendar	
	b. OIC Investment Report	
	c. Budget Execution Report	
	d. Customer Service Survey Results	CROSLEY
B.	**Administrative Rulemaking**	
1.	Notice of 2015 Legislation Rules	VAUGHN
2.	Notice of Partial Year for Academic Employees Rule	
3.	Notice of Retirement Benefits Rules	
4.	Adoption of COLA/Supplementary Payments Rules	
5.	Adoption of Assumed Rate Rule	
C.	**Action and Discussion Items**	
1.	*Moro* Project Update and Funding Request	DUNN
2.	OPSRP Contribution Start Date	ELLEDGE-RHODES
3.	Adoption of Actuarial Methods and Assumptions and 2014 Valuation Results	MILLIMAN

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OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM
BOARD MEETING MINUTES

July 31, 2015

Board Members:	**Staff:**			
John Thomas, Chair	Linda Barnett	Robert Jones	Adrienne Southard	Yong Yang
Lawrence Furnstahl	David Crosley	Andy Kicza	Jason Stanley	
Krystal Gema	Mary Dunn	Kyle Knoll	Marjorie Taylor	
Pat West	Yvette Elledge-Rhodes	Beth Porter	Stephanie Vaughn	
Rhoni Wiswall		Daniel Rivas	Anne Marie Vu	
	Brian Harrington	Steve Rodeman	Dale Wakabayashi	
	Jessica Johnson	David Shevchenko	Joli Whitney	

Others:

Nancy Brewer	Stacy Cowan	Robert Judge	Kevin McCartin	Patrick Weisgerber
Molly Butler	Doug Dillon	Jerry King	Michael McCoy	Peter Wong
Nate Carter	Linda Ely Agee	David Lacy	Michelle Morrison	Greg Hartman
Alison Chan	Janice Essenberg	Matt Larrabee	Carol Samuels	Scott Preppernau
Lance Colley	Claire Hertz	Elizabeth McCann	Deborah Tremblay	

Chair John Thomas called the meeting to order at 1:00 P.M.

ADMINISTRATION

A.1. BOARD MEETING MINUTES OF MAY 29, 2015

Board member Pat West moved and Board member Lawrence Furnstahl seconded approval of the minutes submitted from the May 29, 2015 Board meeting. The motion passed unanimously.

A.2.a. DIRECTOR'S REPORT

Executive Director Steve Rodeman reviewed the 2015 Forward Looking Calendar. He highlighted the importance of the upcoming agenda items. Rodeman presented the Oregon Investment Council (OIC) Investment Report of the Oregon Public Employees Retirement Fund (OPERF) for the period ending June 30, 2015. There is a year-to-date return of 3.34 percent in the regular account. A recent public funds survey done by Callan showed that in one, three, five and ten year returns, OPERF exceeded the median of other public funds by 75-100 basis points.

Rodeman also presented the July 2015 Budget Execution Report. The current positive variance is about 5 percent of the operating budget. The 2015-17 budget was approved by the legislature and signed by the Governor.

ADMINSTRATIVE RULEMAKING

Policy, Analysis, and Compliance Section Manager Stephanie Vaughn presented.

B.1. NOTICE OF COST-OF-LIVING ADJUSTMENT RULES

Vaughn presented the notice of rulemaking for the Cost-of-Living Adjustment Rules, OAR 459-005-0510 and -005-0520. The proposed rule amendments clarify annual cost-of-living adjustment method for earned benefits. A rulemaking hearing will be held at PERS Headquarters August 25, 2015. A second rulemaking hearing will be held in Salem August 27, 2015. The public comment period ends September 1, 2015. No Board action was required.

B.2. NOTICE OF ASSUMED RATE RULE

Vaughn presented the notice of rulemaking for the Assumed Rate Rule, OAR 459-007-0007. The proposed rule amendments will specify the new assumed rate should the PERS Board adopt a change. A rulemaking hearing will be held August 25, 2015. The public comment period ends September 1, 2015. No Board action was required.

B.3. ADOPTION OF DISABILITY APPLICATION RULES

Vaughn presented the revised rules, OAR 459-015-0020, and -076-0020, for adoption. A rulemaking hearing on the rules noticed previously was held on April 28, 2015. No members of the public attended the hearing. The public comment period was extended and a second rulemaking hearing was held on June 23, 2015. No public attended. The public comment period for both rules ended July 1, 2015. No public comment was received. The rule changes make housekeeping edits to properly incorporate defined terms “date of termination,” “date of separation from service,” and “date of disability.”

Board member Krystal Gema moved to adopt modifications to the Disability Application rule, as presented. Furnstahl seconded. The motion passed unanimously.

B.4. ADOPTION OF REEMPLOYMENT OF OPSRP RETIREES RULES

Vaughn presented the revised Reemployment for OPSRP Retirees rules: OAR 459-075-0300, and -080-0300 for adoption. A rulemaking hearing was held June 23, 2015, and the public comment period ended on July 22, 2015. No members of the public attended the hearing and no public comment was received. The modifications clarify the standard for number of hours a retired OPSRP member can work in the calendar year in which they retire without affecting their status as a retired member.

Board member Rhoni Wiswall moved to adopt modifications to the Reemployment of OPSRP Retirees rules as presented. Gema seconded. The motion passed unanimously.

ACTION AND DISCUSSION ITEMS

C.1. LEGISLATIVE UPDATE

Senior Policy Advisor Marjorie Taylor presented. She highlighted 10 bills which are either under consideration or signed by the Governor. PERS staff is working through implementation of these new or revised provisions. House Bill 5034, PERS’ Agency budget bill, included funding for additional call center, budget calculations, and data verification staff. It also included budget notes requiring PERS to report to the 2016 legislature on any Board approved change to the assumed earnings rate; a risk assessment of agency business continuity and disaster preparedness; and a statutory review of how to simplify benefit structure and reduce the costs of administration.

C.2. CONTRACTED ACTUARIAL SERVICES

Procurement and Facilities Manager Robert Jones presented. The contract for actuarial services contract expires on December 31, 2015. Through a formal solicitation process, Milliman was selected. With assistance from the Department of Justice, both parties agreed on a contract that will provide actuarial services through December 31, 2019, with options for six additional years

Wiswall asked if this contract starts a new 10-year clock for Milliman's services. Jones responded that the contract would become effective January 2016. Thomas reviewed the decision matrix used by the committee.

Wiswall moved to direct staff to proceed with the award of the contract to Milliman based upon the mutually agreed upon terms and conditions. The contract's term will be four years, beginning January 1, 2016, with options to renew for three additional two-year terms, up to a maximum contract length of 10 years. Furnstahl seconded. The motion passed unanimously.

C.3. *MORO* IMPLEMENTATION UPDATE

Mary Dunn, Financial and Administrative Services Division, presented. Dunn reviewed the current status of implementing the changes as a result of the *Moro* case.

The project's fiscal impact projection of $1.6 million was approved by the legislature by an amendment to the agency's budget, House Bill 5034. The funds represent staff costs to restore member benefits and for system changes to administer 2016 and future cost-of-living adjustments (COLA) based on the Supreme Court's decision.

PERS will pay a 2% COLA in August to all 132,000+ who are eligible for this benefit. The next milestone will be to determine the amount of underpaid COLA to a population of about 123,000 retirees and send out retroactive payments in October.

In September, there will be a request to use the Contingency Reserve to cover the cost of the retroactive COLA payments. West commented that he is impressed with the speed with which PERS has put together a package to restore member benefits.

Chair Thomas discussed the moving parts of the benefit structure and the importance of good inputs and information to make decisions.

C.4. VALUATION METHODS & ASSUMPTIONS INCLUDING ASSUMED RATE OF RETURN

Matt Larrabee and Scott Preppernau of Milliman presented. Since the May meeting, there has been significant data analysis. In addition to the *Moro* ruling, the assumption review analysis also indicates a change in the mortality assumptions. The new consensus from nationwide studies is that future life expectancy rates have increased. Increased life expectancy results in a significant impact to liability. Considering all assumptions, an increase of $3.6 billion in UAL is expected.

Thomas commented on the last time assumed interest rates were reviewed and the fiduciary responsibility of the Board.

West moved to reduce the assumed interest rate to 7.5 percent effective January 1, 2016. Furnstahl seconded. The motion passed unanimously.

West noted the impact of the change in the rate and the historical assumptions.

<u>OPEN FORUM</u>

Joe Gymkowsky came forward to address the Board about his concerns with his retirement from the City of Portland Fire Department's plan.

Del Steven, retired deputy chief of Portland fire department, appeared in support of Gymkowsky's request and requested that the Board require the City of Portland have a comprehensive Equal to or Better Than (ETOB) test by an independent actuarial firm.

Dwight Williams addressed the Board, but his matter was previously litigated as a contested case and a final order was issued.

Thomas adjourned the Board meeting at 2:00 PM.

Respectfully submitted,

Steven Patrick Rodeman
Executive Director

PERS Board Meeting
Forward-Looking Calendar

Friday, November 20, 2015

Adoption of 2015 Legislation Rules
Adoption of Retirement Benefits Rules
Adoption of Partial Year for Academic Employees Rule
Notice of Proposed Rulemaking Rule
Notice of Leave of Absence Without Pay Rule
Board Scorecard Report on Agency Performance Measures
Audit Committee Meeting

2016 meetings dates:

Friday, January 29, 2016

Monday, March 28, 2016

Friday, May 27, 2016

Friday, July 29, 2016

Friday, September 30, 2016

Friday, November 18, 2016

Item A.2.b.

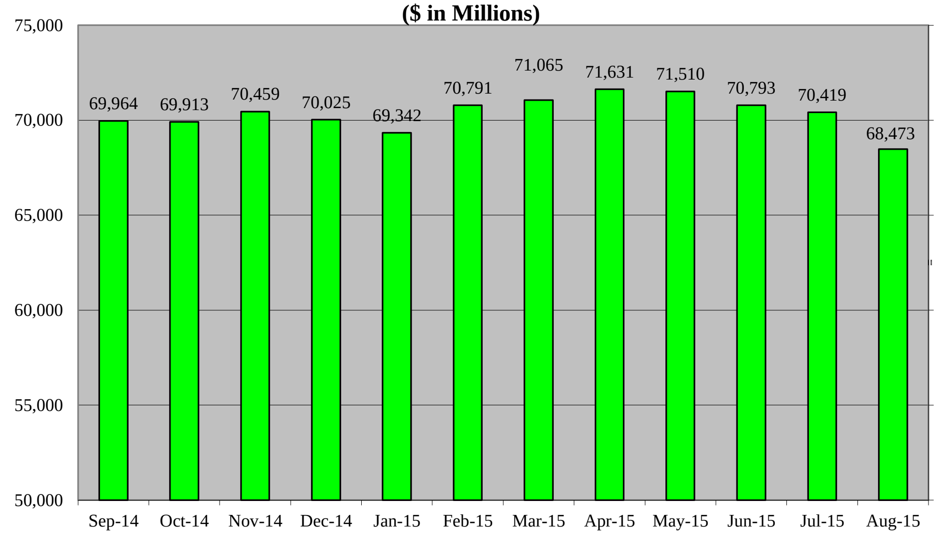
Returns for periods ending 8/31/15 **Oregon Public Employees Retirement Fund**

OPERF	Policy[1]	Target[1]	$ Thousands[2]	Actual	Year-To-Date[3]	1 YEAR	2 YEARS	3 YEARS	4 YEARS	5 YEARS	7 YEARS	10 YEARS
	Regular Account				Historical Performance (Annual Percentage)							
Public Equity	32.5-42.5%	37.5%	$ 27,014,213	39.8%	(2.34)	(4.73)	7.24	10.93	9.78	10.80	5.55	5.62
Private Equity	16-24%	20%	14,040,071	20.7%	4.19	9.54	14.05	13.61	11.84	13.69	8.84	11.86
Total Equity	**52.5-62.5%**	**57.5%**	**41,054,284**	**60.6%**								
Opportunity Portfolio	0-3%	0%	1,165,214	1.7%	2.96	4.42	8.62	10.85	9.31	10.45	8.86	
Total Fixed	**15-25%**	**20%**	**16,240,998**	**24.0%**	1.13	1.12	3.47	2.70	4.32	4.73	6.68	5.62
Real Estate	**9.5-15.5%**	**12.5%**	**7,402,037**	**10.9%**	4.68	10.94	12.64	12.64	12.12	13.16	4.47	7.89
Alternative Investments	**0-10%**	**10%**	**1,671,179**	**2.5%**	(3.38)	(6.18)	1.04	2.45	0.62			
Cash	**0-3%**	**0%**	**262,975**	**0.4%**	0.39	0.47	0.61	0.63	0.77	0.71	0.81	1.94
TOTAL OPERF Regular Account		**100%**	**$ 67,796,687**	**100.0%**	0.67	1.35	8.27	9.41	8.94	10.08	6.44	6.73
OPERF Policy Benchmark					1.47	2.33	9.27	9.94	9.75	10.30	6.99	6.96
Value Added					(0.80)	(0.98)	(1.00)	(0.53)	(0.81)	(0.22)	(0.55)	(0.23)
TOTAL OPERF Variable Account			**$ 676,440**		(2.96)	(5.69)	6.89	10.03	9.11	10.18	5.21	4.01

Asset Class Benchmarks:

Russell 3000 Index	(2.61)	0.36	11.88	14.63	15.22	16.03	8.83	7.33
MSCI ACWI Ex US IMI Net	(3.60)	(11.93)	1.94	5.63	3.58	5.01	1.92	4.45
MSCI ACWI IMI Net	(3.23)	(6.11)	6.57	9.69	8.73	9.83	4.94	5.53
Russell 3000 Index + 300 bps--Quarter Lagged	8.71	15.71	20.85	19.88	17.43	18.12	13.19	11.99
Oregon Custom FI Benchmark	0.79	0.95	2.89	2.03	3.65	3.38	4.82	4.62
NCREIF Property Index--Quarter Lagged	6.72	12.72	11.95	11.47	11.95	12.75	4.98	8.39
91 Day T-Bill	0.02	0.03	0.04	0.06	0.06	0.08	0.17	1.38

TOTAL OPERF NAV
(includes variable fund assets)
One year ending August 2015
($ in Millions)



[1]OIC Policy 4.01.18, as revised October 2013.

[2]Includes impact of cash overlay management.

[3]For mandates beginning after January 1 (or with lagged performance), YTD numbers are "N/A". Performance is reflected in Total OPERF. YTD is not annualized.

Oregon

Kate Brown, Governor

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September 25, 2015

TO: Members of the PERS Board

FROM: Linda M. Barnett, Budget Officer

SUBJECT: September 2015 Board Report

2015-17 OPERATIONS BUDGET

Operating expenditures for July 2015 and preliminary expenditures for August 2015 were $2,897,322 and $3,036,441, respectively. Final expenditures for August will close in the Statewide Financial Management System (SFMS) on September 25, 2015, and will be included in the November 2015 report to the Board.

- To date, through the first two months (or 8.3%) of the 2015-17 biennium, the Agency has expended a total of $5,933,763, or 6.3% of PERS' legislatively approved operations budget of $93,871,154.
- Agency budget reports are still being finalized in SFMS and, until that process is completed, budget execution reports cannot be prepared. For example, final allocations to agency budgets to account for the compensation packages within the recently ratified collective bargaining agreements are not yet finalized. The November budget report will include the usual reports.

2013-15 OPERATIONS BUDGET

Remaining 2013-15 expenditures paid in July and August were $871,697 and $262,786 respectively. PERS has now expended a total of $79,136,062, or 93.3%, of PERS' legislatively approved 2013-15 operations budget of $84,820,034.

- The current projected positive variance is $5,683,973, or 6.7% of the operations budget.

- The 2013-15 operations budget will close in SFMS by December 31, 2015. A final report on 2013-15 expenditures will be submitted at the Board's January 2016 meeting.

SENATE BILL 822/861 BUDGETS

These bills contained separate budget limitations that were approved for the administrative costs to implement the COLA modifications and other elements of the legislation.

- Expenditures to date are $1,445,830, or 71.2% of the cumulative SB 822/861 legislatively approved budget of $2,031,096. Since the Moro decision, project expenditures have been used to prepare for restoring member benefits in line with the court's directives. The current projected variance is $585,266, or 28.8% of appropriated amount. A final report on these expenditures will also be submitted to the Board's January 2016 meeting.

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September 25, 2015

TO: Members of the PERS Board
FROM: David Crosley, Communications Director
SUBJECT: 2015 Customer Service Survey Results

PERS conducted customer satisfaction surveys for active and retired members and employers in August 2015, in accordance with requirements adopted by the 2005 Legislature for standardized customer service performance measures and survey questions for all state agencies. The measures require agencies to survey customers and report results in their budget presentations.

Our 2015 surveys continue to show good overall ratings from both members and employers. We will continue to conduct yearly surveys to measure and trend improvement in our customer service.

MEMBER CUSTOMER SATISFACTION SURVEY

PERS posted a link to the customer service survey on its website during August 2015. We also placed a hard copy of the survey in the August 1 edition of the retired members' newsletter, *Perspectives*. The August 1 *Perspectives* newsletter for active members noted that the survey was available online. In total, we received approximately 1,150 responses, a number of which included individual comments. In comparison, we received approximately 1,450 responses in 2014.

We identified two key issues and suggestions from the comments received as detailed below. We also describe our strategies to address those items and the methodologies used in the survey. The following graphs and charts display the survey results and provide a comparison of responses for the 2011 through 2015 survey years.

In addition to the standard questions we are required to survey by the legislature, we also asked for input regarding the PERS website:

§ Was the PERS website easy to navigate?
§ Did you find the information you wanted?
§ Are there any changes you would make to the PERS website?

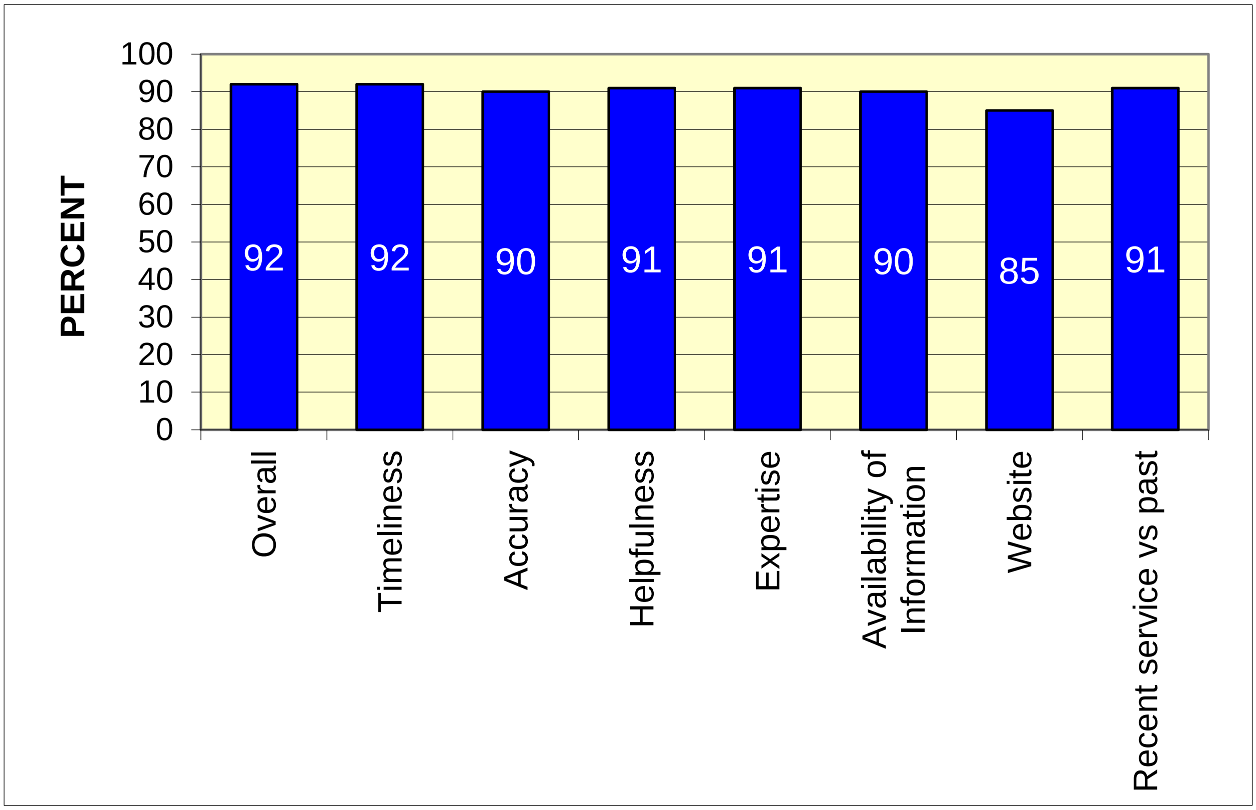
Approximately 81% of respondents said the website was easy to navigate and approximately 83% found the information they were seeking.

Another question asked: "If you rated PERS 'Fair' or 'Poor' in any part of question 3, please tell us why you did not rate us 'Excellent' or 'Good.' " Many noted their dissatisfaction with legislative changes to PERS benefits.

Again this year we asked: “Are PERS forms easy to understand and use?” Approximately 73% of respondents answered “yes,” with approximately 7% answering “no.” The remainder had “not used” PERS forms.

For the second year, we asked: “What type of device do you prefer to access websites?” Approximately 85% of respondents preferred a computer, while approximately 13% preferred a tablet and 8% a phone.

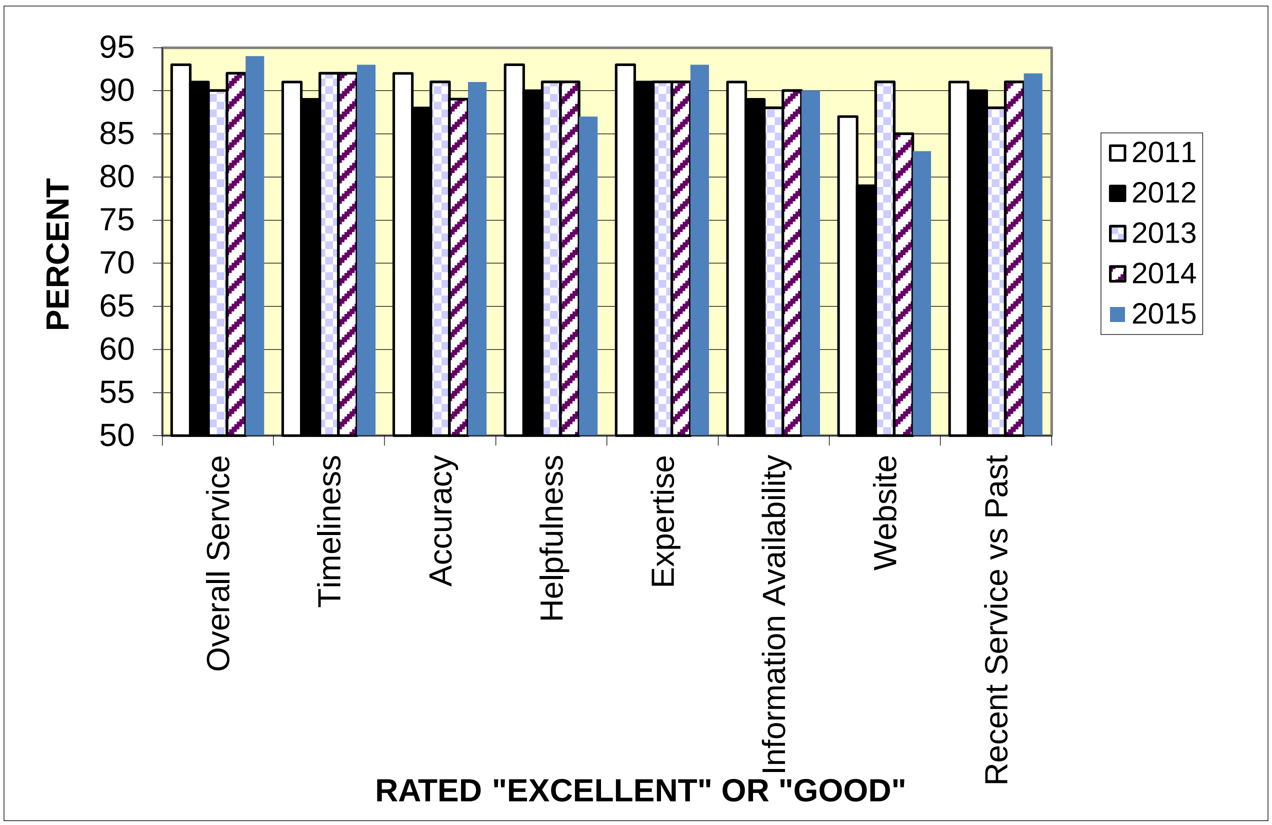
Percent of member respondents rating “excellent” or “good” (the state’s measures do not include the “Don’t Know” responses; the numbers in the graph have been rebaselined to exclude those responses).



NUMERICAL MEMBER RESULTS (may not equal 100% due to rounding)

How do you rate…	Percent				
	Excellent	Good	Fair	Poor	Don't Know
The overall quality of service?	60	29	4	3	4
The timeliness of services PERS provides?	59	30	3	3	5
PERS' ability to provide services accurately the first time?	59	27	4	5	5
PERS' helpfulness?	62	25	5	3	5
The knowledge and expertise of PERS employees?	55	29	4	2	10
The availability of information at PERS?	53	31	5	4	7
The PERS website?	23	23	6	3	45
Our service in the past year compared to previous years?	45	24	3	3	25

COMPARISON OF 2011-2015 MEMBER RESULTS



KEY MEMBER ISSUES AND SUGGESTIONS (in order of number of responses)

1. **Members and retirees noted that PERS encourages use of Online Member Services (OMS), accessible on the PERS website, but asked why OMS is often not available.**

   With computers, people want access to information at any hour of the day. OMS is a repository of member data. Members can create benefit estimates and get other membership information while retired members can change their address, confirm upcoming benefit payment information, and access other data.

   Resolution:
   Because employers report data to PERS daily, we process and update the information in OMS on a daily basis. OMS is normally available daily from 6 a.m. to 9 p.m. Pacific Time. OMS may sometimes not be available until 10 a.m. Saturday and from 4 p.m. Saturday until 6 a.m. Monday for routine maintenance.

   We will add information to our messaging to members regarding the agency's need to process information supplied by employers daily that requires an overnight shutdown of OMS. Also, one of the key goals of the agency's system modernization efforts is to reduce or eliminate the need for a batch processing window, which would improve OMS' up-time.

2. **Respondents noted that the PERS website can be hard to navigate.**

   Members feel that the PERS website can be cumbersome when trying to find specific information.

   Resolution:
   The state is providing new templates for website design and PERS will be updating its website. We anticipate having a website that is more user-friendly later this year.

SURVEY METHODOLOGIES

To maximize member response, PERS created this survey online and posted it in a prominent position on our home page. We also published the location of the survey in our member newsletters. The online survey ran throughout August 2015. Further, we placed a hard copy of the survey in the newsletter that goes to retired members and they had several weeks to complete and mail the survey to PERS.

We used surveymonkey.com to create the survey, using the six key questions the state requires all state agencies to use for the Customer Satisfaction Performance Measure survey.

The survey report combines the online and hard copy responses, even though only retired members received hard copies.

EMPLOYER CUSTOMER SATISFACTION SURVEY

PERS surveyed employers online for the tenth consecutive year. The employer satisfaction survey was posted online throughout August 2015. Employers received an e-mail inviting them to take the survey; 166 responses were received, a number of which included individual comments. In comparison, we received 184 responses in 2014.

We identified two key issues and suggestions from the comments received as detailed below. We also describe our strategies to address those items and the methodologies used in the survey.

The following graphs and charts display the survey results and provide a comparison of responses for the 2011 through 2015 survey years.

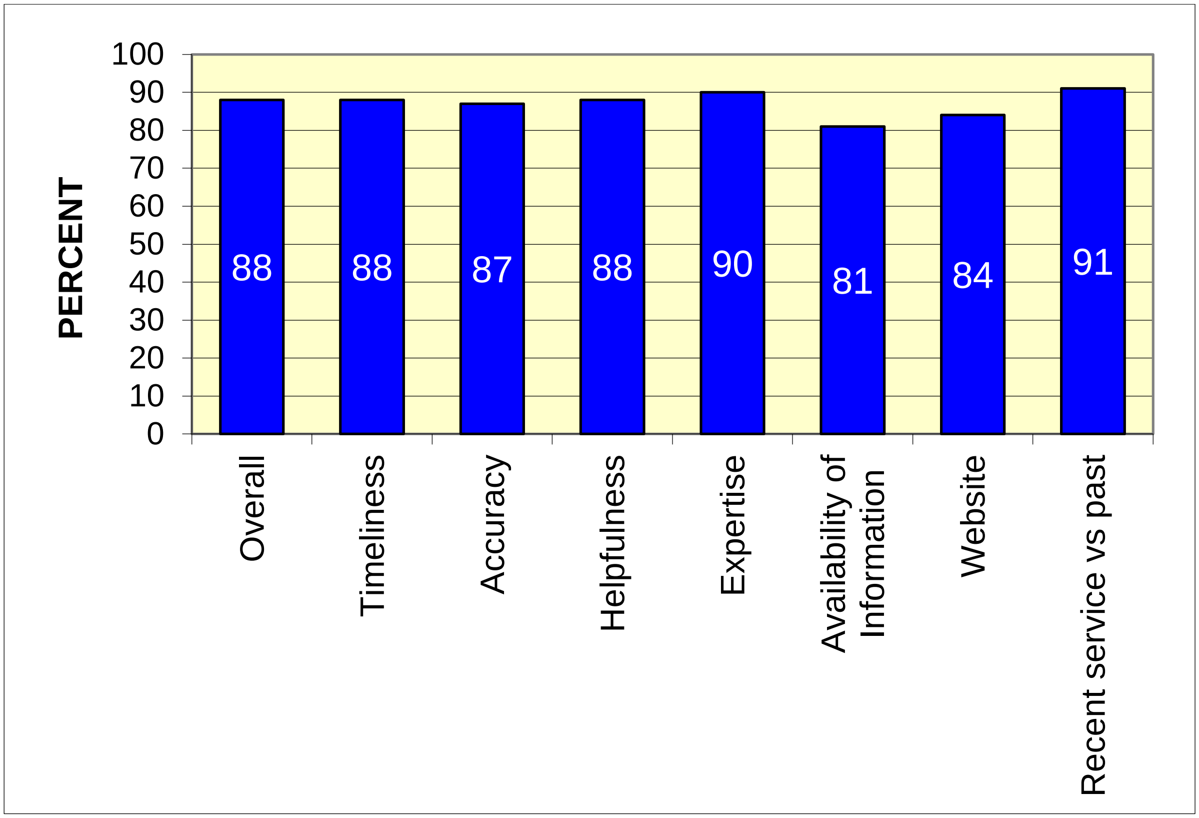
Again this year, we asked three questions regarding the PERS employer website:

- Was the PERS employer website easy to navigate?
- Did you find the information you wanted?
- Are there any changes you would make to the PERS website?

More than 90% of employer respondents said the employer website is “easy” or “somewhat easy” to navigate and nearly 84% of employer respondents said information they were seeking was “easy” or “somewhat easy” to find.

Another questions asked: “If you rated PERS ‘Fair’ or ‘Poor’ in any part of question 6, please tell us why you did not rate us ‘Excellent’ or ‘Good.’ ” Some employers noted the complexity of the electronic data reporting system.

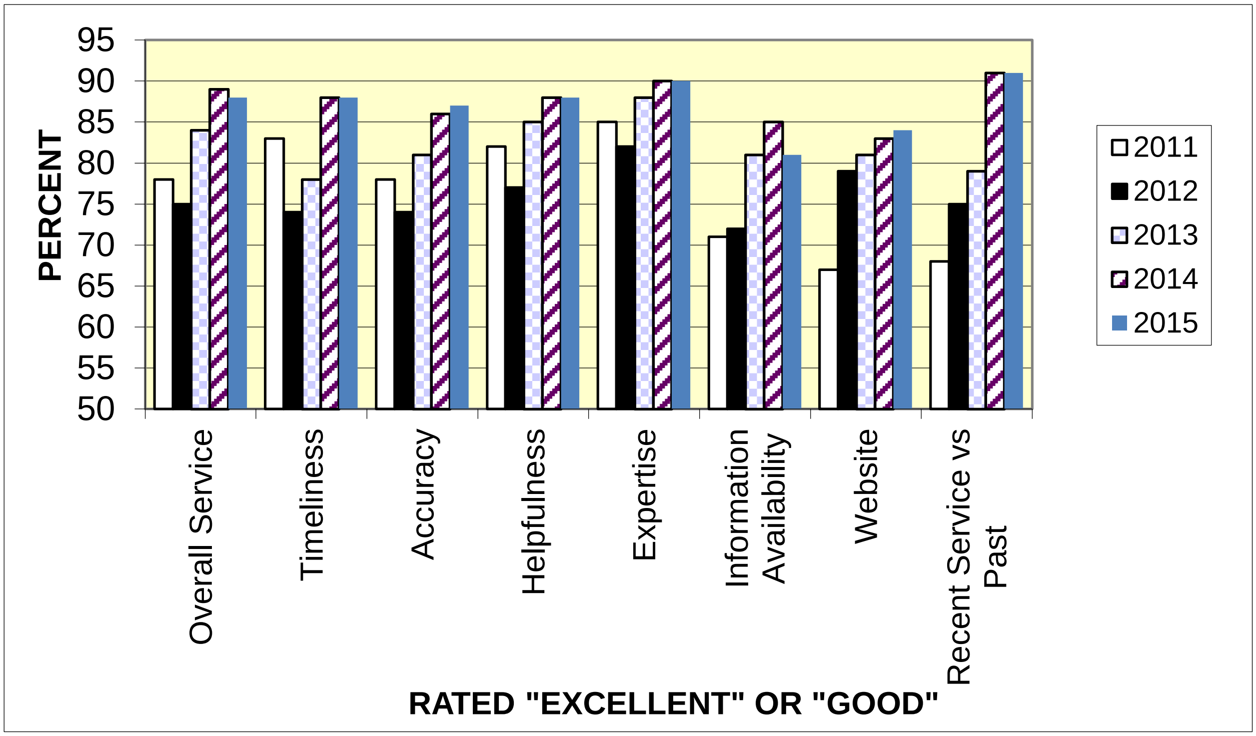
Percent of employer respondents rating "excellent" or "good" (the state's measures do not include the "Don't Know" responses; the numbers in the graph have been rebaselined to exclude those responses).



NUMERICAL EMPLOYER RESULTS (may not equal 100% due to rounding)

How do you rate…	Percent				
	Excellent	Good	Fair	Poor	Don't Know
The overall quality of service?	44	44	9	3	0
The timeliness of services PERS provides?	43	44	9	2	1
PERS' ability to provide services accurately the first time?	43	43	11	3	1
PERS' helpfulness?	56	33	7	4	0
The knowledge and expertise of PERS employees?	50	38	9	2	1
The availability of information at PERS?	37	44	15	4	0
The PERS employer website?	29	51	9	6	5
Our service in the past year compared to previous years?	47	37	7	1	8

COMPARISON OF 2011-2015 EMPLOYER RESULTS



KEY EMPLOYER ISSUES AND SUGGESTIONS (in order of number of responses)

1. **Employers noted that it is sometimes difficult to find information on the PERS Employer website.**

   Employers noted that there is a wealth of information but it could be organized differently.

   Resolution: The state has updated templates for websites and PERS will be updating the PERS employer website later this year with the new templates. We sought input from employers on how to make the site more intuitive and will hold a focus group with employers before we go live with the updated website to ensure that data is easier to locate.

2. **Employers noted that PERS documents for employers could use "plainer" language.**
   Employers requested that information be easier to understand.

   Resolution: We will work to make language easier to understand in documents used by employers. This may include defining terms, using more examples, and creating more visual representations.

SURVEY METHODOLOGIES

To maximize employer response, we created this survey online and sent an email to all employers inviting them to participate. A follow-up email was sent to employers approximately 10 days before the survey deadline. The survey ran throughout August 2015. We set the survey so more than one employee per employer could respond since we often interact with more than one employer contact.

We used surveymonkey.com to create the survey, using the six key questions the state requires all state agencies to use for the Customer Satisfaction Performance Measure survey. The survey included a comments section. The most common comments are summarized and addressed in the respective Key Employer Issues and Suggestions section of this report.

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September 25, 2015

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Notice of Rulemaking for Rules to Implement 2015 Legislation:

459-005-0001, *Definitions, Generally*
459-005-0310, *Date of Participation and Transfer of Employee Funds to the Optional Retirement Plan*
459-005-0350, *Membership Status of Persons in Concurrent Employment Eligible to Participate in an Optional or Alternative Retirement Plan*

459-011-0500, *Accumulated Unused Sick Leave*
459-080-0150, *Employee Contributions into the IAP Account*

OVERVIEW

- Action: None. This is notice that staff has begun rulemaking.
- Reason: Implement 2015 legislation impacting PERS.
- Policy Issue: No policy issues have been identified at this time.

BACKGROUND

The 2015 Oregon Legislative Assembly passed three bills which require rulemaking:

Senate Bill 80 (Chapter 767, Oregon Laws 2015), became effective July 27, 2015. Section 2 of SB 80 abolishes the Oregon University System as of July 1, 2015. Each of the seven public universities now has an independent governing board. The rule modifications reflect this change in reference to the universities' Optional Retirement Plan (ORP).

Senate Bill 454 (Chapter 537, Oregon Laws 2015), which becomes effective on January 1, 2016, requires Oregon employers to provide a minimum rate of accrual of "sick time" to employees (up to 40 hours per year), whether paid or unpaid. ORS 238.350 allows employers to elect to participate in the unused sick leave program, which affects the calculation of Final Average Salary for Tier One and Tier Two members.

Under that program, employees may accrue sick leave at the lowest rate in effect for the covered group. Staff received many questions from employers regarding the effect of SB 454 on the unused sick leave program. Employers represented that the types of positions expected to be covered by SB 454 (part-time, seasonal, or temporary workers) would not be in PERS "qualifying positions" and, therefore, not be covered by the unused sick leave program.

In addition, the language of SB 454 specifies that this law is not to be construed to "preempt, limit or otherwise impact any employer policy . . . that provides for greater use of paid or unpaid sick time." This language indicates that the legislature specifically intended not to interfere with any similar, existing policy or program. Therefore, construing "sick time" in SB 454 as limiting the "sick leave" used for purposes of ORS 238.350 could have a limiting effect with respect to the number of hours accrued under the PERS program, contrary to the legislative intent.

For these reasons, PERS staff concluded that SB 454 does not impact the unused paid sick leave accrual available to Tier One and Tier Two members under ORS 238.350. The proposed amendments to OAR 459-011-0500 confirm this understanding by specifically stating that "sick time" (the term used by SB 454) does not constitute "sick leave" for PERS purposes.

House Bill 3495 (Chapter 326, Oregon Laws 2015), amending ORS 238A.100 and 238A.330, becomes effective on January 1, 2016. As previously reported to the PERS Board, this bill amends the "contribution start date" for new OPSRP and IAP members, such that employer contributions to fund the pension benefit and employee contributions to the IAP will be due for wages attributable to services performed by the employee during the first full pay period following the new member's six-month waiting time. The modifications to OAR 459-080-0150 implement this change for new members as of January 1, 2016.

The proposed rule modifications are summarized below.

SUMMARY OF PROPOSED RULE MODIFICATIONS

SB 80
OAR 459-005-0001, *Definitions, Generally;* 459-005-0310, *Date of Participation and Transfer of Employee Funds to the Optional Retirement Plan*; and 459-005-0350, *Membership Status of Persons in Concurrent Employment Eligible to Participate in an Optional or Alternative Retirement Plan*: The modifications replace "Oregon University System" with "public university." A new definition for "public university" was added in 459-005-0001 to clarify that the term means a public university with a governing board listed in ORS 352.002, in accordance with SB 80.

SB 454
OAR 459-011-0500, *Accumulated Unused Sick Leave*: Clarifies that the new "sick time" provisions provided by SB 454 do not constitute "sick leave" for purposes of ORS 238.350.

HB 3495
OAR 459-080-0150, *Employee Contributions into the IAP Account*: Provides that contributions for newly established IAP members will be made for wages attributable to services performed by the employee during the first full pay period after the employee has established membership in the IAP.

PUBLIC COMMENT AND HEARING TESTIMONY

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The public comment period ends November 2, 2015, at 5:00 p.m.

LEGAL REVIEW

The attached rules were submitted to the Department of Justice for legal review and any comments or changes will be incorporated before the rules are presented for adoption.

IMPACT

Mandatory: Yes, changes are necessary to bring the rules in line with changes or additions to statute made by the 2015 legislature.

Impact: Stakeholders will benefit from the rules' clarification and implementation of the statutory provisions.

Cost: There is no cost specific to the rule changes.

RULEMAKING TIMELINE

September 15, 2015	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.
September 25, 2015	PERS Board notified that staff began the rulemaking process.
October 1, 2015	*Oregon Bulletin* publishes the Notice. Notice is sent to employers, legislators, and interested parties. Public comment period begins.
October 27, 2015	Rulemaking hearing to be held at 2:00 p.m. at PERS in Tigard.
November 2, 2015	Public comment period ends at 5:00 p.m.
November 20, 2015	Staff will propose adopting the rule modifications, including any changes resulting from public comment or reviews by staff or legal counsel.

NEXT STEPS

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The rule is scheduled to be brought before the PERS Board for adoption at the November 20, 2015 Board meeting.

B.1. Attachment 1 - OAR 459-005-0001, *Definitions, Generally*
B.1. Attachment 2 - OAR 459-005-0310, *Date of Participation and Transfer of Employee Funds to the Optional Retirement Plan*
B.1. Attachment 3 - OAR 459-005-0350, *Membership Status of Persons in Concurrent Employment Eligible to Participate in an Optional or Alternative Retirement Plan*
B.1. Attachment 4 – OAR 459-011-0500, *Accumulated Unused Sick Leave*
B.1. Attachment 5 – OAR 459-080-0150, *Employee Contributions into the IAP Account*

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 5 – ADMINISTRATION

459-005-0001

Definitions, Generally

The words and phrases used in OAR Chapter 459 have the same meaning given them in ORS chapters 237, 238, 238A, and 243 unless otherwise indicated. Specific and additional terms used in OAR Chapter 459 generally are defined as follows unless context requires otherwise:

(1) “Ad hoc” means one-time for a specific purpose, case, or situation without consideration of a broader application.

