

PERS

BY THE NUMBERS

Updated December 2021

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OREGON
PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Executive Message

The Oregon Public Employees Retirement System (PERS) serves the people of Oregon by administering public employee benefit trusts to pay the right person, the right benefit, at the right time. The 2021 edition of *PERS by the Numbers* shares the latest facts and figures about the administration of PERS. Where possible, figures are either as of the latest actuarial valuation (December 31, 2020) or the latest fiscal year end date (June 30, 2021); however, there may be minor inconsistencies between data points. Projected system funding status ([page 23](#)) was determined based on the 6.9% assumed earnings rate adopted by the PERS Board in October 2021; the new rate will take effect on January 1, 2022.

The Oregon Legislature is the “plan sponsor” for PERS, the system. The Legislature determines the benefit structure for participating public employees. Those benefits have been modified over time, starting from the plan inception in 1945 with Tier One; the creation of the Tier Two program for employees starting in 1996; the Oregon Public Service Retirement Program (OPSRP) for those who started work after August 28, 2003; and the creation of the Individual Account Program (IAP), an account-based benefit for all PERS members, starting in 2004. This publication also captures some legislative benefit changes, including those due to [Senate Bill \(SB\) 1049](#) (2019), a comprehensive piece of legislation intended by the Oregon Legislature to address the increasing cost of funding Oregon PERS, by providing relief to public employers for escalating PERS contribution rate increases.

The Legislature also established PERS, the agency, to administer the retirement system in partnership with approximately 900 public employers, including school districts, special districts, cities, counties, community colleges, universities, and state agencies. PERS is required to administer the retirement system for participating public employers, and must follow all relevant state and federal laws when determining and administering benefits.

PERS engages with more than 384,000 current and former public employees or their beneficiaries and maintains important data about their public employment service, salaries, and other information. PERS also administers a health insurance program for retirees (PERS Health Insurance Program) and a 457(b) voluntary deferred compensation program (Oregon Savings Growth Plan).

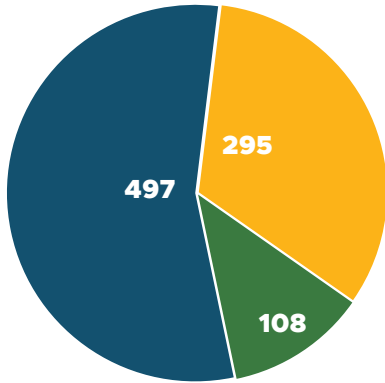
Key facts and information in *PERS by the Numbers* include:

- PERS membership and demographic information, including the **number of members eligible to retire** ([pages 3-4](#)).
- Retiree benefit information, including **monthly benefit payment amounts** ([page 6](#)).
- Updated research from PERS’ annual **Tier One/Tier Two Replacement Ratio Study**, including data on average salary replacement ratios, monthly benefits, and salaries ([pages 10-12](#)).
- Data about the **Individual Account Program (IAP)**, an account-based benefit for all PERS members actively employed since 2004, separate from their defined benefit pension ([page 13](#)).
- PERS’ **system funded status** as of December 31, 2020, including future projections from the PERS actuaries ([pages 21-23](#)).
- **System revenue information**, including member and employer contributions and investment income, as well as earnings credited to member accounts ([pages 24-32](#)).
- The **economic impact** of PERS monthly benefit payments to the state of Oregon ([pages 33-35](#)).
- A list of **PERS-participating employers** by county, according to their mailing address ([pages 37-43](#)).

All Oregonians are served, in one way or another, by public employees. PERS works to ensure that we pay the right benefit, to the right person, at the right time.

Kevin Olineck
PERS Director

1. System Demographics (as of June 30, 2021)



PERS-participating employers

Currently 900, including state agencies, universities, community colleges, school districts, cities, counties, and other local government units. See a full list of PERS employers in [Appendix A](#).

■ State Government	108
■ Local Government	497
■ School Districts	295

Membership by category

		State Govt.	Local Govt.	School Districts	Total
Tier One	Active	4,348	4,158	5,485	13,991
	Inactive	2,736	3,083	3,284	9,103
Tier Two	Active	7,712	9,583	12,027	29,322
	Inactive	3,097	4,849	5,552	13,498
OPSRP	Active	39,280	43,123	54,382	136,785
	Inactive	6,673	9,012	10,098	25,783
Sub-total	Active	51,340	56,864	71,894	180,098
	Inactive	12,506	16,944	18,934	48,384
Retired*		45,557	45,546	65,397	156,500
TOTAL					384,982

*Retirements include beneficiaries, but not members who received total lump-sum retirement or account withdrawal payouts.

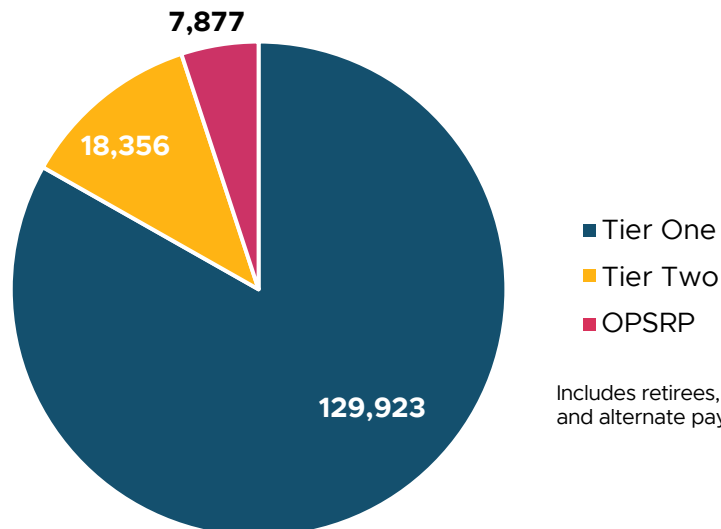
State Government — State agencies, universities (except Oregon Health and Science University, or OHSU), judges

Local Government — Cities, counties, special districts, community colleges, and OHSU

Active — Currently working for a PERS-participating employer

Inactive — Not retired; not currently working for a PERS-participating employer

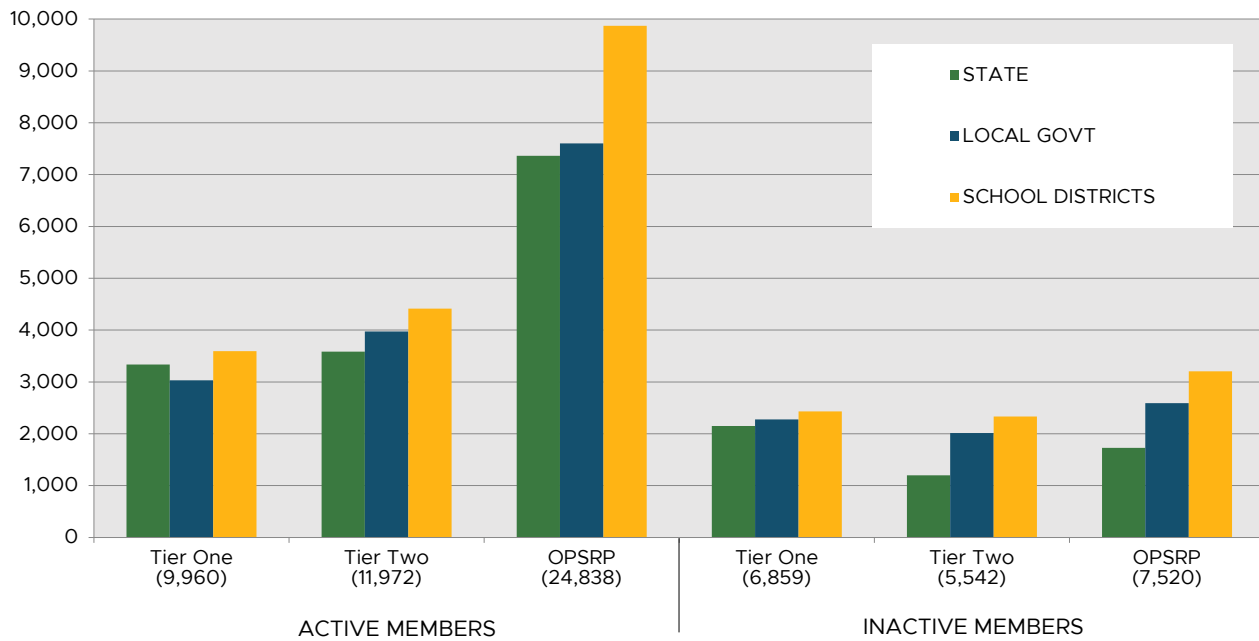
Current retirees by membership group (as of December 31, 2020)



Includes retirees, beneficiaries, and alternate payees.