(2) “After-tax” contributions means:

(a) Member contributions required or permitted by ORS 238.200 or 238.515, which a participating employer has not elected to “pick up,” assume or pay in accordance with ORS 238.205 and 238.515(b). “After-tax” contributions are included in the member’s taxable income for purposes of state or federal income taxation at the time paid to PERS. “After-tax” contributions are included in computing FAS and in computing the employer’s contributions paid to PERS.

(b) Payments made by a member to PERS for the purchase of additional benefits.

(3) “Before-tax” contributions means member contributions required or permitted by ORS 238.200 or 238.515, which a participating employer has elected to “pick up,” assume or pay in accordance with ORS 238.205 and 238.515(b). “Before-tax” contributions are not included in the member’s taxable income for purposes of state or federal income taxation at the time paid to PERS. “Before-tax” contributions are included in:

(a) Computing final average salary; and

(b) Computing the employer's contributions paid to PERS if the employer has elected to "pick up" the member contributions.

(4) "Business day" means a day Monday through Friday when PERS is open for business.

(5) "Calendar month" means a full month beginning with the first calendar day of a month and ending on the last calendar day of that month.

(6) "Calendar year" means 12 consecutive calendar months beginning on January 1 and ending on December 31.

(7) "Casual worker" means an individual engaged for incidental, occasional, irregular, or unscheduled intervals or for a period of less than six consecutive calendar months.

(8) "Contributions" means any contributions required or permitted pursuant to ORS 238.200 or 238.515.

(9) "Differential wage payment" means a payment made on or after January 1, 2009:

(a) By an employer to a member with respect to any period during which the member is performing service in the uniformed services, as defined in USERRA, while on active duty for a period of more than 30 consecutive days; and

(b) That represents all or a portion of the wages the member would have received from the employer if the member were performing service for the employer.

(10) "Effective date of withdrawal" means the later of:

(a) The first day of the calendar month in which PERS receives the last completed document required from a member who requested a withdrawal; or

(b) The first day of the second calendar month following the calendar month in which the member terminated employment with all participating employers and all employers in a controlled group with a participating employer.

(11) "Effective retirement date" means:

(a) For service retirements, the date described in OAR 459-013-0260; or

(b) For disability retirements, the date described in OAR 459-015-0001.

(12) "Elected official" means an individual who is a public official holding an elective office or an appointive office with a fixed term for the state or for a political subdivision of the state who has elected to participate in PERS pursuant to ORS 238.015(5).

(13) "Emergency worker" means an individual engaged in case of emergency, including fire, storm, earthquake, or flood.

(14) "Employee" has the same meaning as provided in ORS 238.005 and shall be determined in accordance with OAR 459-010-0030.

(a) For the purposes of ORS 238.005 to 238.750 the term "employee" includes public officers whether elected or appointed for a fixed term.

(b) The term "employee" does not include:

(A) A member of the governing board of a political subdivision unless the individual qualifies for membership under ORS 238.015.

(B) An individual who performs services for a public employer as a contractor in an independently established business or as an employee of that contractor as determined in accordance with OAR 459-010-0032.

(C) An individual providing volunteer service to a public employer without compensation for hours of service as a volunteer, except for volunteer firefighters who establish membership in accordance with ORS 238.015(6).

(15) “Employer contribution account” means a record of employer contributions to the Fund, as required by ORS 238.225(1), and investment earnings attributable to those contributions, that the Board has credited to the account after deducting amounts required or permitted by ORS Chapter 238.

(16) “Employment” is compensated service to a participating employer as an employee whose:

(a) Period or periods of employment includes only the actual hours of compensated service with a participating employer as an employee; and

(b) Compensated service includes, but is not limited to, paid vacation, paid sick leave, or other paid leave.

(17) “Estimate” means a projection of benefits prepared by staff of a service or disability retirement allowance, a death or a refund payment. An estimate is not a guarantee or promise of actual benefits that eventually may become due and payable, and PERS is not bound by any estimates it provides.

(18) “FAS” and “final average salary” have the same meaning as provided in:

(a) ORS 238.005 for all PERS Tier One members;

(b) ORS 238.435(2) for all PERS Tier Two members who are not employed by a local government as defined in ORS 174.116;

(c) ORS 238.435(4) for all PERS Tier Two members who are employed by a local government as defined in ORS 174.116; or

(d) ORS 238.535(2) for judge members of PERS for service as a judge.

(19) "General service member" means membership in PERS as other than a judge member, a police officer, a firefighter, or a legislator.

(20) "Good cause" means a cause beyond the reasonable control of an individual. "Good cause" exists when it is established by satisfactory evidence that factors or circumstances are beyond the reasonable control of a rational and prudent individual of normal sensitivity, exercising ordinary common sense.

(21) "Independent contractor" means an individual or business entity that is not subject to the direction and control of the employing entity as determined in accordance with OAR 459-010-0032.

(22) "Judge member" has the same meaning as provided in ORS 238.500(3). For purposes of this chapter, active, inactive, and retired membership of a judge member shall have the same meaning as provided in ORS 238.005.

(23) "Legislator" means an individual elected or appointed to the Oregon Legislative Assembly who has elected to participate in PERS for their legislative service.

(24) "Member cost" means after-tax member contributions and payments made by or on behalf of a member to purchase additional benefits.

(25) "Participating employer" means a public employer who has one or more employees who are active members of PERS.

(26) "PERS" and "system" have the same meaning as the Public Employees Retirement System in ORS 238.600.

(27) "Public university" means a public university with a governing board as listed in ORS 352.002.

*[(27)]***(28)** "Qualifying position" has the same meaning as provided in ORS 238.005 and OAR 459-010-0003.

*[(28)]***(29)** "Regular account" means the account established under ORS 238.250 for each active and inactive member who has made contributions to the Fund or the account of an alternate payee of such a member.

*[(29)]***(30)** "Salary" has the same meaning as provided in ORS 238.005.

(a) "Salary" includes a differential wage payment, as defined in this rule.

(b) For a Tier One member, a lump sum payment for accrued vacation pay is considered salary:

(A) In determining employee and employer contributions.

(B) In determining final average salary for the purpose of calculating PERS benefits.

(c) For a Tier Two member, a lump sum payment for accrued vacation pay:

(A) Is considered salary in determining employee and employer contributions.

(B) Is not considered salary in determining final average salary for the purpose of calculating PERS benefits.

*[(30)]***(31)** "Seasonal worker" means an individual whose engagement is characterized as recurring for defined periods that are natural divisions of the employer's business cycle or services.

*[(31)]***(32)** "Staff" means the employees of the Public Employees Retirement System as provided for in ORS 238.645.

*[(32)]***(33)** "Tier One member" means a member who established membership in the system before January 1, 1996, as defined in ORS 238.430(2).

*[(33)]***(34)** "Tier Two member" means a member who established membership in the system on or after January 1, 1996, in accordance with ORS 238.430.

*[(34)]***(35)** "USERRA" means the federal Uniformed Services Employment and Reemployment Rights Act of 1994, 38 U.S.C. 4301-4334, as in effect on the effective date of this rule.

*[(35)]***(36)** "Vacation pay" means a lump sum payment for accrued leave in a Vacation Leave Program provided by a public employer which grants a period of exemption from work for rest and relaxation with pay, and does not include:

(a) Sick leave programs;

(b) Programs allowing the accumulation of compensatory time, holiday pay or other special leaves unless the public employer's governing body indicates by resolution, ordinance, or other legislative process, that such leave is intended to serve as additional vacation leave; and

(c) Other programs, such as a Personal Time Off (PTO) plan, which are a combination of vacation, sick, bereavement, personal and other leaves of pay as defined and described by a public employer unless the employer has a written policy that clearly indicates the percentage of the plan that represents vacation leave. If the employer's PTO has a cash option, the employer must report to PERS the amount of any lump sum pay-off for the percentage that represents vacation leave.

*[(36)]***(37)** "Variable account" and "member variable account" mean the account in the Variable Annuity Account established under ORS 238.260(2) for each active and inactive member who has elected to have amounts paid or transferred into the Variable Annuity Account.

*[(37)]***(38)** “Variable Annuity Account” means the account established in ORS 238.260(2).

*[(38)]***(39)** “Volunteer” means an individual who performs a service for a public employer, and who receives no compensation for the service performed. The term “volunteer” does not include an individual whose compensation received from the same public employer for similar service within the same calendar year exceeds the reasonable market value for such service.

*[(39)]***(40)** “Working day” means a day that the employer is open for business. Unless the employer communicates this information to PERS, PERS will presume an employer’s “working day” is the same as a “business day,” as defined in section (4) of this rule.

*[(40)]***(41)** “Year” means any period of 12 consecutive calendar months.

Stat. Auth.: ORS 238.650

Stats. Implemented: ORS 238

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION

459-005-0310

Date of Participation and Transfer of Employee Funds to the *[Oregon University System]* **Optional Retirement Plan**

(1) Definitions. For the purposes of this rule:

(a) “IAP account” means the member’s employee, rollover, and employer accounts in the Individual Account Program, to the extent the member is vested in those accounts under ORS 238A.320.

(b) “OPSRP Pension account” means the member’s transferable interest in the pension program under ORS 243.800(6)(d).

(c) “PERS member account” includes a “member account” as defined in ORS 238.005, an account established under ORS 238.440, and an account subject to ORS 238.095(4).

(2) The effective date of an election by an administrative or academic employee of *[the Oregon University System (OUS)]* **a public university** to participate in the Optional Retirement Plan (ORP) authorized under ORS 243.800 is the first day of the month following a period of six full calendar months of employment in an administrative or academic position.

(a) Unless otherwise agreed upon, notice of the effective date of the election will be provided to PERS by *[OUS]* **the public university** within 30 days of the date of the election.

(b) If the employee is a member of PERS and elects to transfer funds from PERS to the Optional Retirement Plan pursuant to ORS 243.800(6), *[OUS]* **the public university** will forward to PERS a copy of the ORP election form and a written transfer request from the employee at the time of the notification required in subsection (a) of this section.

(3) If an employee who is a member of PERS requests a transfer of funds pursuant to ORS 243.800(6):

(a) PERS must transfer the funds to the ORP within the 60-day period following the later of:

(A) The effective date of the employee's election to participate in the ORP; or

(B) The effective date of the transfer.

(b) The effective date of a transfer is the first of the month in which PERS completes reconciliation of the account to be transferred.

(c) PERS may not transfer funds to the ORP if the member is concurrently employed by a participating employer *[other than an institution of the Oregon University System]*.

Stat. Auth: ORS 238A.450, 238.650

Stats. Implemented: ORS 243.800

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION

459-005-0350

Membership Status of Persons in Concurrent Employment Eligible to Participate in an Optional or Alternative Retirement Plan

(1) For the purpose of this rule, concurrent employment means employment with two or more different employers participating in the Public Employees Retirement System (PERS) at the same time.

(2) If a person employed by *[the Oregon University System]* **a public university** or by the Oregon Health and Science University is concurrently employed by another PERS or Oregon Public Service Retirement Plan (OPSRP) participating employer, eligibility for PERS or OPSRP membership shall be based on the following:

(a) If the person elects to participate in an Optional Retirement Plan offered by *[the Oregon University System]* **a public university** under ORS 243.800, or an alternative retirement plan offered by the Oregon Health and Science University under ORS 353.250, and concurrently employed with other PERS or OPSRP participating employers in a non-qualifying position(s) as defined in OAR chapter 459, the person:

(A) Shall not be eligible to establish membership in PERS or OPSRP as an employee of *[the Oregon University System]* **a public university** or the Oregon Health and Science University, and

(B) Shall not be eligible to establish membership in PERS or OPSRP as an employee of the other concurrent PERS employer or employers.

(b) If the person elects to participate in an Optional Retirement Plan offered by *[the Oregon University System]* **a public university** under ORS 243.800, or an alternative retirement plan offered by the Oregon Health and Science University under ORS 353.250, and concurrently employed with other PERS or OPSRP participating employers is in a qualifying position(s) as defined in OAR chapter 459, the person:

(A) Shall not be eligible to establish membership in PERS or OPSRP as an employee of *[the Oregon University System]* **a public university** or the Oregon Health and Science University; and

(B) Shall establish membership in OPSRP as an employee of the other concurrent PERS or OPSRP employer or employers.

(3) A member of PERS or OPSRP who is concurrently employed and establishes PERS or OPSRP membership under the provisions of paragraph (2)(b)(B) of this rule shall not be eligible to have the member's account transferred to an Optional or alternative retirement plan *[as described in ORS 243.800(6) and (7)]*.

Stat. Auth: ORS 238.650

Stats. Implemented: ORS 238.015, 243.775 & 353.250*[(3)]*

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 011 – RETIREMENT CREDIT

459-011-0500

Accumulated Unused Sick Leave

(1) Pursuant to ORS 238.350, a public employer may request that one or more groups of its employees be compensated for accumulated unused sick leave in the form of increased retirement benefits. The request, in writing and accompanied by certified copy of the public employer's governing body's official action, shall be effective not earlier than the first of the calendar month following date of the official action by the public employer.

(2) The Board shall determine the monetary value of 1/2 of the accumulated unused sick leave by the following procedure:

(a) For retiring employees not subject to ORS 238.350(1)(b), the hourly rate used to establish the monetary value of the unused sick leave shall be determined by dividing the monthly final average salary by 173.3 hours, multiplying this hourly rate times 1/2 of all accumulated unused sick leave hours reported, and adding this value to the final average salary calculation;

(b) For retiring employees subject to ORS 238.350(1)(b), the hourly rate used to establish the monetary value of the unused sick leave shall be determined by dividing the salary in the final contract of employment by the number of contract hours, multiplying this hourly rate times 1/2 of all unused sick leave hours reported for employment as described in ORS 238.350(1)(b) and adding this value to the final average salary calculation;

(c) The monetary value of the unused sick leave for retiring employees described in ORS 238.350(1)(b) who were employed under contracts for 12 months or earned 96 hours of sick leave in any of the three or less years used in determining final average salary will be valued as provided in subsection (a) of this section.

(3) Upon an employee's termination of employment from any PERS covered position, a public employer shall report the amount of accumulated unused sick leave on forms furnished by the Board. The public employer shall transmit the forms to the Board and provide a legible copy of the form or a facsimile thereof to each terminated employee immediately following final payment of salary. For PERS purposes, accumulated unused sick leave cannot exceed an accrual of more than eight hours per month worked less usage.

(4) To be eligible for the use of unused sick leave pursuant to ORS 238.350, a member must have been in the employ of a public employer and in a covered group on or after the effective date of an employer's election to extend the use of accumulated unused sick leave. A member retiring with an effective retirement date the same as the effective date of the election is deemed an employee on the effective date of the election if the member was employed during the month *[proceeding]* **preceding** the effective date of the employer's election.

(5) "Sick time" as provided in Chapter 537, Oregon Laws 2015 does not constitute "sick leave" for purposes of ORS 238.350.

Stat. Auth.: 238.650

Stats. Implemented: ORS 238.350

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 080 – OPSRP INDIVIDUAL ACCOUNT PROGRAM

459-080-0150

Employee Contributions into the IAP Account

(1) Definitions. For the purposes of this rule:

(a) “Forfeiture account” means the account set up by PERS to administer overpayments of employee contributions.

(b) “Salary” has the same meaning provided in:

(A) ORS 238A.005 for members who established membership in the Individual Account Program under the provisions of OAR 459-080-0010(1); or

(B) ORS 238.005 for members who established membership in the Individual Account Program under the provisions of OAR 459-080-0010(2) or (3).

(2) Employee contributions under the OPSRP Individual Account Program (“IAP”) are required from all eligible employees who qualify as members, as established under OAR 459-080-0010, who:

(a) Are working in a position designated as a “qualifying position” as defined in OAR 459-070 0001; or

(b) Perform a total of 600 or more hours in a calendar year with one or more participating employers in one or more classes the participating employer has designated as a participating class.

(3) Contributions for current members.

(a) For a member who meets the standard set forth in section (2)(a) of this rule, contributions of six percent of the member’s salary are required to be transmitted for all pay periods assigned under OAR 459-070-0100 from the date of hire, or January 1 of the current year, whichever is later.

(b) Once a member meets the standard set forth in section (2)(b) of this rule, retroactive contributions of six percent of the member's salary are required to be transmitted following the member's performance of 600 hours in the calendar year. Contributions are due for all pay periods assigned under OAR 459-070-0100 from the date of hire, or January 1 of the current year, whichever is later.

(4) Contributions for new employees **who establish membership on or after January 1, 2016**.

(a) For an eligible employee who meets the standard set forth in section (2)(a) of this rule, contributions of six percent of the member's salary are required to be transmitted **for wages that are attributable to services performed by the employee during the first full pay period** after the employee has established membership in the IAP as set forth under OAR 459-080-0010.

(b) Once an eligible employee meets the standard set forth in section (2)(b) of this rule, retroactive contributions of six percent of the member's salary are required to be transmitted *[from the date of]* **for wages that are attributable to services performed by the employee during the first full pay period after the employee has established** membership in the IAP*[,]* as *[established]* **set forth** under OAR 459-080-0010.

(5)(a) If contributions are submitted on behalf of an eligible employee who does not meet the standards set forth under section (2)(a) or (b) of this rule, the actual amount of those contributions will be returned after the end of the calendar year during which the pay period triggering those contributions ended.

(b) Any net earnings, losses, or administrative fees attributable to the returned contributions will be applied to the forfeiture account.

Stat. Auth.: ORS 238A.450

Stats. Implemented: ORS 238A.330

Oregon

Kate Brown, Governor

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September 25, 2015

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Notice of Rulemaking for Partial Year Rule:
OAR 459-010-0012, *Membership of Community College Employees*

OVERVIEW

- Action: None. This is notice that staff has begun rulemaking.
- Reason: Clarify application of partial year rules to Tier One and Tier Two academic employees.
- Policy Issue: No policy issues have been identified at this time.

BACKGROUND

PERS membership is based on employment in a "qualifying position," which generally requires 600 hours of employment in a year. ORS 238.074 provides specific conditions for determining whether an academic employee of a community college has worked 600 hours for all purposes under ORS Chapter 238 (.375 Full Time Equivalent (FTE) on a 12-month basis or .50 FTE on a 9-month basis). The modifications to OAR 459-010-0012 clarify that, for academic employees of community colleges, a year shall be the 12-month period beginning July 1 and ending the following June 30, also known as an "academic year." Under PERS administration of the statute and rule, PERS uses an academic year rather than a calendar year as the standard of measure when determining qualifying position for academic employees of community colleges under OAR 459-010-0003, including during a partial year of employment.

PUBLIC COMMENT AND HEARING TESTIMONY

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The public comment period ends November 2, 2015, at 5:00 p.m.

LEGAL REVIEW

The attached rule was submitted to the Department of Justice for legal review and any comments or changes will be incorporated before the rule is presented for adoption.

IMPACT

Mandatory: No.

Impact: Clarify partial year rules for Tier One and Tier Two academic employees of community colleges.

Cost: There are no discrete costs attributable to the rule changes.

RULEMAKING TIMELINE

September 15, 2015	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.
September 25, 2015	PERS Board notified that staff began the rulemaking process.
October 1, 2015	*Oregon Bulletin* publishes the Notice. Notice is sent to employers, legislators, and interested parties. Public comment period begins.
October 27, 2015	Rulemaking hearing to be held at 2:00 p.m. at PERS in Tigard.
November 2, 2015	Public comment period ends at 5:00 p.m.
November 20, 2015	Staff will propose adopting the rule modifications, including any changes resulting from public comment or reviews by staff or legal counsel.

NEXT STEPS

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The rule is scheduled to be brought before the PERS Board for adoption at the November 20, 2015 Board meeting.

B.2. Attachment 1 - OAR 459-010-0012, *Membership of Community College Employees*

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 010 – MEMBERSHIP

459-010-0012

Membership of Community College Employees

(1) For purposes of this rule, “academic year” means 12 consecutive calendar months beginning July 1 and ending the following June 30.

*[(1)]***(2)** For purposes of establishing membership in the system, effective July 1, 1988, an academic employee of a community college who is employed .375 full-time equivalent (FTE) on a 12-month basis or .50 FTE on a 9-month basis is deemed to be employed 600 hours or more in *[a]* **an academic year**. *[For an academic employee of a community college, a year shall be the 12-month period beginning July 1 and ending the following June 30.]*

*[(2)]***(3)** For an academic employee of a community college, an FTE shall be measured against an academic year**.** *[beginning July 1 in a given year and ending June 30 of the year following.]*

(4) For purposes of determining a “qualifying position” under OAR 459-010-0003 for an academic employee of a community college, the following definitions apply:

(a) “Partial year of hire” means a period in the academic year the employee begins employment after the first working day of the academic year, and continues employment through the last day of the academic year.

(b) “Partial year of separation” means a period in the academic year the employee is employed as of the beginning of the academic year, and separates from employment before the last working day of the academic year.

(c) "Short segment" means a period in the academic year during which the employee is hired after the first working day of the academic year, and separated from employment before the last working day of the same academic year.

*[(3)]***(5)** An academic employee of a community college is an instructor who teaches classes offered for college-approved credit or on a non-credit basis. Librarians, counselors, and aides in non-teaching positions, tutors, or other non-teaching faculty, and classified, professional or nonprofessional support staff are not academic employees for the purposes of ORS 238.074; but are subject to the membership requirements under ORS 238.015.

*[(4)]***(6)** Each community college shall determine who is an academic employee in its employ under this rule. In making that determination, a community college shall consider all disciplines (academic activity) collectively when an employee's assignment includes multiple disciplines.

*[(5)]***(7)** For persons concurrently employed in academic positions in two or more community colleges, the combined FTE shall be used in determining eligibility for membership. If the combined FTE is less than the criteria in section *[(1)]***(2)** of this rule, the combination of hours of service shall be considered in determining eligibility for membership pursuant to ORS 238.015.

*[(6)]***(8)** For academic employees concurrently employed in an academic and a non-academic position in one or more community colleges **during an academic year**, the combination of academic and non-academic duties shall be considered in determining eligibility for membership pursuant to ORS 238.015. *[For the purposes of this section, a year shall be any consecutive 12-month period.]*

*[(7)]***(9)** Employment of retired members of the system in academic or non-academic positions is subject to the limitations in ORS 238.082.

Stat. Auth.: ORS 238.650

Stats. Implemented: ORS 238.074

Oregon

Kate Brown, Governor

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September 25, 2015

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Notice of Rulemaking for Retirement Benefits Rules:
OAR 459-013-0060, *Payment of Retirement Benefits*
OAR 459-013-0310, *Payment of Increased Benefits under ORS 238.372 to 238.384*

OVERVIEW

- Action: None. This is notice that staff has begun rulemaking.
- Reason: Clarify treatment of partial year residency for tax remedy qualification, and add information regarding the timing of electronic funds transfer (EFT) payments.
- Policy Issue: No policy issues have been identified at this time.

BACKGROUND

ORS 238.372 prohibits PERS from paying “tax remedy” increases under SB 656 (Chapter 796, Oregon Laws 1991), or HB 3349 (Chapter 569, Oregon Laws 1995) if the benefits are not subject to Oregon personal income tax because the recipient is not an Oregon resident (as provided in ORS 316.127(9)). ORS 238.378 requires PERS and the Department of Revenue (DOR) to share information necessary to determine whether a member’s benefit is subject to Oregon income tax. OAR 459-013-0310 explains how PERS uses the information provided by DOR, and residency status information provided by the recipient, to make residency status determinations.

One scenario the current administrative rule did not take into account is how to determine residency when a person files a partial year return (40P) for the tax year in which they submit a residency status form to PERS. The proposed rule modification in new paragraph (2)(a)(G) clarify that, if a person filed a 40P according to DOR data query information and that person also submitted a residency status certification between January 1 and December 15 for the same calendar year, PERS will base residency on the recipient’s form, since the form requires the recipient to certify under penalty of perjury that they are an Oregon resident for income tax purposes. In addition, a new section (4) has been added to provide further clarification that all residency status information received by PERS between December 16 and December 31 of a calendar year will be treated as received the following calendar year.

The modifications to OAR 459-013-0060 are housekeeping edits to conform the administrative rule to current business practice. In section (1), a new subsection was added to clarify that when the first day of the month falls on a weekend or a PERS holiday, retirement benefits processed through electronic funds transfer must be issued no later than the previous business day. A new section (3) was added stating the only exception applies for retirement benefits payable on January 1, which must always be paid in the month of January to avoid exceeding 12 monthly payments in a year.

PUBLIC COMMENT AND HEARING TESTIMONY

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The public comment period ends November 2, 2015, at 5:00 p.m.

LEGAL REVIEW

The attached rules were submitted to the Department of Justice for legal review and any comments or changes will be incorporated before the rules are presented for adoption.

IMPACT

Mandatory: No.

Impact: Clarifies administration for recipients who file 40Ps, and clarifies the administration of retirement benefit payments on certain calendar dates.

Cost: There are no discrete costs attributable to the rule modifications.

RULEMAKING TIMELINE

September 15, 2015	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.
September 25, 2015	PERS Board notified that staff began the rulemaking process.
October 1, 2015	*Oregon Bulletin* publishes the Notice. Notice is sent to employers, legislators, and interested parties. Public comment period begins.
October 27, 2015	Rulemaking hearing to be held at 2:00 p.m. at PERS in Tigard.
November 2, 2015	Public comment period ends at 5:00 p.m.
November 20, 2015	Staff will propose adopting the rule modifications, including any changes resulting from public comment or reviews by staff or legal counsel.

NEXT STEPS

A rulemaking hearing will be held October 27, 2015, at 2:00 p.m. at PERS headquarters in Tigard. The rule is scheduled to be brought before the PERS Board for adoption at the November 20, 2015 Board meeting.

B.3. Attachment 1 - OAR 459-013-0060, *Payment of Retirement Benefit*s
B.3. Attachment 2 - OAR 459-013-0310, *Payment of Increased Benefits under ORS 238.372 to 238.384*

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 013 – RETIREMENT BENEFITS

459-013-0060

Payment of Retirement Benefits

(1) Retirement benefits shall be payable each month as of the first day of the month following the effective date of retirement.

(a) When the first day of the month falls on a weekend or a PERS holiday, retirement benefits processed through electronic funds transfer shall be payable on the last PERS working day of the prior month.

(b) At the time of death, accrued benefits shall be payable as provided under OAR 459-014-0050(4).

(2) If a retiree elects to receive more than one installment payment as provided under ORS 238.305(4), the subsequent installment payments will be paid on the anniversary of the first day of the month that the initial installment payment was made.

(3) Notwithstanding section (1) of this rule, retirement benefits payable on January 1 shall always be paid in the month of January.

Stat. Auth.: ORS 238.650

Stats. Implemented: ORS 238.300 & 238.305

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 013 – RETIREMENT BENEFITS

459-013-0310

Payment of Increased Benefits under ORS 238.372 to 238.384

(1) For purposes of determinations under ORS 238.372 to 238.384:

(a) “Person” includes a member, an alternate payee, or a beneficiary.

(b) The increased benefit percentage to be added to a benefit paid to a beneficiary under ORS 238.390, 238.395, 238.400, 238.405, or under an optional form of retirement allowance under ORS 238.305 or 238.325 will be determined based on:

(A) The increased benefit percentage(s) for which the member is otherwise eligible under ORS 238.364, 238.366 and 238.368; and

(B) The residency of the beneficiary.

(2) PERS will make the following determinations on residency status for the purpose of determining increased benefit eligibility under ORS 238.372 to 238.384, based on the yearly Oregon personal income tax return information provided by the Department of Revenue.

(a) If the Department of Revenue notifies PERS that a person:

(A) Filed Oregon personal income tax as a resident, PERS will treat the person as a resident of Oregon.

(B) Filed Oregon personal income tax as a non-resident, PERS will treat the person as a non-resident of Oregon, except as provided in section (3) below.

(C) Did not file Oregon personal income tax, PERS will treat the person as a non-resident of Oregon, except as provided in section (3) below.

(D) Filed Oregon personal income tax as a partial-year resident and the prior year the person filed personal income tax as a resident, PERS will treat the person as a non-resident of Oregon, except as provided in section (3) below.

(E) Filed Oregon personal income tax as a partial-year resident and the prior year the person filed personal income tax as a non-resident, PERS will treat the person as a resident of Oregon.

(F) Filed Oregon personal income tax as a partial-year resident and the prior year the person did not file personal income tax, PERS will treat the person as a resident of Oregon.

(G) Filed Oregon personal income tax as a partial-year resident, and the person also submitted residency status information on a form provided by PERS received between January 1 and December 15 of the same calendar year, PERS will determine residency status based on the information provided on the form.

(b) If PERS cannot make a residency status determination based on information provided by the Department of Revenue or the person did not otherwise provide PERS with residency status information, PERS will treat the person as a non-resident of Oregon, except as provided in section (3) below.

(3) Residency status information submitted on a form provided by PERS and received between January 1 and December 15 of the current calendar year will, for purposes of determining increased benefit eligibility under ORS 238.372 to 238.384, supersede any Oregon personal income tax return information provided by the Department of Revenue pursuant to section (2) of this rule.

(4) Residency status information submitted on a form provided by PERS and received between December 16 and December 31 of a calendar year will be treated as received the following calendar year.

Stat. Auth.: ORS 238.650

Stats. Implemented: ORS 238.362, 238.364, 238.366, 238.368 & 238.372 to 238.384

Oregon

Kate Brown, Governor

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September 25, 2015

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Adoption of Cost-of-Living Adjustment Rules:
459-005-0510, *Cost-of-Living Adjustment*
459-005-0520, *Supplementary Payment*

OVERVIEW

- Action: Adopt modifications to the Cost-of-Living Adjustment rules.
- Reason: Clarify the cost-of-living adjustment method for earned benefits.
- Policy Issue: Should PERS incorporate the service time ratio method to blend different cost-of-living adjustment (COLA) structures?

BACKGROUND

On April 30, 2015, the Oregon Supreme Court issued its ruling in the *Moro* case, invalidating the cost-of-living adjustment (COLA) reductions enacted by Senate Bill 822 (effective May 6, 2013) and Senate Bill 861 (effective October 6, 2013) as applied to benefits earned before the effective dates of those bills. As a result, members who have earned benefits both prior to the effective dates of the bills as well as after the effective dates will receive a blended COLA based on the COLA structure in effect when the benefits were earned. While the court specifically did not provide guidance on how to blend the different COLAs, it did reference a service time ratio method as an example of how a blended COLA could be derived.

In addition, the Supreme Court ruling voided the supplementary payment provision in SB 861, so OAR 459-005-0520, *Supplementary Payment* is proposed for repeal.

POLICY QUESTION & RECOMMENDATION

Should PERS incorporate the service time ratio method to blend different cost-of-living adjustment (COLA) structures?

The court decision ties the COLA in retirement to the COLA that was in effect when the benefits were earned. Unfortunately, how to determine when benefits are earned is not clear and the court did not direct a method in its decision. Benefits are not determined until a member retires, and there are many factors that affect a member’s final benefit calculation. Attempting to determine the benefit a member has earned at a particular point in time, especially when that point is early- or mid-career, is problematic.

The court did point to ORS 238.364(5) as an example for calculating a blended rate. This statute describes how to calculate the “tax remedy” established by House Bill 3349 (1995). Specifically, it directs staff to “divide the number of years of creditable service performed before [the repeal of the tax exemption] by the total number of years of creditable service during which the pension income was earned." PERS then applies the tax remedy to this portion of the member's benefit. This is referred to as the service time ratio method, and is the method used by Milliman in their presentation regarding the impact of the *Moro* case at the May 29, 2015 board meeting.

Staff considered other methods that prorate the COLA based on the member's retirement benefit. The common challenge with these methods is that they involve determining a member's benefit as of the effective date of the bills. A number of factors considered in calculating a retirement benefit are variable, changing over the course of a member's career (e.g., sick leave, vacation, final average salary, etc.). The level of complexity involved in these methods invites confusion, more opportunity for miscalculations, and potential challenges.

The blended COLA methodology outlined in the rule modifications blends the COLAs based on creditable service or retirement credit earned by a member when a specific COLA was in effect. Because a member's benefit is not determined until the member retires and includes factors that may or may not span the whole of the member's career, prorating the COLA according to the service time ratio is the most reasonable, administratively feasible, and cost effective method. It is also the most straight-forward method, making it easier to communicate to members.

Staff recommends incorporating the service time ratio method of blending the different COLA structures. Examples of how this rule would be implemented were provided with the July memo when these rule modifications were noticed.

PUBLIC COMMENT AND HEARING TESTIMONY

A rulemaking hearing was held August 25, 2015, at 2:00 p.m. at PERS headquarters in Tigard. One member of the public attended and provided testimony, as summarized below. A second rulemaking hearing was held August 27, 2015, at 2:00 p.m. at Oregon State Archives in Salem. No members of the public attended. The public comment period ended September 1, 2015, at 5:00 p.m.

At the rulemaking hearing on August 25, 2015, Friedrich Rudolf Beyl provided public comment regarding OAR 459-005-0510. Mr. Beyl retired on July 1, 2013, with 30 years of service and received a Money Match benefit. He expressed support for the use of the service time ratio method to blend different COLAs, and appreciated the detailed examples attached to the July Board memo. He inquired as to the origin of the service time ratio. Staff showed Mr. Beyl the corresponding ORS 238.364, which outlines how to determine the service time ratio for tax remedy purposes. Mr. Beyl also concurred with Mr. Crummé's concerns that the proposed rule modifications do not clearly address how a 2 percent COLA applies to the Tier One Money Match option.

PERS also received two public comment letters. Prior to the start of rulemaking, PERS received a letter dated May 5, 2015, from Doug Crummé in which he asks that rulemaking to implement *Moro* clearly address how the two percent COLA applies to the Tier One Money Match option. A copy of his letter is included as Attachment 4.

Mr. Crummé contends that Tier One members who retire under the Money Match benefit calculation have a right to a 2 percent COLA on their entire benefit, regardless of whether or not they continued to work beyond October 1, 2013. Mr. Crummé provides an example:

> …The money match benefit is calculated based on the employee's life expectancy and the Tier One account balance at retirement. The account balance is based on employee and employer contributions through 2003 (after which contributions were terminated) and on net earnings or losses accruing on the account balance through the date or retirement. All other things being equal, an employee who retires from PERS employment on a particular date will receive the same money-match pension benefit whether the employee quits working for PERS employers after 2003 but short of retirement or the employee continues working for PERS employers through his or her eventual PERS retirement date…

Mr. Crummé's reasoning offers one method for implementing the *Moro* decision; however, it is not the only method, and it proceeds from some incorrect assumptions. Staff continues to recommend the service time ratio method of calculating COLA.

A member's benefit is not determined until their effective retirement date. Whether a member's retirement is ultimately calculated under the Money Match method cannot be determined until retirement (PERS uses whichever method provides the highest benefit). The highest benefit calculation can change from month to month for many members, depending on sick leave usage, pay raises, changes in jobs or position, etc. Using the service time ratio removes the arbitrary nature of a member's COLA in retirement being based solely on their calculation method.

For example, contrary to Mr. Crummé's assertion that all Tier One members will receive the same benefit regardless of when they retire (and then become eligible for a COLA), the following members received benefits from January 1, 2004, to before January 1, 2014, that were not retirements, and therefore not eligible for COLA:

- 894 Tier One members died before retiring, but received an employer match
- 1,170 Tier One members died before retiring, but did not receive an employer match
- 2,862 Tier One members withdrew
- 310 Tier One members went into Loss of Membership

This list shows that eligibility for COLA is contingent on actually applying for and receiving a retirement, and for thousands of Tier One members, they never became eligible for one.

As presented, therefore, staff continues to conclude that this rule complies with the *Moro* ruling by the using a service time ratio to allocate the yearly allowance, pension, or benefit before and after the legislative COLA change.

On August 31, 2015, Mr. Crummé provided a second public comment regarding OAR 459-005-0510. A copy of his email is included as Attachment 5. He suggests that the proposed amendments to the rule are inconsistent with the *Moro* decision. He also states that "Employee contract rights to Tier 1 benefits are solely for work performed through 2003. Employee's contract rights to Tier 1 benefits are not for work performed after 2003 or after 2013."

Mr. Crummé's statements are incorrect. The Tier One program was not frozen or terminated as of January 1, 2004. While the contributions for Tier One members were directed to the Individual Account Program (IAP) as of January 1, 2004, none of the other provisions of the program changed. Moreover, work performed after 2003 is still used in determining benefit eligibility (e.g., 30 years of service) and amounts (e.g., tax remedy increases for those members who are eligible).

LEGAL REVIEW

The attached rules were submitted to the Department of Justice for legal review and any comments or changes are incorporated in the rules as presented for adoption.

IMPACT

Mandatory: No.

Impact: PERS will reprogram ORION to automate the annual cost-of-living adjustment.

Cost: There is no cost specific to the rule changes.

RULEMAKING TIMELINE

July 15, 2015	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.
July 31, 2015	PERS Board notified that staff began the rulemaking process.
August 1, 2015	*Oregon Bulletin* published the Notice. Notice was sent to employers, legislators, and interested parties. Public comment period began.
August 25, 2015	First rulemaking hearing held at 2:00 p.m. at PERS in Tigard.
August 27, 2015	Second rulemaking hearing held at 2:00 p.m. at Oregon State Archives in Salem.
September 1, 2015	Public comment period ended at 5:00 p.m.
September 25, 2015	Board may adopt the permanent rule modifications.

BOARD OPTIONS

The Board may:

1. Pass a motion to "adopt modifications to the cost-of-living adjustment and supplementary payment rules, as presented."
2. Direct staff to make other changes to the rules or explore other options.

STAFF RECOMMENDATION

Staff recommends the Board choose Option #1.

- Reason: Implement Senate Bill 861 (2013) annual cost-of-living adjustment due to the Oregon Supreme Court decision in *Moro*.

If the Board does not adopt: Staff would return with rule modifications that more closely fit the Board's policy direction if the Board determines that a change is warranted.

B.4. Attachment 1 – OAR 459-005-0510, *Cost-of-Living Adjustment*
B.4. Attachment 2 – OAR 459-005-0520, *Supplementary Payment*
B.4. Attachment 3 – Blended COLA Examples
B.4. Attachment 4 – May 5 Public Comment Letter from Doug Crummé
B.4. Attachment 5 – August 31 Public Comment Email from Doug Crummé

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION

459-005-0510

Cost-of-Living Adjustment

(1) A cost-of-living adjustment (COLA) under ORS 238.360 and 238A.210 is calculated on an annual basis and *[then divided by 12 to determine the adjustment to the recipient's monthly allowance, pension, or benefit.]* **may use up to three COLA methods that are blended into a COLA percentage rate, as follows:**

(a) Creditable service or retirement credit earned before May 1, 2013, will receive an annual COLA based on ORS 238.360 (2011) or ORS 238A.210 (2011).

(b) Creditable service or retirement credit earned on or after May 1, 2013, and before October 1, 2013, will receive an annual COLA based on Chapter 53, Oregon Laws 2013.

(c) Creditable service or retirement credit earned on or after October 1, 2013, will receive an annual COLA based on ORS 238.360 (2013) or ORS 238A.210 (2013).

(2) The member's prorated periods in section (1) of this rule will be multiplied by the appropriate annual COLA percentage for the same periods to determine the blended annual COLA percentage rate that is applied to a yearly allowance, pension, or benefit. The resulting annual COLA amount is divided by 12 to determine the adjustment to the monthly allowance, pension, or benefit.

(3) A beneficiary's annual COLA percentage rate will be based on the associated member's creditable service time.

*[(2)]***(4)** *[Monthly]* COLA increases end when the recipient is no longer eligible to receive a monthly allowance, pension, or benefit.

[(3) This rule is effective on July 1, 2014.]

Stat. Auth.: ORS 238.650 & 238A.450

Stats. Implemented: ORS 238.360, 238.575, 238A.210 **& OL 2013, Ch. 53**

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION

[459-005-0520

Supplementary Payment

(1) For purposes of this rule, "benefit recipient" means a member, beneficiary, alternate payee, or judge member.

(2) In accordance with ORS 238.465(1), an alternate payee is eligible for a supplementary payment only if the associated member or judge member is eligible.

(3) Increased benefits under ORS 238.364 and 238.366 or cost-of-living adjustments under 238.360 or 238A.210 are not applied to a benefit recipient's supplementary payments.

(4) A benefit recipient's supplementary payment shall not be included in a benefit recipient's yearly allowance or yearly pension or benefit for the purpose of calculating the cost-of-living adjustments under ORS 238.360, 238.575, or 238A.210.

Stat. Auth: ORS 238.650, 238.465 & 238A.450

Stats. Implemented: ORS 238.360, 238.575, 238A.210 & OL 2013, Ch. 2, §8 (1st special session)]

PUBLIC EMPLOYEES RETIREMENT SYSTEM

BLENDED COST-OF-LIVING (COLA) CALCULATION EXAMPLES

Member Data

	Creditable service before and after October 1, 2013		All creditable service before October 1, 2013
	EXAMPLE 1 Yearly allowance less than $60,000	**EXAMPLE 2** Yearly allowance more than $60,000	**EXAMPLE 3** Creditable service before October 1, 2013
Effective Date of Retirement:	July 1, 2015	July 1, 2015	July 1, 2015
Yearly Retirement Allowance:	$40,000	$75,000	$75,000
Months of Creditable Service before October 1, 2013:	339 mths	339 mths	360 mths
Total Months of Creditable Service:	360 mths	360 mths	360 mths
Service Time Ratio before October 1, 2013 (339/360):	0.9416667	0.9416667	1.00
Service Time Ratio after October 1, 2013 (21/360):	0.0583333	0.0583333	0

Calculation Example

	Service Time Ratio		Annual COLA		Example 1: Blended COLA up to $60,000	Example 2: Blended COLA up to $60,000	Example 2: Blended COLA over $60,000	Example 3: COLA
Pre-amendment COLA*:	0.941667	x	2.00%	=	1.8833%	1.8833%	1.8833%	2.0000%
Post-amendment COLA, under $60K:	0.058333	x	1.25%	=	0.0729%	+ 0.0729%		0.0%
Post-amendment COLA, over $60K:	0.058333	x	0.15%	=	+ 0.0%		+ 0.0087%	+ 0.0%
Blended COLA Percentage Rate:					1.9562%	1.9562%	1.8920%	2.0000%
Yearly Allowance ($60,000 or less):					x $ 40,000	x $ 60,000		
Yearly Allowance (above $60,000):							x $ 15,000	x $ 75,000
						$ 1,173.72	$ 283.80	
							1,173.72	
Total Annual COLA:					$ 782.48		$ 1,457.52	$ 1,500.00
					÷ 12		÷ 12	÷ 12
Monthly COLA:					$ 65.21		$ 121.46	$ 125.00

*Annual COLA for 2015 is 2% maximum

May 5, 2015

Fr: Doug Crummé
7350 N.E. Sunflower Lane
Corvallis, Oregon 97330

To: Governor Kate Brown
Office of the Governor
160 State Capitol
900 Court Street
Salem, Oregon 97301-4047

Re: **PERS Money Match under *Moro v. State of Oregon***

Dear Governor Brown,

I am concerned about a possible misconception reflected in some news media about the Oregon Supreme Court's decision in *Moro v. State of Oregon*, 357 Or 167 (2015). (I am writing here as a private citizen and not on behalf of my PERS employer.)