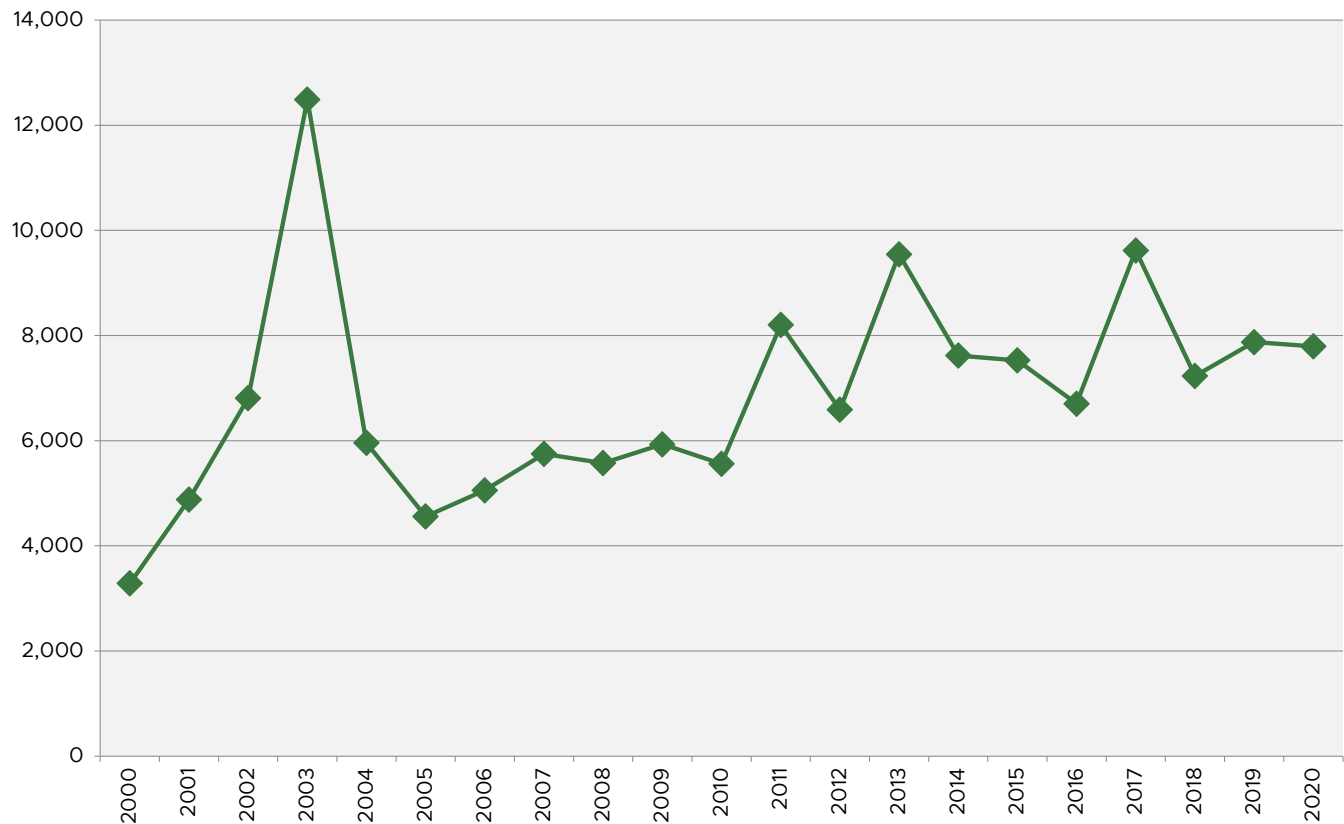
1. System Demographics (continued)

Members eligible to retire (as of June 30, 2021)



66,691 MEMBERS ELIGIBLE TO RETIRE BY AGE OR SERVICE
(29.2% of all active/inactive members)

Retirements by calendar year (Tier One, Tier Two, OPSRP)



Note: Spikes in retirements are generally related to legislative conversations about PERS.

2. System Benefits

PERS benefit component comparisons

The primary components and differences among the PERS Tier One and Tier Two programs, the Oregon Public Service Retirement Plan (OPSRP) pension program, and the Individual Account Program (IAP) are shown below. Tier One covers members hired before January 1, 1996; Tier Two covers members hired between January 1, 1996, and August 28, 2003; and OPSRP covers members hired after August 28, 2003. The IAP is an account-based benefit that includes member contributions plus annual earnings and losses, made on and after January 1, 2004. Starting July 1, 2020, [Senate Bill 1049](#) (2019) requires that members earning more than the [current monthly salary threshold](#) have a portion of their 6% IAP contributions redirected to a new Employee Pension Stability Account (EPSA). The money in each member's EPSA is used to pay for part of their future pension benefit.

	Tier One Pension	Tier Two Pension	OPSRP Pension	IAP
Normal retirement age	58 (or 30 yrs.) P&F: age 55 or 50 w/25 yrs.	60 (or 30 yrs.) P&F: age 55 or 50 w/25 yrs.	65 (58 w/30 yrs.) P&F: age 60 (see P&F 5-year requirement below) or 53 w/25 yrs.	Members retire from IAP when they retire from Tier One, Tier Two, or OPSRP
Early retirement	55 (50 for P&F)	55 (50 for P&F)	55. 50 w/5 years of continuous service in a P&F position immediately preceding effective retirement date.	Members retire from IAP when they retire from Tier One, Tier Two, or OPSRP
Regular account earnings	Guaranteed assumed rate annually (currently 7.2%)	No guarantee; market returns	N/A; no account balance. Member contributions are held in the IAP account.	No guarantee; Target-Date Fund returns
Variable account earnings	Market returns on 100% global equity portfolio	Market returns on 100% global equity portfolio	N/A; no member account	N/A
Retirement calculation methods	Money Match, Full Formula, or Formula + Annuity (if eligible)	Money Match or Full Formula	Formula	Various account payout options or rollover
Full Formula benefit factor	1.67% general; 2.00% P&F	1.67% general; 2.00% P&F	1.50% general; 1.80% P&F	N/A
Formula + Annuity benefit factor	1.00% general; 1.35% P&F	N/A	N/A	N/A
Oregon state income tax remedy	Payable to eligible benefit recipients who pay Oregon state income tax because they reside in Oregon.	No tax remedy provided	No tax remedy provided	No tax remedy provided
IAP contributions are paid on lump-sum vacation payouts	Yes	Yes	No	Yes for Tier One and Tier Two; no for OPSRP
Are lump-sum vacation payouts included in FAS?*	Yes	No	No	N/A
Unused sick leave included in FAS*	Yes, if employer participates in the unused sick leave program	Yes, if employer participates in the unused sick leave program	No	N/A
Vesting	Active member in each of 5 calendar years	Active member in each of 5 calendar years	5 calendar years w/ at least 600 hours qualifying service or normal retirement age	Immediate upon receiving account contributions
COLA (after retirement)	Up to 2% annually for service earned on or before October 1, 2013, and a blended COLA rate for subsequent service			N/A; no COLA provided

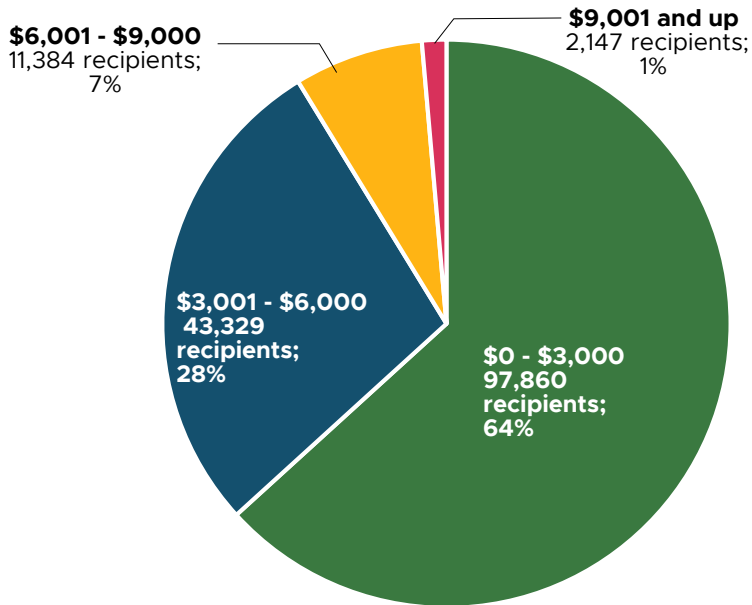
P&F = police and firefighters; FAS = final average salary; COLA = cost-of-living adjustment; N/A = not applicable