Some news media suggest flatly that the Court held that the two-percent COLA will not apply in any case to current employees for the period after the effective dates of the 2013 COLA legislation. This may be true for pension options like the "full formula," where the employee earns a portion of his or her retirement benefits from work after the effective dates of the 2013 legislation. *Id* at 232. However, the same is probably not true under the Tier One "money match" option.

The Court holds in *Moro* that the 2013 COLA legislation is unconstitutional for "retirement benefits earned before" the legislation's effective dates. *Id.* at 228 and 236. Such benefits are those "generally attributable to work performed before the amendments went into effect." *Id.* at 173. "A benefit is attributable to service performed if the employee acquires a right to that benefit as a result of the service performed." *Id.* at 219. The Court notes in *Moro* that it reaches the same result as it did in *Hughes v. State of Oregon*, 314 Or 1 (1992), where it concluded that PERS legislation was unconstitutional "as it related to PERS retirement benefits accrued or accruing for work performed before the effective date of that [law]." *Moro* at 213.

In my understanding, the Tier One money match benefit is attributable to the employee's work performed through 2003; it is not attributable to any work performed thereafter. The money match benefit is calculated based on the employee's life expectancy and the Tier One account balance at retirement. The account balance is based on employee and employer contributions through 2003 (after which contributions were terminated) and on net earnings or losses accruing on the account balance through the date or retirement. All other things being equal, an employee who retires from PERS employment on a particular date will receive the same money-match pension benefit whether the employee quits working for PERS employers after 2003 but short of retirement or the employee continues working for PERS employers through his or her eventual PERS retirement date. If an employee retires choosing a money match option for the employee's Tier One account, the only additional retirement benefits that employee will receive for any work performed after 2003 are those available under the separate "IAP" program, to which the COLA provisions at issue in *Moro* do not apply.

Since the benefits earned with respect to a Tier One money match option are only attributable to work performed before the effective dates of the 2013 legislation, under *Moro*, an employee who retires under that option should receive the two-percent COLA on the full Tier One account balance that has accrued on the date of retirement, even if that date is later than the legislation's effective dates. In other words, the retiring employee should receive the two-percent COLA on any growth that occurs in the Tier One account balance after the effective dates of the 2013 legislation.

I urge that any legislation or rulemaking implementing *Moro* clearly address how the two-percent COLA applies to the Tier One money-match option.

Thank you for considering this issue. Maintaining the real value of a pension poses a very significant challenge to current and future retirees given the compounding effect of inflation and the possibility that one might live 20 or 30 years after retirement.

Please add this letter to the record of any pertinent legislative or rulemaking proceedings that occur.

Sincerely,

Doug Crummé

Doug Crummé

c.c. Steve Rodeman

Krystal Gema
John Thomas
Pat West
Rhoni Wiswall
Daniel Rivas
Sen. Peter Courtney
Sen Sara Gelser
Rep. Tina Kotek
Rep. Dan Rayfield
Ellen F. Rosenblum
Gregory A. Hartman

From: Douglas Crummé [mailto:doug.crumme@gmail.com]
Sent: Monday, August 31, 2015 11:37 AM
To: Daniel Rivas
Subject: Proposed amendments to OAR 459-005-0510

August 31, 2015

Fr: Doug Crummé
7350 N.E. Sunflower Lane
Corvallis, Oregon 97330

To: Daniel Rivas
PERS Administrative Rules Coordinator
11410 S.W. 68th Parkway
Tigard, Oregon 97223

Re: Proposed Amendments to COLA rule, OAR 459-005-0510

Dear Mr. Rivas,

Please add these comments to the rulemaking record concerning the proposed amendments to OAR 459-005-0510. I make these comments as a private citizen and not on behalf of my government employer.

For reasons set out in my letter of May 5, 2015, earlier copied to the Board, the proposed amendments to OAR 459-005-0510 are inconsistent with *Moro v. State of Oregon*, 357 Or 167 (2015).

Moro holds that the pre-2013 version of ORS 238,360 applies to benefits accrued or accruing for work performed before the effective date of those amendments. *Id* at 231 and 232. The proposed amendments to OAR 459-005-0510 would shift the test for the applicable COLA from when the work giving rise to the contract rights was performed to when the benefits under those contract rights accrue or are accruing. Employees' contract rights to Tier 1 benefits are solely for work performed through 2003. Employees' contract rights to Tier 1 benefits are not for work performed after 2003 or after 2013.

If I understand correctly, the proposed amendments to OAR 459-005-0510 would pay a maximum 2-percent COLA on the whole monthly pension benefit to a Tier 1 employee who quit her PERS-covered job in 2013 but then did not retire for PERS purposes until 2015. Yet an employee who has continued to work in her PERS-covered job after 2013 and then both quits the job and retires under PERS in 2015 would receive a blended COLA of less than a maximum 2 percent. Under the core holding in *Moro*, both employees should receive the same 2-percent maximum COLA. The employee contract rights that *Moro* identifies trump the expediency considerations that the Board's staff cites in its July 31, 2015, memo to the Board discussing the proposed rule amendments.

Thank you for your consideration.

Sincerely,

Doug Crummé

Oregon

Kate Brown, Governor

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September 25, 2015

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Adoption of Assumed Rate Rule:
OAR 459-007-0007, *Assumed Rate*

OVERVIEW

- Action: Adopt modifications to Assumed Rate rule.
- Reason: Reflect the change in the assumed rate as adopted by the Board and specify the effective date for implementation of the change for PERS transactions.
- Policy Issue: No policy issues were identified.

BACKGROUND

At the July 31, 2015 PERS Board meeting, staff gave notice of rulemaking to implement any change to the assumed rate. The proposed rule sets forth the new assumed rate of 7.50% adopted by the Board.

The rule also specifies that the new assumed rate will be effective for PERS transactions with an effective date of January 1, 2016, consistent with this Board's policy decision from 2013 that changes to the assumed rate will be effective the following January 1, giving staff ample time to perform the necessary preparation, communicate with members and employers, and treating all members who retire in a year that a change is adopted equitable treatment, no matter which month they retire. The new assumed rate will be aligned with the new actuarial equivalency factors (AEFs), which will allow for a clear effective date for all transactions that involve calculations using both the latest year-to-date rate and AEF components.

SUMMARY OF MODIFICATIONS TO RULE SINCE NOTICE

The adopted assumed rate of 7.50% was added in section (3).

PUBLIC COMMENT AND HEARING TESTIMONY

A rulemaking hearing was held August 25, 2015, at 2:00 p.m. at PERS headquarters in Tigard. No members of the public commented on the rule. A second rulemaking hearing was held August 27, 2015, at 2:00 p.m. at Oregon State Archives in Salem. No members of the public attended. The public comment period ended September 1, 2015, at 5:00 p.m. Two public comments were received.

PERS received a public comment letter dated July 11, 2015, from Doug Crummé. A copy of his letter is included as Attachment 2. Mr. Crummé argues that the assumed rate should not be lowered and, if anything, it should be returned to 8%. He referenced Milliman's May 29, 2015

PowerPoint presentation which predicted a 75% chance that PERS would be 100% funded in the next 20 years, and added that PERS investments have consistently outperformed the market. Mr. Crummé also noted that PERS had previously maintained an 8% assumed rate for around 25 years, despite several investment downturns. Included in his letter is an attachment showing the 42-year average percentage earnings credited to member accounts.

In Milliman's July 31, 2015 presentation to the PERS Board, the actuaries concluded that the long-term future investment return assumption should be lowered based on data from the investment forecasts and review of the guiding principles presented. The Oregon Investment Council also supported a decrease in the assumed rate due to the collapse in bond yields and persistent downward pressures on interest rates. On July 31, the PERS Board decided to reduce the assumed rate to 7.50%, and the administrative rule must be updated based on the new adopted rate. Mr. Crummé's points may be relevant to the Board's July decision, but now since that decision has been made, the rule needs to be modified to reflect that decision.

On August 20, 2015, PERS received a public comment email from Marc Feldesman. A copy of his email is included as Attachment 3. Mr. Feldesman argues that an effective date of January 1, 2016 is too early, because actuarial factors associated with the assumed rate change and the change in mortality factors will not be known until the November Board meeting. He states that members should have at least one full month to evaluate the impact of rate and mortality changes to make an informed retirement decision. In a subsequent email, staff informed Mr. Feldesman that PERS' actuary, Milliman, intended to have the updated AEF tables ready no later than November 1 (earlier if possible). PERS will post the tables on the PERS website following receipt.

Examples from the impact of the rate changes considered were included in the Milliman presentations for both May and July's meetings. While members considering retirement cannot precisely determine the impact of these changes until the new tables are available, their order of magnitude is illustrated and shows how much longer a member needs to delay retirement to achieve roughly equivalent monthly benefits, if that is driving their decision to retire.

LEGAL REVIEW

The attached draft rule was submitted to the Department of Justice for legal review and any comments or changes are incorporated in the rule as presented for adoption.

IMPACT

Mandatory: Yes, the assumed rate determined by the Board must be adopted by rule and clearly describe the effective date of the assumed rate change on PERS transactions.

Impact: The proposed rule benefits members, employers, and staff by setting forth the assumed rate and a clear effective date for implementing a change in the rate.

Cost: There are no discrete costs directly attributable to specifying the assumed rate in rule.

RULEMAKING TIMELINE

July 15, 2015	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.

July 31, 2015	PERS Board notified that staff began the rulemaking process.
August 1, 2015	*Oregon Bulletin* published the Notice. Notice was sent to employers, legislators, and interested parties. Public comment period began.
August 25, 2015	First rulemaking hearing held at 2:00 p.m. at PERS in Tigard.
August 27, 2015	Second rulemaking hearing held at 2:00 p.m. at Oregon State Archives in Salem.
September 1, 2015	Public comment period ended at 5:00 p.m.
September 25, 2015	Board may adopt the permanent rule modifications.

BOARD OPTIONS

The Board may:

1. Pass a motion to "adopt modifications to the Assumed Rate rule, as presented."
2. Direct staff to make other changes to the rule or explore other options.

STAFF RECOMMENDATION

Staff recommends the Board choose Option #1.

- Reason: Reflect the change in the assumed rate as adopted by the Board and specify the effective date for implementation of the change for PERS transactions.

If the Board does not adopt: Staff would return with rule modifications that more closely fit the Board's policy direction if the Board determines that a change is warranted.

B.5. Attachment 1 – 459-007-0007, *Assumed Rate*
B.5. Attachment 2 – Public Comment Letter from Doug Crummé
B.5. Attachment 3 – Public Comment Email from Marc Feldesman

OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 007 – EARNINGS AND INTEREST DISTRIBUTION

459-007-0007

Assumed Rate

(1) The Board will review the assumed rate in odd-numbered years as part of the Board’s review and adoption of actuarial assumptions and methods.

(2) The Board may adopt a change in the assumed rate at any time. A change in the assumed rate is effective the first of the year following the Board’s adoption of the change.

(3) The assumed rate is set at *[7.75]* **<u>7.50</u>** percent, effective on January 1, *[2014]* **<u>2016</u>**.

Stat. Auth.: ORS 238.650 & 238A.450

Stats. Implemented: ORS Chapters 238 & 238A

July 11, 2015

Fr: Doug Crummé
7350 N.E. Sunflower Lane
Corvallis, Oregon 97330

To: John Thomas, Chair
Oregon PERS Board
11410 S.W. 68th Parkway
Tigard, Oregon 97223

Re: **Hold Steady on Assumed Earnings Rate**

Dear PERS Board,

Please maintain the current assumed earnings rate for the PERS fund over the next two years. Milliman appears to be recommending another cut this year. However, there has not been enough time to digest the *Moro* decision, the legislative session, the current growth outlook for the Oregon economy, and the investment outlook to jump into another change. Milliman's May 2015 materials estimate a 75 percent likelihood that the PERS fund will be 100-percent funded in the next 20 years.

Resist the urge to try to make up for *Moro*. The May 2015 Milliman materials still, in places, refer to the 2013 COLA changes as "reforms." But as we know, *Moro* identifies that those were largely an unconstitutional breach of contract. A herd mentality led to precipitous, unsound decisions in 2013.

Until 2013, PERS had steadily maintained an 8-percent assumed earnings rate for about 25 years, through several investment downturns. The rate was cut in 2013. Circumstances do not warrant yet another cut.

If any change is warranted, it should be a return to the 8-percent rate. Your 2012 publication, "*PERS: By The Numbers*," states on page 14 that, through 2011, "the 42-year average regular account earnings available for crediting equal[ed] 10.3 %." Since then, Tier One earnings available for distribution were 14.53 percent in 2012 and 15.76 percent in 2013. Returns were lower but still positive in 2014, with 7.05 percent IAP earnings.

Milliman notes that, in attempting to project future earnings, it does not take into account PERS' ability to outperform the market ("alpha"). It would be reasonable for you though to take PERS' demonstrated alpha into account in determining the assumed earnings rate for the next two years.

I write to you as a private citizen and not on behalf of my government employer. But please understand that Oregonians who work in government are weary of all of the recent changes that keep moving the goal line for retirement. Please hold steady on the assumed earnings rate this time around.

Please add this letter to any record that you make of your proceedings. Thank you.

Sincerely,

Doug Crummé

Doug Crummé

DC

cc. Krystal Gema
Pat West
Rhoni Wiswall
Lawrence Furnstahl
Steve Rodeman
Daniel Rivas
Gov. Kate Brown
Sen. Sara Gelser
Rep. Dan Rayfield

4. *System Revenue (continued)*

Regular account earnings available for crediting and actual distributions to Tier One and Tier Two member regular, variable, and Individual Account Program (IAP) accounts

	Earnings	Distributions (%)			
Year	Regular Account (%)	Tier One	Tier Two	Variable Account	IAP
1970	5.09	5.09		7.47	
1971	6.27	6.27		9.47	
1972	7.46	7.46		13.87	
1973	0.00	0.00		-16.39	
1974	0.00	5.50		-18.16	
1975	9.19	7.50		18.94	
1976	10.38	7.75		18.58	
1977	4.79	7.00		-2.62	
1978	7.37	7.00		7.03	
1979	12.32	11.09		20.40	
1980	16.92	13.00		29.94	
1981	4.37	7.50		-2.25	
1982	15.31	11.50		22.39	
1983	18.37	13.00		23.12	
1984	7.33	7.50		4.00	
1985	21.38	15.00		27.99	
1986	22.70	18.37		18.98	
1987	9.00	7.50		4.54	
1988	16.86	13.50		18.62	
1989	19.74	14.50		26.84	
1990	-1.53	8.00		-7.84	
1991	22.45	15.00		35.05	
1992	6.94	8.00		10.54	
1993	15.04	12.00		12.65	
1994	2.16	8.00		-1.76	
1995	20.78	12.50		29.92	
1996	24.42	21.00	24.42	21.06	
1997	20.42	18.70	20.42	28.87	
1998	15.43	14.10	13.63	21.45	
1999	24.89	11.33*	21.97	28.83	
2000	0.63	8.00	0.54	-3.24	
2001	-7.17	8.00	-6.66	-11.19	
2002	-8.93	8.00	-8.93	-21.51	
2003	23.79	8.00	22.00	34.68	
2004	13.80	8.00	13.27	13.00	12.77
2005	13.04	8.00	18.31**	8.29	12.80
2006	15.57	8.00	15.45	15.61	14.98
2007	10.22	7.97***	9.47	1.75	9.46
2008	-27.18	8.00	-27.18	-43.71	-26.75
2009	19.12	8.00	19.12	35.57	18.47
2010	12.44	8.00	12.44	15.17	12.13
2011	2.21	8.00	2.21	-7.80	2.15

* The PERS Board originally credited these accounts at 20%. That allocation was later reduced to 11.33% to comply with subsequent court decisions and legislative findings.

** Tier Two regular account crediting, based solely on earnings, was 13.74%. However, the PERS Board deployed $9 million from the Capital Preservation Reserve and $17 million from the Contingency Reserve that was added to Tier Two earnings. As a result, Tier Two was credited with a total of 18.31%. The dollars allocated from the reserves were originally withheld from Tier Two regular account earnings.

*** After crediting Tier One accounts with the assumed rate of 8%, member attorney fees in the *Strunk* case were deducted by order of the Oregon Supreme Court resulting in an effective crediting rate of 7.97%.

- 42-year average regular account earnings available for crediting equals 10.3%.
- 42-year average earnings credited to Tier One regular accounts equals 9.6%.
- 42-year average earnings credited to variable accounts equals 10.7%.
- Average earnings credited to Tier Two accounts since 1996 equals 9.4%.
- Average earnings credited to IAP accounts since 2004 equals 7.0%.
- In determining plan funding, the actuary must project future earnings of the PERS Fund. This is called the "assumed earnings rate." Historical assumed earnings rates are:
  - 5.0% for 1971 - 1974
  - 7.0% for 1975 - 1978
  - 7.5% for 1979 – 1988
  - 8.0% for 1989 – current.

From: Marc Feldesman [mailto:feldesmanm@gmail.com]
Sent: Thursday, August 20, 2015 6:48 PM
To: Daniel Rivas
Subject: Re: PERS Rulemaking Hearings for COLA and Assumed Rate rules

Regarding the assumed rate change, the timing for implementing all changes puts eligible retirees in an extremely difficult time bind. Although the final assumed rate will be known by 9/25/15, the actuarial factors associated with the assumed rate change and the change in mortality factors will not be known until the November Board meeting. It can hardly be considered adequate notice as members eligible to retire before the implementation will not know how the new changes will affect decisions to retire until they have barely a week to make an informed decision. This is hardly a fair timetable. Members ought to have at least one full month to evaluate the impact of rate and mortality changes before being forced to make an irrevocable and potentially costly decision.

Marc R. Feldesman

Oregon

Kate Brown, Governor

Public Employees Retirement System
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11410 S.W. 68th Parkway, Tigard, OR
Mailing Address:
P.O. Box 23700
Tigard, OR 97281-3700
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www.oregon.gov/pers

September 25, 2015

TO: Members of the PERS Board

FROM: Mary Dunn, Financial and Administrative Services Division

SUBJECT: *Moro* Implementation Project Update and Funding Request

PROJECT ACTIVITIES

Since the July 31, 2015 PERS Board meeting, the *Moro* Implementation Project team has been hard at work. We have determined the amount of underpaid COLA and the revised benefit for recipients based on members with all their service credit prior to May 1, 2013 (approximately 119,639 recipients). This group will receive, by October 31, 2015, a lump-sum retroactive payment of underpaid COLA minus their Supplementary Payment received last year. Their benefit payment will also be revised to reflect the corrected COLA starting November 1, 2015.

For recipients whose benefit includes service credit earned after May 1, 2013, PERS will apply a blended COLA based on the member's service credit before and after the effective date of the legislation challenged in *Moro*. Of this population, approximately 7,027 recipients will receive a lump-sum retroactive payment, minus Supplementary Payments and invoices for updated actuarial equivalency factors (AEF), by January 31, 2016. However, others in this group will only receive an invoice for their Supplementary Payment and AEF overpayments (there are approximately 3,807 recipients in this situation) as any COLA owed to them is not sufficient to cover these other changes. For both groups, their revised benefit should start with the February 1, 2016, payment.

As reported in July, updated AEF tables for retirements from January 1, 2014, through June 1, 2015, have been implemented. Now, PERS is recalculating all of the affected members, with the goal to have all of these recalculations completed by the end of 2015. We currently have about 39% recalculated and, based on the project plan, that's 10% more than scheduled. These AEF table updates were required because survivorship options originally used the reduced COLA assumption that was deemed invalid by the Supreme Court.

The next part of the project to begin is reprogramming PERS jClarety system for the blended COLA calculation. This will begin following final approval of the OAR presented for adoption at this meeting, and is planned to be completed in time for the 2016 COLA update next July, paid August 1, 2016. The remaining accounts impacted by the *Moro* decision are related to death and are on hold until after system programming is complete.

FUNDING SOURCE

The Oregon Supreme Court decided in the *Moro* case that PERS underpaid COLA from August 1, 2013, to October 1, 2015. This underpayment resulted from applying the challenged 2013 legislation to all recipients. Currently, the total amount of underpayments is calculated to be around $73.2 million. When the amount of the Supplementary Payments made in 2014 (about $9.8 million) are recovered as a deduction from the COLA payments, the net amount to be distributed to recipients is about $63.4 million.

In 2013, the PERS Board earmarked a total of $65 million from the Contingency Reserve to fund the Supplementary Payment. With PERS no longer making these payments, the $55.2 remaining (minus the 2014 payments) is now left unallocated in the reserve.

Per ORS 238.670(1)**,** the Contingency Reserve "may be used by the board for the following purposes:

(a) To prevent any deficit in the fund by reason of the insolvency of a participating public employer. Reserves under this paragraph may be funded only from the earnings on employer contributions made under ORS 238.225.
(b) To pay any legal expenses or judgments that do not arise in the ordinary course of adjudicating an individual member's benefits or an individual employer's liabilities.
(c) To provide for any other contingency that the board may determine to be appropriate."

As this restored COLA is being paid pursuant to a court judgment, the use of the Contingency Reserve to fund these COLA payment seems appropriate. Staff is requesting approval from the PERS Board to fund the restored COLA payments from the Contingency Reserve, in an amount approximating $63.4 million.

The Contingency Reserve was funded to its current level with this eventuality in mind. Other potential funding sources, such as the Benefit-in-Force Reserve, could be tapped for this purpose but would reduce the assets available to fund member benefits.

BOARD ACTION

1. Fund the restored COLA payment from the Contingency Reserve.
2. Have the funding for the restored COLA come from another source, such as the Benefit-in-Force Reserve.

STAFF RECOMMENDATION

Option 1, use of the Contingency Reserve to fund these restored COLA payments.

Oregon

Kate Brown, Governor

Public Employees Retirement System
Headquarters:
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September 25, 2015

TO: Members of the PERS Board

FROM: Yvette Elledge-Rhodes, Chief Operations Officer

SUBJECT: OPSRP Contribution Start Date – Funding Source

BACKGROUND:

At the first Employer Advisory Group (EAG) meeting on January 23, 2015, the main topic of discussion was PERS' guidance on when to start member and employer contributions for a new OPSRP member. Guidance has been administered inconsistently since OPSRP was created in 2004 based on changes in the understanding of the law by PERS and certain employers. The inconsistency has been further complicated by the variety of pay periods that employers use.

PERS and the EAG have discussed ways to resolve this disparity prospectively and retroactively. House Bill 3495 was passed in the 2015 session to change the contribution start date prospectively, starting on January 1, 2016, when that bill becomes effective. According to the new law, contributions will be due after the first full pay period following the initial membership date of an OPSRP member, which is similar to how Tier One and Tier Two plans were administered. The policy question remains of how to resolve the contributions and earnings that are due but not paid because of the inconsistent administration over prior years (2004-2015).

The chart below shows the estimated cost to make these data corrections, reflecting reported salary and earnings information thorough calendar year 2014. PERS will have actual costs when data corrections are made in the system.

As shown below, not all employers are affected equally.

Employer Group	Impacted vs. Total Employers	Impacted vs. Total Members	Contributions		Prior Years' Earnings	Totals
			Members	Employers		
State Agencies	86 of 106	16,301 of 46,954	$2,925,526	$3,396,023	$2,884,781	$9,206,330
Local Governments	254 of 488	14,804 of 69,518	$1,365,097	$2,170,426	$989,916	$4,525,439
OUS	8 of 8	317 of 23,562	$23,264	$25,466	$33,595	$82,325
OHSU	1 of 1	249 of 6,382	$21,972	$16,898	$27,628	$66,498
Community Colleges	17 of 17	2,491 of 27,424	$197,803	$124,580	$229,222	$551,606
Schools	238 of 295	4,103 of 145,477	$267,821	$393,229	$367,089	$1,028,140
Totals	**604 of 915**	**38,265 of 319,317**	**$4,801,483**	**$6,126,622**	**$4,532,231**	**$15,460,338**

As this chart shows, correcting these members' records will trigger significant payments for contributions and the associated earnings. To reiterate, the contributions owed are member contributions to the IAP and employer contributions toward the cost of the members' OPSRP Pension Program, and the earnings those contributions would have earned had they originally been paid when required. Resolving this matter is also challenging because the reasons for the misapplication of the law vary:

1. Inconsistency between administration of contribution start date under Tier One/Tier Two and OPSRP, which created another structure until HB 3495 becomes effective.
2. Changes in the understanding of the statute by PERS and certain employers as well as inconsistent communication to certain employers.
3. Employers have different reporting structures, systems, and pay periods that did not yield consistent results from month to month as new OPSRP members came on.
4. Inconsistent reporting by employers; i.e. local governments had different reporting rules than the other actuarial groups.

POLICY QUESTION:

After discussions over several meetings, the EAG has recommended that the Contingency Reserve be used to fund the costs for these prior contributions and earnings. Per ORS 238.670(1)(c), the Contingency Reserve may be used to provide for any other contingency that the board may determine to be appropriate.

Attached is testimony from EAG members in support of this request. We also received emails of support from the following members of the advisory group:

- Celia Heron, Policy Analyst, City of Portland
- Trudy Vidal, Financial Business Systems Manager, State of Oregon
- Debra Grabler, Chief Financial Officer, Tualatin Valley Fire & Rescue

The Contingency Reserve's current balance is $651,202,143.97. Of that total, $25,000,000 was previously allocated from employer account earnings to cover employer insolvencies, but staff has not had to use that portion of the reserve since it was established. Note also that the restored cost-of-living adjustment (COLA) payments required to comply with the Oregon Supreme Court's Moro decision are slated to be paid out of this reserve. In a separate memo at this board meeting, we report the estimate for those costs to be $63.4 million.

PERS staff need to have this policy question answered before embarking on clean up efforts to restore the contributions and earnings to member and employer accounts. As those amounts are determined, staff will proceed with invoicing employers, if the Board does not allocate funds from the Contingency Reserve for some or all of those costs, or generate charges to the Contingency Reserve for the amounts that the Board agrees to allocate there.

OPTIONS:

1. Retroactive costs are NOT funded by the Contingency Reserve. Impacted employers would be liable for previous contributions and earnings from the data corrections. PERS staff would determine the contributions and earnings due from each employer, and some individual employers would certainly challenge their responsibility for those costs.
2. Some retroactive costs are funded by the Contingency Reserve. For example, member and employer contributions are paid by employers; earnings are covered by the Contingency Reserve.
3. All retroactive costs (member and employer contributions plus earnings) are funded by the Contingency Reserve.

EAG RECOMMENDATION:

The EAG recommends Option #3; all retroactive costs for data corrections be funded by the Contingency Reserve. PERS staff can administer any of the three options listed above.

C.2. Attachment 1 – Supporting testimony from EAG Members

Association of Oregon Counties

September 10, 2015

PERS Board
PERS Headquarters
11410 SW 68th Parkway
Tigard, OR 97223

SENT via email

RE: Letter of support for Option 3 as contained in the PERS staff memo relating to the Contribution Start Date issue

Dear Members of the PERS Board,

The Association of Oregon Counties (AOC) strongly encourages the Board to adopt recommendation number 3 in the staff memo relating to the contribution start date issue, and fund all retroactive costs from the Contingency Reserve.

As you are aware, the original statutes for the PERS Oregon Public Service Retirement Plan (OPSRP) pension program were ambiguous with regard to contribution start date.[1] Compounding that problem was various PERS directives to employers. The letters to you from Marion and Linn Counties provide examples of what actually occurred, and I strongly encourage you to read those letters.

In the end, this issue was not caused by employers. It is the result of ambiguous state legislation, compounded by directives to employers from PERS, and subsequent reinterpretation of those statutes by PERS. Employers should not now be liable for that which they did not create, and could not control. Instead, this is an appropriate use of the Contingency Reserve, as outlined in the staff memo, and justified in the letters from Linn and Marion Counties.

AOC therefore ask the PERS Board to adopt Option 3. Thank you in advance for your consideration in this matter.

Sincerely,

Rob Bovett
Legal Counsel
Association of Oregon Counties

[1] AOC took the lead in successfully promoting 2015 legislation to clarify this ambiguity for future employees hired on and after January 1, 2016. 2015 Oregon Laws, Chapter 326 (Enrolled House Bill 3495). But it is the ambiguity in the original OPSRP statute, and any potential retroactive clarification and application, that gives rise to the issue now before the PERS Board.

CORVALLIS
ENHANCING COMMUNITY LIVABILITY

Finance Department
500 SW Madison Avenue
PO Box 1083
Corvallis, OR 97339-1083
Phone: (541) 766-6990
Fax: (541) 754-1729

September 9, 2015

OPERS Board Members

RE: OPSRP Contribution Start Date

I am a member of the OPERS Employer Advisory Group. We have met several times to discuss the OPSRP Contribution Start Date issue outlined in the staff report. I support OPERS staff recommendation for Option 3 – to use the Contingency Reserve to fund the member and employer contributions plus earnings to correct the problems with OPSRP Contribution Start Date. As noted in the staff report, this is a complex issue with no easy solution.

I participated in a number of meetings beginning in the early 2000s when the concept of monthly payroll reporting was first being considered by OPERS. I also participated in meetings between 2004 and 2006 when "earned when earned" vs. "earned when paid" concepts were discussed. Like some other employers, Corvallis' pay periods cross calendar month end, so the resolution of this issue was important to us to ensure we would be able to report data accurately to OPERS. These were difficult concepts and the alternatives considered were complicated; ultimately the EDX system program was changed to include work period begin and end date fields, with new instructions for employers to use these fields.

Corvallis has followed OPERS directions on how to report members' first month of contribution data. We have gone to annual trainings for payroll staff to ensure we were tracking and reporting hours worked correctly. We have been audited by OPERS staff to ensure we were following procedures correctly. Therefore, we were surprised when OPERS staff began to send invoices to revise how the first month of contributions would be treated. We found we owed monies for employee contributions, employer contributions, and of course lost earnings. We understand the need for OPERS to have accurate records, and correct contributions for each and every member, but at this point requiring the employers to pay these invoices for following the rules OPERS gave us seems wrong. In addition, during the time period under consideration, some employee groups in Corvallis have been employee paid contributors, so the City would be forced to collect the member contributions from employees, and in many cases former employees.

All of the information I have about this issue leads me to support the OPERS staff recommendation to use Contingency Reserves to make this correction.

Sincerely,

Nancy Brewer
Finance Director

Corvallis School District 509J

Olivia Meyers Buch, Director of Finance and Operations
1555 SW 35th Street • PO Box 3509J • Corvallis, Oregon 97339
541-757-3859 • www.csd509j.net • 541-757-3936 FAX

September 8, 2015

PERS Board of Trustees
11410 SW 68th Parkway
Tigard, OR 97223

Testimony in Support of EAG Recommendation RE: OPSRP Start Date Issue

Members of the PERS Board:

The Corvallis School District supports the Employer Advisory Group's recommendation that the PERS Contingency Reserve be used to fund the costs for the prior contributions and earnings related to the OPSRP start date issue. We feel that the complexity of this issue warrants this action and without it, the majority of PERS employers will be considered liable for previous contributions and earnings simply due to statute interpretation, inconsistent communication, and an ineffective reporting system.

I strongly encourage you to support the EAG's recommendation and take action to resolve this matter in a reasonable and equitable way.

Sincerely,

Olivia Meyers Buch

Olivia Meyers Buch
Director of Finance and Operations
Corvallis School District 509J

LEAGUE of Oregon CITIES

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September 11, 2015

Public Employee Retirement System Board
11410 SW 68th Parkway
Tigard, Or 97223

Re: Support for "Option 3" regarding contribution start date.

Dear PERS Board Members:

I am writing to express the support of the League of Oregon Cities for Option 3 as articulated by PERS staff in their memo regarding Oregon Public Service Retirement Plan (OPSRP)start date. This option will eliminate uncertainty that employers currently find themselves in and fund retroactive costs through the Contingency Reserve Fund.

When the OPSRP was installed in the statutes, there was an ambiguity as to when an employee should be enrolled in the plan. This ambiguity resulted in inconsistent advice to employers. Fortunately, the statutory confusion has been corrected by the passage of HB 3495 in 2015.

Vague and ambiguous statutes create for chaotic implementation. However, employers should not be held liable for situations they did not create and could not control. To that end, the League urges the adoption of "Option 3" so that cost will be covered by the Contingency Reserve Fund.

Respectfully,

Scott J. Winkels
Intergovernmental Relations Associate
League of Oregon Cities

LINN COUNTY GENERAL ADMINISTRATION

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Accounting/Payroll, Personnel Services, ITS, GIS, County Attorney,
General Services/Facilities/Property Management, Printing/Supplies, Veterans' Services

BOARD OF COMMISSIONERS
John K. Lindsey
Roger Nyquist
Will Tucker

RALPH E. WYATT
Administrative Officer

September 9, 2015

RE: OPSRP Contribution Start Date Issue

Members of the PERS Board:

Regarding to the PERS Staff memo titled the "OPSRP Contribution Start Date Issue" which is being considered by the Board, Linn County is in support of the staff's recommendation #3 - "All retroactive costs (member and employer contributions plus earnings) are funded by Contingency Reserve." Based on the information in the memo and outlined below, that recommendation provides the most rational resolution of the issue for all parties.

When OPSRP was created in 2004, the statue was not clear regarding a new member's contribution start date and a discussion started about using an "earned when earned" date or "earned when paid" date. During the following two years, there was confusion as to which date was correct. In 2006, Linn County was instructed by PERS to follow the contribution start date to match the beginning of the PERS membership date, which is defined as being six full months of employment. Linn County had been using that date since 2004 and, based on those instructions, has continued to do so.

Because Linn County and other employers relied upon and followed PERS directives as to how to determine the employee contribution start date for new OPSRP members, it seems reasonable that PERS pay for any cost incurred due to the revised interpretation of the related statutes with a one-time use of the PERS Contingency Reserve. Linn County urges the Board to approve that action.

Thank you for your consideration

Sincerely,

Ralph E. Wyatt
Linn County Administrative Officer

Cc: Linn County Board of Commissioners
Dave Alderman, Linn County Accounting Officer

Marion County
OREGON

FINANCE DEPARTMENT

BOARD OF COMMISSIONERS
Sam Brentano
Janet Carlson
Patti Milne

CHIEF ADMINISTRATIVE OFFICER
John Lattimer

CHIEF FINANCIAL OFFICER
Jeff White

Telephone:
(503) 589-3295

Fax:
(503) 373-4379

Date: September 1, 2015

To: OPERS Board Members

RE: OPSRP Contribution Start Date Issue

<u>In regards to the PERS Staff memo describing the "OPSRP Contribution Start Date Issue", Marion County is in support of PERS Staff recommendation #3 "All retroactive costs (member and employer contributions plus earnings) are funded by the Contingency Reserve."</u>

In 2014, Marion County was invoiced by PERS for additional benefits for two former Marion County employees who are part of the PERS Oregon Public Service Retirement Plan (OPSRP) pension program. PERS staff determined that additional benefits were due to these employees based on a recently revised PERS interpretation of Oregon Revised Statutes that identifies when OPSRP members are first eligible for contribution benefits. These invoices were received without any explanation or notification from PERS regarding the revised interpretation of statute.

The cost of this revised interpretation could be substantial for some employers. Marion County has estimated that its cost is approximately $250,000 to $300,000 for retroactive corrections back to 2004. This estimate does not include the cost of lost earnings on these contributions, the cost of staff time to make 11 years of corrections, or the increased cost to employers of this new interpretation of benefit eligibility.

While there has been much discussion as to the validity of the revised interpretation, the primary concern for Marion County is simply, "Who is going to pay for the cost of this new interpretation of the statute?"

From Marion County's perspective, <u>PERS is responsible for this cost</u> and should pay for the correction.

This position is based on the following description of how this issue was created:

1) When OPSRP was first implemented in 2004, the related statutes did not appear to be clear regarding the exact contribution start date (CSD) for calculation of member benefits. Marion County has on file several email communications with PERS that document the discussion regarding the contribution start date.

Marion County employees remember several employer-PERS meetings over a two-year period to discuss this particular issue, which centered primarily around two different interpretations as to the correct contribution start date.

2) When an employee begins working for a PERS covered employer for the first time, they become eligible for PERS membership on the first day of the month following six months of employment. For example, if an employee begins employment on January 15th, they become a PERS member on August 1st.

3) If an employer pay period begins on the first of the month (such as August 1st – which equals the membership date), there is no issue. However, if an employer pay period crosses over the beginning of the month, such as is frequently the case for Marion County, then the two separate interpretations of contribution eligibility create a difference in the contribution calculation. Using a Marion County pay period example of July 20, 2014 through August 2, 2014 with a pay date of August 12, 2014, for an OPSRP employee who becomes a PERS member on August 1, 2014, the differences between the two interpretations are as follows:

    a. Interpretation "A" - Marion County has followed this model, as instructed by PERS, which sets the contribution start date to match the beginning of the PERS membership date. In the example, PERS benefits would only be calculated for the two days after the employee became a member – August 1st and August 2nd. The pay period dates of July 20th through July 31st would not be included in the calculation of contribution benefits.

    b. Interpretation "B" – the recently revised interpretation from PERS which sets the contribution start date for benefits to include all work days paid on a pay check received after the membership date. In the example, PERS contributions would be calculated on the entire pay period July 20th through August 2nd, because the pay check for that pay period was received on August 12th, which is after August 1st, the membership start date. Pay period dates prior to the membership date, which were excluded in interpretation "A" are now to be included as part of interpretation "B". This interpretation adds 12 additional days to the contribution calculation and payment.

4) Sometime around 2006, PERS determined that the appropriate benefit calculation under the 2004 OPSRP legislation should be as described above in "A". Employers such as Marion County were actually instructed to pay benefits based on that interpretation back to 2004 (see attachment I). PERS then later implemented a system within their software for employers to use, which required (per their instructions) payroll information to be entered using "Work Period Begin and End Dates" to reflect this earnings basis. Marion County, along with other employers, has been following the direction given by PERS for the past 11 years and making the required contributions.

5) There is no confusion regarding the direction provided from PERS as found in attachment I. Both the language in the email, along with the picture clearly state that PERS interpretation was that no contributions were to be paid on any earnings prior to the membership date, regardless of when those earnings were paid.

6) Recently, legislation was passed that does provide a very clear statement on when contributions should begin for OPSRP members. This legislation was purposely drafted to match language found in statute that defines the contribution start date for Tier 1 and Tier 2 members. Ironically, the new language that will be effective in January 2016 defines a date that is closer to Interpretation "A" (how Marion County has been making the calculation) and less like Interpretation "B" (the calculation that PERS staff is now requesting be implemented for the period 2004-2015). The new requirement will be that the contribution start date will be the first date of a full pay period that begins after the membership date.

Because Marion County and other employers relied upon and followed PERS directive as to how to calculate the benefits for new OPSRP members, and made the required payments in good faith, it is only reasonable to expect PERS to be liable for any cost incurred due to its mistaken directives and recently revised interpretation of the related statutes. Those costs should include: 1) the benefit cost, 2) the lost earnings cost, and 3) employer staff time to make the required data corrections. PERS should require all employers to make the requested corrections and pay for all costs as a one-time use of the PERS Contingency Reserve so that this issue can be closed.

Sincerely,

Jeff D White

Jeff White
Chief Financial Officer
Marion County

ATTACHMENT I

From: "Gayle LANSKY" <Gayle.Lansky@state.or.us>
To: <SMAY@co.marion.or.us>
Date: 6/21/2005 1:06 PM
Subject: Re: ORS 238 vs ORS238A
Attachments: PERS Followup_1.doc

Hello Sharon,

It was nice to put a face with a name and voice last week.

I don't think Marsha Ehlers has had a chance to circulate my responses the questions posed at the meeting, so I am attaching them here.

I think we are both saying the same thing. The statute you reference says "Contributions for new members shall be made for those wages that are attributable to services performed by the employee during the first full pay period following the six months' period, without regard to when those wages are considered earned for other purposes under this chapter." What the statute is saying is, only wages relating to service performed AFTER the membership date are considered subject to contributions, even though other parts of the statute say that salary is earned when paid. This is specifically intended to exclude waiting time salary. I think the examples I have in the attachment will clarify as well. If not, please give me a call.

Best Regards,

Gayle Lansky
PERS/Memberhip & Employer Relations
(503) 603-7742

>>> "Sharon May" <SMAY@co.marion.or.us> 6/21/2005 12:11 PM >>>
Hi Gayle,

I enjoyed meeting you and others from PERS at the 6/16/2005 meeting at Multnomah County. Thank you for your answers to questions and the information regarding upcoming changes to reporting.

Have you had a chance to find out if 1st time contributions begin in the first full pay period of the month for OPSRP?

ORS 238.015 (1) Membership - had specific language stating first time contributions for wages attributable to services performed during the first full pay period on or after the effective date of membership. SB 427 in 2002.

ORS 238A - states the effective date of membership but doesn't seem to specifically address when, for new members, the 1st time contributions should begin.