Note: PERS uses three methods to calculate Tier One retirement benefits: Full Formula, Formula + Annuity (for members who made contributions before August 21, 1981), and Money Match. PERS uses two methods to calculate Tier Two retirement benefits: Full Formula and Money Match. PERS uses the method (for which a member is eligible) that produces the highest benefit amount. OPSRP Pension Program benefits are based only on a formula method. *Beginning January 1, 2020, SB 1049 changed the definition of "salary" for PERS purposes and [created new limitations](#) on annual "subject salaries," which may affect how PERS calculates a member's pension and contributions. Beginning January 1, 2022, Senate Bill (SB) 111 changed the definition of "subject salary" for OPSRP members to include amounts that are or would be subject to Oregon state income tax.

2. System Benefits (continued)

Monthly benefit payment amounts (as of January 1, 2021)

Based on 154,720 monthly benefit payments totaling \$424.6 million for the month (includes alternate payees and survivors; excludes lump-sum and unit payments). Benefit payment amounts include compounded annual cost-of-living adjustments (COLAs) and other post-retirement benefit adjustments.



- Average Annual Benefit: **\$32,931**
- Median Annual Benefit: **\$26,130**

Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid	Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid
0 - 500	17,055	1.23%	3,001 - 3,500	9,994	7.64%
501 - 1,000	21,439	3.77%	3,501 - 4,000	8,656	7.64%
1,001 - 1,500	18,102	5.31%	4,001 - 4,500	7,646	7.64%
1,501 - 2,000	15,619	6.42%	4,501 - 5,000	6,539	7.31%
2,001 - 2,500	13,780	7.28%	5,001 - 5,500	5,788	7.15%
2,501 - 3,000	11,865	7.67%	5,501 - 6,000	4,706	6.36%
Subtotal	97,860		Subtotal	43,329	
% of total	63.25%	31.68%	% of total	28.00%	43.74%

Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid	Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid
6,001 - 6,500	3,543	5.21%	9,001 - 10,000	939	2.09%
6,501 - 7,000	2,758	4.38%	10,001 - 11,000	462	1.14%
7,001 - 7,500	1,961	3.34%	11,001 - 12,000	285	0.77%
7,501 - 8,000	1,342	2.45%	12,001 - 13,000	159	0.47%
8,001 - 8,500	1,026	1.99%	13,001 - 14,000	84	0.27%
8,501 - 9,000	754	1.55%	14,001 and up	218	0.94%
Subtotal	11,384		Subtotal	2,147	
% of total	7.36%	18.92%	% of total	1.39%	5.68%

2. System Benefits (continued)

Tier One/Tier Two members (hired before August 29, 2003)

At retirement, PERS uses three methods to calculate a Tier One monthly benefit amount and two methods to calculate a Tier Two monthly benefit amount. Members receive the highest monthly benefit that results from these calculations.

Full Formula Method (90.8% of benefits in 2020)

For General Service members: $1.67\% \times \text{years of service credit} \times \text{final average salary}$

For Police and Firefighter members: $2\% \times \text{years of service credit} \times \text{final average salary}$

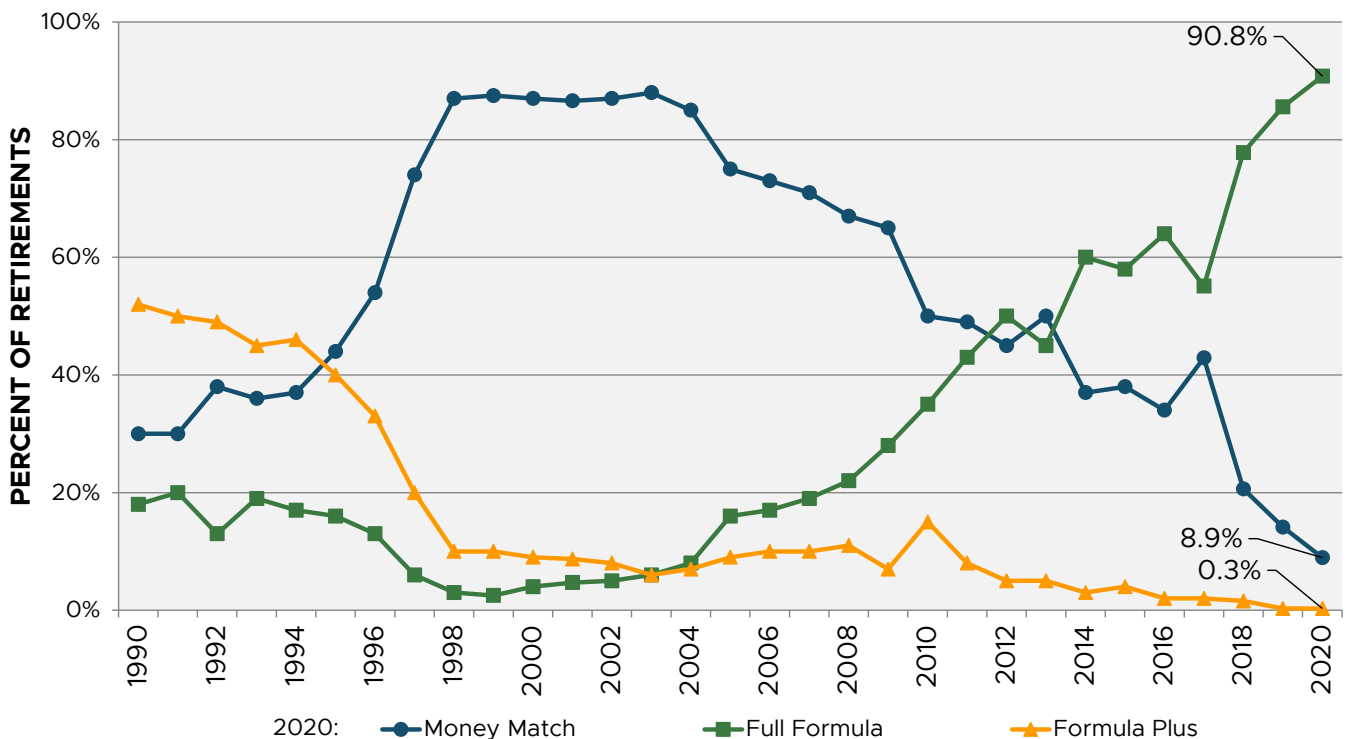
Formula Plus Annuity Method (0.3% of benefits in 2020)

Tier One only, available to those who made contributions before August 21, 1981.

This benefit uses a formula similar to the Full Formula Method to compute the employer portion of the benefit. For General Service members, multiply 1% of final average salary by years of service credit. Legislators, police, and firefighters should multiply 1.35% of final average salary by years of service credit. The total of the calculation will be added to an annuity payment based on member account balance and life expectancy.

Money Match (8.9% of benefits in 2020)

The employer matches the member account balance by an equal amount. From that total, a monthly payment amount is then calculated based on life expectancy.



2. System Benefits (continued)

Tier One/Tier Two pension benefit payment options selected in calendar year 2020

At retirement, Tier One and Tier Two members have **13 different options** for how to receive their pension benefit payments. All monthly retirement pension benefits are paid to the retiree or beneficiary for life. The option a member chooses will affect the amount of the monthly pension benefit payment. An option that includes a beneficiary payment will produce a lower monthly pension benefit payment. Benefit payments are based on an actuarial equivalent of the member's and/or the beneficiary's life expectancy.

Option (definitions below) Calendar Year 2020	Quantity	Percent
1	1,427	24.78
Refund Annuity	375	6.51
15-Year Certain	291	5.05
2	1,089	18.91
2A	1,286	22.33
3	147	2.55
3A	310	5.38
Lump-Sum 1	51	0.89
Lump-Sum 2	37	0.64
Lump-Sum 2A	28	0.49
Lump-Sum 3	6	0.1
Lump-Sum 3A	7	0.12
Total Lump Sum	392	6.81
AS refund*	313	5.43
Total	5,759	100%

Option 1 (nonrefund): This option is paid for the member's lifetime. No benefit of any kind is paid to anyone after the member dies.

Refund Annuity Option: This option is paid for the member's lifetime. When the member dies, the designated beneficiary receives a lump-sum refund of any amount remaining in the member's account, if any.

15-Year Certain Option: This option is paid for the member's lifetime. If the member dies before receiving 180 monthly payments (15 years), the beneficiary is entitled to receive the remainder of the 180 monthly payments. Once the member has received at least 180 payments, no benefit is payable to the beneficiary.

Survivorship Options (Option 2, Option 2A, Option 3, and Option 3A): Under any of the survivorship options, the member may name only one beneficiary who must be a living person. The monthly benefit payment is paid to the member until his/her death, and then paid to the beneficiary if then living (under Options 2 and 2A, at the same base amount as the member; under Option 3 and 3A, at ½ the base amount of the member).

Lump-Sum Options (Lump-Sum Option 1, Lump-Sum Option 2, Lump-Sum Option 2A, Lump-Sum Option 3, and Lump-Sum Option 3A): These options provide a lump-sum payment of the member's account balance plus a lifetime monthly pension from the employer's contributions. The lifetime monthly pension options are the same as those for the nonrefund and survivorship options described above.

Total Lump Sum: The balance of the member's account and a matching amount funded by employers' contributions are paid out in total; there is no ongoing monthly benefit.

AS refund*: A one-time payment based on an actuarial calculation if the Option 1 benefit is less than \$200 per month.

2. System Benefits (continued)

Oregon Public Service Retirement Plan (OPSRP) members (hired after August 28, 2003)

At retirement, all OPSRP members who are vested and eligible to retire can receive a monthly pension benefit for life. The pension benefit is calculated using the following formulas:

For General Service members: $1.5\% \times \text{years of total retirement credit} \times \text{final average salary}$

For Police and Firefighters: $1.8\% \times \text{years of total retirement credit} \times \text{final average salary}$

OPSRP pension benefit payment options selected in calendar year 2020

At retirement, OPSRP members have **five different options** for how to receive their pension benefit payments. All monthly pension retirement benefits are paid to the retiree or beneficiary for life. The option a member chooses will affect the amount of the monthly pension benefit payment. An option that includes a beneficiary payment will produce a lower monthly pension benefit payment. Benefit payments are based on an actuarial equivalent of the member's and/or the beneficiary's life expectancy.

Option (definitions below) Calendar Year 2020	Quantity	Percent
Single Life Option	673	40.47
Full-Survivorship Option	367	22.07
Full-Survivorship Increase Option	199	11.97
Half-Survivorship Option	43	2.59
Half-Survivorship Increase Option	42	2.53
Cash Out Lump Sum*	339	20.38
Total	1,663	100%

Single Life Option: This option is paid for the member's lifetime. No benefit of any kind is paid to anyone after the member dies.

Full-Survivorship Option: This benefit is paid monthly for the member's lifetime. After the member dies, his or her surviving beneficiary will receive, for life, the monthly benefit the member was receiving at the time of the member's death. Payments are actuarially reduced to provide the same monthly benefit amount to the member for life and to the member's beneficiary for his or her lifetime.

Full-Survivorship Increase Option: Same as the Full-Survivorship Option, but if the member's beneficiary dies before the member, or if the member's beneficiary is his or her spouse and they are divorced after retirement, the member will receive the higher-paying Single Life Option benefit for the remainder of the member's lifetime.

Half-Survivorship Option: This benefit is paid monthly for the member's lifetime. After the member dies, his or her surviving beneficiary will receive, for life, one-half of the monthly benefit the member was receiving at the time of the member's death.

Half-Survivorship Increase Option: Same as the Half-Survivorship Option, but if the member's beneficiary dies before the member, or if the member's beneficiary is his or her spouse and they are divorced after retirement, the member will receive the higher-paying Single Life Option benefit for the remainder of the member's lifetime.

Cash Out Lump Sum*: If an OPSRP member's monthly pension benefit is less than \$200, the member will receive a one-time lump-sum payment that represents the actuarial equivalent of the present value of the pension.

2. System Benefits (continued)

Summary of findings from PERS' Tier One/Tier Two Replacement Ratio Study (RRS) for 2020

The Replacement Ratio Study population consists of 116,699 retirements from January 1990 through December 2020 and covers retired members who selected comparable monthly benefit options. The techniques used in the 2021 PERS Replacement Ratio Study are consistent with the techniques used in previous studies (see **Appendix B**). The calculations do not include any federal Social Security benefits that a retiree may be eligible for based on the retiree's work history. The calculations do include the effects of the Strunk/Eugene benefit adjustments, which will generally impact retirements occurring in 2000-2004 and reduce the reported replacement ratios for those periods by several percentage points.

Characteristics of the retired members in the RRS population¹

Average age at retirement: 62 years old

Average years of service at retirement: 26 years of service

Average monthly retirement benefit

- For all retirees from 1990-2020, the average monthly retirement benefit at time of retirement was \$2,455 per month, or about \$29,463 annually.
- For those retirees in the most recent year (2020), the average monthly retirement benefit was \$3,210 per month, or about \$38,522 annually.

Average public employee salaries at retirement

- For all retirees from 1990-2020, the final average salary at retirement was \$56,124 annually.
- For 2020 retirees, the final average salary at retirement was \$86,389 annually.

Average salary replacement ratio (see chart on following page)

- For all retirees from 1990-2020, the average annual retirement benefit equaled 52% of final average salary at the time of retirement.
- For 2020 retirees, the average annual retirement benefit equaled 44% of final average salary.
- For all retirees from 1990-2020, there were 5.9% who received annual benefits more than 100% of final average salary. The average years of service for this group was 31 years.
- For 2020 retirees, there were 1.5% who received annual benefits more than 100% of final average salary. The average years of service for this group was 38 years.

For members who retire with at least 30 years of service (see chart on following page)

- From 1990-2020, the average retirement benefit for 30-year members equaled 76% of final average salary, and the average monthly benefit was \$3,732 per month.
- The average replacement ratio for 30-year members peaked at 100% of final average salary in 2000 and their average monthly benefit was \$4,200 per month.
- For 2020 only, the average retirement benefit for 30-year members equaled 50% of final average salary, and the average monthly benefit was \$4,047 per month.
- 10.3% of retirees from 1990-2020 had 30 years of service.
- 9.4% of retirees in 2020 had 30 years of service.

¹ The exclusions and other factors applied to this population are explained in [Appendix B on page 44](#). Generally, these exclusions remove about 35% of members who retire in a given year.

2. System Benefits (continued)

Summary of findings from PERS' Tier One/Tier Two RRS for 2020 (continued)