Marion County ER 2009

Thanks,
Sharon

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Sharon May
Payroll Specialist
Marion County
smay@co.marion.or.us
503-588-5494
Fax#503-588-7980

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PERS followup to questions from PUG Meeting on 6/16/2005

Thank you for your questions and feedback at the PUG meeting yesterday. If I have missed any of the questions that arose during our conversation, please email me directly and I will send a response to Marsha Ehlers for distribution to your list.

New Statement Screens
I have attached the draft statement screens I mentioned and will be interested in your feedback. Please note that these screens represent a PRELIMINARY DRAFT of what we are planning, and will probably undergo revisions before the final release of the software enhancements. We will be seeking input about the screens during our next Employer Advisory Committee conference call on July 6 but I welcome your comments at any time.

Waiting Time Salary
At Thursday's meeting I answered a question about waiting time by stating that waiting time salary is not subject to contributions, even if it is paid after the eligibility date (Contribution Start Date). I have confirmed the accuracy to that statement. Waiting time salary is one of the few categories of salary that is considered "earned when earned," not "earned when paid."

Here are two examples taken directly from our business rules:

Example:

An employee was hired into an OPSRP IAP qualifying position on December 28, 2003.
The employee became eligible for membership in the OPSRP IAP Program on July 1, 2004.
The employer pay date is July 7, 2004 for the pay period that began on June 20, 2004 and ended July 2, 2004.
Employer reporting for the pay period ending July 2, 2004, will show two days of subject salary and eight days of waiting time non-subject salary.
The member is not eligible for contributions for the eight days of waiting time salary that was paid on July 7, 2004.

Example:

Employer's pay period:	02/23/2005 to 03/05/2005
Employee completes waiting period:	02/28/2005
Employee becomes an active member:	03/01/2005 (The first day of the month after the employee completes the waiting period. (BR 3023)

Employee has hours worked and wages earned for entire pay period.

←Waiting Time Non-Subject Salary→			←Subject Salary→	
08/16/2004 ↑	02/23/2005 ↑	02/28/2005 ↑	03/01/2005 ↑	03/05/2005 ↑
Hire Date	Beginning of pay period	Last day before active membership	Employee becomes active member	End of pay period
	←Pay Period→			

Severance Pay
Severance pay is a lump sum payment made to an employee in association with involuntary termination. Such payments are considered subject to employer (pension) contributions for PERS Tier One and Tier Two employees, as well as subject salary for Final Average Salary calculations. Severance Pay paid in a lump sum is not subject salary for member (IAP) or OPSRP pension contributions. Severance Pay should be reported in the Lump Sum Payments field on EDX.

Payments made more than 31 days after separation (the termination date submitted on EDX) are not subject to employer or member (IAP) contributions. Payments made more than 31 days after the employment relationship has ended should not be reported to PERS.

"Refreshing" Average Overtime Hours
Populating the fields in the "PERS Job Class" section on a DTL2 Wage and Contribution record causes what we call a "position" within a job segment to close, and a new position to open. If there is actually a change to either Job Class (police and fire to general service, for example), FTE Code (A teacher with a contract for 1700 hours becomes an administrator

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where 2000 hours is the FTE), or reevaluation of the Average Overtime Hours worked per year in a given position, the new information, along with the date the change was effective (Job`Grade Start Date) is warranted. If a new position has been created by entering a new Job Grade Start Date, suspended records related to the previous position will not post. Obstacles to records posting will be created if unnecessary information is entered in the fields.

Printed IAP Statements for non-Computer Literate Members
Currently PERS provides duplicate annual statements for members upon written request. IAP summary statements will be supplied to members upon request in the same fashion. Members should send their written request for an IAP statement directly to PERS and mark the envelope with the heading IAP SUMMARY STATEMENT.

Issue Management for New File Format
I will be recommending that PERS maintain a log of known problems, the PERS point-of-contact, any available work-arounds, and their expected dates of resolution on the Employer Website during the phase-in of the new file format. In addition, our capability for electronic communication with employers will greatly enhance our ability to alert employers to problems and their solutions. Other suggestions for quickly and efficiently disseminating information to employers will be appreciated.

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Oregon Community College Association
260 13th Street NE, Salem, OR 97301
Phone: (503) 399-9912 Fax: (503) 399-9286
*http://www.occa17.*com

September 11, 2015

Oregon Public Employee Retirement Board
P.O. Box 23700
Tigard, Oregon 97281

Dear Members of the PERS Board,

The Oregon Community College Association (OCCA), which represents Oregon's seventeen community colleges, urges your adoption of the recommendation of the PERS Employer Advisory Group to use the Contingency Reserve to pay all retroactive costs associated with the OPSRP contribution start date correction. All seventeen community colleges are impacted by this situation.

During the 2015 legislative session, OCCA joined the other PERS employers in supporting the passage of HB 3495. As you know, this bill addressed the prospective application of the OPSRP start date to make it clear in statute when member contributions should be started for OPSRP employees. This legislation could not, however, address the retroactive cost implications of resolving the member and employer contributions plus earnings due as a result of inconsistent crediting during the years from 2004 to 2015. PERS estimates that the cost to community colleges and their employees to resolve the shortfall to be more than $458,000.

Given the cost impact this will have on community colleges and their employees, we urge you to use your authority to allocate funds from the Contingency Reserve as allowed by ORS 238.670(1)(c) to cover all retroactive costs (member and employer contributions as well as earnings). We believe the use of the reserve is justified in that the inconsistency in administering OPSRP start date contributions resulted not from the fault of employers but due to ambiguous statutory language and guidance from PERS. The Contingency Reserve was created to address situations like this.

Sincerely,

Andrea Henderson

Andrea Henderson
Executive Director

Oregon
Kate Brown, Governor

Department of Administrative Services
Office of the Chief Operating Officer
155 Cottage Street NE
Salem, OR 97301
PHONE: 503-378-3106
FAX: 503-373-7643

September 15, 2015

PERS Board
PERS Headquarters
11410 SW 68th Parkway
Tigard, OR 97223

Dear PERS Board Members,

This letter is in response to Yvette Elledge-Rhodes' memo of 9/25/15 regarding the OPSRP contribution start date.

DAS supports Option 3, funding the retroactive costs from the contingency reserve. We believe this is appropriate because we have been following PERS guidance on the timing of first month contributions for state employees.
We do want to note that we are concerned with the PERS estimate of 16,301 State of Oregon member accounts being affected. In reviewing the 2014 OPSRP data, we found approximately 75% of state employees reaching their contribution start date required adjustments to their accounts. If the same percentage of employee accounts needing adjustments is true for all new state employees hired under OPSRP, the actual number of impacted employees could be closer to 30,000 than the 16,301 currently estimated.

I appreciate the opportunity to express my support for Option 3. Thank you for your consideration in this matter.

Sincerely,

Clyde Saiki
Acting COO & DAS Director

Oregon

Kate Brown, Governor

Public Employees Retirement System
Headquarters:
11410 S.W. 68th Parkway, Tigard, OR
Mailing Address:
P.O. Box 23700
Tigard, OR 97281-3700
(503) 598-7377
TTY (503) 603-7766
http://oregon.gov/pers

September 25, 2015

TO: Members of the PERS Board

FROM: Steven Patrick Rodeman, Executive Director

SUBJECT: Adoption of Actuarial Methods & Assumptions

BACKGROUND

Matt Larrabee and Scott Preppernau of Milliman will follow up their July 31, 2015 Board meeting presentation with a revised draft of the 2014 Experience Study. At the July meeting, the PERS Board directed the actuaries to apply the recommended economic and demographic assumptions. The PERS Board also directed the actuaries to move to use an assumed earnings rate of 7.5 percent in completing the December 31, 2014 system valuation. The new study is still in development as of the mailing date of these meeting materials. It will be distributed to the Board as soon as it is available.

The new version of the 2014 Experience Study will incorporate the PERS Board's direction from the July meeting. Pursuant to ORS 238.605, adoption of the 2014 Experience Study will fulfill the PERS Board's duty to direct the actuary to prepare a report evaluating the current and prospective assets and liabilities of the system and indicating its current and prospective financial condition. Once adopted, staff will complete the responsibility to distribute a summary of the report to all participating public employers by posting the study on the PERS website.

BOARD OPTIONS

The Board may:

1. Pass a motion to "adopt the 2014 Experience Study, as presented."
2. Direct the actuary or staff to make further revisions to the Experience Study methods and assumptions, and return with a revised study for the Board's consideration.

STAFF RECOMMENDATION

Staff recommends the Board choose Option #1.

- Reason: The 2014 Experience Study, as presented, reflects the methods and assumptions necessary to competently report the current and prospective assets and liabilities of the system and to indicate its current and prospective financial condition.

DECEMBER 31, 2014 ACTUARIAL VALUATION

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

September 25, 2015

Presented by:
Matt Larrabee, FSA, EA
Scott Preppernau, FSA, EA

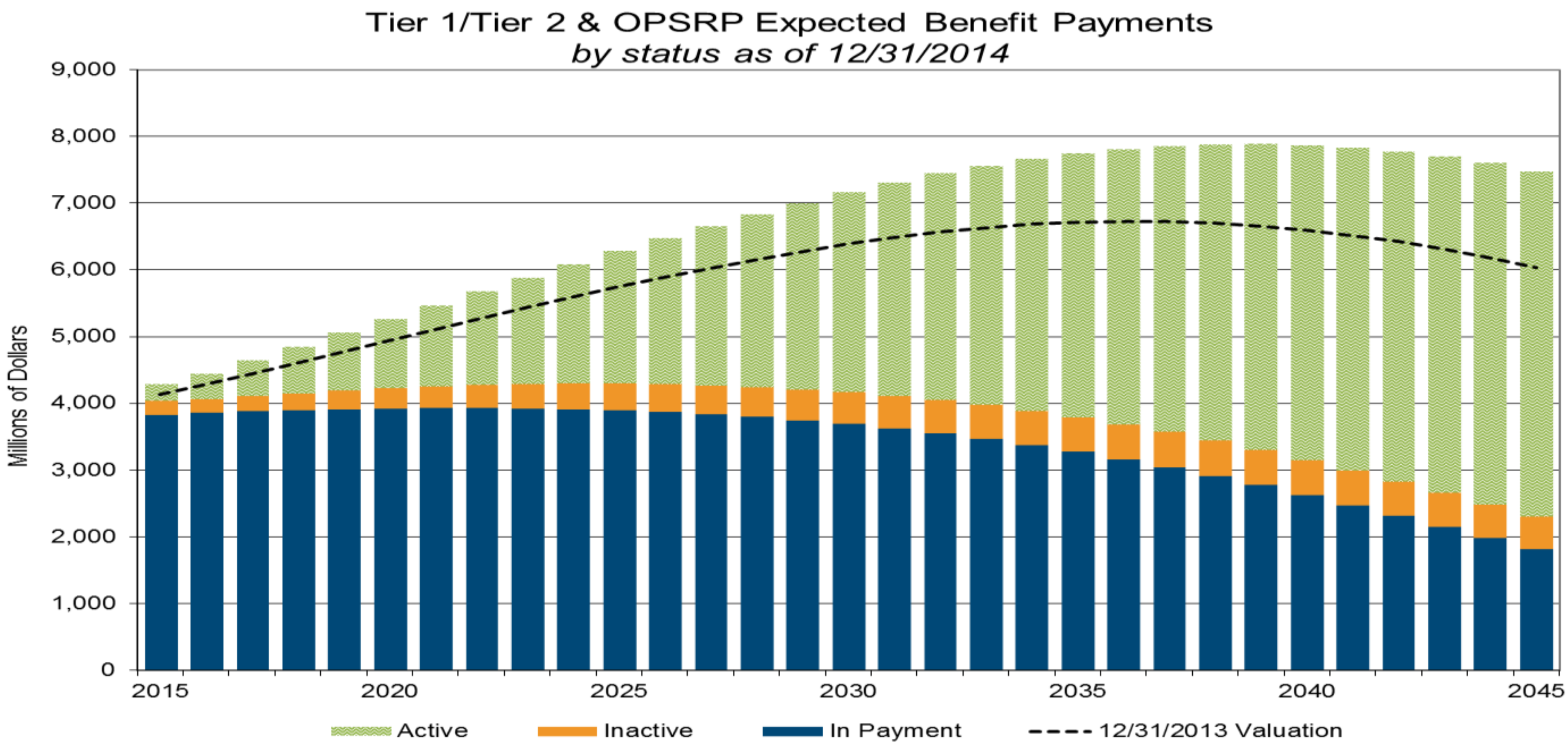
Milliman

Introduction

- Today we will review preliminary valuation results for the Tier 1/Tier 2 & OPSRP retirement programs
  - We will also review preliminary valuation results for the RHIA & RHIPA retiree healthcare programs
- All work is based on:
  - Asset levels and member demographics at year-end 2014
  - Updates to methods and assumptions from the 2014 Experience Study
  - Current benefit provisions, including the effects of Senate Bills 822 & 861 and the related ruling in the *Moro* case
- Results are advisory in nature
  - Indicate where 2017 - 2019 contribution rates would be if set today
  - Assess program funded status and unfunded actuarial liability (UAL)
- Action item for today: Adopt the 2014 Experience Study

Milliman

Projected Benefit Payments



The dotted line reflects the projected payments from the 12/31/2013 valuation, prior to the effects of *Moro* and updates to methods and assumptions

Milliman

System Funded Status and UAL

- System-total pension funded status is lower and unfunded actuarial liability is larger in the 12/31/2014 actuarial valuation than in the 12/31/2013 valuation

System-total pension funded status		
($ in billions)	**12/31/2013**	**12/31/2014**
Actuarial liability	$62.6	$73.5
Assets (excluding side accounts)	$54.1	$55.5
UAL (excluding side accounts)	$8.5	$18.0
Funded status (excluding side accounts)	86%	76%
Side account assets	$5.9	$5.9
UAL (including side accounts)	$2.6	$12.1
Funded status (including side accounts)	96%	84%

Sources of 2014 UAL Increase

Sources of 2014 UAL Increase	UAL Increase
Expected UAL increase/(decrease) during 2014	$0.2 B
2014 actual investment performance below assumption	$0.2 B
Moro adjustment to projected benefits	$5.1 B
Decrease in assumed return to 7.50%	$1.7 B
Update to mortality assumption	$1.8 B
All other assumption changes and actual experience	$0.5 B
Total	$9.5 B

- The *expected UAL increase/(decrease)* is the change, based on 12/31/2013 valuation results, projected to occur during 2014 if:
  - Actual 2014 experience mirrored 12/31/2013 valuation assumptions
  - No benefit or assumption changes made for the 12/31/2014 valuation
- 2014 increase reflects effects of temporary negative amortization

Milliman

Tier 1/Tier 2 Rate Pool Funded Status and UAL

- Funded status differs for the two large Tier 1/Tier 2 rate pools

($ in billions)	SLGRP	School Districts
Actuarial liability	$37.2	$27.1
Assets (excluding side accounts)	$28.5	$20.3
UAL (excluding side accounts)	$8.7	$6.8
Funded status (excluding side accounts)	77%	75%
Projected 2015 payroll	$5.4	$2.9
Ratio of UAL to payroll	161%	234%
Side account assets	$2.7	$3.1
UAL (including side accounts)	$6.0	$3.7
Funded status (including side accounts)	84%	86%

Overview of Rate Calculation Structure

- The *uncollared rate* is the theoretical contribution rate to reach 100% funded status over a specified amortization period if:
  - Contributions at that rate started on the actuarial valuation date, and
  - Actual future experience mirrors the actuarial valuation’s assumptions
- The rate collar sets a biennium’s *base rate*, limiting the base rate change when there is a large change in the uncollared rate
- Employers pay the *net rate*, which can differ from the base rate due to adjustments that fall into two major categories
  - Side account rate offsets for employers with side accounts
  - SLGRP charges/offsets (e.g., Transition Liability/Surplus)

Comments on Advisory 2017 – 2019 Rates

- No single employer pays the system-wide average rate
  - School district base rates are above the average
  - Most SLGRP employers' base rates are below the average
- Employers in a rate pool do not pay the pool average rate
  - Actual rates reflect employer-specific side account rate offsets and/or any SLGRP charges/offsets
  - SLGRP normal cost rates are specific to an employer's composition of member tier and job classification
- Rates shown do <u>not</u> include the effects of:
  - Individual Account Plan (IAP) contributions
  - Rates for the RHIA & RHIPA retiree healthcare programs
  - Debt service payments on pension obligation bonds

Uncollared Pension Rates – School Districts

Excludes Retiree Health Care, IAP Contributions, Rate Collar, Side Accounts

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Normal Cost	11.94%	7.33%	10.14%	13.72%	8.10%	11.28%
Tier 1/Tier 2 UAL	9.25%	9.25%	9.25%	17.54%	17.54%	17.54%
OPSRP UAL	0.61%	0.61%	0.61%	1.01%	1.01%	1.01%
Uncollared Rate	**21.80%**	**17.19%**	**20.00%**	**32.27%**	**26.65%**	**29.83%**
Increase				**10.47%**	**9.46%**	**9.83%**

The pool-average advisory collared net rates which employers would be charged are shown on a subsequent slide

[1] *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date.*

Uncollared Pension Rates – SLGRP Average

Excludes Retiree Health Care, IAP Contributions, Rate Collar, Side Accounts

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Normal Cost	13.66%	7.79%	11.13%	16.05%	8.63%	12.52%
Tier 1/Tier 2 UAL	5.71%	5.71%	5.71%	12.09%	12.09%	12.09%
OPSRP UAL	0.61%	0.61%	0.61%	1.01%	1.01%	1.01%
Uncollared Rate	**19.98%**	**14.11%**	**17.45%**	**29.15%**	**21.73%**	**25.62%**
Increase				**9.17%**	**7.62%**	**8.17%**

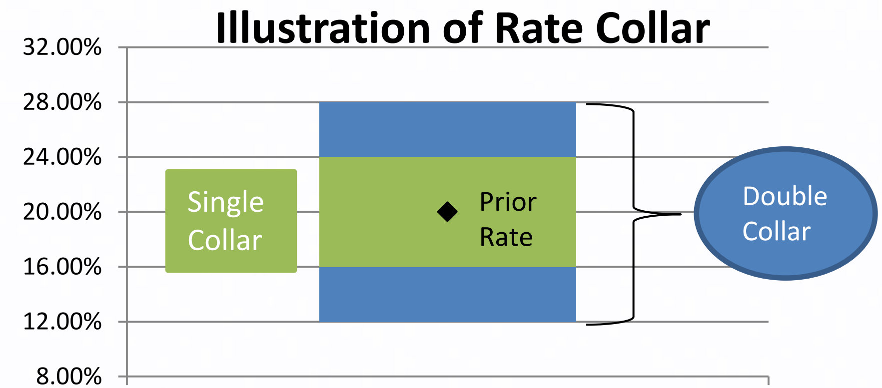
The pool-average advisory collared net rates which employers would be charged are shown on a subsequent slide

Employer-specific rates vary widely from the SLGRP average

1 Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date.

Current Rate Collar Design

- The maximum change typically permitted by the collar is:
  - 20% of the rate currently in effect (3% of payroll minimum collar width)
- If funded status is 60% or lower, the width of the collar doubles
  - 40% of rate currently in effect (6% of payroll minimum collar width)
- If the funded status is between 60% and 70%, the collar size is pro-rated between the initial collar and double collar level



- Collars are calculated at a rate pool level and limit the biennium to biennium increase in the UAL Rate for a given rate pool

Collared Pension Base Rates – School Districts

Excludes Retiree Health Care & IAP Contributions, Side Account Offsets

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Uncollared Rate	**21.80%**	**17.19%**	**20.00%**	**32.27%**	**26.65%**	**29.83%**
Collar Limitation	(0.00%)	(0.00%)	(0.00%)	(5.83%)	(5.83%)	(5.83%)
Collared Base Rate	**21.80%**	**17.19%**	**20.00%**	**26.44%**	**20.82%**	**24.00%**
Increase				**4.64%**	**3.63%**	**4.00%**

Barring benefit modifications or actual 2015 investment returns differing materially from assumption, final 2017 – 2019 base rates will be similar to advisory 2017 – 2019 base rates shown in this presentation

1 *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date*

Collared Pension Base Rates – SLGRP Average

Excludes Retiree Health Care & IAP Contributions, Side Account Offsets

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Uncollared Rate	**19.98%**	**14.11%**	**17.45%**	**29.15%**	**21.73%**	**25.62%**
Collar Limitation	(1.14%)	(1.14%)	(1.14%)	(6.26%)	(6.26%)	(6.26%)
Collared Base Rate	**18.84%**	**12.97%**	**16.31%**	**22.89%**	**15.47%**	**19.36%**
Increase				**4.05%**	**2.50%**	**3.05%**

Barring benefit modifications or actual 2015 investment returns differing materially from assumption, final 2017 – 2019 base rates will be similar to advisory 2017 – 2019 base rates shown in this presentation

Employer-specific base rates can vary widely from SLGRP average rates

1 *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date*

Collared Pension Net Rates – School Districts

Excludes Retiree Health Care & IAP Contributions

	12/31/2013[1] 2015 - 2017 Final			12/31/2014[1] 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[2]	Tier 1 / Tier 2	OPSRP	Weighted Average[2]
Collared Base Rate	**21.80%**	**17.19%**	**20.00%**	**26.44%**	**20.82%**	**24.00%**
Side Account (Offset)	(10.62%)	(10.62%)	(10.62%)	(10.61%)	(10.61%)	(10.61%)
Collared Net Rate	**11.18%**	**6.57%**	**9.38%**	**15.83%**	**10.21%**	**13.39%**
Increase				**4.65%**	**3.64%**	**4.01%**

Rates vary by employer, as only some employers have side accounts

Changes in side account offsets are not collared; actual 2015 returns below assumption would lower the offset, increasing the net rate

1 *For this exhibit, adjustments are assumed not to be limited due to an individual employer reaching a 0.00% contribution rate.*
2 *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date*

Milliman

Collared Pension Net Rates – SLGRP Average

Excludes Retiree Health Care & IAP Contributions

	12/31/2013[1] 2015 - 2017 Final			12/31/2014[1] 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[2]	Tier 1 / Tier 2	OPSRP	Weighted Average[2]
Collared Base Rate	**18.84%**	**12.97%**	**16.31%**	**22.89%**	**15.47%**	**19.36%**
Side Account (Offset)	(4.99%)	(4.99%)	(4.99%)	(4.94%)	(4.94%)	(4.94%)
SLGRP Charge/(Offset)	(0.80%)	(0.80%)	(0.80%)	(0.80%)	(0.80%)	(0.80%)
Collared Net Rate	**13.05%**	**7.18%**	**10.52%**	**17.15%**	**9.73%**	**13.62%**
Increase				**4.10%**	**2.55%**	**3.10%**

Rates vary by employer, as only some employers have side accounts and the SLGRP charge/(offset) varies by employer

Changes in side account offsets are not collared; actual 2015 returns below assumption would lower the offset, increasing the net rate

1 *For this exhibit, adjustments are assumed not to be limited due to an individual employer reaching a 0.00% contribution rate.*

2 *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date*

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2017-19 Contribution Increase Estimates

($ millions)	Projected 2015-17 Payroll*	(A) Projected 2015-17 Contribution	Projected 2017-19 Payroll*	(B) Projected 2017-19 Contribution	(B)- (A) Projected Contribution Increase
State Agencies	$5,580	$575	$5,980	$800	$225
School Districts	$5,950	$560	$6,370	$850	$290
All Others	$7,350	$870	$7,870	$1,155	$285
Total	**$18,880**	**$2,005**	**$20,220**	**$2,805**	**$800**

* Assumes payroll grows at 3.50% annually based on 12/31/2014 active member census, reflecting proportional payroll composition (Tier 1/Tier 2 vs. OPSRP) as of 12/31/2014

- Projected 2017-19 contributions are determined by applying collared net advisory rates calculated in the 12/31/2014 valuation
  - Projections do not reflect the effects of actual 2015 investment returns

Looking Toward the Rate-Setting Valuation

- This valuation is based on 12/31/2014 assets and demographic information and calculates:
  - Advisory 2017-19 uncollared contribution rates
  - Advisory 2017-19 collared base contribution rates
  - Advisory 2017-19 side account rate offsets
  - Advisory 2017-19 collared net contribution rates
- Actual 2017-19 contribution rates will be determined based on 12/31/2015 asset and demographic information

If actual 2015 investment returns are below the 7.5% assumed return, how will each of the four measures noted above change between the 12/31/2014 advisory valuation and the 12/31/2015 rate-setting valuation?

Effects of 2015 Returns – Uncollared Rates

- Any actual 2015 investment underperformance compared to the assumed 7.5% return would increase final uncollared 2017-19 rates determined in the 12/31/2015 rate-setting valuation
  - Actual underperformance has a “first dollar” effect on uncollared rates
- To illustrate, if actual 2015 return was +2.5%, the uncollared system-average rate would be estimated to increase by 2.1% of payroll for the 5% investment underperformance
- The relationship between investment underperformance and uncollared rate changes is approximately linear
  - In other words, 2.5% underperformance is estimated to impact the uncollared rate by approximately 1.05% of payroll, which is half of the effect of 5% underperformance

Effects of 2015 Returns – Collared Base Rates

- Any 2015 investment underperformance would affect a rate pool's collared 2017-19 base rates only if it affects the size of the rate collar
  - The collar size increases if a rate pool's funded status falls below 70%
  - For rate pools currently above 70%, actual underperformance leading to funded status below 70% will affect the collared base rate
- The actual return before the collar would widen varies by pool and depends on each pool's funded status
  - Current funded status: School districts (75%); SLGRP (77%)
- If returns are below the necessary threshold, the collar would progressively widen (and the collared base rate would increase) linearly until funded status was 60% or less

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Effects of 2015 Returns – Side Account Offsets

- Like uncollared rates, any actual 2015 investment underperformance will decrease final 2017-19 side account rate offsets determined in the 12/31/2015 rate-setting valuation
  - Actual underperformance has a “first dollar” effect on side account offsets
- Most current side account rate offsets are calculated to fully amortize at 12/31/2027 if future experience follows assumptions
  - This remaining amortization period, which is shorter than the 20-year amortization period used for amortizing new Tier 1/Tier 2 UAL, will lead to large changes in 2017-19 side account rate offsets if investment losses are material
- The relationship between investment underperformance and changes in side account rate offsets is approximately linear

Effects of 2015 Returns – Collared Net Rates

- How any actual 2015 investment underperformance affects an employer's final 2017-19 net rates determined in the 12/31/2015 rate-setting valuation depends on two factors
  - Which Tier 1/Tier 2 rate pool the employer participates in
  - Whether or not the employer has a side account
- The effect on net rates for employers without side accounts will be very similar or identical to the effect, if any, on collared base rates
- The effect on net rates for employers with side accounts will be the sum of two separate effects
  - Effect, if any, on collared base rates
  - Effect due to change in side account rate offset

12/31/2014 Retiree Health Care Valuation

- Two separate health care benefit subsidies are valued:
  – RHIA provides a $60 per month subsidy toward healthcare premiums for Medicare-eligible Tier 1/Tier 2 retirees
  – RHIPA provides Tier 1/Tier 2 state employees who retire prior to age 65 with an alternative to PEBB coverage until they reach Medicare eligibility
- OPSRP retirees are not eligible for either subsidy
- RHIA and RHIPA benefits historically have been less well funded than Tier 1/Tier 2 & OPSRP benefits
  – To help address that, in July 2009 the Board shortened the shortfall amortization period to ten years to improve funded status over less time
  – Rates reflecting the shorter amortization were first effective July 2011

12/31/2014 Retiree Health Care Valuation

- While funded status is low, RHIA and RHIPA liabilities combined are less than 1% of the pension liability
- In recent experience studies, we recommended restructuring the RHIPA participation assumption for future state government retirements
  - Assume higher participation rates for retirees eligible for the largest employer-paid subsidies
  - Rates reflecting new structure first went into effect in July 2015
- RHIPA warrants continued monitoring, as funded status is very low and subsidy payments are sensitive to actual participation levels

12/31/2014 Retiree Health Care Valuation

Unfunded Accrued Liability (UAL) and Advisory Contribution Rates

(amounts in millions)	RHIA		RHIPA*	
	12/31/2013	12/31/2014	12/31/2013	12/31/2014
Accrued Liability	$474	$468	$61	$71
Assets	$354	$396	$ 5	$ 7
UAL	$120	$72	$56	$64
Funded Status	**75%**	**85%**	**9%**	**10%**
Normal Cost Rate	**0.08%**	**0.07%**	**0.09%**	**0.11%**
UAL Rate	**0.45%**	**0.43%**	**0.35%**	**0.39%**
Total Rate	**0.53%**	**0.50%**	**0.44%**	**0.50%**

**State Agencies, OUS, and State Judiciary are the only employers who pay RHIPA rates*

RHIPA assets at year-end 2014 were only about 150% of 2014 RHIPA benefit payments

Contribution Rate & Funded Status Projections

- In November, we will return with contribution rate and funded status projections based on this valuation
  - They will use the latest year-to-date investment return information at the time the projections are made
- Projections will be developed using two types of models
  - Deterministic
    - Straight lines reflecting steady future actual investment returns
  - Stochastic
    - Probability distributions reflecting a wide variety of noisy scenarios for possible actual future investment returns
    - The modeling will include updates to the risk metrics we have used in projection studies conducted in previous years

Wrap Up / Next Steps

- Action item:
  - Adoption of the 2014 Experience Study
- Between now and the November meeting, we will:
  - Assist PERS in preparing financial reporting schedules
  - Develop updated actuarial equivalence factors for 2016
  - Issue system-wide and employer-specific valuation reports
- At the November meeting, we will:
  - Provide listings of employer-specific advisory 2017-2019 contribution rates
  - Update long-term rate and funded status projections

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Certification

This presentation summarizes key preliminary results of an actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014, for the Plan Year ending December 31, 2014. The results are preliminary in nature and may not be relied upon to, for example, prepare the System's Consolidated Annual Financial Report (CAFR). The reliance document will be the forthcoming formal December 31, 2014 System-Wide Actuarial Valuation Report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the System.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The PERS Board has the final decision regarding the appropriateness of the assumptions.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in the appendix of this report. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Certification

Milliman’s work is prepared solely for the internal business use of the Oregon Public Employees Retirement System. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman’s work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s):

(a) The System may provide a copy of Milliman’s work, in its entirety, to the System’s professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman’s work for any purpose other than to benefit the System.

(b) The System may provide a copy of Milliman’s work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman’s advice is not intended to be a substitute for qualified legal or accounting counsel. The signing actuaries are independent of the plan sponsors. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Appendix

Data Exhibits

	2014				2013
	Tier 1	Tier 2	OPSRP	Total	Total
Active Members					
Count	34,174	42,180	88,505	164,859	162,185
Average Age	55.2	49.6	42	46.9	46.9
Average Service	23.5	14.1	5.5	11.4	11.5
Average prior year Covered Salary	$ 70,668	$ 61,473	$ 44,604	$ 54,323	$ 52,688
Inactive Members[1]					
Count	16,521	15,924	10,118	42,563	41,213
Average Age	57.7	51.8	46.4	52.8	52.5
Average Monthly Benefit	$ 2,052	$ 707	$ 326	$ 1,138	$ 1,135
Retired Members and Beneficiaries[1]					
Count	121,545	8,428	1,532	131,505	128,117
Average Age	71.5	66.3	65.8	71.1	70.8
Average Monthly Benefit	$ 2,516	$ 791	$ 381	$ 2,381	$ 2,365
Total Members	**172,240**	**66,532**	**100,155**	**338,927**	**331,515**

[1] *Inactive and Retiree counts are shown by lives within each rate pool. In other words, a member is counted once per purposes of this exhibit, regardless of their service history for different rate pools.*

Valuation Process and Timeline

- Actuarial valuations are conducted annually
  - Alternate between “rate setting” and “advisory” valuations
  - The 12/31/2014 valuation is advisory
- The Board adopts rate setting valuation results, and rates go into effect 18 months subsequent to the valuation date

Valuation Date	Employer Contribution Rates
12/31/2013 →	July 2015 – June 2017
12/31/2015 →	July 2017 – June 2019

Two-Year Rate-Setting Cycle

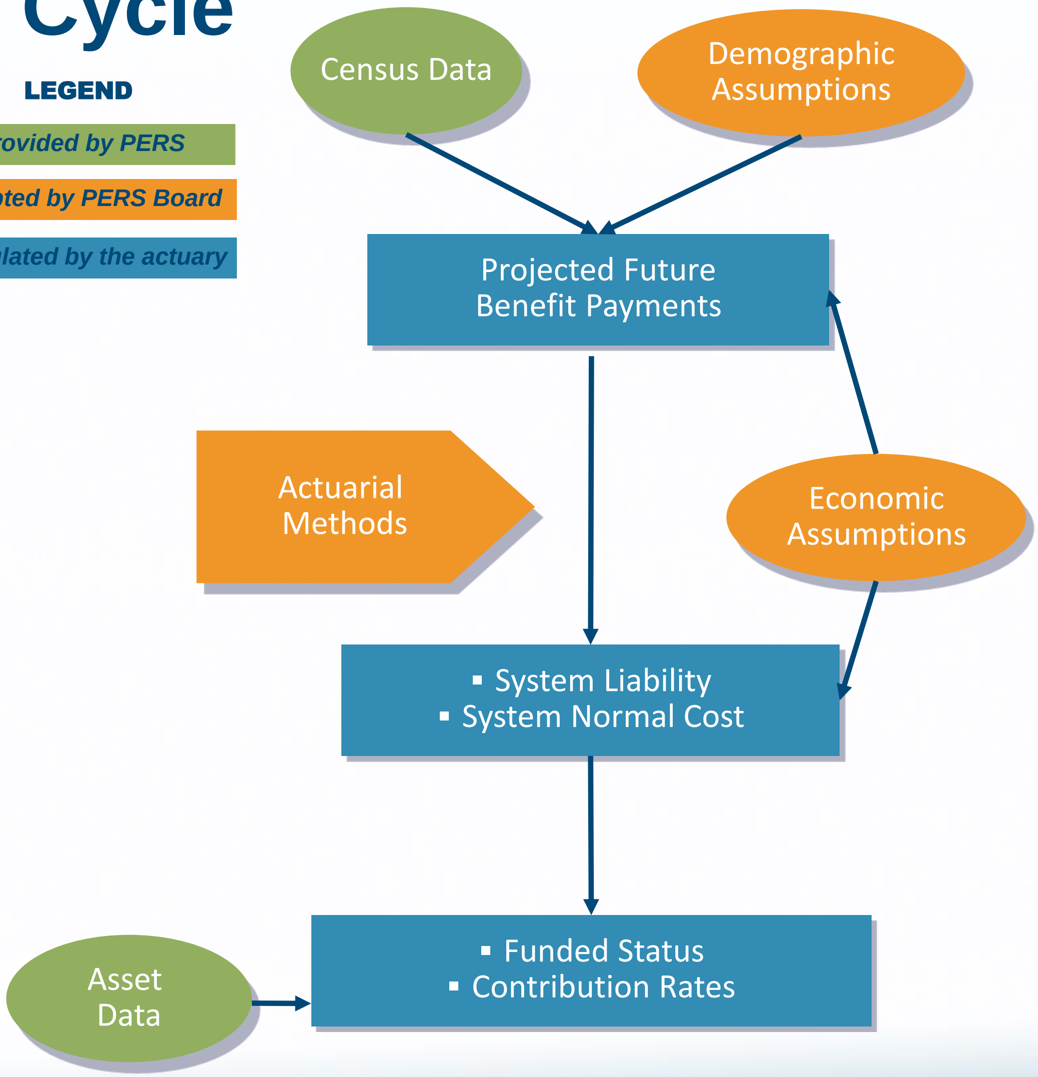
- July 2015: Assumptions & methods adopted by Board in consultation with the actuary
- September 2015: System-wide 12/31/14 "advisory" actuarial valuation results
- November 2015: Advisory 2017-2019 employer-specific contribution rates
- July 2016: System-wide 12/31/15 "rate-setting" actuarial valuation results
- September 2016: Disclosure & adoption of employer-specific 2017-2019 contribution rates

LEGEND

Provided by PERS

Adopted by PERS Board

Calculated by the actuary



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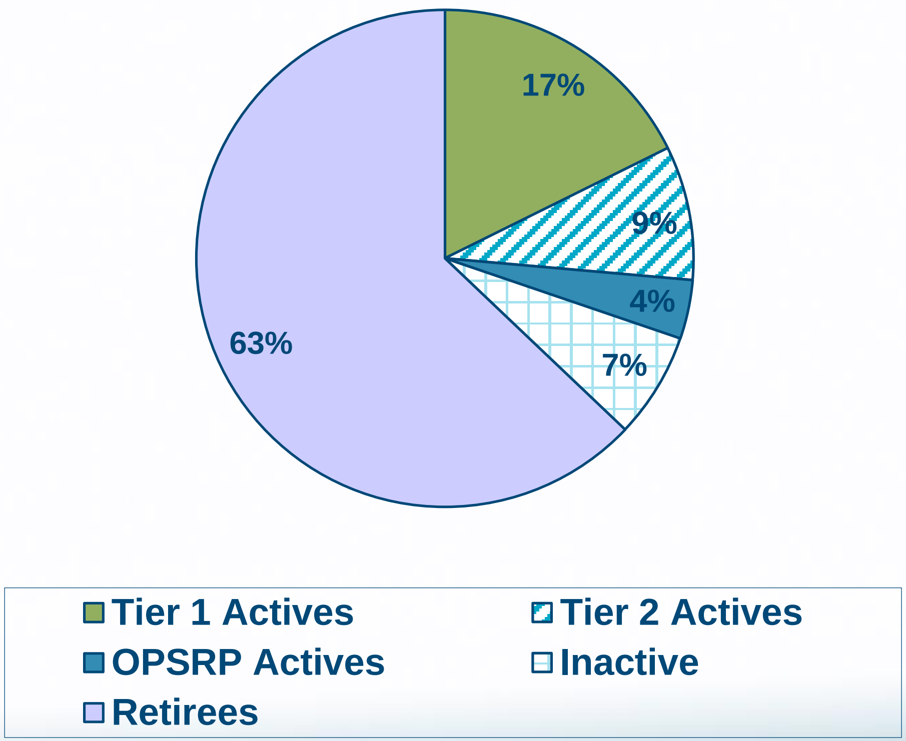
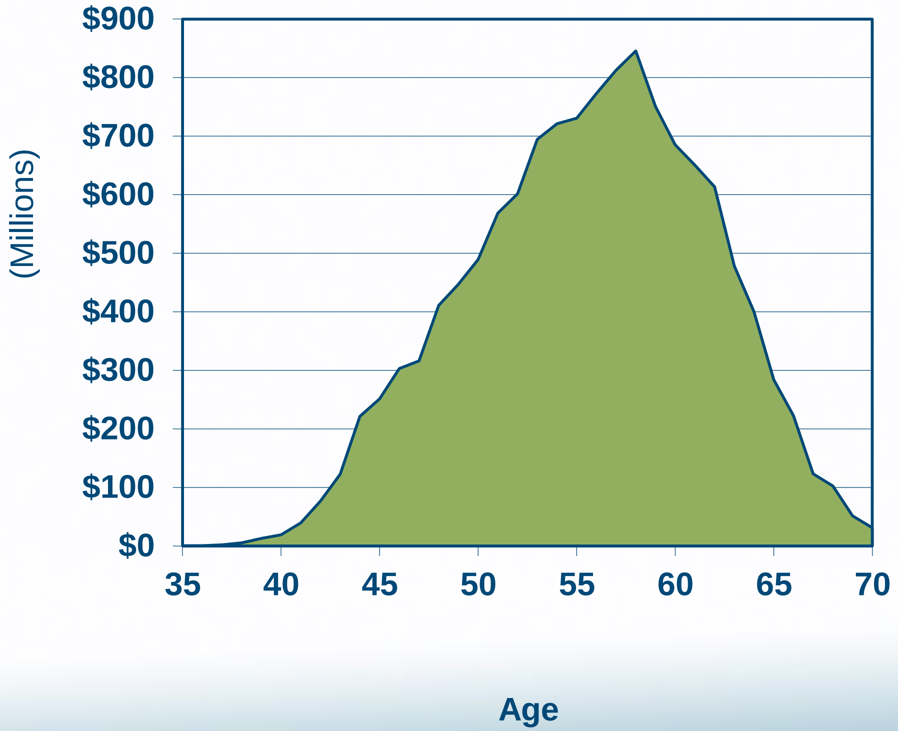
Division of Accrued Liability by Category

12/31/2014 Tier 1/Tier 2 and OPSRP Actuarial Accrued Liability

Actuarial Accrued Liability by Member Category



Age Distribution of Tier 1 Active Liability



Uncollared Pension Rates – System-Wide

Excludes Retiree Health Care, IAP Contributions, Rate Collar, Side Accounts

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Normal Cost	13.18%	7.79%	10.94%	15.41%	8.63%	12.30%
Tier 1/Tier 2 UAL	6.63%	6.63%	6.63%	13.68%	13.68%	13.68%
OPSRP UAL	0.61%	0.61%	0.61%	1.01%	1.01%	1.01%
Uncollared Rate	**20.42%**	**15.03%**	**18.18%**	**30.10%**	**23.32%**	**26.99%**
Increase				**9.68%**	**8.29%**	**8.81%**

The advisory collared net rates which employers would be charged are shown later in this presentation

[1] *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date.*

Collared Pension Base Rates – System-Wide

Excludes Retiree Health Care & IAP Contributions, Side Account Offsets

	12/31/2013 2015 - 2017 Final			12/31/2014 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[1]	Tier 1 / Tier 2	OPSRP	Weighted Average[1]
Uncollared Rate	**20.42%**	**15.03%**	**18.18%**	**30.10%**	**23.32%**	**26.99%**
Collar Limitation	(0.72%)	(0.72%)	(0.72%)	(6.25%)	(6.25%)	(6.25%)
Collared Base Rate	**19.70%**	**14.31%**	**17.46%**	**23.85%**	**17.07%**	**20.74%**
Increase				**4.15%**	**2.76%**	**3.28%**

The collar limits increases that would be effective July 2017

Barring benefit modifications or 2015 investment returns significantly above assumption, final 2017 – 2019 base rates will be similar to advisory 2017 – 2019 base rates shown in this presentation

[1] *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date.*

Collared Pension Net Rates – System-Wide

Excludes Retiree Health Care & IAP Contributions

	12/31/2013[1] 2015 - 2017 Final			12/31/2014[1] 2017 - 2019 Advisory		
	Payroll			Payroll		
	Tier 1 / Tier 2	OPSRP	Weighted Average[2]	Tier 1 / Tier 2	OPSRP	Weighted Average[2]
Collared Base Rate	**19.70%**	**14.31%**	**17.46%**	**23.85%**	**17.07%**	**20.74%**
Side Account (Offset)	(6.38%)	(6.38%)	(6.38%)	(6.37%)	(6.37%)	(6.37%)
SLGRP Charge/(Offset)	(0.47%)	(0.47%)	(0.47%)	(0.47%)	(0.47%)	(0.47%)
Collared Net Rate	**12.85%**	**7.46%**	**10.61%**	**17.01%**	**10.23%**	**13.90%**
Increase				**4.16%**	**2.77%**	**3.29%**

Rates vary by employer, as only some employers have side accounts

Changes in side account offsets are not collared

1 *For this exhibit, adjustments are assumed not to be limited due to an individual employer reaching a 0.00% contribution rate.*
2 *Weighting based on the pool's payroll levels (Tier 1/Tier 2, OPSRP) as of the valuation date*

Appendix

Actuarial Basis

Data

We have based our calculation of the liabilities on the data supplied by the Oregon Public Employees Retirement System and summarized in the data exhibits on the preceding slides.

Assets as of December 31, 2014, were based on values provided by Oregon PERS reflecting the Board's earnings crediting decisions for 2014.

Methods / Policies

Actuarial Cost Method: Entry Age Normal, adopted effective December 31, 2012.

UAL Amortization: The UAL for OPSRP, and Retiree Health Care as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period 20 year period for OPSRP and a closed 10 year period for Retiree Health Care. For the Tier 1/Tier 2 UAL, the amortization period was reset at 20 years as of December 31, 2013. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over the amortization period (20 years for Tier/Tier 1, 16 years for OPSRP, 10 years for Retiree Health Care) from the odd-year valuation in which they are first recognized.

Appendix

Actuarial Basis

Methods / Policies (cont'd)

Contribution rate stabilization method: Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) are confined to a collar based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Expenses: Tier 1/Tier 2 administration expenses are assumed to be equal to $33.0M, while OPSRP administration expenses are assumed to be equal to $5.5M. The assumed expenses are added to the respective normal costs.

Actuarial Value of Assets: Equal to Market Value of Assets excluding Contingency and Tier 1 Rate Guarantee Reserves. The Tier 1 Rate Guarantee Reserve is not excluded from assets if it is negative (i.e. in deficit status).

Assumptions

Assumptions for valuation calculations are as described in the 2014 Experience Study for Oregon PERS and presented to the PERS Board in July 2015.

Provisions

Provisions valued are as detailed in the 2013 Valuation Report, except as modified by the Supreme Court decision in *Moro v. State of Oregon*.

Appendix

Blended COLA

Moro Decision

The Oregon Supreme Court decision in *Moro v. State of Oregon* stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. According to the Court, PERS members who earned benefits before and after the effective date "will be entitled to receive during retirement a blended COLA rate that reflects the different COLA provisions applicable to benefits earned at different times."

The Supreme Court did not articulate a specific a methodology for determining a member's blended COLA. For purposes of the results in this presentation, the blending was based on the creditable service earned before and after the effective date.

The example below illustrates this blended COLA approach for a member with 30 years of service at retirement, 20 of which were earned prior to the effective date of the SB 861 COLA.

Annual Benefit COLA Applies to:	COLA prior to SB 822 & 861	SB 861 COLA	Blended COLA
<$60,000	2.00%	1.25%	(20/30) x 2.00% +(10/30) x 1.25% = 1.75%
>$60,000	2.00%	0.15%	(20/30) x 2.00% +(10/30) x 0.15% = 1.38%

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

2014 Experience Study

Prepared by:

Milliman, Inc.

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September 23, 2015

Board of Trustees
Oregon Public Employees Retirement System

Re: 2014 Experience Study – Oregon Public Employees Retirement System

Dear Members of the Board:

The results of an actuarial valuation are based on the actuarial methods and assumptions used in the valuation. These methods and assumptions are used in developing employer contribution rates, disclosing employer liabilities pursuant to GASB requirements and for analyzing the fiscal impact of proposed legislative amendments.

This experience study report has been prepared exclusively for the Oregon Public Employees Retirement System (PERS) and its governing PERS Board (Board). **The study recommends to the Board the actuarial methods and assumptions to be used in the December 31, 2014 and 2015 actuarial valuations of PERS.**

Except where otherwise noted, the analysis in this study was based on data for the experience period from January 1, 2011 to December 31, 2014 as provided by PERS. PERS is solely responsible for the validity, accuracy and comprehensiveness of this information; the results of our analysis can be expected to differ and may need to be revised if the underlying data supplied is incomplete or inaccurate.

Milliman’s work is prepared solely for the use and benefit of the Oregon Public Employees Retirement System.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries and, for the analysis of the RHIPA program, healthcare actuaries. Milliman’s advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. Assumptions related to the healthcare cost inflation rates for the RHIPA retiree healthcare program discussed in this report were determined by Milliman actuaries qualified in such matters.

Sincerely,

Matt Larrabee, FSA, EA, MAAA	Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary	Principal and Consulting Actuary

Table of Contents

1. Executive Summary

This experience study report has been prepared exclusively for the Oregon Public Employees Retirement System (PERS) and the PERS Board (Board) in order to analyze the system's experience from January 1, 2011 through December 31, 2014 and to recommend actuarial methods and assumptions to be used in the December 31, 2014 and 2015 actuarial valuations of PERS.

A brief summary of the recommended method and assumption changes contained in this report as well as items reviewed at the May 2015 and/or July 2015 Board meetings follows:

Actuarial Methods

- No changes recommended for most actuarial methods, including actuarial cost method, amortization method, and rate collar.

Allocation Procedures

- When allocating accrued liability for Tier 1/Tier 2 active members who have earned service with multiple PERS employers, base 75% of the allocation on service with each employer (100% for police & fire members) and base the rest on the member account balance associated with each employer. These assumptions have both increased 5% since the prior experience study. This movement illustrates the continued migration of projected future Tier 1/Tier 2 retirement benefits away from the Money Match calculation, which is based on account balances, toward the ongoing Full Formula approach, which is based on final average salary.

Economic Assumptions

- Lower the inflation assumption from 2.75% per year to 2.50% per year, which in turns lowers the annual system payroll growth assumption from 3.75% per year to 3.50% per year.
- Lower the investment return assumption from the current assumption of 7.75% per year. Based on the current target asset allocation of the Oregon PERS Fund, analyses under three different sets of capital market assumptions indicate the best estimate of future expected returns falls between 7.00% and 7.50%. At its July 2015 meeting, the Board selected an assumed return of 7.50%.
- Add an explicit assumption regarding administrative expenses for Tier 1/Tier 2.
- Update the assumed health cost trend rates.

Demographic Assumptions

- Adjust the healthy mortality assumption to reflect an updated mortality improvement scale for all groups.
- Adjust retirement rates for most groups to more closely align with recent and expected future experience.
- Increase the merit component of the salary increase assumption for all members based on observations of the last eight years of experience.
- Update pre-retirement termination of employment assumptions for two member categories.
- Slightly lower assumed rates of duty disability for general service members.
- Increase the Tier 1 unused vacation cash out assumption for most categories.
- Adjust the Tier 1/Tier 2 unused sick leave assumption for three groups to more closely reflect recently observed experience.
- Decrease the healthy participation assumption for the RHIA retiree healthcare program.
- Increase the RHIPA participation assumption for longer-service members.

2. Actuarial Methods and Allocation Procedures

Overview

Actuarial methods and allocation procedures are used as part of the valuation to determine actuarial accrued liabilities, to determine normal costs, to allocate costs to individual employers and to amortize unfunded liabilities. The following Board objectives were considered in developing the actuarial methods and allocation procedures:

- Transparency of shortfall and funded status calculations
- Predictable and stable employer contribution rates
- Protection of the plan's funded status to enhance benefit security for members
- Equity across generations of taxpayers funding the program
- Actuarial soundness - crafting policy that will fully fund the system if assumptions are met
- Compliance with GASB (Governmental Accounting Standards Board) requirements

The actuarial methods used for the December 31, 2013 actuarial valuation and the changes recommended for the December 31, 2014 and 2015 actuarial valuations are shown in the table below.

Method	December 31, 2013 Valuation	December 31, 2014 and 2015 Valuations
Cost method	Entry Age Normal (EAN)	No change
UAL Amortization method	UAL amortized as a level percent of combined Tier 1/Tier 2 and OPSRP payroll	No change
UAL Amortization period	▪ UAL bases – Closed amortization from the first rate setting valuation in which experience is recognized – Tier 1/Tier 2 – re-amortized over 20 years effective December 31, 2013 – OPSRP – 16 Years – RHIA/RHIPA – 10 years ▪ Newly established side accounts – Aligned with the new Tier 1/Tier 2 base from the most recent rate-setting valuation ▪ Newly established transition liabilities or surpluses – 18 years from the date joining the SLGRP (State & Local Government Rate Pool)	No change
Asset valuation method	Market value	No change
Exclusion of reserves from valuation assets	Contingency Reserve, Capital Preservation Reserve, and Tier 1 Rate Guarantee Reserve (RGR) excluded from valuation assets. RGR is not excluded from valuation assets when RGR is negative (i.e., when the RGR is a deficit reserve).	No change

Method	December 31, 2013 Valuation	December 31, 2014 and 2015 Valuations
Allocation of Benefits in Force (BIF) Reserve	The BIF is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool.	No change
Rate collar	Change in base contribution rate limited (i.e., collared) to greater of 20% of current base rate or 3% of payroll. Size of collar doubles if funded percentage excluding side accounts falls below 60% or increases above 140%. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale. Exclude RHIA and RHIPA (retiree medical) rates from the rate collar calculation.	No change
Liability allocation for actives with several employers	▪ Allocate Actuarial Accrued Liability 30% (5% for police & fire) based on account balance with each employer and 70% (95% for police & fire) based on service with each employer	Change allocation to 25% (0% for police & fire) based on account balance and 75% (100% for police & fire) based on service with each employer.
	▪ Allocate Normal Cost to current employer	No change

The methods or procedures are described in greater detail on the following pages.

Actuarial Cost Method

The total cost of the program, over time, will be equal to the benefits paid less investment earnings and is not affected directly by the actuarial cost method. The actuarial cost method is simply a tool to allocate costs to past, current or future years and thus primarily affects the timing of cost recognition.

The December 31, 2013 valuation used the Entry Age Normal (EAN) method, which allocates costs as a level percentage of payroll across the full projected working career. EAN is the required method under the recently implemented GASB 67 and 68 financial reporting standards, though the Board could choose to use a different method for employer contribution rate calculations. Oregon PERS adopted EAN for all purposes with the December 31, 2012 valuation. Employing a consistent method for both financial reporting and contributions is more understandable to interested parties as only one set of liability and normal cost calculations will be made for each employer. The EAN approach is widely used in the actuarial and public plan sponsor community because it provides a realistic estimate of the long-term costs of a retirement program as a level percentage of payroll if all assumptions are met. The benefits of this method are unchanged from when the Board previously adopted it, and thus we recommend continuing to use the EAN cost method.

Amortization Method

Unfunded Actuarial Liability

The unfunded actuarial liability (UAL) is amortized as a level percentage of combined payroll (Tier 1/Tier 2 plus OPSRP) in order to maintain more level contribution rates as payroll for the closed group of Tier 1/Tier 2 members declines and payroll of OPSRP members increases. We recommend this methodology continue.

The UAL is currently amortized over the following closed periods as a level percent of projected payroll from the first rate-setting valuation in which the experience is recognized:

- Tier 1/Tier 2 – 20 years
- OPSRP – 16 years
- RHIA/RHIPA – 10 years

As part of a collection of method changes made with the 2012 Experience Study, the Board made a policy decision to re-amortize all existing Tier 1/Tier 2 shortfall (unfunded actuarial liability or UAL) at the December 31, 2013 rate-setting actuarial valuation. Gains and losses between subsequent rate-setting valuations will be amortized as a level percentage of payroll over a closed 20 year period from the valuation in which they are first recognized.

Side Accounts and Transition Liabilities/Surpluses

Prior to the 2010 Experience Study, side accounts and transition liabilities/surpluses were amortized over the period ending December 31, 2027. To better match the amortization periods for new side accounts and new transition liabilities with the amortization of the Tier 1/Tier 2 UAL and to avoid issues related to a shortening amortization period, as part of the 2010 Experience Study the PERS Board adopted the following amortization procedures which are not tied to a fixed date:

- Newly established side accounts are amortized over the same period as the new Tier 1/Tier 2 UAL base from the most recent rate-setting valuation. For example, a side account created in July 2015 would be amortized to December 31, 2033, aligned with the Tier 1/Tier 2 UAL base created in the December 31, 2013 valuation.

- New transition liabilities/surpluses are amortized over the 18 year period beginning when the employer joins the SLGRP. This amortization period aligns with the last Tier 1/Tier 2 amortization base established as an independent employer.

We recommend no change to the amortization method or periods of side accounts and new transition liabilities/surpluses.

Asset Valuation Method

Effective December 31, 2004, the Board adopted market value as the actuarial value of assets, replacing the four-year smoothing method previously used to determine the actuarial asset value, which is used for shortfall (UAL) calculations. Although asset smoothing is a common method for smoothing contribution rates in public sector plans, the smoothed asset value does not provide a transparent measure of the plan's funded status and UAL. Market value provides more transparency to members and other interested parties regarding the funded status of the plan. Instead of smoothing assets, a rate collar method (described below) is used to smooth contribution rates.

We recommend no change to the asset valuation method.

Excluded Reserves

Statute provides that the Board may establish Contingency and Capital Preservation reserve accounts to mitigate gains and losses of invested capital and other contingencies, including certain legal expenses or judgments. In addition, statute requires the establishment and maintenance of a Rate Guarantee or Deficit reserve to fund earnings crediting to Tier 1 member regular accounts when actual earnings are below the investment return assumption selected by the Board.

The Contingency and Capital Preservation reserves are excluded from the valuation assets used for employer rate-setting calculations. We recommend no change to the treatment of the Contingency and Capital Preservation reserves.

The Rate Guarantee Reserve (RGR) was positive as of December 31, 2013, but can become negative (in deficit status) if, over time, the required crediting on Tier 1 member accounts exceeds the investment earnings on those accounts. The RGR was negative from the December 31, 2008 valuation to the December 31, 2012 valuation. All else being equal, excluding a negative reserve increases the level of valuation assets used in employer rate-setting calculations. This occurs because subtracting a negative amount is mathematically equivalent to adding a positive amount of the same magnitude. If the negative reserve was larger in absolute value than the sum of the other reserves, this approach would lead to the actuarial value of assets used in shortfall (UAL) calculations being larger than the market value of assets.

As part of the 2010 Experience Study, the Board decided to only exclude the RGR from assets when it is in positive surplus position, and to not subtract a negative RGR (which would increase the actuarial value of assets) when it is in deficit status. We recommend this treatment of the RGR continue.

Rate Collar Method

Effective December 31, 2004, a rate collar method was adopted that limits biennium to biennium changes in contribution rates to be within a specified "collar". The existing rate collar method restricts the change in an employer's "base" Tier 1/Tier 2 contribution rate (i.e., the rate before contemplation of side account rate offsets or rate adjustments for any pre-pooled obligations) to the greater of 20 percent of the current rate or

3% of payroll. If the funded status excluding side accounts is less than 60% or greater than 140%, the size of the rate collar is doubled. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

The rate collar is applied for each employer (or rate pool) prior to any adjustments to the employer contribution rate for side accounts, transition liabilities, or pre-SLGRP pooled liabilities. The rate collar only applies to employer contribution rates for pension benefits. Rates attributable to RHIA and RHIPA (retiree medical) programs are not subject to the collar.

Liability Allocation for Actives with Several Employers

Over the course of a member’s working career, a member may work for more than one employer covered under the Tier 1/Tier 2 program. Since employer contribution rates are developed on an individual employer basis, the member’s liability should be allocated between such a member’s various Tier 1/Tier 2 employers. If all of the member’s employers participate in the same rate pool, the allocation has no effect on rates, but if the employers participate in different pools or are independent, the allocation can have an impact on the different employers’ rates.

When a member retires, PERS allocates the cost of the retirement benefit between the employers the member worked for based on the formula that produces the member’s retirement benefit. If the member’s benefit is calculated under the Money Match approach, the cost is allocated in proportion to the member’s account balance attributable to each employer. If the member’s benefit is calculated under the percent of final average pay Full Formula approach, the cost is allocated in proportion to the service attributable to each employer.

In the period prior to the 2003 system reforms and shortly thereafter, the vast majority of retirement benefits were calculated under Money Match, so the member liability in valuations prior to December 31, 2006 had been allocated in proportion to the member’s account balance attributable to each employer. With no new member contributions to Tier 1/Tier 2, however, this procedure meant no liability was allocated to employers for service after December 31, 2003 in the valuation. As Money Match benefits became less dominant and retirements with Full Formula benefits become more prevalent, a change in the procedure to allocate liability among employers was warranted.

Effective with the December 31, 2006 valuation, a change was made to allocate a member’s actuarial accrued liability among employers based on a weighted average of the Money Match methodology, which utilizes account balance, and the Full Formula methodology, which utilizes service. The methodologies were weighted according to the percentage of the system-wide actuarial accrued liability for new retirements projected to be attributable to Money Match and Full Formula, respectively, as of the next rate-setting valuation. For the December 31, 2012 and December 31, 2013 valuations, the Money Match method was weighted 70 percent for general service members and 5 percent for police & fire members.

The table below shows a summary of the portion of the total actuarial liability for Tier 1/Tier 2 active members estimated to be attributable to Money Match benefits at the most recent published valuation date and how that proportion is projected to change in subsequent years.

December 31,	General Service	Police & Fire
2013	27%	4%
2014	25%	3%
2015	24%	3%
2016	22%	2%

Since the next rate-setting valuation is the December 31, 2015 valuation, we recommend the Money Match method be weighted 25 percent for general service members. This weighting will continue to be reviewed with each experience study and updated as necessary. For police & fire members we recommend the allocation be based entirely on the Full Formula approach, now that the Money Match portion is less than 5% and declining.

As in prior valuations, the member's normal cost will continue to be assigned to his or her current employer.

3. Economic Assumptions

Overview

Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations,* provides guidance on selecting economic assumptions used in measuring obligations under defined benefit pension plans. ASOP No. 27 suggests that economic assumptions be developed using the actuary's professional judgment, taking into consideration past experience and the actuary's expectations regarding the future. The process for selecting economic assumptions involves:

- Identifying components of each assumption and evaluating relevant data
- Considering factors specific to the measurement along with other general factors
- Selecting a reasonable assumption

Under ASOP No. 27, an assumption is considered reasonable if:

- It is appropriate for the purpose of the measurement,
- It reflects the actuary's professional judgment,
- It takes into account relevant historical and current economic data,
- It reflects the actuary's estimate of future experience, the actuary's observation of estimates inherent in market data, or a combination thereof, and
- It has no significant bias, except when provisions for adverse deviation are included and disclosed.

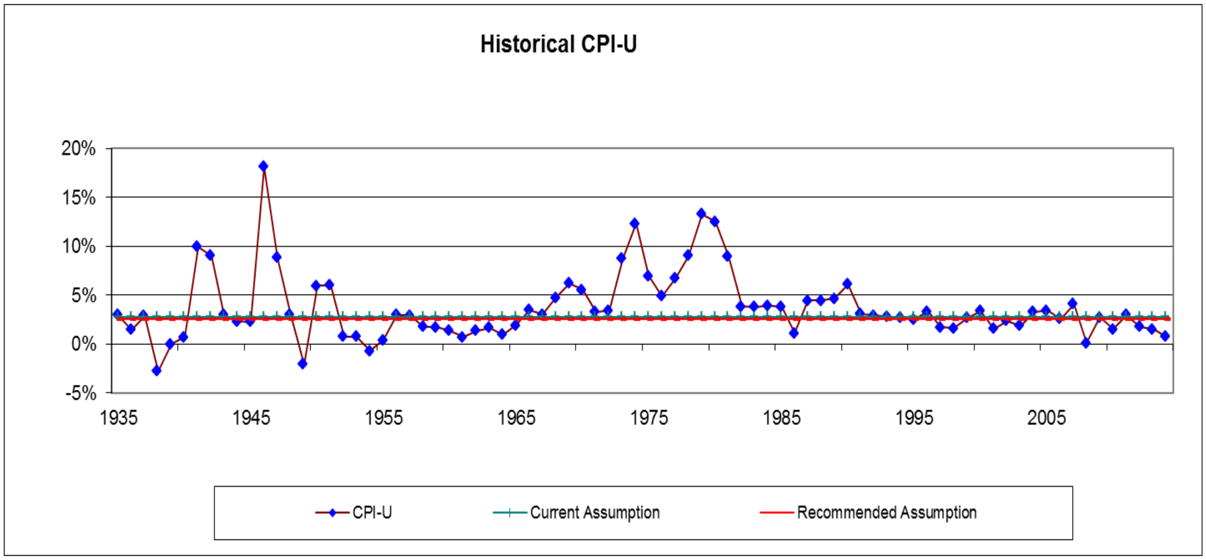
A summary of the economic assumptions used for the December 31, 2013 actuarial valuation and those recommended for the December 31, 2014 and 2015 actuarial valuations is shown below:

Assumption	December 31, 2013 Valuation	December 31, 2014 and 2015 Valuations
Inflation (other than healthcare)	2.75%	2.50%
Real wage growth	1.00%	No Change
Payroll growth	3.75%	3.50%
Regular investment return	7.75%	7.50% (selected by the Board at the July 2015 Board meeting)
Variable account investment return	Same as regular investment return	Same as regular investment return
Tier 1/Tier 2 administrative expenses	N/A	$33.0 million/year
OPSRP administrative expenses	$5.5 million/year	$5.5 million/year
Healthcare cost inflation rates		
▪ 2015 rate	5.90%	7.00%
▪ Ultimate inflation rate	4.70%	4.40%
▪ Year reaching ultimate rate	2083	2094

The recommended assumptions shown above, in our opinion, were selected in a manner consistent with the requirements of ASOP No. 27. Each of the above assumptions is described in detail below and on the following pages.

Inflation

The assumed inflation rate is the basis for all of the other economic assumptions. It affects other assumptions including payroll growth, investment return, and healthcare inflation.



In selecting an appropriate inflation assumption, we consider both historical data and the breakeven inflation rates inherent in current long-term Treasury Inflation Protection Securities (TIPS). The chart above shows the annual inflation rate for the years ending December 31 from 1935 through 2014 as reported by the Bureau of Labor Statistics. The mean and median annual rates over this period are **3.64** percent and **2.96** percent respectively.

Historical inflation rates vary significantly from period to period and may not be an indication of future inflation rates. With the development of a TIPS market, we can calculate an estimated breakeven inflation rate by comparing yields on regular Treasury securities to the yields on TIPS. The table below shows yields as of December 31, 2014, for 10-year and 30-year Treasury bonds and TIPS.

As of 12/31/2014	**10-Year**	**30-Year**
Treasury Yield	2.17%	2.75%
TIPS Yield	0.49%	0.83%
Breakeven Inflation	**1.68%**	**1.92%**

We also considered two other inflation measures in our analysis: Social Security's intermediate inflation projection of **2.54** percent over the period 2015-2025 (with an ultimate rate of 2.70 percent), and the Congressional Budget Office's projection of CPI of an average of **2.25** percent inflation over the period 2015-2025. These measures were taken from the 2014 versions of the OASDI and CBO reports, which were the most current available at the time the analysis was performed.

Based on the information shown above, we recommend lowering inflation assumption from the current level of 2.75 percent to 2.50 percent. Based on a combination of historical and market data and expert forecasts, our judgment is that **2.50** percent is an appropriate unbiased long-term assumption.

Real Wage Growth

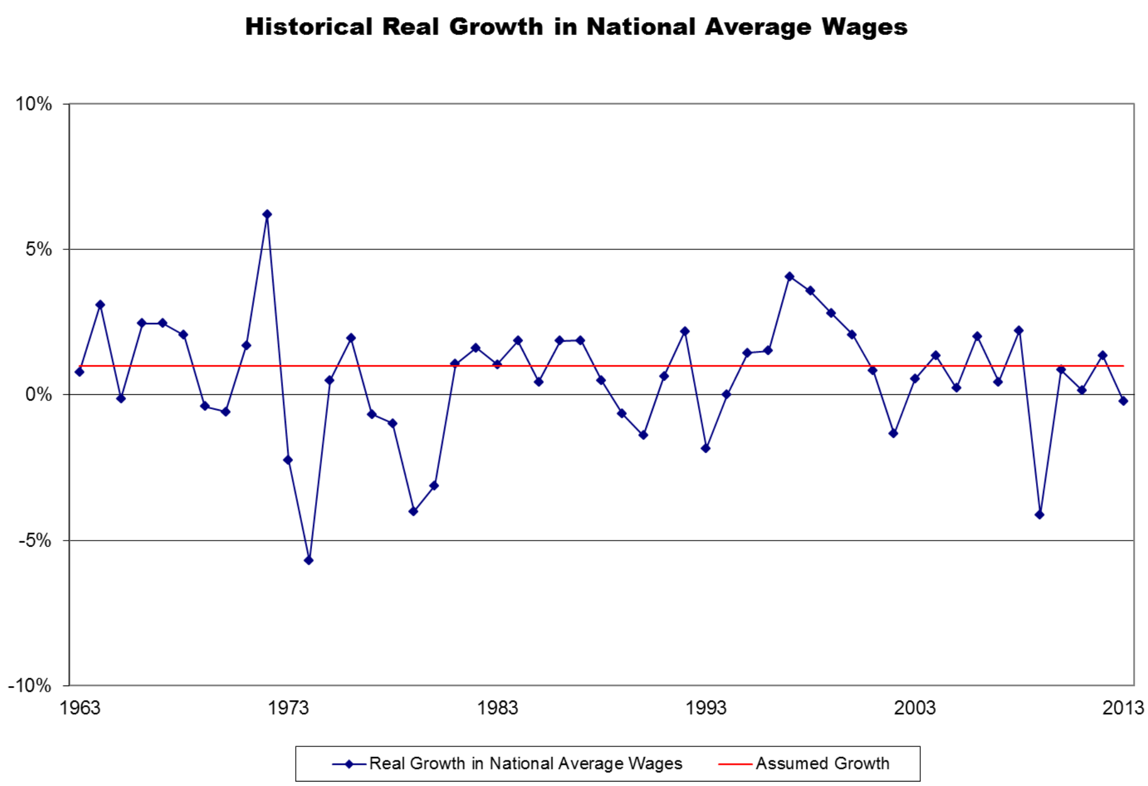
The expected salary growth assumption is the sum of three factors:

- Inflation,
- Real wage growth, and
- Merit and longevity wage growth.

Real wage growth represents the increase in wages above inflation for the entire group due to improvements in productivity and competitive pressures. Merit and longevity wage growth, in contrast, represent the increases in wages for an individual due to factors such as performance, promotion, or seniority.

Real wage growth combined with inflation represents the expected growth in total payroll for a stable population. Changes in payroll due to an increase or decline in the covered population are not captured by this assumption. The payroll growth assumption is used to develop the annual amount necessary to amortize the unfunded actuarial liability as a level percentage of expected payroll.

The chart below shows the real growth in national average wages over the past fifty years based on data compiled by the Social Security Administration.



While the change in any one year has been volatile, the change over longer periods of time is more stable as shown in the table below. However, the significant outlier result of a 4.1 percent productivity decrease in 2009 (measuring change in national average wages from 2008 to 2009) has a strong downward impact on the trailing averages shown in the table below. For example, the 10 year trailing average ending on December 31, 2008, is 1.11 percent.

Length of Period Ending December 31, 2013	Average Real Growth in National Average Wages
10 years	0.41%
20 years	0.97%
30 years	0.83%
40 years	0.40%
50 years	0.61%

We also considered the Social Security Administration's current long-term intermediate wage growth assumption of 1.13 percent in our analysis.

Based on the combination of historical data and forecasted future experience, we consider the current assumption of 1.00 percent to continue to be appropriate. We recommend no change to the assumption at this time.

Payroll Growth

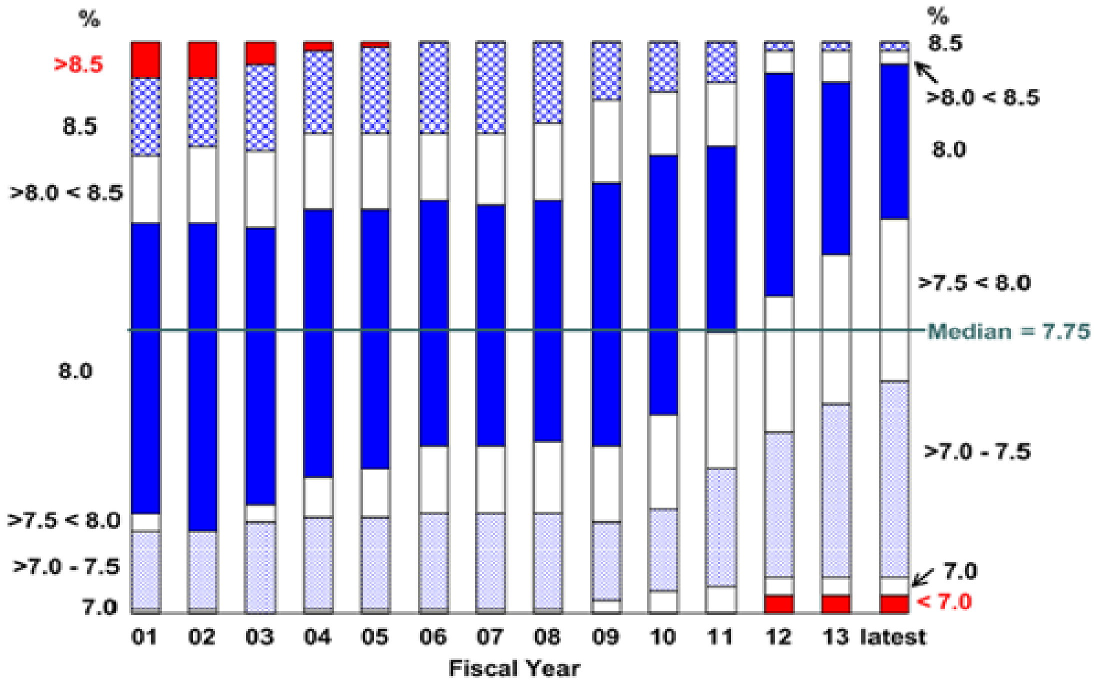
Payroll growth is the sum of inflation and real wage growth. Since we are recommending lowering the inflation assumption 25 basis point and making no change to the real wage growth assumption, the payroll growth assumption will be reduced from 3.75 percent to 3.50 percent.

Investment Return

The assumed rate of investment return is used to discount the future projected benefit payments from the retirement plan to the valuation date, to project interest credits on member accounts to retirement, to convert member accounts to a monthly retirement allowance under the Money Match formula, and to convert the retirement allowance to optional joint & survivor benefits. As such, it is one of the most important assumptions used in valuing the plan's liabilities and developing contribution rates. The assumption is intended to reflect the long-term expected future return on the portfolio of assets that fund the benefits.

To provide some perspective on this assumption, the chart below shows the assumptions used by the 126 largest US public sector systems in a regularly updated survey published by the National Association of State Retirement Administrators (NASRA). As can be seen from the chart (updated in NASRA's May 2015 Issue Brief), the Oregon PERS assumption of 7.75% used in the prior valuation is currently the median assumption for large US public sector systems. The majority of systems have investment return assumptions below 8%. The average (mean) return assumption is 7.68%. Given the consensus view among investment professionals regarding lower long-term expected returns for fixed income investments, we believe that this downward trend in the survey will continue in the future as systems periodically revisit their investment return assumptions.

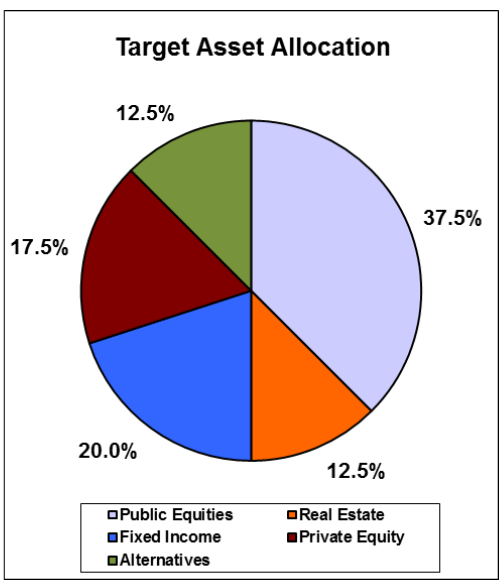
NASRA Public Fund Survey
Assumed Investment Return



Source: Compiled by NASRA based on Public Fund Survey

Regular Accounts

Based on the Oregon Investment Council's (OIC) Statement of Investment Objectives and Policy Framework for the Oregon Public Employees Retirement Fund revised as of December 3, 2014 and the revised allocation adopted at the June 3, 2015 OIC meeting, we understand the target asset allocation adopted by the OIC is as follows:



To develop an analytical basis for the Board's selection of the investment return assumption, we use long-term assumptions developed by Milliman's capital market assumptions team for each of the asset classes in which the plan is invested based on the OIC's long-term target asset allocation. Since the OIC uses broader asset classes than those for which Milliman's investment actuaries develop long-term return assumptions, we used OIC's description of each asset class to map it to the classes shown below. For example, the OIC's allocation to "alternatives" was distributed among hedge funds, real estate, and commodities based on the detail available. Each asset class assumption is based on a consistent set of underlying assumptions, including the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model. Based on the target allocation and investment return assumptions for each of the asset classes, our 50th percentile best estimate assumption is developed as follows:

Asset Class	Target Allocation	Annual Arithmetic Mean	20-Year Annualized Geometric Mean	Annual Standard Deviation
Core Fixed Income	8.00%	4.10%	4.00%	4.68%
Short-Term Bonds	8.00%	3.65%	3.61%	2.74%
Bank/Leveraged Loans	3.00%	5.69%	5.42%	7.82%
High Yield Bonds	1.00%	6.67%	6.20%	10.28%
Large/Mid Cap US Equities	15.75%	7.96%	6.70%	17.07%
Small Cap US Equities	1.31%	8.93%	6.99%	21.35%
Micro Cap US Equities	1.31%	9.37%	7.01%	23.72%
Developed Foreign Equities	13.13%	8.34%	6.73%	19.40%
Emerging Market Equities	4.13%	10.56%	7.25%	28.45%
Non-US Small Cap Equities	1.88%	9.01%	7.22%	20.55%
Private Equity	17.50%	11.60%	7.97%	30.00%
Real Estate (Property)	10.00%	6.48%	5.84%	12.00%
Real Estate (REITS)	2.50%	8.74%	6.69%	22.02%
Hedge Fund of Funds - Diversified	2.50%	4.94%	4.64%	8.09%
Hedge Fund – Event-driven	0.63%	7.07%	6.72%	8.90%
Timber	1.88%	6.60%	5.85%	13.00%
Farmland	1.88%	7.11%	6.37%	13.00%
Infrastructure	3.75%	8.31%	7.13%	16.50%
Commodities	1.88%	6.07%	4.58%	18.40%
Portfolio – Net of Investment Expenses	**100.00%**	**7.80 %**	**7.03%***	**13.27%**

**The model's 20-year annualized geometric median is 6.99%.*

Based on capital market expectations developed by Milliman.

We compared the expected return to the range of returns developed using a mean-variance model and the capital market assumptions of Milliman and Callan, the OIC's investment consultant. In addition, we modeled the returns projected for the OIC's asset allocation using the 10-year capital market assumptions from the 2014 Survey of Capital Market Assumptions published by Horizon Actuarial Services, LLC. Returns shown below are net of passive investment expenses. We assume that expenses incurred for active management are offset by additional returns gained from active management.

The table below compares the median of expected annualized returns calculated on a geometric basis for the Regular Account based on Milliman's and Callan's capital market assumptions, along with the average assumptions from the Horizon survey.

	Milliman	Callan	Horizon
Median annualized geometric return	6.99%	7.51%	7.25%
Assumed inflation	2.50%	2.25%	2.41%
Timeframe modeled	20 years	10 – 20 years	10 years

Based on the capital market outlooks modeled above, we believe the investment return assumption should be reduced from the current 7.75% assumption. An assumption between 7.00% and 7.50% would be reasonable, based on the forward-looking return expectations of the investment professionals considered, and before any potential active management adjustments. Based on discussion at the July 31, 2015 PERS Board meeting, the Board adopted an assumption of 7.50%.

Variable Account

The variable account is invested entirely in Public Equities. As a result, the annual expected arithmetic return is significantly higher than for the regular account, but so is the standard deviation. The result is a long-term compounded geometric annual return similar to the regular account, based on Milliman's capital market assumptions. Prior to the December 31, 2012 valuation, the compound geometric variable account return was assumed to be higher than the regular account return. Beginning with that valuation, the variable account return assumption was set equal to the regular account return assumption, as the relationship between the various asset classes no longer warranted such a distinction. We recommend continuing to set the variable account return assumption equal to the regular account return assumption.

Administrative Expenses

In the mature Tier 1/Tier 2 program, administrative expenses are modest compared to program asset levels. As such, in prior valuations, administrative expenses for Tier 1/Tier 2 were estimated by a 5 basis point adjustment to the expected plan investment return. In contrast, administrative expenses for the relatively new OPSRP program are significant in comparison to OPSRP assets. As such, the recent valuations included an explicit administrative expense assumption for the OPSRP program, but not for the Tier 1/Tier 2 program.

Recently implemented GASB Statements No. 67 and No. 68 specifically require the long-term investment return assumption to be developed gross of administrative expenses. As a result, we will no longer reflect an adjustment for Tier 1/Tier 2 administrative expenses in the expected investment return, and will develop explicit administrative expense assumptions for both Tier 1/Tier 2 and OPSRP.

The OPSRP assumed administrative expenses in the December 31, 2013 valuation were $5.5 million per year. A summary of recent actual administrative expenses for both Tier 1/Tier 2 and OPSRP is shown below.

	Tier 1/Tier 2		OPSRP	
Year	Dollar Amount ($ millions)	Percentage of Beginning of Year Assets	Dollar Amount ($ millions)	Percentage of Beginning of Year Assets
2010	$22.8	0.05%	$6.1	1.37%
2011	$22.2	0.05%	$6.9	1.05%
2012	$26.4	0.06%	$5.3	0.63%
2013	$29.6	0.06%	$4.5	0.38%
2014	$30.1	0.06%	$5.0	0.30%

Based on PERS financial reporting information reviewed as part of this study, we recommend setting the assumed actual administrative expenses for 2015 and 2016 at $33.0 million for Tier 1/Tier 2 and maintaining the current assumption of $5.5 million for OPSRP.

Healthcare Cost Trend Rates

Healthcare cost trend rates are used to estimate increases in the employer cost of the RHIPA subsidy. Based on analysis performed by Milliman's healthcare actuaries, we recommend the following change to the healthcare cost trend assumption. These rates include consideration of the excise tax that will be introduced in 2018 by the Patient Protection and Affordable Care Act.

Note that the following chart shows sample rates. A full chart can be found in the appendices.

Year[1]	December 31, 2012 and 2013 Valuations	December 31, 2014 and 2015 Valuations
2013	8.0%	N/A
2014	6.1%	N/A
2015	5.9%	7.0%
2016	5.5%	6.3%
2017	6.2%	6.0%
2018	5.9%	5.4%
2019	5.8%	5.3%
2020	5.9%	5.4%
2021	6.0%	5.4%
2022	6.0%	5.4%
2023	6.5%	5.4%
2024	6.9%	5.4%

[1] *For valuation purposes, the health cost trend rates are assumed to be applied at the beginning of the plan year.*

Year[1]	December 31, 2012 and 2013 Valuations	December 31, 2014 and 2015 Valuations
2025	6.9%	5.5%
2030	6.6%	6.4%
2035	6.4%	6.3%
2040	5.9%	5.9%
2045	5.7%	5.7%
2050	5.6%	5.5%
2060	5.5%	5.4%
2070	5.3%	4.6%
2080	4.9%	4.5%
2090	4.7%	4.5%
2094+	4.7%	4.4%

4. Demographic Assumptions

Overview

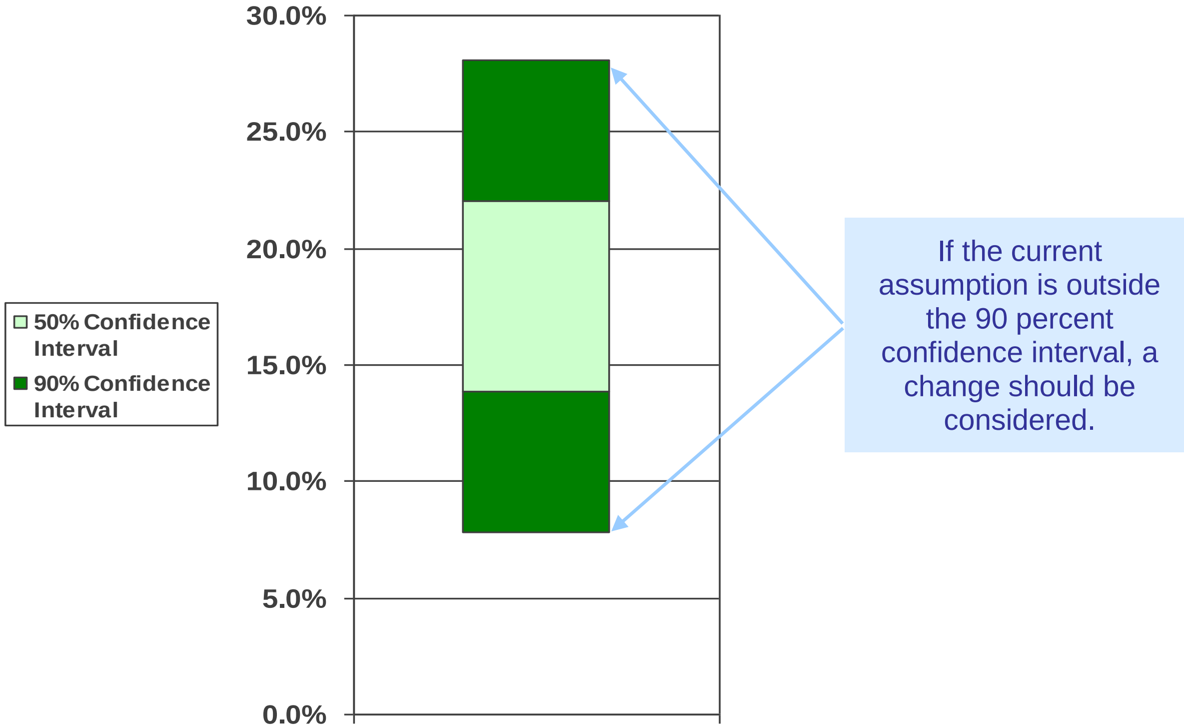
Actuarial Standard of Practice (ASOP) No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations,* provides guidance on selecting demographic assumptions used in measuring obligations under defined benefit pension plans. The general process for recommending demographic assumptions as defined in ASOP No. 35 is as follows:

- Identify the types of assumptions;
- Consider the relevant assumption universe;
- Consider the assumption format;
- Select the specific assumptions; and
- Evaluate the reasonableness of the selected assumption.