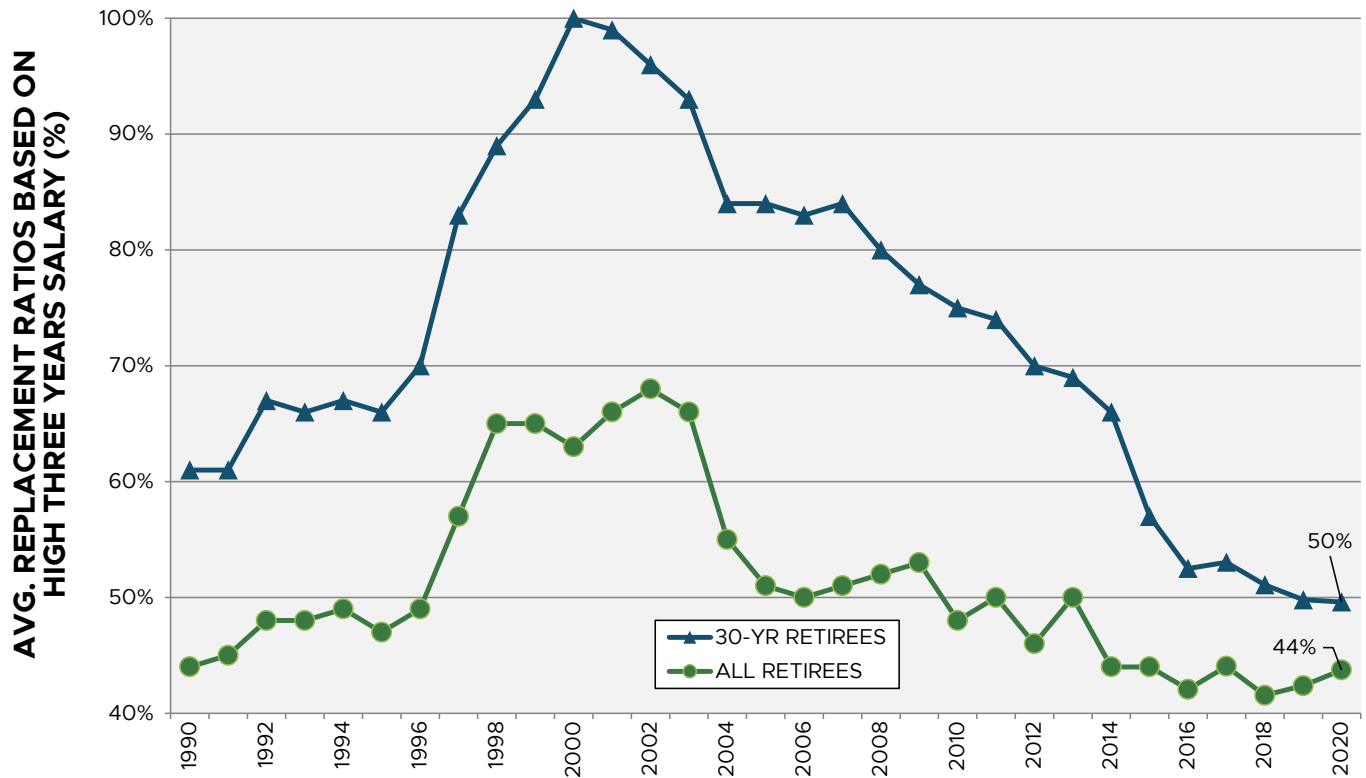
Average salary replacement ratio based on final average salary (FAS)

Calendar Year	Retirees with 30 Years of Service		All Retirees in Study			Retirees with 31+ Years of Service
	# of Retirees in Study*	Average Replacement Ratio Based on FAS	# of Retirees in Study*	Average Replacement Ratio Based on FAS	% of Retirees Receiving >100% of FAS	# of Retirees in Study*
1990	146	61%	1,866	44%	.0%	236
1991	217	61%	2,377	45%	.1%	261
1992	205	67%	2,432	48%	.5%	289
1993	289	66%	2,744	48%	.5%	319
1994	302	67%	3,298	49%	.3%	452
1995	304	66%	2,827	47%	1.0%	307
1996	281	70%	2,477	49%	1.4%	223
1997	295	83%	3,107	57%	7.5%	284
1998	465	89%	4,567	65%	12.0%	472
1999	548	93%	4,644	65%	14.0%	452
2000	273	100%	2,112	63%	15.8%	148
2001	391	99%	3,146	66%	16.5%	304
2002	670	96%	4,605	68%	17.4%	583
2003	942	93%	7,631	66%	14.4%	937
2004	471	84%	3,259	55%	5.5%	155
2005	393	84%	2,548	51%	4.4%	155
2006	347	83%	2,952	50%	4.3%	254
2007	372	84%	3,226	51%	4.9%	337
2008	417	80%	3,480	52%	5.0%	445
2009	432	77%	3,881	53%	6.2%	586
2010	414	75%	3,516	48%	4.3%	440
2011	464	74%	4,484	50%	5.3%	937
2012	272	70%	4,098	46%	4.3%	585
2013	389	69%	5,800	50%	5.6%	1,108
2014	262	66%	4,000	44%	2.8%	441
2015	430	57%	4,830	44%	2.6%	772
2016	324	52%	3,955	42%	2.0%	606
2017	423	53%	5,319	44%	1.5%	1089
2018	320	51%	3,642	42%	1.2%	549
2019	347	50%	4,004	42%	1.4%	758
2020	369	50%	3,926	44%	1.5%	799
Total/Avg	11,774	76%	114,753	52%	5.9%	15,283

* Includes monthly benefit payments for members retiring from active service within the preceding 12 months. Benefits related to inactive, lump sum, judge, and legislator retirements are excluded.

2. System Benefits (continued)

Tier One/Tier Two replacement ratio trends (data from PERS' Replacement Ratio Study)



2. System Benefits (continued)

Individual Account Program (IAP)

All PERS members actively employed since 2004 have an Individual Account Program (IAP) account-based benefit. A portion of members' salary, whether paid by the member or their employer, is placed into the IAP. Senate Bill 1049 (2019) requires a portion of contributions that would have gone into the IAP to be placed in each member's Employee Pension Stability Account (EPSA). At retirement, the payment members receive from the IAP is based on their account balance — contributions plus investment earnings or losses over time.

Average IAP account balances and distributions to retired members, withdrawals, and deceased members

Year (as of 12/31)	Total IAP Account Balance After Earnings Crediting (\$M)	# of Accounts	Average IAP Account Balance (\$)	# of Payees
2004	423.4	162,119	2,611	2
2005	928.9	181,055	5,130	4,131
2006	1,396.8	197,491	7,072	6,557
2007	2,120.5	210,133	10,091	6,705
2008	1,851.2	218,192	8,484	8,624
2009	2,742.8	231,256	11,847	7,727
2010	3,536.9	236,265	14,970	8,695
2011	3,939.7	238,062	16,549	11,479
2012	4,855.1	240,637	20,176	14,728
2013	5,127.3	242,516	21,142	14,994
2014	6,001.1	245,768	24,821	15,118
2015	6,906.1	255,896	26,988	15,644
2016	7,634.7	262,096	29,129	16,213
2017	8,960.4	269,812	33,210	16,866
2018	9,015.2	276,739	32,577	17,597
2019	10,391.9	285,293	36,425	17,983
2020	11,230.1	292,983	38,330	17,633

IAP Target-Date Fund values (as of June 30, 2021)

Starting January 1, 2018, all PERS members became invested in age-based Target-Date Funds in an effort by the Oregon Investment Council to reduce investment risk and volatility as members age. Retired members receiving installment payments are invested in the retirement installments fund.

Target-Date Fund	Number of Accounts	Total Account Balance (\$)
Retirement Installments Fund	8,506	\$336,570,525
Retirement Allocation Fund Born in 1957 or before	25,047	\$988,069,489
2025 Born between 1958 and 1962	28,038	\$1,531,596,357
2030 Born between 1963 and 1967	33,027	\$1,944,643,218
2035 Born between 1968 and 1972	38,751	\$2,136,750,781
2040 Born between 1973 and 1977	39,394	\$1,810,977,710
2045 Born between 1978 and 1982	41,364	\$1,377,122,126
2050 Born between 1983 and 1987	36,553	\$736,064,013
2055 Born between 1988 and 1992	27,883	\$293,508,437
2060 Born in 1993 and 1997	15,275	\$73,327,354
2065 Born in 1998 or after	2,774	\$15,606,594

2. System Benefits (continued)

Retired Tier One, Tier Two, and OPSRP members with hours reported working in a PERS-covered position in 2020 by employer group

After PERS members begin receiving a PERS retirement benefit, they may choose to return to work for a PERS-participating employer.

Prior to the passage of Senate Bill (SB) 1049 (2019), most PERS members had restrictions on the number of hours they could work in a calendar year without stopping their pension benefit payments. Tier One/Tier Two and OPSRP retirees were subject to specific hour limitations and exceptions.

From January 1, 2020, through December 31, 2024, most* retirees may work for a PERS-participating employer for an unlimited number of hours while continuing to receive their pension benefit. Learn more about [Work After Retirement](#).

All retired members working after retirement

State	Local Govt.	K-12	Total
1,641	3,069	5,306	10,016

*If a member retired earlier than normal retirement age, they must have a complete break in all PERS-participating employment for at least six months in order to be eligible for unlimited retiree hours under SB 1049. Otherwise, the existing Tier One/Tier Two and OPSRP limits of working less than 1,040 and 600 hours, respectively, apply.