The purpose of the demographic experience study is to compare actual experience against expected experience based on the assumptions used in the most recent actuarial valuation. The observation period used in this study is January 1, 2011 through December 31, 2014, and the current assumptions are those adopted by the Board for the December 31, 2013 actuarial valuation. If the actual experience differs significantly from the overall expected experience, or if the pattern of actual decrements by age, sex, or duration does not follow the expected pattern, new assumptions are considered.

Confidence intervals have been used to measure observed experience against current assumptions to determine the reasonableness of the assumption. The floating bars represent the 50 percent and 90 percent confidence intervals around the observed experience. The 90 percent confidence interval represents the range around the observed rate that could be expected to contain the true rate during the period of study with 90 percent probability. The size of the confidence interval depends on the number of observations and the likelihood of occurrence. If an assumption is outside the 90 percent confidence interval and there is no other information to explain the observed experience, a change in assumption should be considered. A sample graph with confidence intervals is shown below:

Overview (continued)



The demographic assumptions used for the December 31, 2013 actuarial valuation and the recommended assumptions for the December 31, 2014 and December 31, 2015 actuarial valuations are shown in detail in the following sections.

A summary of the changes recommended to the Board are as follows:

- Adjust the healthy mortality assumption to reflect an updated mortality improvement scale for all groups.
- Adjust retirement rates for most groups modestly to more closely align with recent and expected future experience.
- Increase the merit component of the salary increase assumption for all members based on observations of the last eight years of experience.
- Update pre-retirement termination of employment assumptions for two member categories.
- Slightly lower assumed rates of duty disability for general service members.
- Update the Tier 1 unused vacation cash out assumption for most categories. The recommendations increase the Tier 1 unused vacation cash out assumption based on recent experience.
- Adjust the Tier 1/Tier 2 unused sick leave assumption for three groups to more closely reflect recently observed experience.
- Decrease the healthy participation assumption for the RHIA retiree healthcare programs.
- Increase the participation assumption for the RHIPA retiree healthcare program for longer-service members.

The recommended assumptions, in our opinion, were selected in a manner consistent with the requirements of ASOP No. 35.

Mortality

Mortality rates are used to project the length of time benefits will be paid to current and future retirees and beneficiaries. The selection of a mortality assumption affects plan liabilities because the estimated value of retiree benefits depends on how long the benefit payments are expected to continue. There are clear differences in the mortality rates among healthy retired members, disabled retired members, and non-retired members. As a result, each of these groups is reviewed independently.

A summary of the current assumed mortality rates and recommended changes is shown below:

Assumption	December 31, 2013 Valuation	Recommended December 31, 2014 and 2015 Valuations
Healthy Annuitant Mortality	**RP2000 <u>Generational with Scale AA</u>, Combined Active/Healthy Annuitant, Sex Distinct**	**RP2000 <u>Generational with Scale BB</u>, Combined Active/Healthy Annuitant, Sex Distinct**
▪ School District male	No collar, set back 24 months	No change to collar adjustment or set back
▪ Other General Service male (and male beneficiary)	Blended 25% blue collar/75% white collar, set back 12 months	No change to collar adjustment or set back
▪ Police & Fire male	Blended 25% blue collar/75% white collar, set back 12 months	No change to collar adjustment or set back
▪ School District female	White collar, set back 24 months	No collar, set back 24 months
▪ Other female (and female beneficiary)	White collar, no setback	Blended 25% blue collar/75% white collar, no setback
Disabled Retiree Mortality	**RP 2000 <u>Static</u>, Disabled, No Collar, Sex distinct**	**RP 2000 <u>Generational with Scale BB,</u> Disabled, No Collar, Sex distinct**
▪ Male	65% of Disabled table, but not less than corresponding healthy annuitant rates	70% of Disabled table, but not less than corresponding healthy annuitant rates
▪ Female	90% of Disabled table, but not less than corresponding healthy annuitant rates	95% of Disabled table, but not less than corresponding healthy annuitant rates
Non-Annuitant Mortality	**Fixed Percentage of Healthy Annuitant Mortality**	**No change**
▪ School District male	70%	60%
▪ Other General Service male	85%	75%
▪ Police & Fire male	95%	75%
▪ School District female	60%	55%
▪ Other female	55%	60%

Mortality (*continued*)

Healthy Annuitant Mortality

Mortality assumptions for healthy retired members are separated into five groups based on employment category and gender (school district males, school district females, police & fire males, other general service males, all other females). Experience for female police & fire members was not sufficient for them to be rated on their own, so they were combined with non-school district general service females.

Mortality rates are expected to continue to decrease in the future, and the resulting increased longevity should be anticipated in the actuarial valuation. For Oregon PERS, this is done through the use of a generational mortality table. A generational mortality table anticipates future improvements in mortality by using a different static mortality table for each year of birth, with the tables for later years of birth assuming lower mortality than the tables for earlier years of birth.

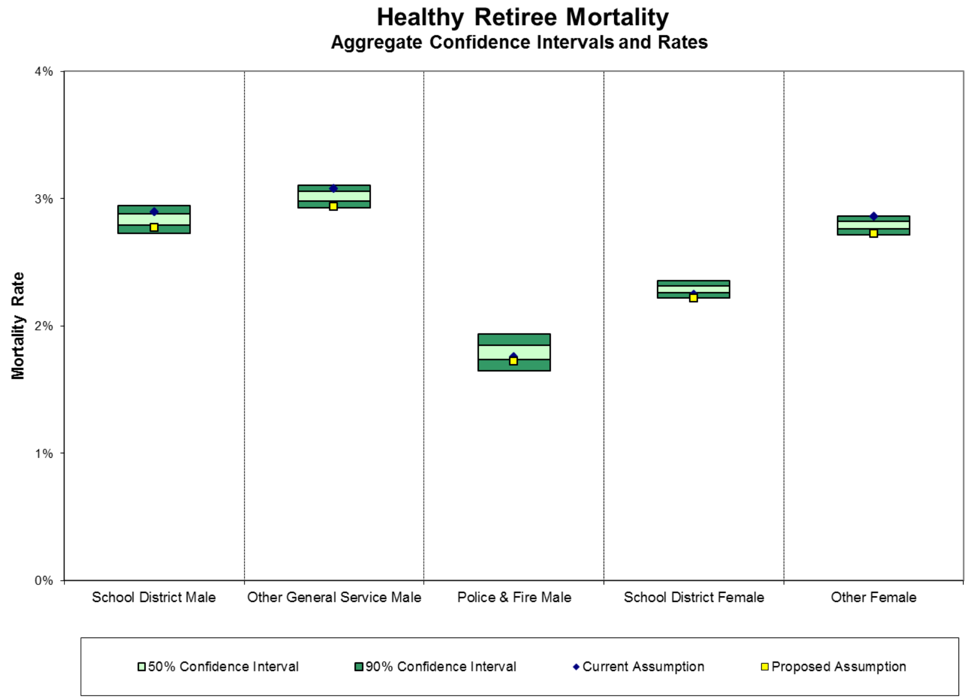
To assist in review of the current mortality assumption's reasonability, we calculated the ratio of actual deaths to expected deaths (A/E ratio) during the experience study period for each of the five groups described above. With a generational mortality table, we generally targeted A/E ratios of near 100 percent in previous studies.

			Current Assumption		Recommended Assumption	
	Exposures	Actual Deaths	Expected Deaths	A/E Ratio	Expected Deaths	A/E Ratio
School District male	62,018	1,758	1,796	98%	1,717	102%
Other General Service male	99,915	3,015	3,077	98%	2,931	103%
Police & Fire male	23,670	424	416	102%	408	104%
School District Female	131,204	2,999	2,946	102%	2,906	103%
Other female	133,632	3,728	3,817	98%	3,640	102%

The A/E ratios for all of the groups were near 100 percent, which indicates the current assumptions have tracked recent experience well in aggregate. However, based on recently-concluded studies prepared by the Society of Actuaries (SOA), we recommend updating the mortality improvement scale used to project future mortality from the current Scale AA to Scale BB. The SOA's research, based upon analysis of large amounts of Social Security data, indicates that Scale AA no longer would constitute the *"best actuarial information on mortality at the time"* as mandated by ORS 238.607.

In this study, we recommend targeting an A/E ratio with a margin slightly above 100 percent (from 102 to 104 percent). This margin is intended as an allowance for the fact that our analysis uses a headcount-weighted approach, rather than a benefits-weighted approach which might produce moderately lower weighted mortality rates.

Mortality (*continued*)



The RP 2000 generational mortality table has a number of adjustments that can be applied to match the mortality rates of Oregon PERS. At times we use a “set back” to adjust the mortality rates. A “set back” of 12 months, for example, treats all members as if they were 12 months younger than they really are when applying the mortality table, which results in lower assumed mortality rates for members. In addition to a “set back,” we have also applied a collar adjustment as defined in the RP 2000 table. Essentially, a “white collar” adjustment further reduces the rates of mortality while a “blue collar” adjustment increases the rates of mortality. The basic table reflects a blend of approximately 55 percent “white collar” and 45 percent “blue collar.” Please note that “white collar” and “blue collar” are used in this context only to describe the adjustments made to the RP 2000 generational mortality table and are not intended to classify any members as either “blue collar” or “white collar.”

Mortality (*continued*)

A summary of the current and recommended healthy retiree mortality assumptions is shown below:

	December 31, 2013 Valuation	Recommended December 31, 2014 and 2015 Valuations
Basic Table	**RP2000 Generational with Scale AA, Combined Active/Healthy Annuitant, Sex Distinct**	**RP2000 Generational with Scale BB, Combined Active/Healthy Annuitant, Sex Distinct**
School District male	No collar, set back 24 months	No change to collar adjustment or set back
Other General Service male (and male beneficiary)	Blended 25% blue collar/75% white collar, set back 12 months	No change to collar adjustment or set back
Police & Fire male	Blended 25% blue collar/75% white collar, set back 12 months	No change to collar adjustment or set back
School District female	White collar, set back 24 months	No collar, set back 24 months
Other female (and female beneficiary)	White collar, no setback	Blended 25% blue collar/75% white collar, no setback

Disabled Retiree Mortality

Disabled members are expected to experience higher mortality rates at a given age than healthy retired members. In the past, disabled mortality was not expected to improve over time as significantly as healthy mortality. As a result, the current assumption does not use generational mortality for disabled retirees. However, based on recent studies performed by the Social Security Administration and the Society of Actuaries, it is now reasonable to assume continued improvement in disabled mortality as is standard for healthy mortality. We now recommend updating the disabled mortality assumption to reflect generational mortality improvement.

			December 31, 2013 Valuation		Recommended December 31, 2014 and 2015 Valuations	
	Exposures	Actual Deaths	Expected Deaths	A/E Ratio	Expected Deaths	A/E Ratio
Male	8,164	300	312	96%	291	103%
Female	9,328	265	286	93%	253	101%

Mortality (*continued*)

A summary of current and recommended disabled retiree mortality assumptions is shown below:

	December 31, 2013 Valuation	Recommended December 31, 2014 and 2015 Valuations
Basic Table	**RP 2000 Static, Disabled, No Collar, Sex distinct**	**RP 2000 Generational with Scale BB, Disabled, No Collar, Sex distinct**
Male	65% of Disabled table, but not less than corresponding healthy annuitant rates	70% of Disabled table, but not less than corresponding healthy annuitant rates
Female	90% of Disabled table, but not less than corresponding healthy annuitant rates	95% of Disabled table, but not less than corresponding healthy annuitant rates

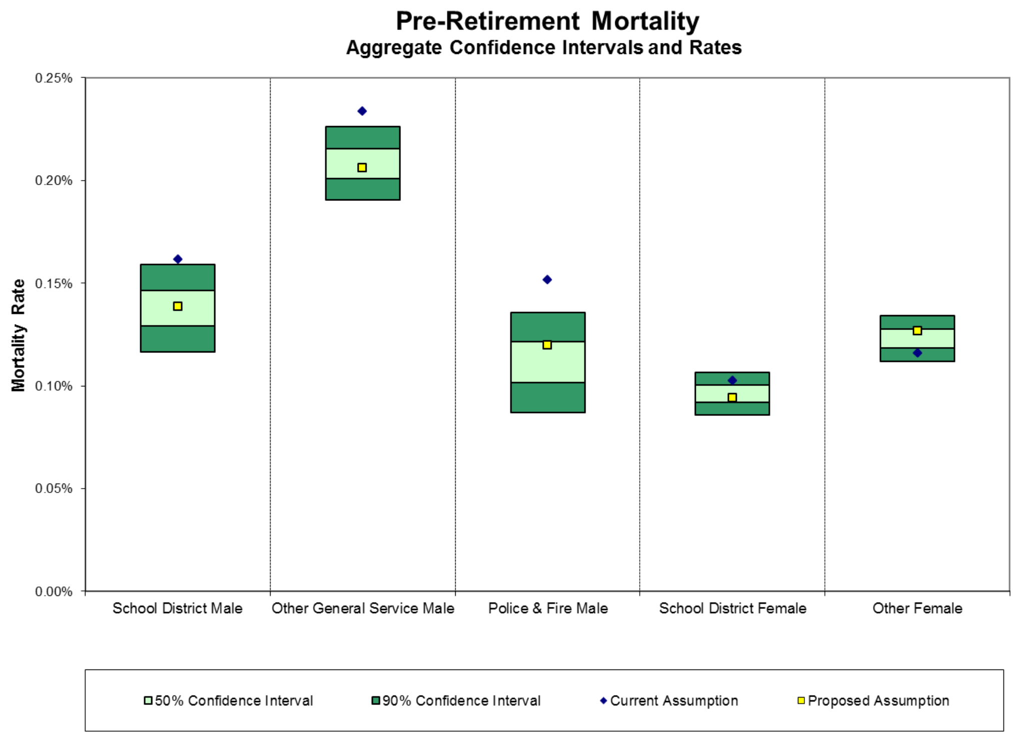
Non-Annuitant Mortality

The non-annuitant mortality assumption applies to active members and dormant members (those members who have terminated employment but are vested and entitled to a future benefit), and is a fixed percentage of the healthy annuitant mortality rates. Because the healthy annuitant mortality assumptions have changed for all groups, the associated non-annuitant mortality assumptions have also changed. The analysis below compares the current fixed percentages as applied to the recommended healthy annuitant mortality assumptions to determine if a change also needs to be made in the fixed percentages for each of the groups. A/E ratios for non-annuitants have been targeted around 100 percent.

Mortality (*continued*)

			December 31, 2013 Valuation		Recommended December 31, 2014 and 2015 Valuations	
	Exposures	Actual Deaths	Expected Deaths	A/E Ratio	Expected Deaths	A/E Ratio
School District male	81,602	113	132	85%	113	99%
Other General Service male	177,419	370	415	89%	366	101%
Police & Fire male	50,284	56	76	74%	60	93%
School District female	237,658	229	244	94%	224	102%
Other female	265,198	327	308	106%	336	97%

With the very limited number of non-retired deaths in the experience period, the A/E ratio tends to fluctuate, particularly for police & fire males. Since the underlying annuitant mortality table was changed for all groups with the introduction of mortality projection Scale BB, the percentage factors used for active mortality were all updated at the same time.



Mortality (*continued*)

A summary of the current and recommended non-retired mortality assumptions is shown below:

	December 31, 2013 Valuation	Recommended December 31, 2014 and 2015 Valuations
Basic Assumption	Fixed Percentage of Healthy Annuitant Mortality	No change
School District male	70%	60%
Other General Service male	85%	75%
Police & Fire male	95%	75%
School District female	60%	55%
Other female	55%	60%

Retirement Assumptions

The retirement assumptions used in the actuarial valuation include the following assumptions:

- Retirement from active status
- Probability a member will elect a lump sum option at retirement
- Percentage of members who elect to purchase credited service at retirement.

Retirement from Active Status

Members are eligible to retire as early as age 55 (50 for police & fire members) or earlier if the member has 30 years of service. In our analysis, we have found significant differences in the retirement patterns based on length of service, employment category (general service or police & fire), and eligibility for unreduced benefits.

A summary of the early, normal, and unreduced retirement dates under the plan are as follows:

Employment Category	Tier	Normal Retirement Age	Early Retirement Age	Unreduced Retirement
General Service	1	58	55	30 years of service
General Service	2	60	55	30 years of service
General Service	OPSRP	65	55	Age 58 with 30 years
Police & Fire	1 and 2	55	50	30 years of service, or age 50 with 25 years of service
Police & Fire	OPSRP	60	50	Age 53 with 25 years
State Judiciary	N/A	65	60	60 if Plan B; N/A if Plan A

Structure for Retirement Rates

The structure of the PERS retirement rate assumption separates rates by job classification and by service level. General service rates differ across three service bands: less than 15 years, 15 to 29 years, and 30 or more years of service. The first two service bands have different assumptions for school districts versus all other general service members. With this study, we also recommend different assumptions for school districts versus all other general service members for the third service band. Police & fire rates employ the following three service bands: less than 13 years, 13 to 24 years, and 25 or more years of service.

The service band structure anticipates that member retirement decisions will contemplate the amount of the retirement benefit and the affordability of retirement.

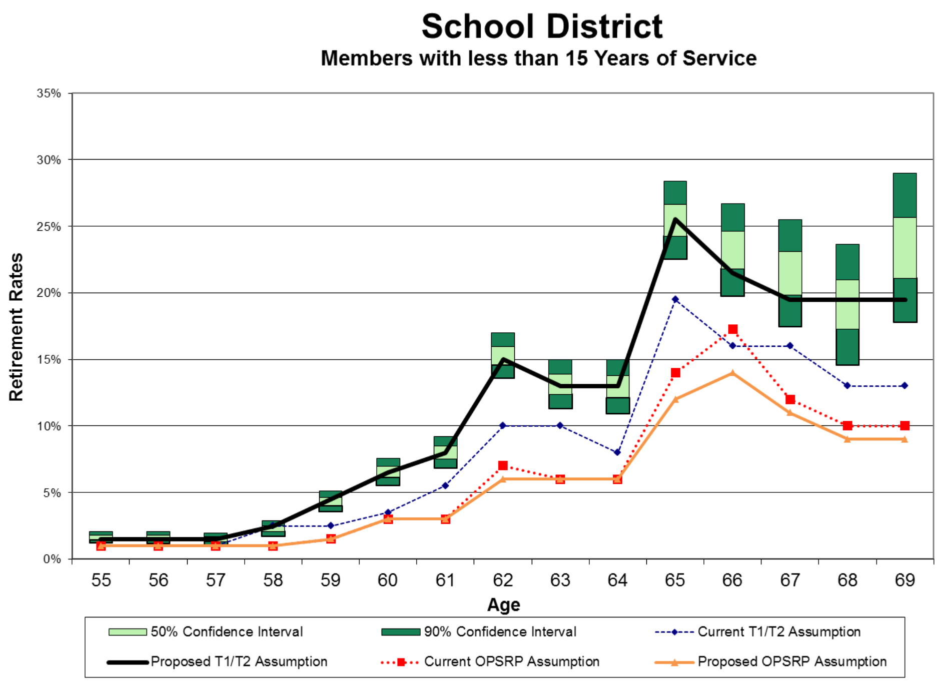
School District and General Service Retirement Rates

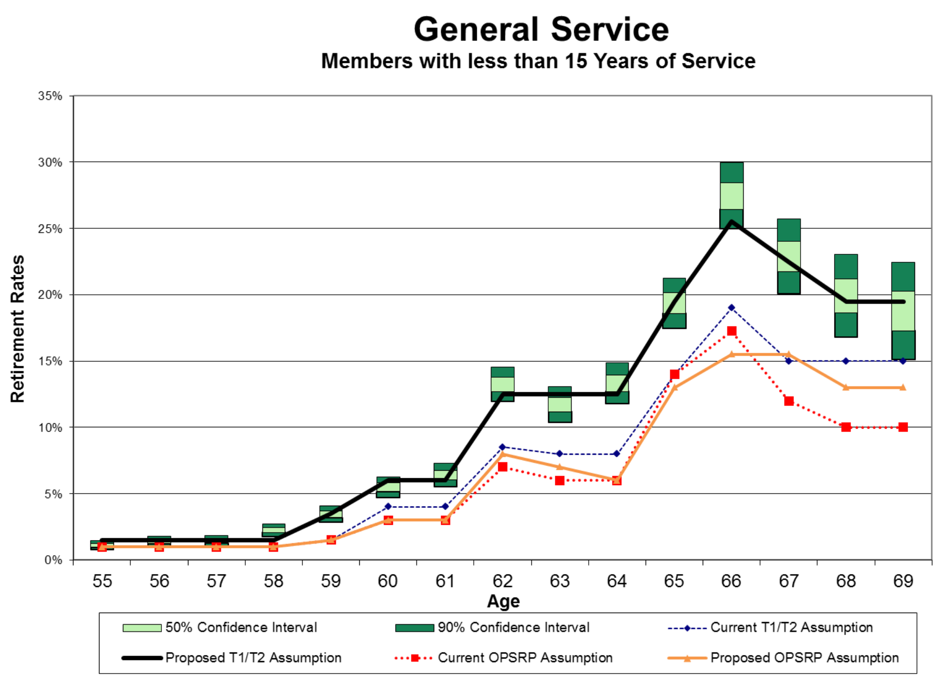
Members with Less Than 15 Years of Service

Retirement decisions by members with less than 15 years of service are likely to be heavily influenced by the availability of resources other than PERS benefits, including Social Security, prior employment, spousal benefits, and savings.

The following charts show the current assumed rates of retirement, the confidence interval around observed experience, and the recommended retirement rate assumption for school district and general service members retiring with less than 15 years of service.

Retirement Assumptions (*continued*)



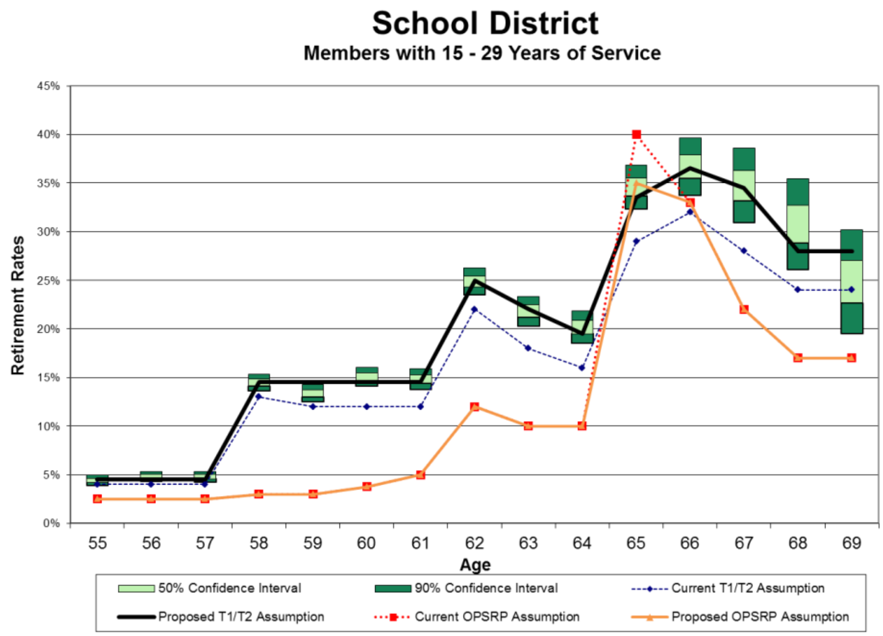


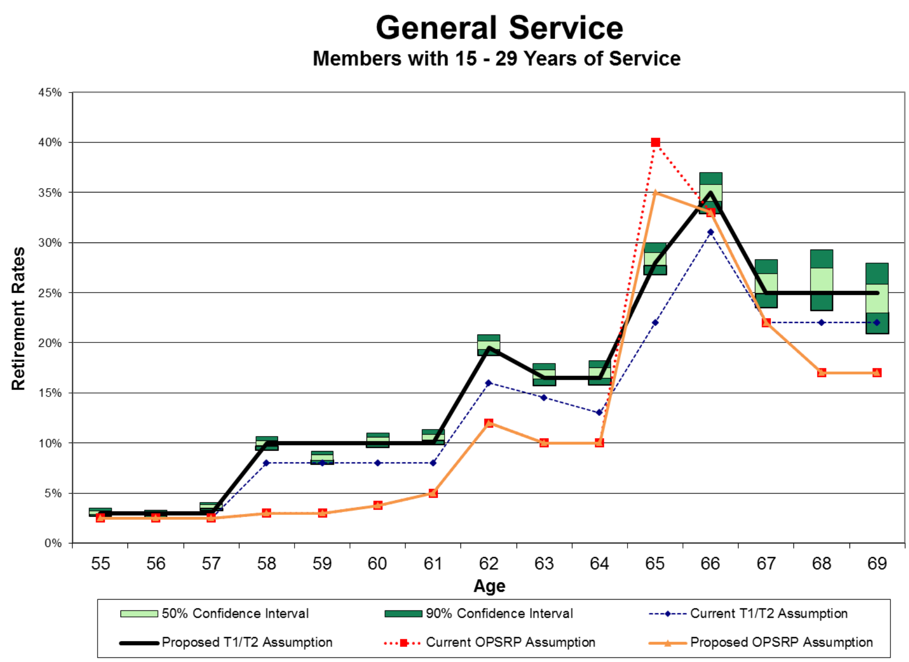
Retirement Assumptions (*continued*)

Members with 15 to 30 Years of Service

Retirement decisions by members with 15 to 29 years of years of service are likely to be influenced by the structure of PERS benefits as well as the availability of other resources, including Social Security, prior employment, spousal benefits, and savings.

The following charts show the current assumed rates of retirement, the confidence interval around observed experience, and the recommended retirement rate assumption for school district and general service members retiring with more than 15 years of service and less than 30 years of service.



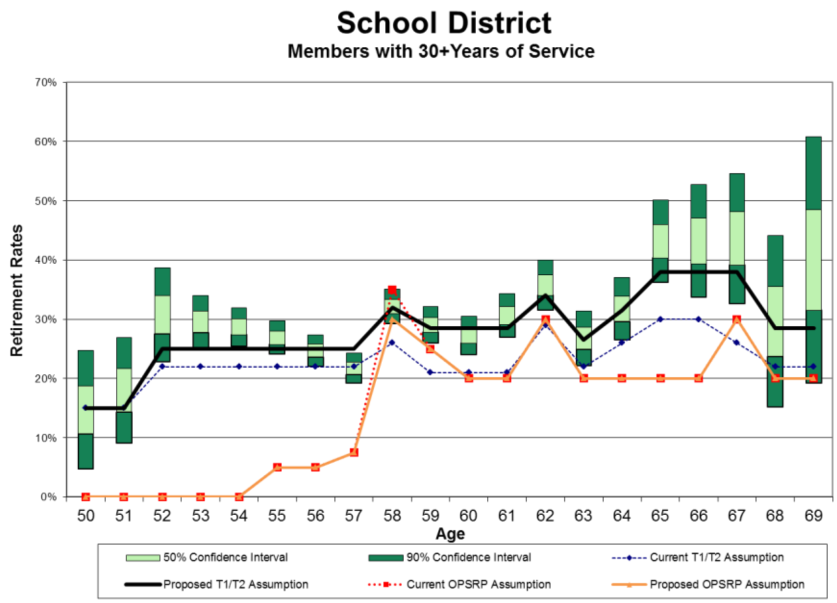


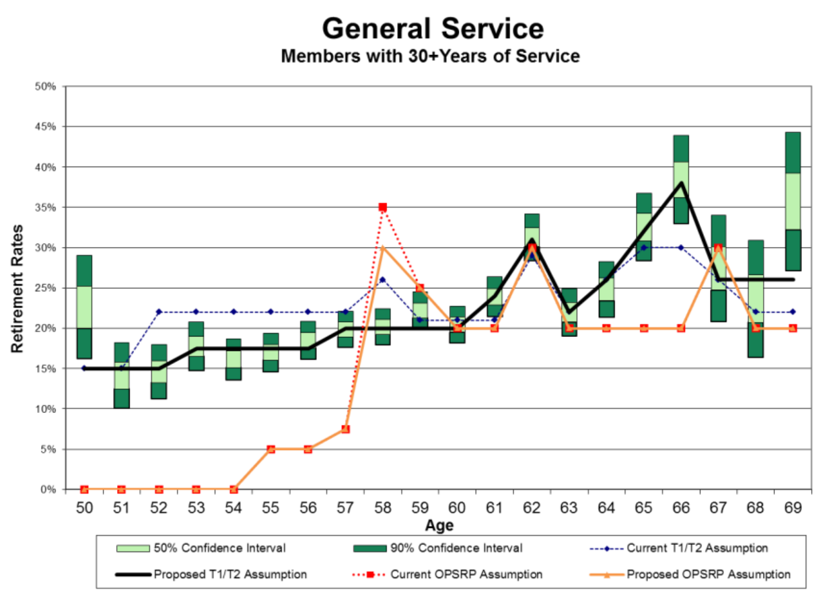
Retirement Assumptions (*continued*)

Members with 30 or More Years of Service

Previously, the retirement rate assumption for members with 30 or more years of service at retirement did not differentiate between school district and all other general service members. With this study, we have analyzed the rates separately and now recommend adopting distinct rates for these groups. Our analysis indicated that school district members with 30 or more years of service had higher rates of retirement than did other general service members with 30 or more years of service. Our recommended assumption reflects this experience.

The following charts show the current assumed rates of retirement, the confidence interval around observed experience and the recommended retirement rate assumption for school district and other general service members retiring with more than 30 years of service.





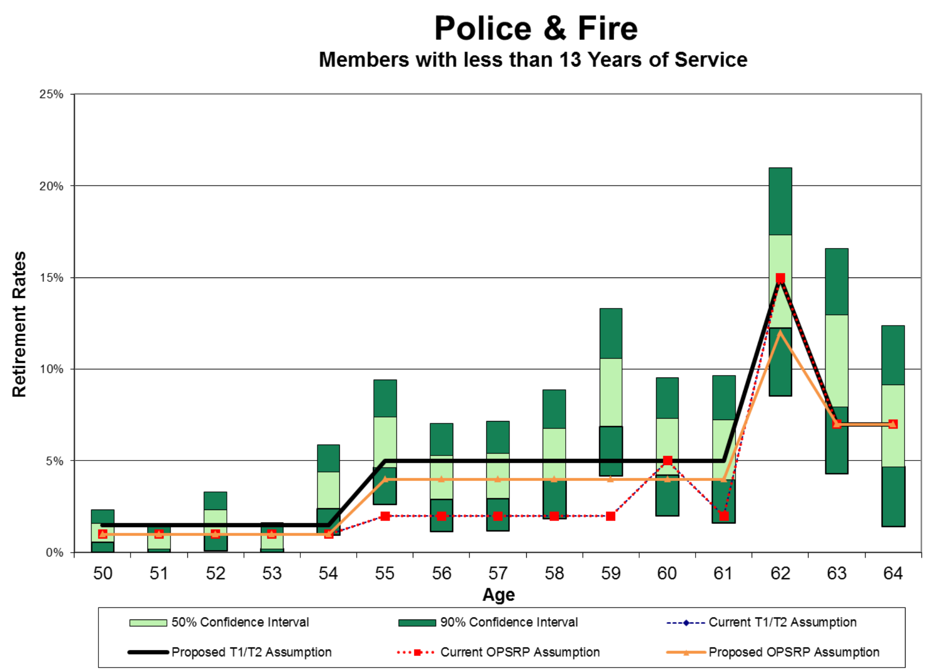
Retirement Assumptions (*continued*)

Police & Fire

Members with Less Than 13 Years of Service

The retirement assumption for police & fire members differs for members retiring with less than 13 years of service, those retiring with between 13 and 24 years of service, and those retiring with more than 25 years of service. Retirement decisions by members with less than 13 years of service are likely to be heavily influenced by the availability of resources other than PERS benefits, including Social Security, prior employment, spousal benefits, and savings.

The following graph shows the current assumed rates of retirement, the confidence interval around observed experience and the recommended retirement rate assumption for police & fire members retiring with less than 13 years of service.

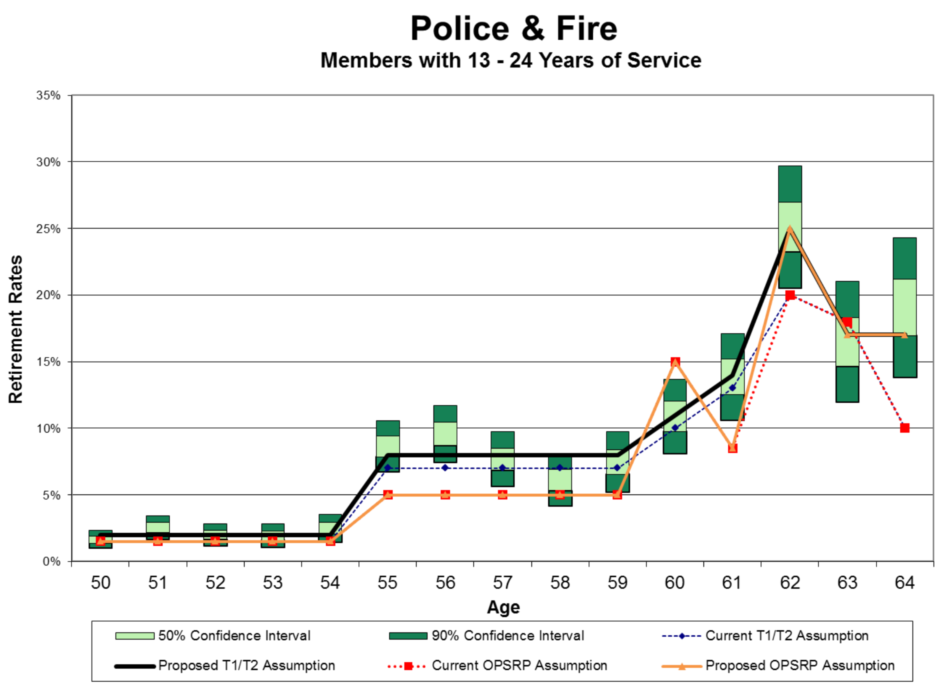


Retirement Assumptions (*continued*)

Members with 13 to 24 Years of Service

Retirement rates for members with 13 to 24 years of service are likely to be influenced by the structure of PERS benefits as well as the availability of other resources, including Social Security, prior employment, spousal benefits, and savings.

The following chart shows the current assumed rates of retirement, the confidence interval around observed experience, and the recommended retirement rate assumption for police & fire members retiring with between 13 and 24 years of service.

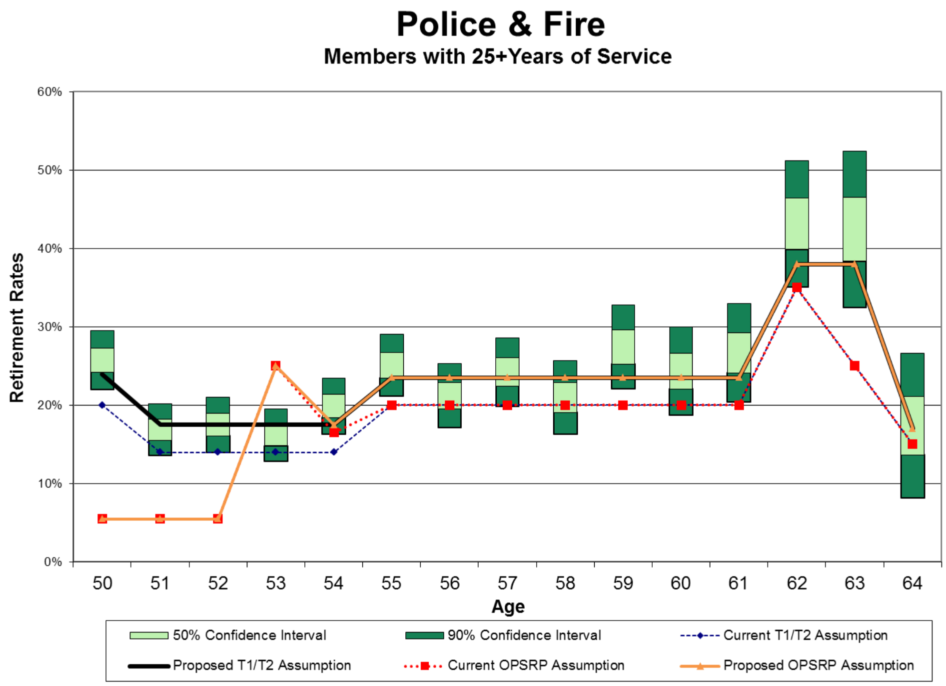


Retirement Assumptions (*continued*)

Members with 25 or More Years of Service

Police & fire members with 25 or more years of service can retire immediately at age 50 (53 for OPSRP) with unreduced retirement benefits. As a result, retirement rates at all ages are relatively high, with a spike at first eligibility for unreduced benefits, and another increase when Social Security benefits become available.

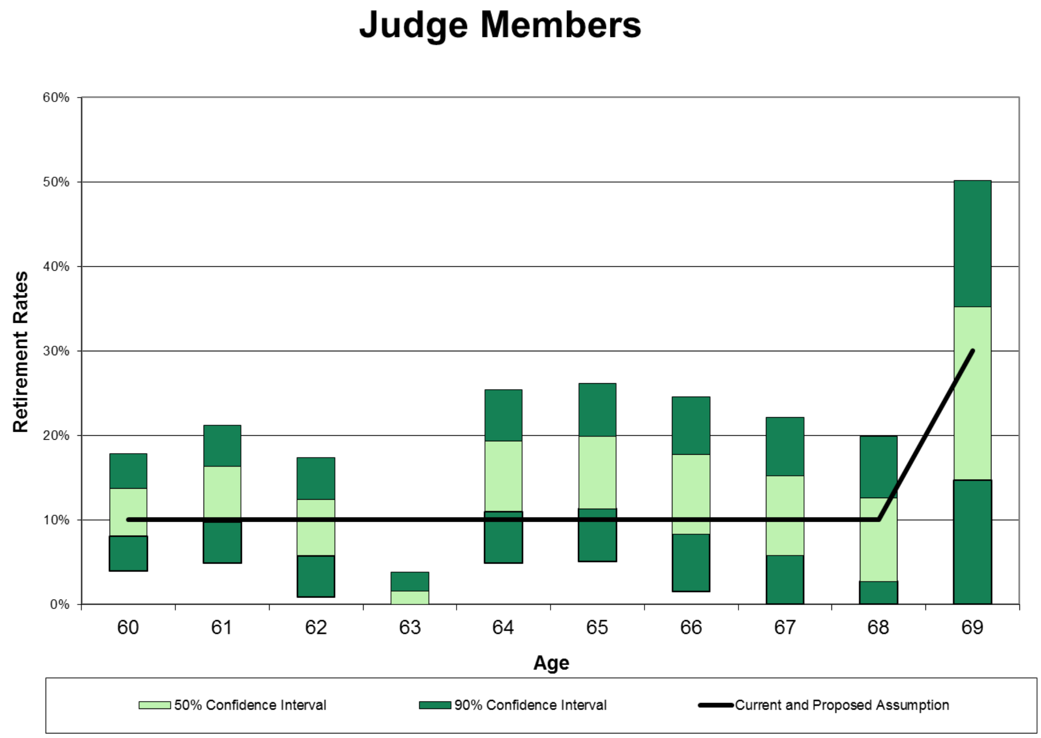
The following chart shows the current assumed rates of retirement, the confidence interval around observed experience, and the recommended retirement rate assumption for police & fire members retiring with more than 25 years of service.



Retirement Assumptions (*continued*)

Judges

The following chart shows the current assumed rates of retirement, the confidence interval around observed experience, and the recommended retirement rate assumption for members of the State Judiciary. The current assumption generally remains in the confidence intervals, so no changes are proposed to the current assumption.