2. System Benefits (continued)

Other PERS Programs



Oregon Savings Growth Plan (OSGP) 457(b) deferred compensation

The Oregon Savings Growth Plan (OSGP) is a 457(b) deferred compensation plan that provides many public employees a convenient way to save for retirement. Enrollment is available to all state of Oregon employees upon hire, as well as local government and school district employees whose employers have adopted the plan.

OSGP lets participants save for retirement on a pre-tax or after-tax basis through payroll deductions. Participants can save as little as \$25 a month up to \$19,500 in calendar year 2021 (\$26,000 if age 50 or older).

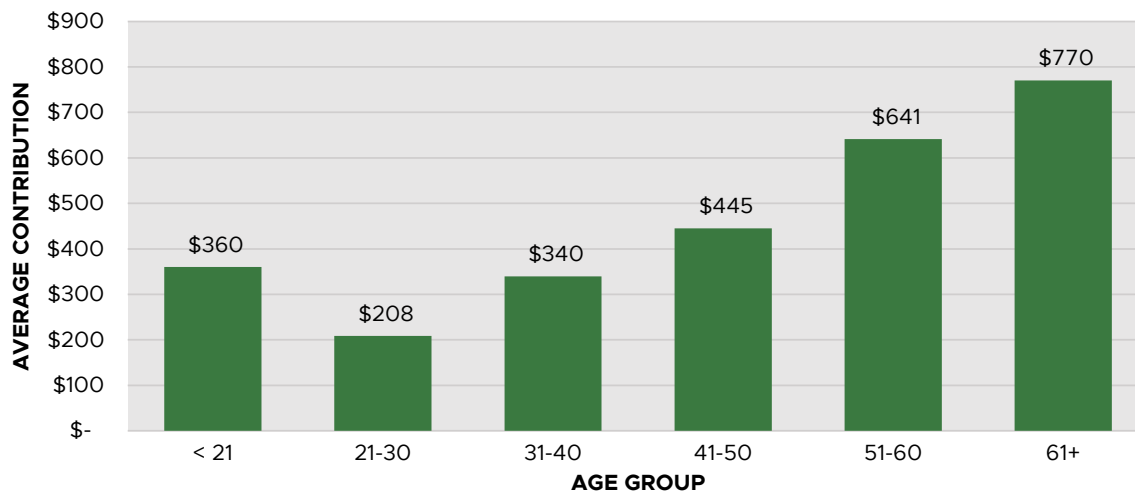
Oregon law authorizes the state to offer its deferred compensation program to all Oregon public employers, including special districts, local governments, and school districts. As of June 30, 2021, 336 local governments offer OSGP.

Participation (as of June 30, 2021)

34,917 total participants

- 30,029 participants are state government employees (includes universities, higher education, and miscellaneous state agencies).
- 20,755 participants are actively contributing to OSGP.

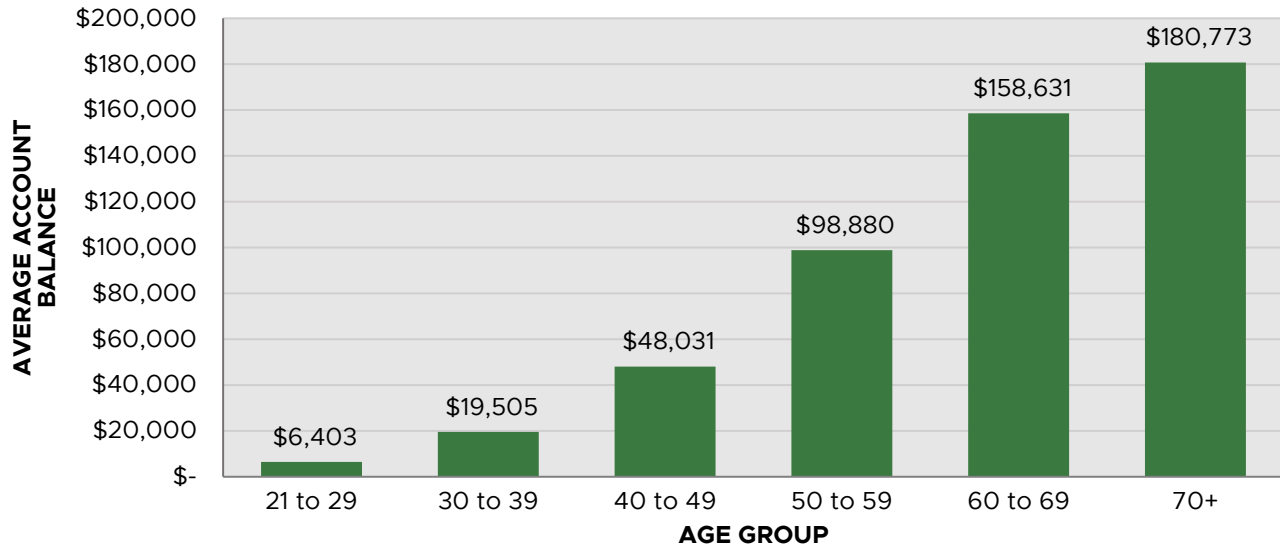
Average monthly contribution to OSGP by age



Average contribution amount: \$516.26/month

2. System Benefits (continued)

Average value of OSGP accounts by age



Total Plan Assets: \$3.2 billion
Average account balance: \$92,342

2. System Benefits (continued)



PERS Retiree Health Insurance Program information

The Oregon PERS Health Insurance Program offers medical and dental insurance plans to eligible Tier One/Tier Two and OPSRP retirees, their spouses, and dependents. Upon retirement, these insurance options become a choice available to all PERS retirees. While primarily serving our Medicare-eligible (age 65 and over) population, the PERS Health Insurance Program also offers insurance coverage options for those not yet Medicare eligible.

There are two statutory trust funds administered by PERS as part of the Health Insurance Program that provide premium subsidies for eligible Tier One and Tier Two retirees or surviving spouses. These trusts are known as the Retirement Health Insurance Account (RHIA), serving all qualifying PERS Medicare-eligible retirees, and the Retiree Health Insurance Premium Account (RHIPA), serving qualifying state government non-Medicare retirees. Both trusts are funded from employer contributions on an actuarial basis.

Program enrollment (as of June 30, 2021)

Medical Plans (five plans offered)	Totals	Medicare	Non-Medicare
Covered lives	56,161	54,717	1,444
Retirees (or surviving spouses)	46,024	45,124	900
Spouses/dependents	10,137	9,593	544
Average age of enrolled retirees	76.38	76.92	56.74
Dental Plans (two plans offered)	37,792		

Statutory health insurance premium subsidies

Retirees receiving RHIA (trust fund held by PERS*)	42,948
Retirees receiving RHIPA (trust fund held by PERS**)	685
RHIA monthly payment total	\$2,576,880
RHIPA monthly payment total	\$284,348

*The RHIA subsidy is \$60 per month for Medicare-eligible retirees.

**The RHIPA subsidy is for state of Oregon non-Medicare retirees only and varies depending on the employee's years of state service, from \$222.50 (8 years) to \$444.99 (30+ years) per month for plan year 2021.

Employer rates (effective July 1, 2019): RHIA: 0.06%; RHIPA (state government only): 0.39%

Unfunded actuarial liability (as of December 31, 2020): -\$277 million (RHIA); \$16 million (RHIPA)

2. System Benefits (continued)

History of key PERS benefit enhancements, caps, and reductions by year

Year	Category	Action	Affected Members
1945	Administrative	The Public Employees Retirement System is signed into law and begins business July 1, 1946, as a money match retirement plan	All
1947	Retirement Age/Vesting	Requirement for employees to serve a six-month waiting period before becoming PERS members begins	All
1953	Administrative	By law, the PERS plan is terminated and immediately reopened the next day, allowing public employers to provide Social Security coverage	All
1967	Investment Risk Allocation	Legislature passes a bill that allows PERS to invest up to 10% of the retirement fund in common stock, creates the Oregon Investment Council, and establishes a defined benefit formula for employer-funded retirement benefits (formula plus annuity)	All
1969	Investment Risk Allocation	Participation in variable account program begins	All
1972	Cost-of-Living Adjustment	Implemented <i>ad hoc</i> COLA increase (12% to 25% benefit increase)	Existing retirees
1972	Cost-of-Living Adjustment	Initiated an annual COLA with a 1.5% cap	All retirees
1973	Benefit Calculation/Formula	Increased Formula Plus Annuity pension factors (General Service: .67 to 1.00; Police & Fire: 0.92 to 1.35)	Tier One
1973	Cost-of-Living Adjustment	Annual COLA cap raised from 1.5% to 2%	All retirees
1973	Cost-of-Living Adjustment	Capped COLA at actual inflation rate or 2%, whichever is less	All retirees
1973	Final Average Salary	Added accrued sick leave to retirement benefit calculation for participating employers	Tier One/Two
1974	Cost-of-Living Adjustment	Implemented <i>ad hoc</i> increase (0% to 25% benefit increase)	Existing retirees
1975	Investment Risk Allocation	Initiated member account assumed rate guarantee	Tier One
1975	Investment Risk Allocation	Increased assumed earnings rate from 5.5% to 7%	Tier One
1975	Investment Risk Allocation	Credited member regular accounts with more than the assumed earnings rate*	Tier One
1976	Investment Risk Allocation	Gain Loss Reserve established to “self-fund” assumed earnings rate crediting	Tier One
1979	Administrative	Employers allowed to “pick up” member 6% contribution	All
1979	Investment Risk Allocation	Increased assumed earnings rate from 7% to 7.5%	Tier One
1981	Benefit Calculation/Formula	Added Full Formula benefit calculation method	All
1981	Benefit Calculation/Formula	Consolidated member contributions from 1% to 7% salary-based sliding scale to universal 6%	All
1981	Benefit Calculation/Formula	Eliminated Formula Plus Annuity benefit calculation method	Tier One
1981	Cost-of-Living Adjustment	Implemented <i>ad hoc</i> COLA increase (4% to 11.4% benefit increase)	Existing retirees
1985	Cost-of-Living Adjustment	Implemented <i>ad hoc</i> COLA increase (3% to 7.28% benefit increase)	Existing retirees
1985	Benefit Calculation/Formula	Added benefit option to allow lump-sum payment of member account	All
1987	Benefit Calculation/Formula	Members allowed to purchase six-month waiting period	All
1987	Benefit Calculation/Formula	New retirement benefit payout options added	All
1989	Cost-of-Living Adjustment	Implemented <i>ad hoc</i> COLA increase (0% to 25% benefit increase)	Existing retirees
1989	Investment Risk Allocation	Increased assumed earnings rate from 7.5% to 8%	Tier One
1989	Retiree Health Benefits	Established Medicare and state employee pre-Medicare insurance premium subsidies	Tier One/Two

*Tier One regular accounts were credited with earnings in excess of the assumed rate in the following years: 1975, 1976, 1979, 1980, 1982, 1983, 1985, 1986, 1988, 1989, 1991, 1993, 1995, 1996, 1997, 1998, and 1999. In all other years subsequent to 1975, these accounts were credited at the effective assumed rate.

Key:	Benefit enhancement	Benefit cap or reduction
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2. System Benefits (continued)

History of key PERS benefit enhancements, caps, and reductions (continued)

Year	Category	Action	Affected
1989	Retiree Health Benefits	Capped Medicare premium subsidy at \$60 per month	Tier One/ Two
1989	Retirement Age/Vesting	Added "30 years of service" retirement regardless of age	Tier One/ Two
1991	Benefit Calculation/Formula	Imposed state income tax on PERS benefits	All
1991	Benefit Calculation/Formula	Established service time-based state income tax offset benefit of between 1% to 4% (SB 656)	Tier One
1993	Administrative	Divorced spouses entitled to separate account from member's	All
1995	Benefit Calculation/Formula	Established state income tax offset benefit for pre-1991 service time (HB 3349)	Tier One
1995	Benefit Calculation/Formula	Eliminated tax remedy for anyone hired after July 14, 1995	All new hires
1996	Final Average Salary	Excluded lump-sum vacation payouts from final average salary	Tier Two
1996	Investment Risk Allocation	Eliminated guaranteed return on regular accounts for new members	Tier Two
1996	Retirement Age/Vesting	Increased normal retirement age for new members from 58 to 60 (General Service)	Tier Two
1997	Administrative	Married members must provide proof of spousal consent for retirement option choice	All
1997	Administrative	Reemployed retirees can work up to 1,040 hours for a PERS-covered employer without loss of benefits (up from 600 hours)	All
1997	Benefit Calculation/Formula	Out-of-state teaching service and some military purchases allowed	All
1999	Benefit Calculation/Formula	Locked in existing actuarial equivalency factor tables	Tier One
2000	Investment Risk Allocation	Eliminated "Last Known Rate" member account crediting guarantee	Tier One
2003	Benefit Calculation/Formula	Decreased Full Formula benefit pension factor (General Service: 1.67 to 1.50; Police & Fire 2.00 to 1.80)	OPSRP
2003	Benefit Calculation/Formula	Eliminated Money Match benefit calculation method	OPSRP
2003	Benefit Calculation/Formula	Redirected member contributions to freeze Money Match benefit levels	Prospective MM retirees
2003	Benefit Calculation/Formula	Required regularly updated mortality assumptions and actuarial factors	All
2003	Cost-of-Living Adjustment	Pro-rated first year COLA	OPSRP
2003	Cost-of-Living Adjustment	Eliminated COLA "bank" carryover	OPSRP
2003	Final Average Salary	Eliminated lump-sum vacation payouts from subject salary	OPSRP
2003	Final Average Salary	Eliminated accumulated sick leave from final average salary	OPSRP
2003	Investment Risk Allocation	Required members to self-fund guaranteed return on member accounts	Tier One
2003	Investment Risk Allocation	Creates IAP to include all member contributions made on or after January 1, 2004, which receives actual returns with no guarantee	All
2003	Retiree Health Benefits	Eliminated post-retirement health insurance premium subsidies	OPSRP
2003	Retirement Age/Vesting	Increased normal retirement age from 60 to 65 (General Service) 55 to 60 (Police & Fire)	OPSRP
2003	Retirement Age/Vesting	Increased vesting from 5 years or age 50 to 5 years or age 65 (General Service) or age 60 (Police & Fire)	OPSRP
2005	Benefit Calculation/Formula	Adjusted member accounts and benefit payments to recapture 1999 earnings overcrediting	Tier One
2009	Retiree Health Benefits	Allowed OPSRP members to participate in PERS retiree health insurance pools without premium subsidy	OPSRP
2011	Benefit Calculation/Formula	Eliminated HB 3349 tax remedy for prospective retirees who move out of state on or after January 1, 2012	Tier One

Key:	Benefit enhancement	Benefit cap or reduction
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2. System Benefits (continued)

History of key PERS benefit enhancements, caps, and reductions (continued)

Year	Category	Action	Affected
2013	Cost-of-Living Adjustment	1.5% in 2013; COLA in 2014 and beyond is 1.25% on the first \$60,000 of an annual benefit; 0.15% on amounts above \$60,000	All
2013	Supplementary Payments	Annual supplementary payments of 0.25% to all benefit recipients (up to \$150) through 2019. Second annual supplementary payment of 0.25% through 2019 if benefit is \$20,000 or less annually	Retirees
2013	Benefit Calculation/Formula	Eliminated any tax remedy for retirees who do not pay income taxes in Oregon because they are not residents of Oregon	Tier One
2014	Investment Risk Allocation	Decreased assumed earnings rate from 8.0% to 7.75%	Tier One
2015	Supplementary Payments	Supplementary payments invalidated by Oregon Supreme Court	Retirees
2015	Cost-of-Living Adjustment	Annual COLA of up to 2% restored for service time accrued before October 1, 2013. COLA for service time after that date uses a lower rate. Service time accrued in both periods is "blended."	All
2016	Investment Risk Allocation	Decreased assumed earnings rate from 7.75% to 7.50%	Tier One
2017	Investment Risk Allocation	Decreased assumed earnings rate from 7.50% to 7.20%	Tier One
2017	Investment Risk Allocation	Oregon Investment Council changes IAP investment strategy to Target-Date Funds, intended to reduce investment risk and volatility as members age	All
2019*	Administrative	Note: Senate Bill (SB) 1049 made substantial changes to benefit administration, details of which can be found on our SB 1049 webpage .	All
2019	Administrative	Alternate method to calculate death benefit for certain Tier One/Tier Two members who die before retirement	Tier One/ Tier Two
2019	Benefit Calculation/Formula	Reduces member contributions to IAP. Establishes limit on salary used for benefit calculations	All
2021	Investment Risk Allocation	Decreased assumed earnings rate from 7.20% to 6.90%	Tier One
2021	Benefit Calculation/Formula	Changed definition of salary to include income that is or would be taxable under Oregon state income tax	OPSRP
2021	Benefit Calculation/Formula	Increased death benefits from 50% of actuarially determined value to 100%	All

*Neither enhancement nor reduction.