Retirement Assumptions (*continued*)

Summary of Recommended Retirement Rates

The following table summarizes our recommended Tier 1/Tier 2 retirement rates:

Tier 1/Tier 2 Recommended December 31, 2014 and 2015 Valuations										
	Police & Fire			General Service			School Districts			Judges
Age	< 13 yrs	13-24 yrs	25+ yrs	<15 yrs	15-29 yrs	30+ yrs	<15 yrs	15-29 yrs	30+ yrs	
Less than 50						15.00%			15.00%	
50	1.50%	2.00%	24.00%			15.00%			15.00%	
51	1.50%	2.00%	17.50%			15.00%			15.00%	
52	1.50%	2.00%	17.50%			15.00%			25.00%	
53	1.50%	2.00%	17.50%			17.50%			25.00%	
54	1.50%	2.00%	17.50%			17.50%			25.00%	
55	5.00%	8.00%	23.50%	1.50%	3.00%	17.50%	1.50%	4.50%	25.00%	
56	5.00%	8.00%	23.50%	1.50%	3.00%	17.50%	1.50%	4.50%	25.00%	
57	5.00%	8.00%	23.50%	1.50%	3.00%	20.00%	1.50%	4.50%	25.00%	
58	5.00%	8.00%	23.50%	1.50%	10.00%	20.00%	2.50%	14.50%	32.00%	
59	5.00%	8.00%	23.50%	3.50%	10.00%	20.00%	4.50%	14.50%	28.50%	
60	5.00%	11.00%	23.50%	6.00%	10.00%	20.00%	6.50%	14.50%	28.50%	10.00%
61	5.00%	14.00%	23.50%	6.00%	10.00%	24.00%	8.00%	14.50%	28.50%	10.00%
62	15.00%	25.00%	38.00%	12.50%	19.50%	31.00%	15.00%	25.00%	34.00%	10.00%
63	7.00%	17.00%	38.00%	12.50%	16.50%	22.00%	13.00%	22.00%	26.50%	10.00%
64	7.00%	17.00%	17.00%	12.50%	16.50%	26.00%	13.00%	19.50%	31.50%	10.00%
65	100.00%	100.00%	100.00%	19.50%	28.00%	32.00%	25.50%	33.50%	38.00%	10.00%
66				25.50%	35.00%	38.00%	21.50%	36.50%	38.00%	10.00%
67				22.50%	25.00%	26.00%	19.50%	34.50%	38.00%	10.00%
68				19.50%	25.00%	26.00%	19.50%	28.00%	28.50%	10.00%
69				19.50%	25.00%	26.00%	19.50%	28.00%	28.50%	30.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Retirement Assumptions (*continued*)

The following table summarizes our recommended OPSRP retirement rates:

OPSRP Recommended December 31, 2014 and 2015 Valuations									
	Police & Fire			General Service			School Districts		
Age	< 13 yrs	13-24 yrs	25+ yrs	<15 yrs	15-29 yrs	30+ yrs	<15 yrs	15-29 yrs	30+ yrs
50	1.00%	1.50%	5.50%						
51	1.00%	1.50%	5.50%						
52	1.00%	1.50%	5.50%						
53	1.00%	1.50%	25.00%						
54	1.00%	1.50%	17.50%						
55	4.00%	5.00%	23.50%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
56	4.00%	5.00%	23.50%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
57	4.00%	5.00%	23.50%	1.00%	2.50%	7.50%	1.00%	2.50%	7.50%
58	4.00%	5.00%	23.50%	1.00%	3.00%	30.00%	1.00%	3.00%	30.00%
59	4.00%	5.00%	23.50%	1.50%	3.00%	25.00%	1.50%	3.00%	25.00%
60	4.00%	15.00%	23.50%	3.00%	3.75%	20.00%	3.00%	3.75%	20.00%
61	4.00%	8.50%	23.50%	3.00%	5.00%	20.00%	3.00%	5.00%	20.00%
62	12.00%	25.00%	38.00%	8.00%	12.00%	30.00%	6.00%	12.00%	30.00%
63	7.00%	17.00%	38.00%	7.00%	10.00%	20.00%	6.00%	10.00%	20.00%
64	7.00%	17.00%	17.00%	6.00%	10.00%	20.00%	6.00%	10.00%	20.00%
65	100.00%	100.00%	100.00%	13.00%	35.00%	20.00%	12.00%	35.00%	20.00%
66				15.50%	33.00%	20.00%	14.00%	33.00%	20.00%
67				15.50%	22.00%	30.00%	11.00%	22.00%	30.00%
68				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
69				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Retirement Assumptions (*continued*)

Lump Sum Option at Retirement

At retirement, a member has the option of electing a total lump sum distribution equal to two times the member's account balance, a partial lump sum distribution equal to the member's account balance with a reduced monthly allowance, or a monthly allowance with no lump sum distribution. The percentage of active members electing a lump sum distribution at retirement has declined slightly from the prior experience study. The results of our analysis are as follows:

Election at Retirement	Number of Retired Members	Percentage of Retirements	December 31, 2013 Valuation Assumption	Recommended December 31, 2014 and 2015 Valuations
Partial Lump Sum	868	4.5%	5.0%	4.5%
Total Lump Sum				
• 2011	245	4.6%	N/A	N/A
• 2012	133	3.3%	N/A	N/A
• 2013	217	3.7%	4.0%	N/A
• 2014	129	3.1%	3.5%	N/A
• 2015	TBD	TBD	3.0%	No change
• 2016	TBD	TBD	2.5%	No change

When a member elects a total or partial lump sum under Money Match or a partial lump sum under Full Formula, he or she gives up the value of future COLAs (cost of living allowances) on the lump sum amount. A total lump sum election under Full Formula may cause the member to give up significantly more. Because there are no new contributions to member accounts and the system is projected to become dominated by Full Formula over time, we expect the total lump sum rate to decline over time.

Based on the data shown above, we recommend lowering the partial lump sum assumption of 5.0 percent to 4.5 percent. We recommend no change to the total lump sum assumption of 3.0 percent in 2015 decreasing by 0.5 percent per year until reaching 0.0 percent.

Retirement Assumptions (*continued*)

Purchase of Credited Service

A member has the option of purchasing service at retirement to enhance his or her retirement benefits. Service may be purchased under one or more of the following categories:

- Purchase of forfeited service
- Credit for waiting time
- Credit for educational service
- Credit for military service
- Credit for seasonal positions
- Credit for police officers and firefighters
- Purchase of retirement credit for disability time

Most purchases are full cost purchases, meaning the member pays both the member and employer cost to obtain the service. Since the member pays the full cost of the service purchased, the purchase produces no impact or only a small impact on projected Tier 1/Tier 2 employer costs. The most common, and predictable, non-full cost service purchase made by members is purchasing credit for the six-month waiting period. Thus, for valuation purposes, we have included an adjustment to account for those members who are expected to make the waiting period service purchase.

For Money Match retirements, the purchase of credited service is generally cost-neutral to the system, because the member is depositing both the member and employer contributions. Therefore, in reviewing actual experience, we examined non-Money Match retirements. The following table shows the number of members who retired in the experience period and elected to purchase credit for the six-month waiting period:

	Count	Number Electing to Purchase Waiting Time Service	Percentage of Retirements	December 31, 2013 Valuation Assumption	Recommended December 31, 2014 and 2015 Valuations
Non-Money Match Retirements	11,958	7,204	60%	60%	60%

We recommend maintaining the assumption of non-Money Match retirements purchasing credited service for the six month waiting period at 60 percent.

Disability Incidence Assumptions

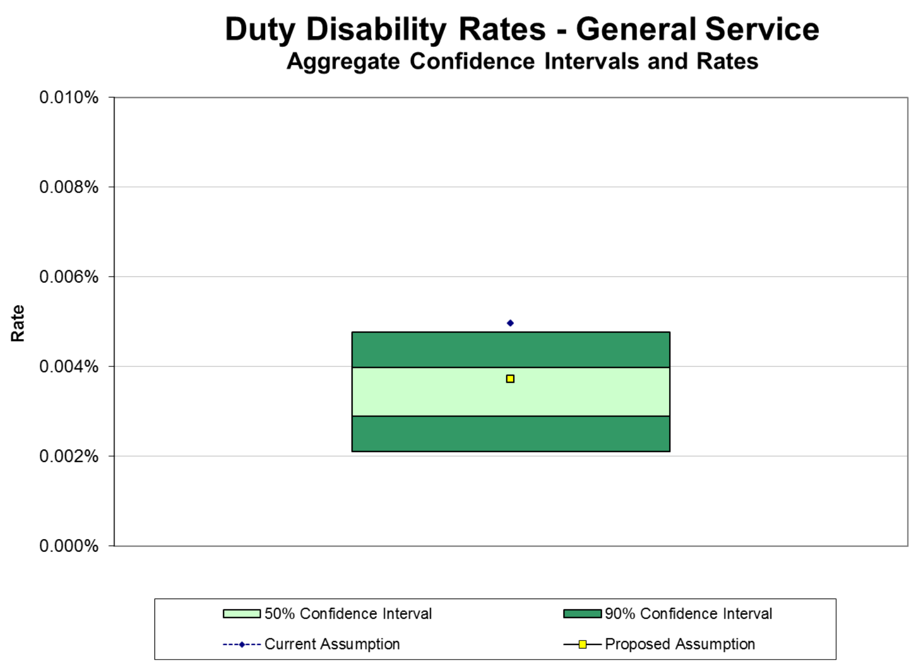
The Plan provides duty and non-duty disability benefits to members. Members are eligible to receive duty disability benefits if they become disabled as a direct result of a job-related injury or illness, regardless of length of service. Members are eligible for non-duty disability benefits (also referred to as ordinary disability) if they become disabled after ten years of service (six years if a judge), but prior to normal retirement eligibility.

Duty disability incidence rates are developed separately for police & fire and general service members. Ordinary (non-duty) disability rates are developed for the system as a whole.

Duty Disability

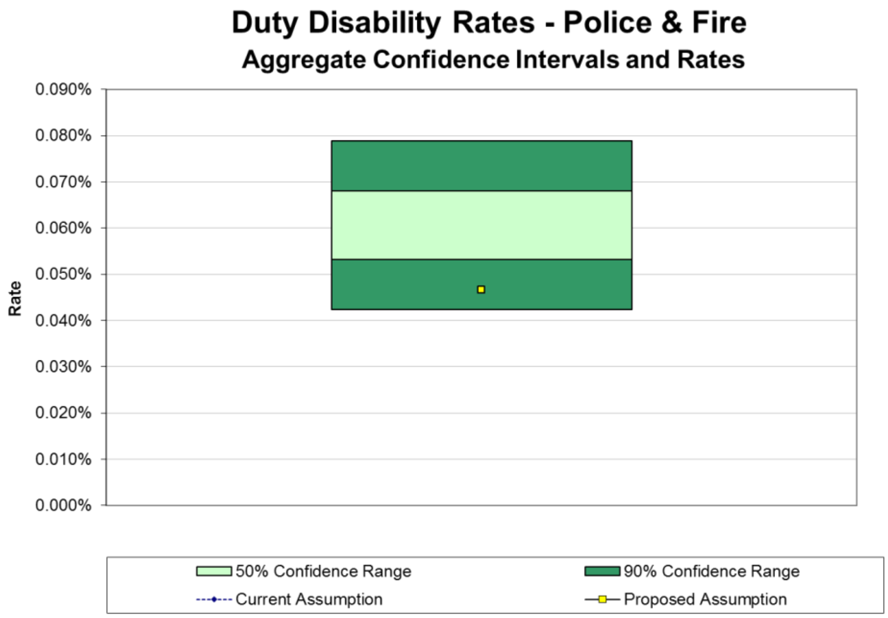
Due to the limited amount of experience data available at some ages, this assumption employs a standard table adjusted to fit within the aggregate confidence interval. We recommend updating the duty disability incidence assumption for general service at this time.

The current assumed aggregate rate for the general service assumption is above the 90 percent confidence interval of the disability rates experienced. We recommend updating the assumption to more closely match observed experience.



The current assumed aggregate rate for police & fire members is below actual observed experience, but within the 90 percent confidence interval. As such, we recommend maintaining the current assumption and continuing to monitor experience in the next study.

Disability Incidence Assumptions (*continued*)

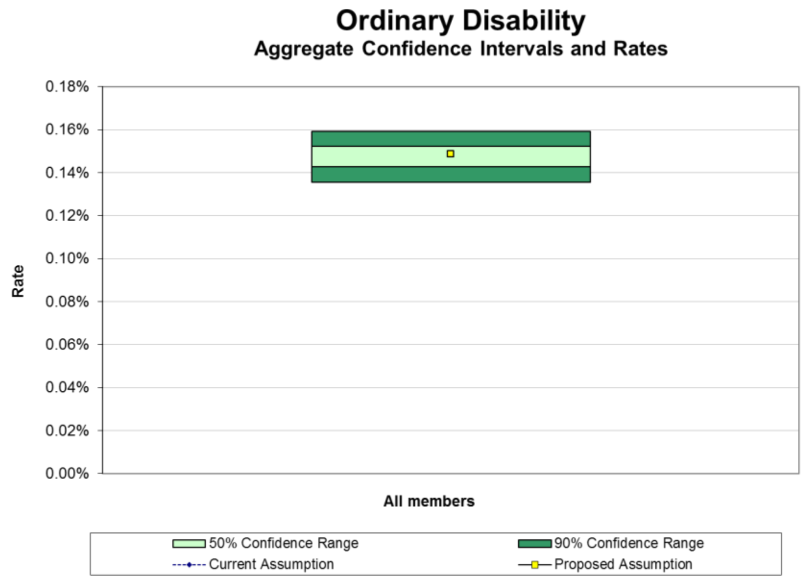


Ordinary (Non-Duty) Disability

As with duty disability, the experience data for ordinary disability was very limited at specific ages. Therefore, this assumption also uses a standard table adjusted to fit within the aggregate confidence interval. Based on the disability rates experienced, we recommend no change to the ordinary disability incidence assumption at this time.

The data underlying the ordinary disability study showed a pattern wherein a member's record would only be recognized as a disability retirement (rather than a service retirement or other separation from service) after a lag period that could span over a year. Because such lagged experience is not yet available for 2014, the final year of our study, we included in our analysis an assumption as to additional disabilities occurring in 2014 that will not be apparent until the subsequent reporting period. Our assumption was based on an average of such records observed in the first three years of the study.

Disability Incidence Assumptions (*continued*)



The following table summarizes our recommended disability incidence rates:

	Percentage of the 1985 Disability Class 1 Rates	
	December 31, 2013 Valuation	**Recommended December 31, 2014 and 2015 Valuations**
Duty Disability		
• Police & Fire	20% (0.006% – 0.169%)	No change
• General Service	1.2% (0.0004% – 0.010%)	0.9% (0.0003% – 0.008%)
Ordinary Disability	50% with 0.18% cap (0.015% – 0.180%)	No change

Termination Assumptions

Not all active members are expected to continue working for covered employers until retirement. Termination rates represent the probabilities that a member will leave covered employment for causes other than retirement, disability or death at any given point during their working career.

Beginning with the most recent experience study, termination rates have been developed as service-based assumptions. Prior to that, the assumption was structured as an age-based select and ultimate assumption. The service-based assumptions reflect the experience of Tier 1, Tier 2, and OPSRP members, with each group affecting the period of the table relating to the relevant service amount.

Assumptions are developed for the following groups:

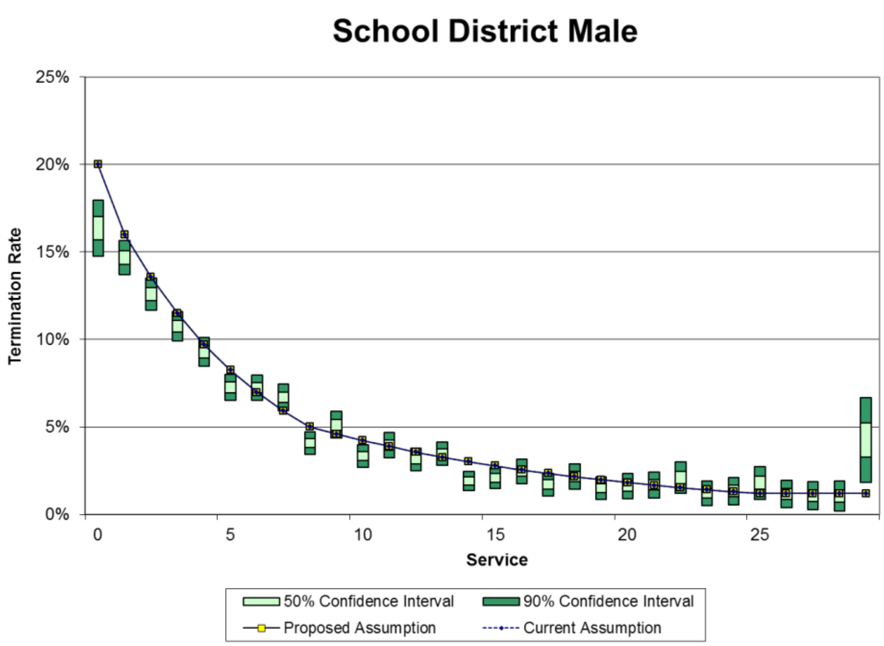
- School District males
- School District females
- Other General Service males
- Other General Service females
- Police & Fire (single table for both males and females)

Termination Rates

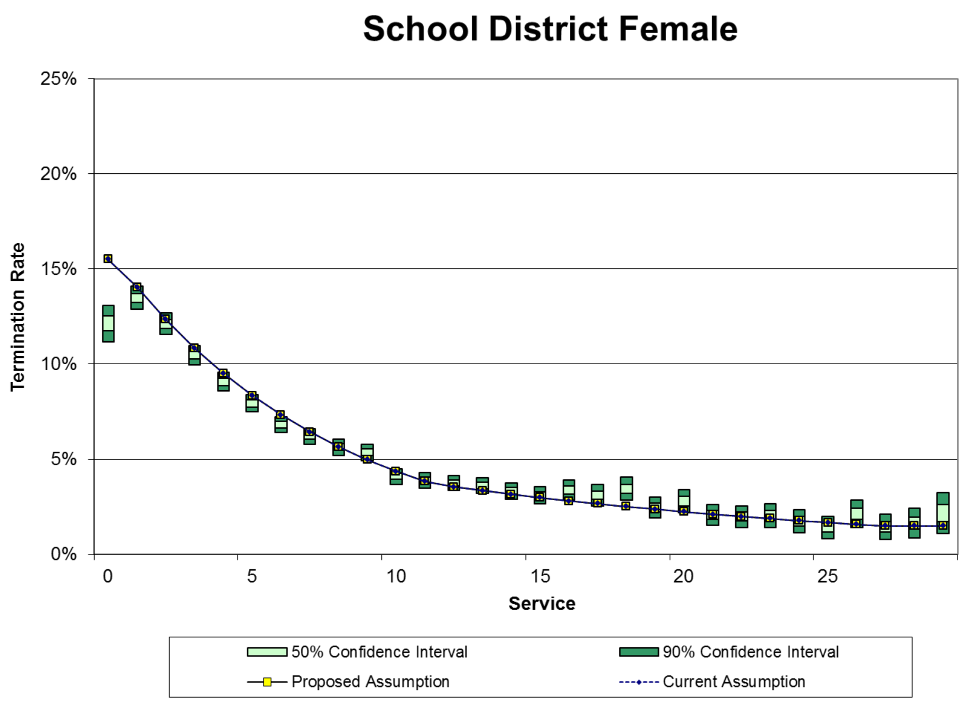
The following charts show the confidence interval around observed experience and the recommended rates of termination by year of service. These charts are based on the observed experience of members in the relevant group during the study period. We recommend changes to the assumptions for non-school district general service females and police & fire members. For the other three groups, we recommend maintaining the current assumption and evaluating again with the next study.

Full listings of recommended termination assumptions are included in the appendix.

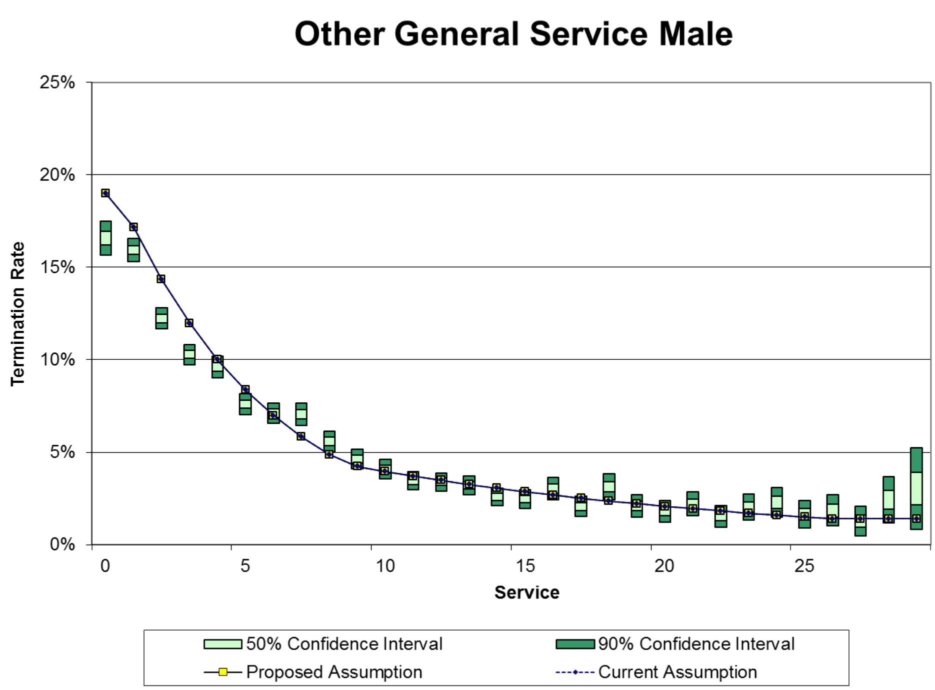
School Districts



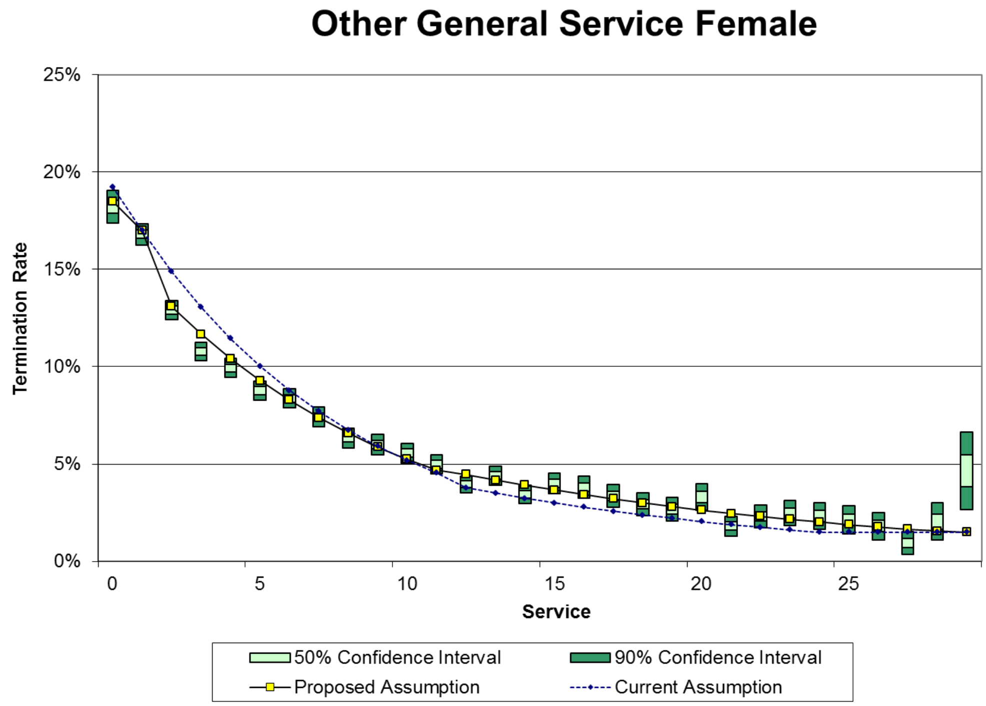
Termination Assumptions (*continued*)



General Service

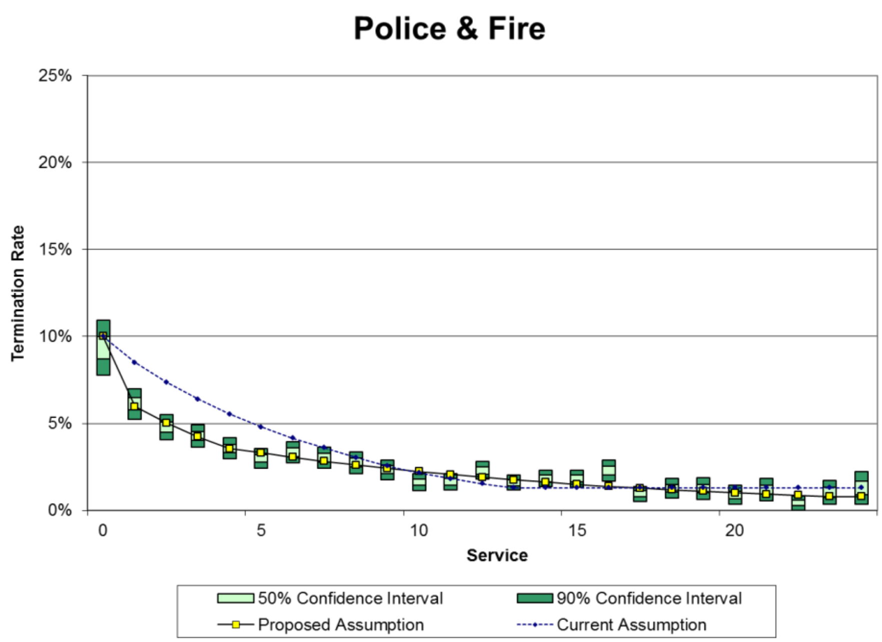


Termination Assumptions (*continued*)



Police & Fire

All police & fire members were rated together, with no variation by group or gender.



Salary Increase Assumptions

The salary increase assumptions analyzed with demographic experience were:

- Merit scale increases
- Unused sick leave adjustments
- Unused vacation cash out adjustments

Merit Scale

The merit scale assumption is used in conjunction with the inflation and real wage growth assumptions to project individual member salaries to retirement. To focus on the merit and longevity component of salary increases, actual inflation and assumed long-term real wage growth were subtracted from observed salary increases. Our analysis assumes a one-year lag in the impact of actual inflation on a member's salary increase. For example, actual inflation during 2013 is expected to impact the ratio of salary during 2014 to salary during 2013. In our analysis, the 1.00 percent assumed level of annual real wage growth adopted by the PERS Board was used instead of the actual annual changes in the Average Wage Index (AWI) published by the Social Security Administration. A stable annual productivity assumption was judged to be a more appropriate measure for the salary increase expectations of members and employers in, for example, a bargaining process to set salary increases.

In order to capture experience across a broader range of budget, collective bargaining, and economic cycles, the analysis covered observed salary experience from 2006 through 2014. As shown in the table below, actual inflation was measured using CPI-U and the assumed real growth in wages is the 1.00 percent assumption adopted by PERS.

Year	Actual Inflation (CPI-U)	Assumed Real Wage Growth
2006	2.54%	1.00%
2007	4.08%	1.00%
2008	0.09%	1.00%
2009	2.72%	1.00%
2010	1.50%	1.00%
2011	2.96%	1.00%
2012	1.74%	1.00%
2013	1.50%	1.00%

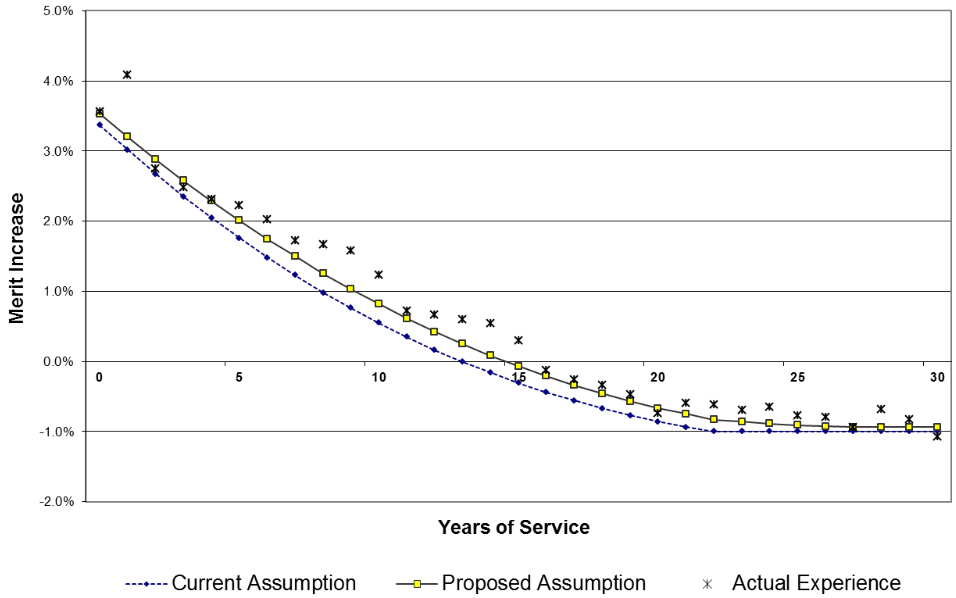
In the past, separate assumptions have been set for:

- School Districts
- Other General Service
- Police & Fire

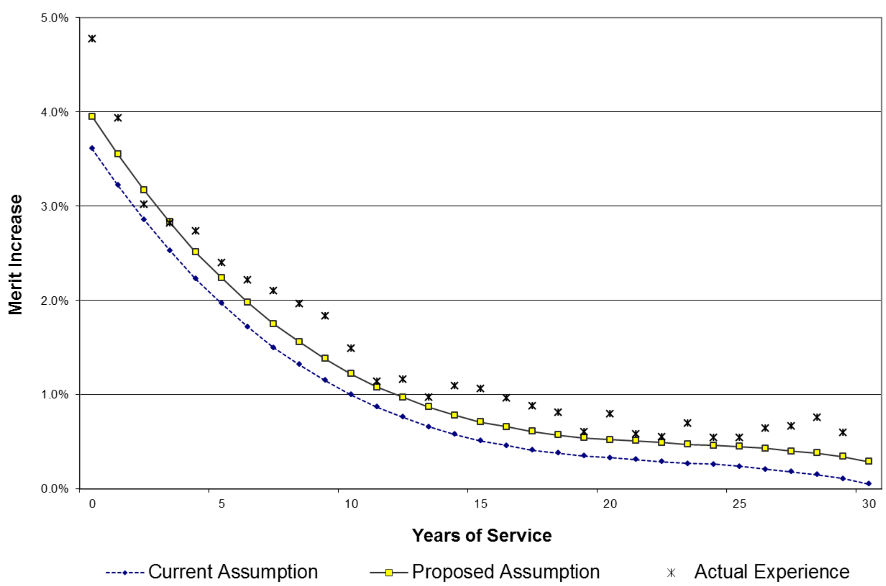
The following charts show the current assumed rates of merit salary increases, the eight-year average of merit increases based on observed experience, and the recommended rates of merit salary increases. We recommend increases in the merit salary increase assumptions for all groups. Our proposed new assumptions strike a balance between the previous assumptions and the experience observed in the study period. This is partially because the increase observed since the previous study is largely driven by relatively larger merit increases in 2013 and 2014, which may not persist in the future.

Salary Increase Assumptions (*continued*)

School Districts

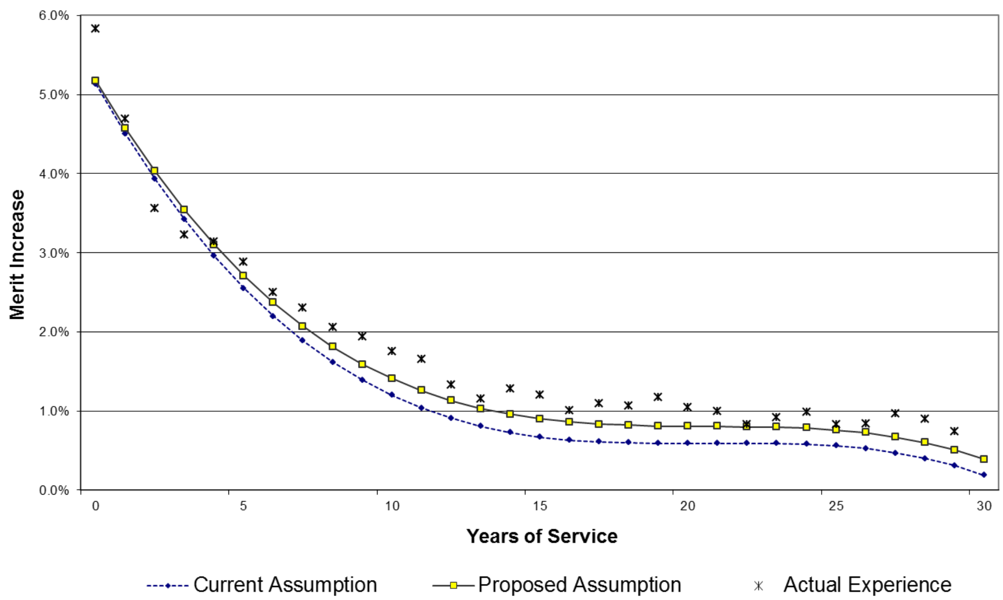


Other General Service



Salary Increase Assumptions (*continued*)

Police & Fire

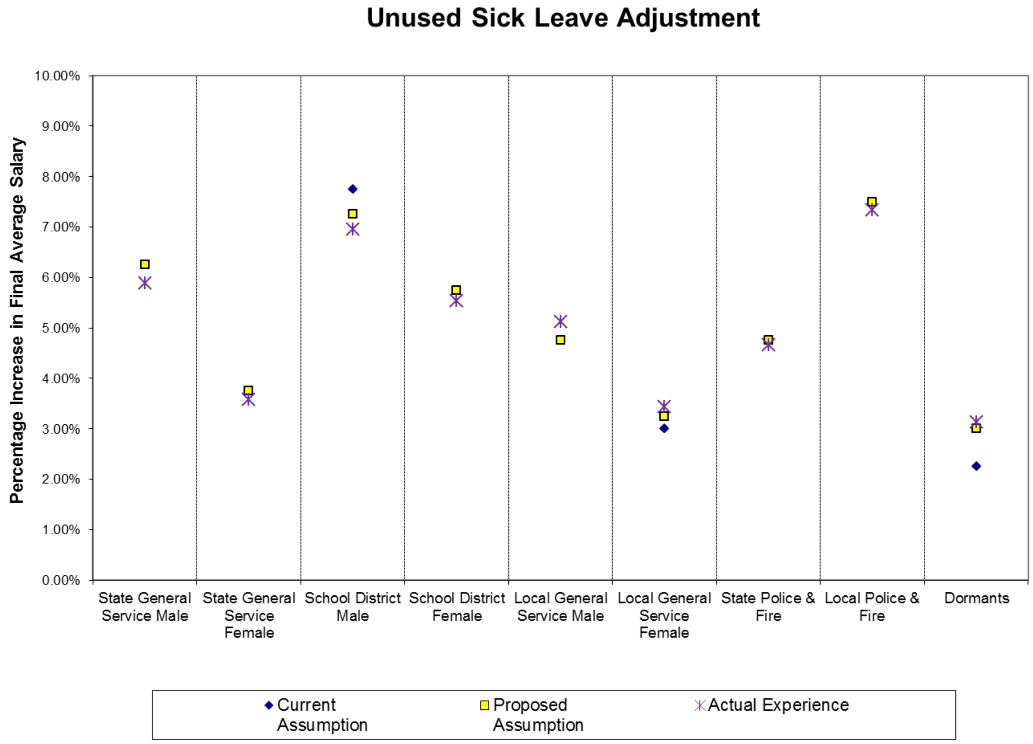


Unused Sick Leave Adjustment

Employers may elect to participate in the Unused Sick Leave Program. This program allows Tier 1/Tier 2 members to convert the value of one-half of their accumulated sick leave into additional retirement benefits. The assumption represents the percentage increase in a member's final average pay due to the inclusion of the value of 50 percent of the member's accumulated sick leave, and is only applied to employers who participate in the program.

For active members, there are currently eight sets of rates developed by employer group, employment category (general service or police & fire), and gender. In addition, a single rate is developed for eligible dormant members. The chart below shows the current assumption, the four-year average of the observed experience, and the recommended assumption for each of the groups studied. If the current assumption is not visible on the chart, it is the same as the proposed assumption.

Salary Increase Assumptions (*continued*)

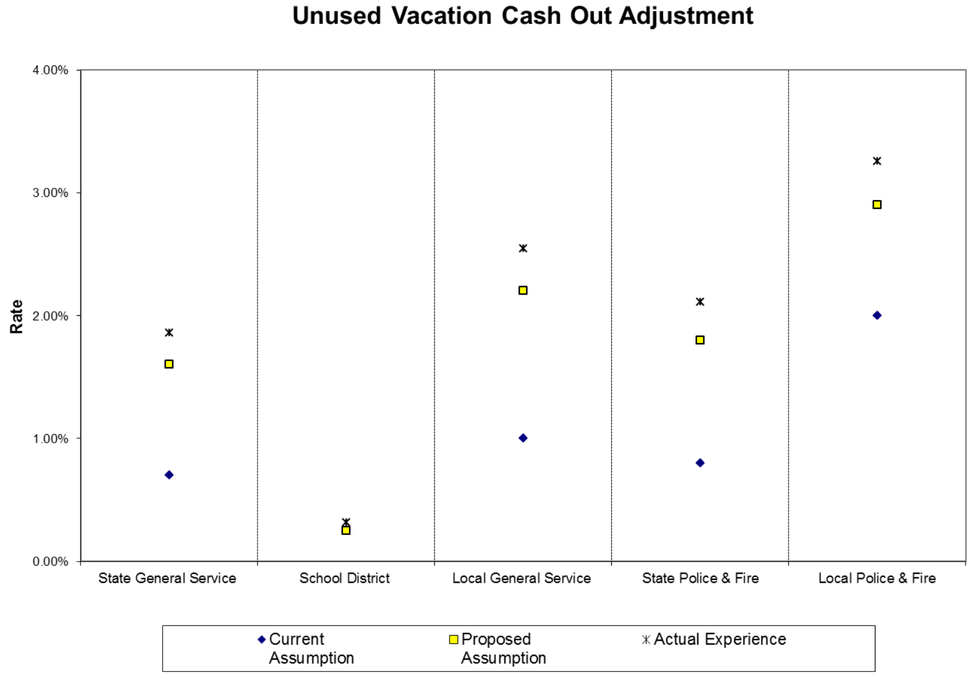


Due to the volatility in experience from one study to the next, for the groups where we recommended changes the recommended change is between the prior assumption and the actual observed experience. How closely the recommended assumption is set to the recently observed experience is influenced by the sample size of the particular group.

Unused Vacation Cash Out Adjustment

Tier 1 members are eligible to include the value of any lump sum payment of unused vacation pay in the calculation of their final average salary. The assumption shown below represents the percentage increase in a member's final average salary expected to result from this provision.

Salary Increase Assumptions (*continued*)



Retiree Healthcare Assumptions

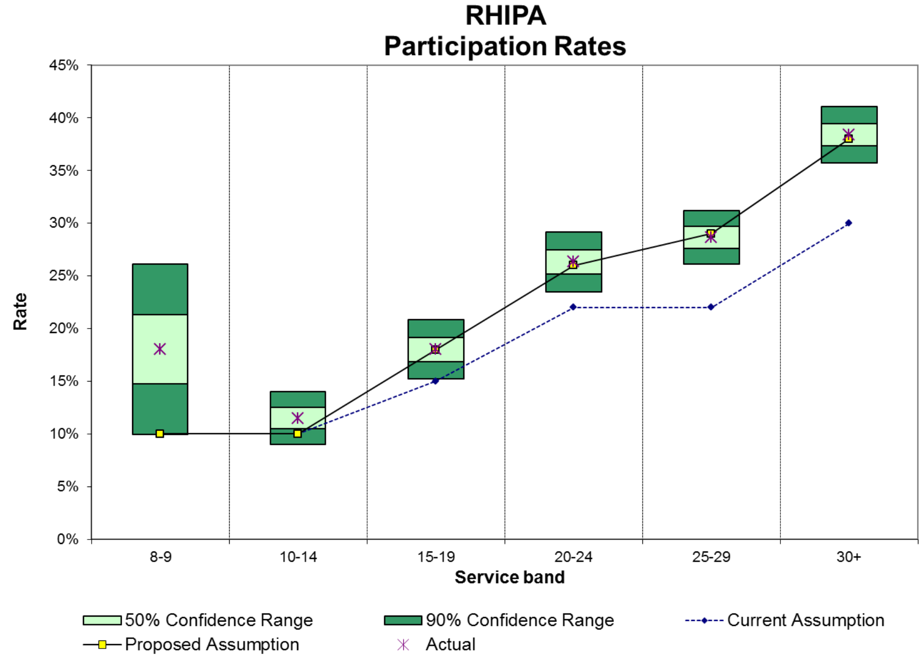
There are two retiree healthcare programs offered to eligible members, the Retiree Health Insurance Premium Account (RHIPA) and the Retiree Health Insurance Account (RHIA).

RHIPA

RHIPA is a program for eligible retirees from State of Oregon employment that provides a subsidized pre-Medicare insurance plan. In the previous valuation, the participation rate assumption for future eligible retirees varied based on service at the time of retirement, as the level of employer-paid benefits in the RHIPA program varies by service level. We recommend continuing this structure for the assumption.

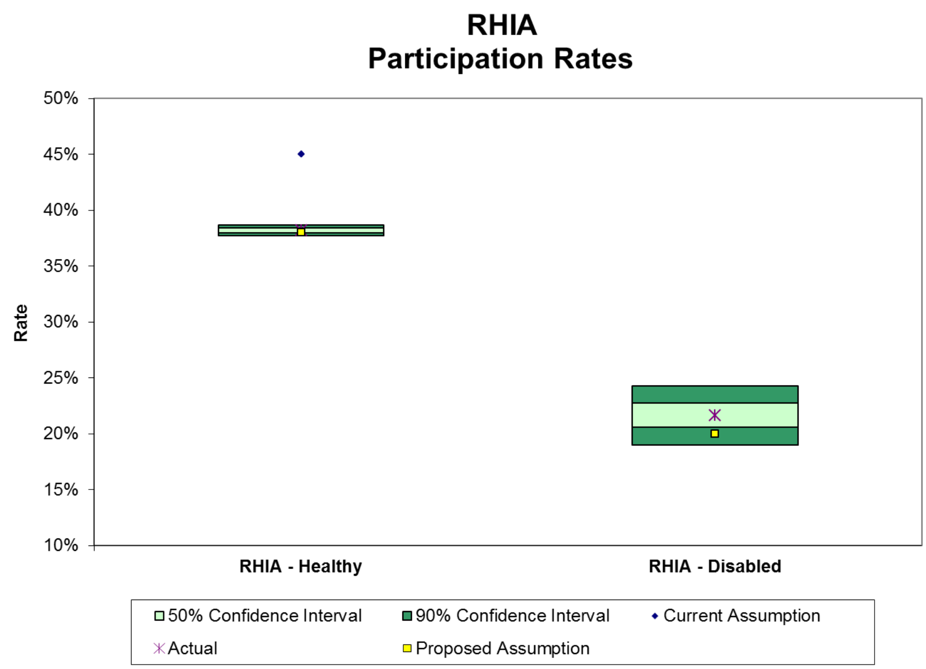
We further recommend increasing the assumed participation level at certain age ranges, as shown below. We believe this change will increase the liability and lower the funded status for the program, which already had a very low funded status at the most recent valuation. This level of participation in RHIPA may be affected, at least in part, by economic conditions, cost of coverage, competition from alternative programs available to retirees, and the impact of healthcare reform legislation becoming effective. Since changes in these factors could change participation rates in RHIPA quickly and because the program's funded status is very low, we recommend that PERS closely monitor participation on a regular basis.

Retiree Healthcare Assumptions (*continued*)



RHIA

RHIA is a subsidized Medicare supplemental insurance program offered to all eligible retirees. Participation rates during the period of study decreased to approximately 38 percent for healthy retirees compared to the current assumption of 45 percent. For disabled retirees, the participation followed the current assumption of 20 percent fairly closely. As shown in the table below, we recommend decreasing the healthy assumption to 38 percent and maintaining the disabled assumption of 20 percent.



5. Appendix

Data

Except where noted, the analysis in this study was based on data for the experience period from January 1, 2011 to December 31, 2014 as provided by the Oregon Public Employees Retirement System (PERS). PERS is solely responsible for the validity, accuracy and comprehensiveness of this information; the results of our analysis can be expected to differ and may need to be revised if the underlying data supplied is incomplete or inaccurate.

The member data was summarized according to the actual and potential member decrements for each year in the study. Actual and potential decrements were grouped according to age or service depending on the demographic assumption.

Assumption Tables

A complete listing of all the assumptions, methods and procedures presented to the Board for review on July 31, 2015 that are to be used in the December 31, 2014 and December 31, 2015 actuarial valuations are summarized on the following pages.

Methods and Procedures

Actuarial cost method: Entry Age Normal

UAL amortization method: Level percent of combined Tier 1, Tier 2, and OPSRP payroll

UAL amortization period:

- Closed amortization from the first rate setting valuation in which the experience is recognized
  - Tier 1/Tier 2 – 20 years
  - OPSRP – 16 years
  - RHIA/RHIPA – 10 years
- New side accounts are aligned with the new Tier 1/Tier 2 base from the most recent rate-setting valuation.
- New transition liabilities are amortized over the 18-year period beginning when the employer joins the SLGRP.

Asset valuation method: Market value

Excluded reserves: Contingency Reserve, Capital Preservation Reserve. Rate Guarantee Reserve is excluded only when it is positive.

Contribution Rate Stabilization Method: Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) are confined to a collar based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Liability Allocation for Actives with Several Employers: Allocate Actuarial Accrued Liability 25% (0% for police & fire) based on account balance with each employer and 75% (100% for police & fire) based on service with each employer.

Allocate Normal Cost to current employer.

Allocation of Benefits-In-Force (BIF) Reserve: The BIF is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool.

Recommended Economic Assumptions

Inflation	2.50%
Real wage growth	1.00%
Payroll growth	3.50%
Investment Return	7.50% (as selected at July 2015 Board meeting)
Interest Crediting	
▪ Regular account	Equal to investment return assumption
▪ Variable account	Equal to investment return assumption
Health cost trend rates ▪ 2015 trend rate ▪ Ultimate trend rate ▪ Year reaching ultimate trend	 7.00% 4.40% 2094

Demographic Assumptions

Mortality

	Healthy Annuitant Mortality - Sample Values										Beneficiary Mortality - Sample Values			
Age	School District Male		Other General Service Male		Police & Fire Male		School District Female		Other Female		Male		Female	
	RP2000 Generational w/BB combined no collar, 2 year setback		RP2000 Generational w/BB combined 75% White/25% Blue collar blend, 1 year setback		RP2000 Generational w/BB combined 75% White/25% Blue collar blend, 1 year setback		RP2000 Generational w/ BB combined no collar, 2 year setback		RP2000 Generational w/BB combined 75% White/25% Blue collar blend, 0 year setback		RP2000 Generational w/BB combined 75% White/25% Blue collar blend, 1 year setback		RP2000 Generational w/BB combined 75% White/25% Blue collar blend, 0 year setback	
Year of Birth	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
50	0.001860	0.001805	0.001948	0.001890	0.001948	0.001890	0.001434	0.001392	0.001683	0.001633	0.001948	0.001890	0.001683	0.001633
51	0.001989	0.001930	0.002080	0.002019	0.002080	0.002019	0.001545	0.001500	0.001845	0.001790	0.002080	0.002019	0.001845	0.001790
52	0.002125	0.002062	0.002399	0.002328	0.002399	0.002328	0.001666	0.001617	0.001993	0.001934	0.002399	0.002328	0.001993	0.001934
53	0.002427	0.002355	0.002599	0.002522	0.002599	0.002522	0.001835	0.001781	0.002157	0.002093	0.002599	0.002522	0.002157	0.002093
54	0.002635	0.002557	0.002827	0.002742	0.002827	0.002742	0.001994	0.001935	0.002337	0.002245	0.002827	0.002742	0.002337	0.002245
55	0.002873	0.002788	0.003075	0.002984	0.003075	0.002984	0.002174	0.002110	0.002573	0.002448	0.003075	0.002984	0.002573	0.002448
56	0.003139	0.003046	0.003463	0.003360	0.003463	0.003360	0.002366	0.002273	0.002872	0.002705	0.003463	0.003360	0.002872	0.002705
57	0.003549	0.003444	0.003969	0.003852	0.003969	0.003852	0.002623	0.002495	0.003175	0.002959	0.003969	0.003852	0.003175	0.002959
58	0.004100	0.003979	0.004334	0.004163	0.004334	0.004163	0.002945	0.002773	0.003507	0.003235	0.004334	0.004163	0.003507	0.003235
59	0.004527	0.004349	0.004747	0.004514	0.004747	0.004514	0.003265	0.003043	0.003874	0.003539	0.004747	0.004514	0.003874	0.003539
60	0.005015	0.004770	0.005216	0.004912	0.005216	0.004912	0.003620	0.003341	0.004292	0.003881	0.005216	0.004912	0.004292	0.003881
61	0.005564	0.005239	0.005790	0.005397	0.005790	0.005397	0.004021	0.003673	0.004802	0.004299	0.005790	0.005397	0.004802	0.004299
62	0.006202	0.005781	0.006467	0.005968	0.006467	0.005968	0.004481	0.004052	0.005352	0.004743	0.006467	0.005968	0.005352	0.004743
63	0.006915	0.006381	0.007272	0.006643	0.007272	0.006643	0.005035	0.004508	0.006073	0.005383	0.007272	0.006643	0.006073	0.005383
64	0.007716	0.007049	0.008197	0.007413	0.008197	0.007413	0.005622	0.004982	0.006786	0.006015	0.008197	0.007413	0.006786	0.006015
65	0.008611	0.007788	0.009082	0.008130	0.009082	0.008130	0.006381	0.005656	0.007583	0.006720	0.009082	0.008130	0.007583	0.006720
66	0.009450	0.008461	0.010041	0.008899	0.010041	0.008899	0.007105	0.006297	0.008492	0.007527	0.010041	0.008899	0.008492	0.007527
67	0.010374	0.009194	0.011067	0.009709	0.011067	0.009709	0.007905	0.007006	0.009377	0.008310	0.011067	0.009709	0.009377	0.008310
68	0.011385	0.009989	0.011959	0.010386	0.011959	0.010386	0.008815	0.007812	0.010302	0.009131	0.011959	0.010386	0.010302	0.009131
69	0.012297	0.010680	0.012830	0.011031	0.012830	0.011031	0.009670	0.008570	0.011311	0.010025	0.012830	0.011031	0.011311	0.010025
70	0.013209	0.011356	0.013956	0.011999	0.013956	0.011999	0.010561	0.009360	0.012605	0.011171	0.013956	0.011999	0.012605	0.011171
71	0.014417	0.012395	0.015395	0.013236	0.015395	0.013236	0.011532	0.010221	0.013842	0.012268	0.015395	0.013236	0.013842	0.012268
72	0.015925	0.013691	0.016770	0.014417	0.016770	0.014417	0.012837	0.011377	0.015223	0.013492	0.016770	0.014417	0.015223	0.013492
73	0.017356	0.014921	0.018332	0.015760	0.018332	0.015760	0.014074	0.012474	0.016718	0.014817	0.018332	0.015760	0.016718	0.014817
74	0.018981	0.016319	0.020096	0.017277	0.020096	0.017277	0.015467	0.013708	0.018307	0.016224	0.020096	0.017277	0.018307	0.016224
75	0.020825	0.017904	0.022095	0.018995	0.022095	0.018995	0.016986	0.015054	0.019973	0.017701	0.022095	0.018995	0.019973	0.017701
76	0.022885	0.019675	0.024308	0.020898	0.024308	0.020898	0.018600	0.016484	0.021781	0.019304	0.024308	0.020898	0.021781	0.019304
77	0.025157	0.021628	0.026771	0.023015	0.026771	0.023015	0.020288	0.017981	0.023738	0.021039	0.026771	0.023015	0.023738	0.021039
78	0.027619	0.023745	0.029431	0.025303	0.029431	0.025303	0.022084	0.019573	0.025907	0.022961	0.029431	0.025303	0.025907	0.022961
79	0.030261	0.026016	0.032349	0.027811	0.032349	0.027811	0.024031	0.021298	0.028303	0.025084	0.032349	0.027811	0.028303	0.025084
80	0.033122	0.028476	0.035522	0.030539	0.035522	0.030539	0.026172	0.023196	0.031013	0.027486	0.035522	0.030539	0.031013	0.027486
81	0.036258	0.031172	0.038930	0.033469	0.038930	0.033469	0.028548	0.025301	0.034054	0.030181	0.038930	0.033469	0.034054	0.030181
82	0.039685	0.034119	0.042928	0.036906	0.042928	0.036906	0.031177	0.027632	0.037433	0.033175	0.042928	0.036906	0.037433	0.033175
83	0.043750	0.037613	0.047240	0.040614	0.047240	0.040614	0.034094	0.030216	0.041211	0.036525	0.047240	0.040614	0.041211	0.036525
84	0.048145	0.041392	0.051910	0.044629	0.051910	0.044629	0.037342	0.033095	0.045410	0.040246	0.051910	0.044629	0.045410	0.040246
85	0.052862	0.045447	0.056865	0.048889	0.056865	0.048889	0.040965	0.036306	0.050084	0.044388	0.056865	0.048889	0.050084	0.044388
86	0.057909	0.049786	0.062255	0.053523	0.062255	0.053523	0.045013	0.039894	0.055180	0.048905	0.062255	0.053523	0.055180	0.048905
87	0.063316	0.054434	0.068128	0.058572	0.068128	0.058572	0.049546	0.043911	0.060753	0.053844	0.068128	0.058572	0.060753	0.053844
88	0.069146	0.059447	0.077426	0.067245	0.077426	0.067245	0.054596	0.048387	0.066738	0.059148	0.077426	0.067245	0.066738	0.059148
89	0.078501	0.068178	0.088026	0.077230	0.088026	0.077230	0.060161	0.053319	0.072996	0.064695	0.088026	0.077230	0.072996	0.064695
90	0.089224	0.078281	0.100190	0.088796	0.100190	0.088796	0.066205	0.058676	0.082740	0.074076	0.100190	0.088796	0.082740	0.074076
91	0.101447	0.089910	0.113829	0.101910	0.113829	0.101910	0.072635	0.064374	0.093423	0.084490	0.113829	0.101910	0.093423	0.084490
92	0.115256	0.103187	0.128066	0.115821	0.128066	0.115821	0.082751	0.074086	0.104909	0.095841	0.128066	0.115821	0.104909	0.095841
93	0.129671	0.117272	0.143680	0.131260	0.143680	0.131260	0.093863	0.084888	0.117219	0.108172	0.143680	0.131260	0.117219	0.108172
94	0.145516	0.132937	0.160775	0.148366	0.160775	0.148366	0.105888	0.096735	0.130137	0.121309	0.160775	0.148366	0.130137	0.121309
95	0.162785	0.150221	0.179050	0.166904	0.179050	0.166904	0.118735	0.109571	0.143653	0.135263	0.179050	0.166904	0.143653	0.135263
96	0.181471	0.169161	0.198852	0.187238	0.198852	0.187238	0.132324	0.123348	0.163086	0.155113	0.198852	0.187238	0.163086	0.155113
97	0.201590	0.189816	0.224315	0.213348	0.224315	0.213348	0.146588	0.138027	0.178284	0.171279	0.224315	0.213348	0.178284	0.171279
98	0.223193	0.212281	0.247375	0.237656	0.247375	0.237656	0.161460	0.153566	0.184754	0.177495	0.247375	0.237656	0.184754	0.177495
99	0.246385	0.236705	0.259075	0.248897	0.259075	0.248897	0.176860	0.169912	0.199711	0.193800	0.259075	0.248897	0.199711	0.193800
100	0.258039	0.247901	0.284148	0.275737	0.284148	0.275737	0.183279	0.176078	0.204344	0.198295	0.284148	0.275737	0.204344	0.198295
101	0.283295	0.274910	0.295606	0.286856	0.295606	0.286856	0.198514	0.192639	0.221070	0.216688	0.295606	0.286856	0.221070	0.216688
102	0.294719	0.285996	0.323171	0.316765	0.323171	0.316765	0.203119	0.197107	0.229336	0.224790	0.323171	0.316765	0.229336	0.224790
103	0.322525	0.316132	0.334267	0.327642	0.334267	0.327642	0.220186	0.215822	0.252304	0.249792	0.334267	0.327642	0.252304	0.249792
104	0.333599	0.326986	0.362895	0.359282	0.362895	0.359282	0.228420	0.223892	0.264379	0.261747	0.362895	0.359282	0.264379	0.261747
105	0.362532	0.358923	0.371015	0.367321	0.371015	0.367321	0.251800	0.249293	0.293116	0.293116	0.371015	0.367321	0.293116	0.293116
106	0.370644	0.366954	0.397886	0.397886	0.397886	0.397886	0.263850	0.261223	0.307811	0.307811	0.397886	0.397886	0.307811	0.307811
107	0.397886	0.397886	0.400000	0.400000	0.400000	0.400000	0.293116	0.293116	0.322725	0.322725	0.400000	0.400000	0.322725	0.322725
108	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.307811	0.307811	0.337441	0.337441	0.400000	0.400000	0.337441	0.337441
109	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.322725	0.322725	0.351544	0.351544	0.400000	0.400000	0.351544	0.351544
110	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.337441	0.337441	0.364617	0.364617	0.400000	0.400000	0.364617	0.364617
111	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.351544	0.351544	0.376246	0.376246	0.400000	0.400000	0.376246	0.376246
112	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.364617	0.364617	0.386015	0.386015	0.400000	0.400000	0.386015	0.386015
113	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.376246	0.376246	0.393507	0.393507	0.400000	0.400000	0.393507	0.393507
114	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.386015	0.386015	0.398308	0.398308	0.400000	0.400000	0.398308	0.398308
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.393507	0.393507	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.398308	0.398308	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Demographic Assumptions (continued)

Disabled Retired Mortality			Non-Annuitant Mortality										
Age	Male	Female	Age	School District Male		Other General Service Male		Police & Fire Male		School District Female		Other Female	
Year of Birth	1950	1950	Year of Birth	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
	70% of RP2000 Disabled male, Generational w/BB	95% of RP2000 Disabled female, Generational w/BB	% of Annuitant Rates	60%	60%	75%	75%	75%	75%	55%	55%	60%	60%
45	0.015800	0.007078	30	0.000236	0.000236	0.000309	0.000309	0.000309	0.000309	0.000129	0.000129	0.000172	0.000172
46	0.016693	0.007775	31	0.000247	0.000247	0.000335	0.000335	0.000335	0.000335	0.000136	0.000136	0.000195	0.000195
47	0.017587	0.008511	32	0.000266	0.000266	0.000368	0.000368	0.000368	0.000368	0.000145	0.000145	0.000218	0.000218
48	0.018483	0.009286	33	0.000299	0.000299	0.000407	0.000407	0.000407	0.000407	0.000169	0.000169	0.000242	0.000242
49	0.019381	0.010102	34	0.000337	0.000337	0.000449	0.000449	0.000449	0.000449	0.000193	0.000193	0.000265	0.000265
50	0.020283	0.010958	35	0.000379	0.000379	0.000491	0.000491	0.000491	0.000491	0.000217	0.000217	0.000288	0.000288
51	0.021124	0.011818	36	0.000421	0.000421	0.000536	0.000536	0.000536	0.000536	0.000239	0.000239	0.000311	0.000311
52	0.021962	0.012706	37	0.000464	0.000464	0.000581	0.000581	0.000581	0.000581	0.000261	0.000261	0.000334	0.000334
53	0.022795	0.013618	38	0.000505	0.000505	0.000624	0.000624	0.000624	0.000624	0.000283	0.000283	0.000360	0.000360
54	0.023621	0.014488	39	0.000542	0.000542	0.000668	0.000668	0.000668	0.000668	0.000305	0.000305	0.000389	0.000389
55	0.024440	0.015328	40	0.000578	0.000578	0.000712	0.000712	0.000712	0.000712	0.000329	0.000329	0.000422	0.000422
56	0.025253	0.016125	41	0.000613	0.000611	0.000758	0.000755	0.000758	0.000755	0.000356	0.000355	0.000460	0.000459
57	0.025882	0.016871	42	0.000647	0.000644	0.000808	0.000803	0.000808	0.000803	0.000388	0.000386	0.000504	0.000501
58	0.026452	0.017559	43	0.000685	0.000679	0.000865	0.000857	0.000865	0.000857	0.000426	0.000422	0.000553	0.000548
59	0.026967	0.018188	44	0.000729	0.000720	0.000931	0.000920	0.000931	0.000920	0.000469	0.000463	0.000607	0.000600
60	0.027433	0.018763	45	0.000779	0.000768	0.001005	0.000990	0.001005	0.000990	0.000515	0.000508	0.000665	0.000655
61	0.027859	0.019293	46	0.000838	0.000823	0.001091	0.001072	0.001091	0.001072	0.000566	0.000556	0.000727	0.000714
62	0.028249	0.019790	47	0.000905	0.000886	0.001175	0.001151	0.001175	0.001151	0.000618	0.000606	0.000793	0.000776
63	0.028615	0.020538	48	0.000970	0.000947	0.001267	0.001236	0.001267	0.001236	0.000673	0.000657	0.000862	0.000841
64	0.028964	0.021341	49	0.001040	0.001013	0.001361	0.001325	0.001361	0.001325	0.000729	0.000710	0.000933	0.000908
65	0.029304	0.022215	50	0.001116	0.001083	0.001461	0.001418	0.001461	0.001418	0.000789	0.000766	0.001010	0.000980
66	0.029645	0.023176	51	0.001193	0.001158	0.001560	0.001514	0.001560	0.001514	0.000850	0.000825	0.001107	0.001074
67	0.029992	0.024237	52	0.001275	0.001237	0.001799	0.001746	0.001799	0.001746	0.000916	0.000889	0.001196	0.001160
68	0.030348	0.025406	53	0.001456	0.001413	0.001949	0.001891	0.001949	0.001891	0.001009	0.000980	0.001294	0.001256
69	0.031313	0.026687	54	0.001581	0.001534	0.002120	0.002057	0.002120	0.002057	0.001097	0.001064	0.001402	0.001347
70	0.032380	0.028084	55	0.001724	0.001673	0.002306	0.002238	0.002306	0.002238	0.001196	0.001161	0.001544	0.001469
71	0.033555	0.029593	56	0.001883	0.001828	0.002597	0.002520	0.002597	0.002520	0.001301	0.001250	0.001723	0.001623
72	0.034840	0.031213	57	0.002129	0.002066	0.002977	0.002889	0.002977	0.002889	0.001443	0.001372	0.001905	0.001776
73	0.036240	0.032938	58	0.002460	0.002387	0.003250	0.003122	0.003250	0.003122	0.001620	0.001525	0.002104	0.001941
74	0.037752	0.034766	59	0.002716	0.002609	0.003560	0.003386	0.003560	0.003386	0.001796	0.001674	0.002324	0.002123
75	0.039371	0.036692	60	0.003009	0.002862	0.003912	0.003684	0.003912	0.003684	0.001991	0.001838	0.002575	0.002328
76	0.041088	0.038713	61	0.003338	0.003143	0.004342	0.004048	0.004342	0.004048	0.002212	0.002020	0.002881	0.002579
77	0.042891	0.040833	62	0.003721	0.003469	0.004850	0.004476	0.004850	0.004476	0.002465	0.002229	0.003211	0.002846
78	0.044765	0.043053	63	0.004149	0.003829	0.005454	0.004982	0.005454	0.004982	0.002769	0.002479	0.003644	0.003230
79	0.046691	0.045380	64	0.004630	0.004229	0.006147	0.005560	0.006147	0.005560	0.003092	0.002740	0.004072	0.003609
80	0.048651	0.047824	65	0.005167	0.004673	0.006811	0.006098	0.006811	0.006098	0.003510	0.003111	0.004550	0.004032
81	0.050625	0.050401	66	0.005670	0.005077	0.007531	0.006674	0.007531	0.006674	0.003908	0.003463	0.005095	0.004516
82	0.052599	0.053130	67	0.006224	0.005516	0.008300	0.007282	0.008300	0.007282	0.004348	0.003853	0.005626	0.004986
83	0.054559	0.056025	68	0.006831	0.005993	0.008969	0.007790	0.008969	0.007790	0.004848	0.004297	0.006181	0.005478
84	0.056496	0.059106	69	0.007378	0.006408	0.009623	0.008273	0.009623	0.008273	0.005319	0.004714	0.006786	0.006015
85	0.058404	0.062387	70	0.007925	0.006814	0.010467	0.008999	0.010467	0.008999	0.005809	0.005148	0.007563	0.006703
86	0.062255	0.065881	71	0.008650	0.007437	0.011546	0.009927	0.011546	0.009927	0.006343	0.005622	0.008305	0.007361
87	0.068128	0.069595	72	0.009555	0.008215	0.012577	0.010813	0.012577	0.010813	0.007060	0.006257	0.009134	0.008095
88	0.077426	0.073536	73	0.010414	0.008953	0.013749	0.011820	0.013749	0.011820	0.007741	0.006861	0.010031	0.008890
89	0.088026	0.077701	74	0.011389	0.009791	0.015072	0.012958	0.015072	0.012958	0.008507	0.007539	0.010984	0.009735
90	0.100190	0.085478	75	0.012495	0.010742	0.016571	0.014246	0.016571	0.014246	0.009342	0.008280	0.011984	0.010621
91	0.113829	0.094185	76	0.013731	0.011805	0.018231	0.015674	0.018231	0.015674	0.010230	0.009066	0.013069	0.011583
92	0.128066	0.104909	77	0.015094	0.012977	0.020078	0.017261	0.020078	0.017261	0.011158	0.009890	0.014243	0.012623
93	0.143680	0.117219	78	0.016571	0.014247	0.022073	0.018977	0.022073	0.018977	0.012146	0.010765	0.015544	0.013776
94	0.160775	0.130137	79	0.018157	0.015610	0.024262	0.020858	0.024262	0.020858	0.013217	0.011714	0.016982	0.015050
95	0.179050	0.143653	80	0.019873	0.017086	0.026642	0.022904	0.026642	0.022904	0.014395	0.012758	0.018608	0.016491
96	0.198852	0.163086	81	0.021755	0.018703	0.029198	0.025102	0.029198	0.025102	0.015701	0.013916	0.020432	0.018108
97	0.224315	0.178284	82	0.023811	0.020471	0.032196	0.027680	0.032196	0.027680	0.017147	0.015198	0.022460	0.019905
98	0.247375	0.184754	83	0.026250	0.022568	0.035430	0.030461	0.035430	0.030461	0.018752	0.016619	0.024727	0.021915
99	0.259075	0.199711	84	0.028887	0.024835	0.038933	0.033472	0.038933	0.033472	0.020538	0.018202	0.027246	0.024147
100	0.284148	0.204344	85	0.031717	0.027268	0.042649	0.036666	0.042649	0.036666	0.022531	0.019968	0.030051	0.026633
101	0.295606	0.221070	86	0.034745	0.029872	0.046691	0.040142	0.046691	0.040142	0.024757	0.021942	0.033108	0.029343
102	0.323171	0.229336	87	0.037990	0.032660	0.051096	0.043929	0.051096	0.043929	0.027250	0.024151	0.036452	0.032307
103	0.334267	0.252304	88	0.041488	0.035668	0.058070	0.050434	0.058070	0.050434	0.030028	0.026613	0.040043	0.035489
104	0.362895	0.264379	89	0.047101	0.040907	0.066020	0.057922	0.066020	0.057922	0.033089	0.029325	0.043798	0.038817
105	0.371015	0.293116	90	0.053534	0.046969	0.075142	0.066597	0.075142	0.066597	0.036413	0.032272	0.049644	0.044446
106	0.397886	0.307811	91	0.060868	0.053946	0.085371	0.076432	0.085371	0.076432	0.039949	0.035406	0.056054	0.050694
107	0.400000	0.322725	92	0.069154	0.061912	0.096050	0.086866	0.096050	0.086866	0.045513	0.040747	0.062946	0.057504
108	0.400000	0.337441	93	0.077803	0.070363	0.107760	0.098445	0.107760	0.098445	0.051625	0.046688	0.070332	0.064903
109	0.400000	0.351544	94	0.087310	0.079762	0.120581	0.111274	0.120581	0.111274	0.058238	0.053204	0.078082	0.072785
110	0.400000	0.364617	95	0.097671	0.090133	0.134288	0.125178	0.134288	0.125178	0.065304	0.060264	0.086192	0.081158
111	0.400000	0.376246	96	0.108883	0.101497	0.149139	0.140428	0.149139	0.140428	0.072778	0.067841	0.097852	0.093068
112	0.400000	0.386015	97	0.120954	0.113890	0.168236	0.160011	0.168236	0.160011	0.080623	0.075915	0.106970	0.102767
113	0.400000	0.393507	98	0.133916	0.127369	0.185531	0.178242	0.185531	0.178242	0.088803	0.084461	0.110852	0.106497
114	0.400000	0.398308	99	0.147831	0.142023	0.194306	0.186673	0.194306	0.186673	0.097273	0.093452	0.119827	0.116280
115	0.400000	0.400000	100	0.154823	0.148741	0.213111	0.206803	0.213111	0.206803	0.100803	0.096843	0.122606	0.118977
116	0.400000	0.400000	101	0.169977	0.164946	0.221705	0.215142	0.221705	0.215142	0.109183	0.105951	0.132642	0.130013
117	0.400000	0.400000	102	0.176831	0.171598	0.242378	0.237574	0.242378	0.237574	0.111715	0.108409	0.137602	0.134874
118	0.400000	0.400000	103	0.193515	0.189679	0.250700	0.245732	0.250700	0.245732	0.121102	0.118702	0.151382	0.149875
119	0.400000	0.400000	104	0.200159	0.196192	0.272171	0.269462	0.272171	0.269462	0.125631	0.123141	0.158627	0.157048
120	1.000000	1.000000	105	0.217519	0.215354	0.278261	0.275491	0.278261	0.275491	0.138490	0.137111	0.175870	0.175870

Demographic Assumptions (continued)

Retirement Assumptions (Tier 1/Tier 2)

Retirement from Active Status (Tier 1/Tier 2)

	Police & Fire			General Service / School Districts						Judges
				General Service			School Districts			
Age	**<13 Years**	**13 - 24**	**25+ Years**	**< 15 years**	**15-29 Years**	**30+ Years**	**< 15 years**	**15-29 Years**	**30+ Years**	
< 50						15.00%			15.00%	
50	1.50%	2.00%	24.00%			15.00%			15.00%	
51	1.50%	2.00%	17.50%			15.00%			15.00%	
52	1.50%	2.00%	17.50%			15.00%			25.00%	
53	1.50%	2.00%	17.50%			17.50%			25.00%	
54	1.50%	2.00%	17.50%			17.50%			25.00%	
55	5.00%	8.00%	23.50%	1.50%	3.00%	17.50%	1.50%	4.50%	25.00%	
56	5.00%	8.00%	23.50%	1.50%	3.00%	17.50%	1.50%	4.50%	25.00%	
57	5.00%	8.00%	23.50%	1.50%	3.00%	20.00%	1.50%	4.50%	25.00%	
58	5.00%	8.00%	23.50%	1.50%	10.00%	20.00%	2.50%	14.50%	32.00%	
59	5.00%	8.00%	23.50%	3.50%	10.00%	20.00%	4.50%	14.50%	28.50%	
60	5.00%	11.00%	23.50%	6.00%	10.00%	20.00%	6.50%	14.50%	28.50%	10.00%
61	5.00%	14.00%	23.50%	6.00%	10.00%	24.00%	8.00%	14.50%	28.50%	10.00%
62	15.00%	25.00%	38.00%	12.50%	19.50%	31.00%	15.00%	25.00%	34.00%	10.00%
63	7.00%	17.00%	38.00%	12.50%	16.50%	22.00%	13.00%	22.00%	26.50%	10.00%
64	7.00%	17.00%	17.00%	12.50%	16.50%	26.00%	13.00%	19.50%	31.50%	10.00%
65	100.00%	100.00%	100.00%	19.50%	28.00%	32.00%	25.50%	33.50%	38.00%	10.00%
66				25.50%	35.00%	38.00%	21.50%	36.50%	38.00%	10.00%
67				22.50%	25.00%	26.00%	19.50%	34.50%	38.00%	10.00%
68				19.50%	25.00%	26.00%	19.50%	28.00%	28.50%	10.00%
69				19.50%	25.00%	26.00%	19.50%	28.00%	28.50%	30.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Demographic Assumptions (continued)

Retirement Assumptions (OPSRP)

Retirement from Active Status (OPSRP)

	Police & Fire			General Service / School Districts					
				General Service			School Districts		
Age	**<13 Years**	**13 - 24**	**25+ Years**	**< 15 years**	**15-29 Years**	**30+ Years**	**< 15 years**	**15-29 Years**	**30+ Years**
50	1.00%	1.50%	5.50%						
51	1.00%	1.50%	5.50%						
52	1.00%	1.50%	5.50%						
53	1.00%	1.50%	25.00%						
54	1.00%	1.50%	17.50%						
55	4.00%	5.00%	23.50%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
56	4.00%	5.00%	23.50%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
57	4.00%	5.00%	23.50%	1.00%	2.50%	7.50%	1.00%	2.50%	7.50%
58	4.00%	5.00%	23.50%	1.00%	3.00%	30.00%	1.00%	3.00%	30.00%
59	4.00%	5.00%	23.50%	1.50%	3.00%	25.00%	1.50%	3.00%	25.00%
60	4.00%	15.00%	23.50%	3.00%	3.75%	20.00%	3.00%	3.75%	20.00%
61	4.00%	8.50%	23.50%	3.00%	5.00%	20.00%	3.00%	5.00%	20.00%
62	12.00%	25.00%	38.00%	8.00%	12.00%	30.00%	6.00%	12.00%	30.00%
63	7.00%	17.00%	38.00%	7.00%	10.00%	20.00%	6.00%	10.00%	20.00%
64	7.00%	17.00%	17.00%	6.00%	10.00%	20.00%	6.00%	10.00%	20.00%
65	100.00%	100.00%	100.00%	13.00%	35.00%	20.00%	12.00%	35.00%	20.00%
66				15.50%	33.00%	20.00%	14.00%	33.00%	20.00%
67				15.50%	22.00%	30.00%	11.00%	22.00%	30.00%
68				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
69				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Lump Sum Option at Retirement

Partial Lump Sum	4.5% for all years
Total Lump Sum	3.0% for 2015, declining by 0.5% per year until reaching 0.0%

Purchase of Credited Service at Retirement

Money Match Retirements	0%
Non-Money Match Retirements	60%

Disability Assumptions

	Duty Disability		
Age	**Police & Fire**	**General Service**	**Ordinary Disability**
20	0.006%	0.000%	0.015%
25	0.009%	0.000%	0.022%
30	0.013%	0.001%	0.032%
35	0.020%	0.001%	0.049%
40	0.032%	0.001%	0.079%
45	0.052%	0.002%	0.130%
50	0.090%	0.004%	0.180%
55	0.169%	0.008%	0.180%
60	0.241%	0.011%	0.180%

Termination Assumptions

Duration	School District Male	School District Female	General Service Male	General Service Female	Police & Fire
0	20.00%	15.50%	19.00%	18.50%	10.00%
1	16.00%	14.05%	17.16%	17.00%	5.97%
2	13.55%	12.34%	14.34%	13.09%	5.02%
3	11.48%	10.83%	11.98%	11.67%	4.22%
4	9.72%	9.51%	10.00%	10.41%	3.54%
5	8.24%	8.35%	8.36%	9.29%	3.31%
6	6.98%	7.33%	6.98%	8.28%	3.06%
7	5.91%	6.44%	5.83%	7.38%	2.83%
8	5.01%	5.66%	4.87%	6.59%	2.61%
9	4.60%	4.97%	4.23%	5.87%	2.41%
10	4.23%	4.36%	3.96%	5.24%	2.23%
11	3.89%	3.83%	3.71%	4.67%	2.06%
12	3.57%	3.55%	3.48%	4.46%	1.90%
13	3.28%	3.35%	3.26%	4.18%	1.76%
14	3.02%	3.16%	3.06%	3.91%	1.63%
15	2.78%	2.98%	2.86%	3.66%	1.50%
16	2.55%	2.81%	2.68%	3.43%	1.39%
17	2.35%	2.66%	2.51%	3.21%	1.28%
18	2.16%	2.51%	2.36%	3.00%	1.19%
19	1.98%	2.37%	2.21%	2.81%	1.10%
20	1.82%	2.23%	2.07%	2.63%	1.01%
21	1.68%	2.11%	1.94%	2.46%	0.94%
22	1.54%	1.99%	1.82%	2.31%	0.87%
23	1.42%	1.88%	1.70%	2.16%	0.80%
24	1.30%	1.77%	1.59%	2.02%	0.80%
25	1.20%	1.67%	1.49%	1.89%	0.80%
26	1.20%	1.58%	1.40%	1.77%	0.80%
27	1.20%	1.50%	1.40%	1.66%	0.80%
28	1.20%	1.50%	1.40%	1.55%	0.80%
29	1.20%	1.50%	1.40%	1.50%	0.80%
30 +	1.20%	1.50%	1.40%	1.50%	0.80%

Merit Salary Increase Assumptions

Duration	School District	Other General Service	Police & Fire
0	3.53%	3.95%	5.17%
1	3.20%	3.55%	4.57%
2	2.88%	3.17%	4.03%
3	2.58%	2.83%	3.54%
4	2.29%	2.51%	3.10%
5	2.01%	2.24%	2.71%
6	1.74%	1.98%	2.37%
7	1.50%	1.75%	2.07%
8	1.25%	1.56%	1.81%
9	1.03%	1.38%	1.59%
10	0.82%	1.22%	1.41%
11	0.61%	1.08%	1.26%
12	0.42%	0.97%	1.13%
13	0.25%	0.87%	1.03%
14	0.08%	0.78%	0.96%
15	-0.07%	0.71%	0.90%
16	-0.21%	0.66%	0.86%
17	-0.34%	0.61%	0.83%
18	-0.46%	0.57%	0.82%
19	-0.57%	0.54%	0.81%
20	-0.67%	0.52%	0.81%
21	-0.75%	0.51%	0.81%
22	-0.83%	0.49%	0.80%
23	-0.86%	0.47%	0.80%
24	-0.89%	0.46%	0.79%
25	-0.91%	0.45%	0.76%
26	-0.93%	0.43%	0.73%
27	-0.94%	0.40%	0.67%
28	-0.94%	0.38%	0.60%
29	-0.94%	0.34%	0.51%
30	-0.94%	0.29%	0.39%
31 +	-0.94%	0.00%	0.00%

Unused Sick Leave Adjustment

Actives	
• State General Service Male	6.25%
• State General Service Female	3.75%
• School District Male	7.25%
• School District Female	5.75%
• Local General Service Male	4.75%
• Local General Service Female	3.25%
• State Police & Fire	4.75%
• Local Police & Fire	7.50%
Dormants	3.00%

Unused Vacation Cash Out Adjustment

Tier 1	
• State General Service	1.60%
• School District	0.25%
• Local General Service	2.20%
• State Police & Fire	1.80%
• Local Police & Fire	2.90%
Tier 2	0.00%

Retiree Healthcare Assumptions

Retiree Healthcare Participation

RHIPA	
• 8 – 9 years of service	10.0%
• 10 – 14 years of service	10.0%
• 15 – 19 years of service	18.0%
• 20 – 24 years of service	26.0%
• 25 – 29 years of service	29.0%
• 30+ years of service	38.0%
RHIA	
• Healthy Retired	38.0%
• Disabled Retired	20.0%

Healthcare Cost Trend Rates

Year	Rate
2015	7.00%
2016	6.30%
2017	6.00%
2018	5.40%
2019	5.30%
2020	5.40%
2021-2024	5.40%
2025-2027	5.50%
2028	6.40%
2029	6.50%
2030-2034	6.40%
2035	6.30%
2036	6.20%
2037	6.10%
2038	6.00%
2039-2040	5.90%
2041-2043	5.80%
2044-2045	5.70%
2046-2049	5.60%
2050-2055	5.50%
2056-2061	5.40%
2062	5.30%
2063	5.20%
2064	5.10%
2065	5.00%
2066	4.90%
2067	4.80%
2068	4.70%
2069	4.70%
2070	4.60%
2071-2093	4.50%
2094+	4.40%

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September 24, 2015

BY EMAIL ONLY
Steve Rodeman
Executive Director
Public Employee Retirement System
PO Box 23700
Tigard, OR 97281-3700

Re: 9/25/15 PERB Meeting
Our File No.: 5415-237

Dear Steve:

I am sending this letter on behalf of the PERS Coalition to comment on several issues that will be before the board tomorrow. I apologize for the last-minute correspondence but I did not have the opportunity to review the board packet until this morning. I want to comment on two issues.

The first is the potential use of the contingency reserve, both in the *Moro* implementation and in the OPSRP contribution issue. Though it is clear that the legislature has invested PERS with some discretion in the use of the contingency reserve, that discretion should not be exercised on an ad hoc basis. It would be prudent to, at a minimum, develop policies for the circumstances which are appropriate for the use of the contingency reserve. Secondarily, the board should consider whether a particular use of the contingency reserve should be assigned to the employer (or employee) portion of the reserve.

On the *Moro* implementation issue the staff asks for approval from the PERS board for the use of the contingency reserve to restore the COLA payments that were not made while the litigation was pending. The PERS Coalition has not opposed the use of the contingency reserve for that purpose. However, it is their position that those payments should be assigned to the employer portion of the fund. It is clear that funds deposited to the contingency reserve do not fully lose their identity based on the source of those funds. In ORS 238.670(a) the legislature has specifically addressed the issue of employer insolvency and while authorizing the use of the contingency reserve, assigns those obligations to the employer portion of that reserve. Funding of cost of living adjustments is specifically assigned to the employer accounts (ORS 238.360(3)), and it would be consistent with that statute to use the employer portion of the contingency reserve to fund this obligation. The practical impact of assigning this to the employer portion of the reserve is that should there be a need for additional funding for the reserve, that funding would come disproportionately from employer earnings in order to make the account whole. Conversely, if the board determines that the contingency reserve is overfunded, then distribution of those funds back to the accounts from which they were derived would be adjusted to reflect the use of a portion of the employer reserve.

The memo addressing the OPSRP contribution start date also contemplates the use of the contingency reserve. Certainly if the board is to consider the use of the contingency reserve to fund any employer obligations it should also consider assigning that use to the employer portion of the fund. However, even before reaching that issue it would appear that it is premature to bring this issue to the board without full input from employee representatives. This issue was presented to the last LAC committee meeting and while the employee representatives supported the introduction of the bill to change the OPSRP contribution date, they also made it very clear that they would not support use of the contingency reserve to reimburse those employers who had mistakenly implemented the prior statute.

Prior to consideration of this issue by the board, either the LAC committee directly or the employee representatives should have an opportunity to weigh in on all aspects of this issue. This is particularly important since it would appear that one of the major reasons advanced for the use of the contingency reserve is what is described as confusing and inadequate advice given by PERS on the proper application of the prior statute. In numerous circumstances PERS has taken the position that the failure of PERS to give accurate advice or information to members does not constitute a basis for relief for those members whether funded through the contingency reserve or otherwise. I can think of no good policy reason which would permit the use of contingency reserve to cure inadequate or incorrect advice given to an employer while not permitting the use of that reserve to address that same problem when members are adversely impacted. On behalf of the Coalition I suggest that the board defer any action on this issue until there has been adequate time to address the issues raised.

Finally, I note in the *Moro* implementation memo that a certain group of retirees, who retired subsequent to the passage of the 2013 legislation, will receive invoices for overpayments which were made during the time the lawsuit was pending. At least in part, those payments were as a result of the supplementary payment program adopted by the legislature and set aside by the Oregon Supreme Court. It is my understanding that in circumstances where the invoice is less than the amount of additional payment, that they will offset so that the member will not be compelled to make any payments to PERS. However, it appears from the memo that there are approximately 3,800 retirees who will receive an invoice in excess of the amount of additional benefit they will receive. There can be no question that receipt of an invoice from PERS is regarded as one of the most unpleasant experiences a PERS retiree can endure. I understand that those invoices will not go out until after January 1, 2016 so there should be adequate opportunity to address the best way to minimize the impact of these invoices on PERS members. For instance, the board may want to consider whether use of the contingency reserve to pay those invoices would be appropriate. This is particularly true because to the extent they were receiving a supplementary payment, they are members who are receiving a lower-than-average benefit payment.

I appreciate the opportunity to bring these issues to your attention. I will be at the meeting tomorrow and will be happy to address any of these issues if either you or the board have questions.

Yours very truly,

Gregory A. Hartman

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cc: Clients