Key:	Benefit enhancement	Benefit cap or reduction
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3. System Funding Level and Status

The PERS funding equation

At the end of each calendar year, the PERS actuaries calculate the system’s funded status using the following basic equation:

B	=	C	+	E
BENEFITS		CONTRIBUTIONS		EARNINGS
<i>Present value of earned benefits (set by Oregon Legislature)</i>		<i>Employer and member funds to pay pension benefits (set by PERS Board)</i>		<i>Future returns on invested funds (managed by Oregon Investment Council and Oregon State Treasury)</i>

Every two years, the PERS Board adjusts contribution rates so that, over time, contributions will be sufficient to fund the benefits earned, if earnings follow assumptions.

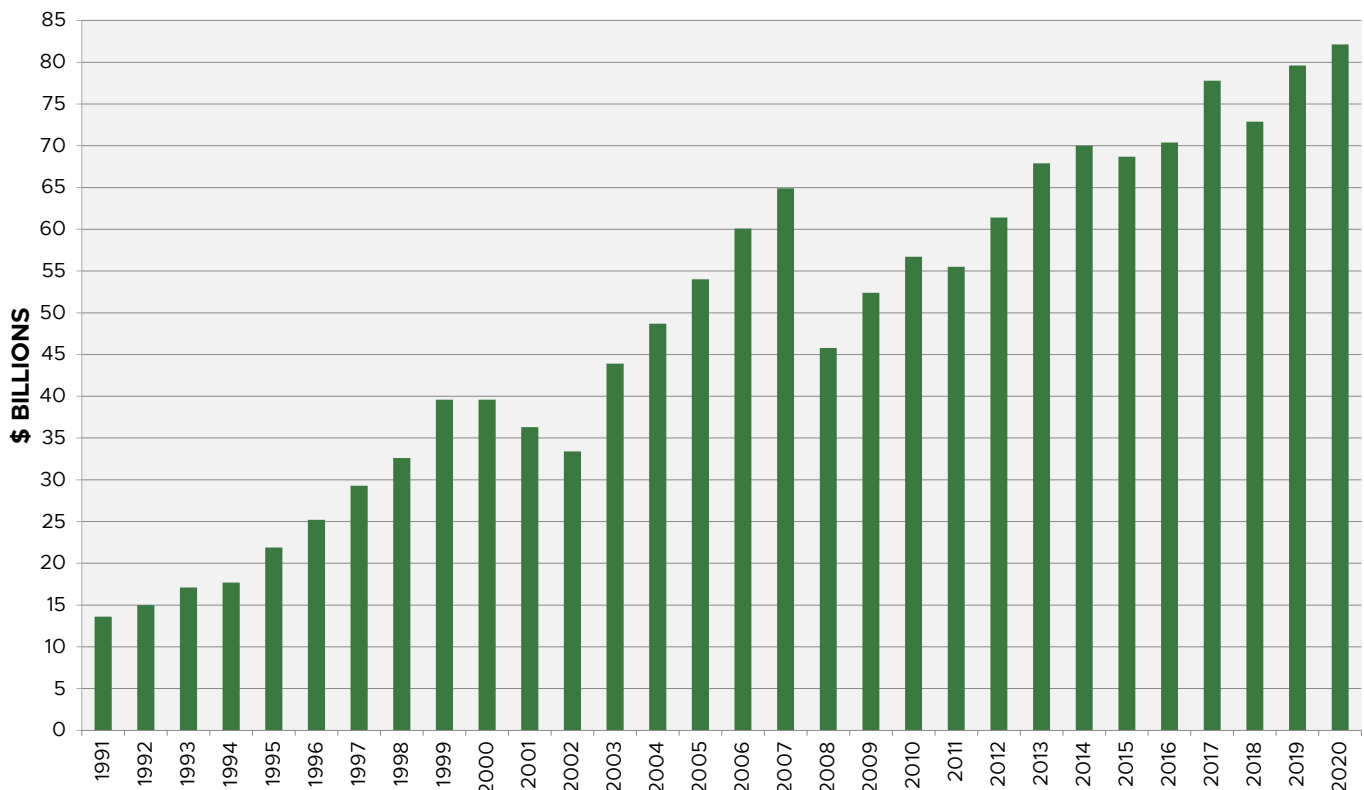
Funded status (as of December 31, 2020)

The Oregon Public Employees Retirement Fund (OPERF) is invested under the oversight and direction of the Oregon Investment Council, with staff support from the Investment Division of Oregon State Treasury.

As of December 31, 2020, PERS was 71% funded (76%, including employer side accounts). Side accounts hold deposits from PERS employers of pension obligation bond proceeds and other advance lump-sum payments that are amortized to offset that employer’s contribution.

As of December 31, 2020, the unfunded actuarial liability (UAL) was \$28 billion (\$22.9 billion, including side accounts). The UAL fluctuates based on various factors, including investment returns, board reserving policies, statutory plan design changes, and litigation outcomes.

PERS fund value (calendar years ending December 31)



3. System Funding Level and Status (continued)

Unfunded actuarial liability (UAL) history and funded ratio¹

Valuation ² Date	With Side Accounts ³ (starting in 2002)		Without Side Accounts	
	UAL (\$M)	Funded Ratio (%)	UAL (\$M)	Funded Ratio (%)
2000	1,545	96.4	1,545	96.4
2001	-2,031	105.4	-2,031	105.4
2002	3,204	92.0	3,983	89.9
2003	1,751	96.1	6,227	86.0
2004	2,122	95.6	7,678	84.0
2005	-1,751	104.0	4,919	91.0
2006	-5,019	109.7	2,229	95.7
2007	-6,120	111.5	1,538	97.1
2008	10,998	80.0	16,133	70.4
2009	8,108	86.0	13,598	76.0
2010 ⁴	7,700	87.0	13,300	78.0
2011	11,030	82.0	16,255	73.0
2012 ⁵	5,600	91.0	11,100	82.0
2013	2,600	96.0	8,500	86.0
2014 ⁶	12,100	84.0	18,000	76.0
2015	16,200	79.0	21,800	71.0
2016	19,911	75.4	25,300	68.8
2017 ⁷	16,700	80.0	22,300	73.0
2018	21,800	75.0	27,000	69.0
2019	19,100	79.0	24,600	72.0
2020	22,900	76.0	28,000	71.0

1 Includes RHIA/RHIPA.

2 2000-2003 UALs were calculated using actuarial value of assets (AVA) based on year-to-year changes in asset values smoothed over four-year periods. All other UALs since 1997 were calculated using an AVA based on fair market value.

3 The official PERS valuation UAL and funded ratio are based on accepted actuarial standards and methodologies. These methodologies are subject to review and revision every two years. A negative UAL amount represents a surplus.

4 2010 and after includes the OPSRP Pension Program; 2000-2009 reflects only Tier One/Tier Two.

5 Includes liability reductions from Senate Bills 822 and 861 and board-adopted actuarial assumptions/methods from the 2012 Experience Study.

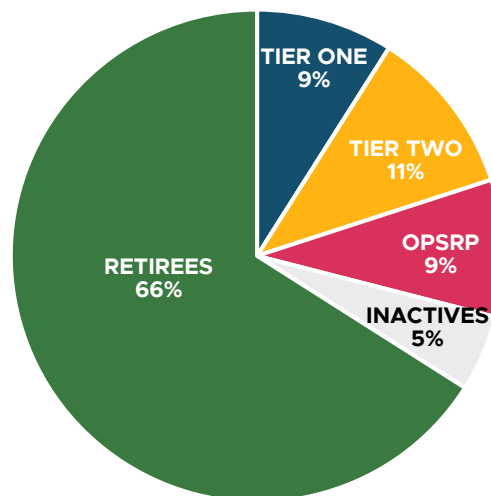
6 Includes the *Moro* decision and board-adopted actuarial assumptions/methods from the 2014 Experience Study.

7 Includes board-adopted actuarial assumptions/methods from prior year experience studies.

Actuarial accrued liabilities

(as of December 31, 2020)

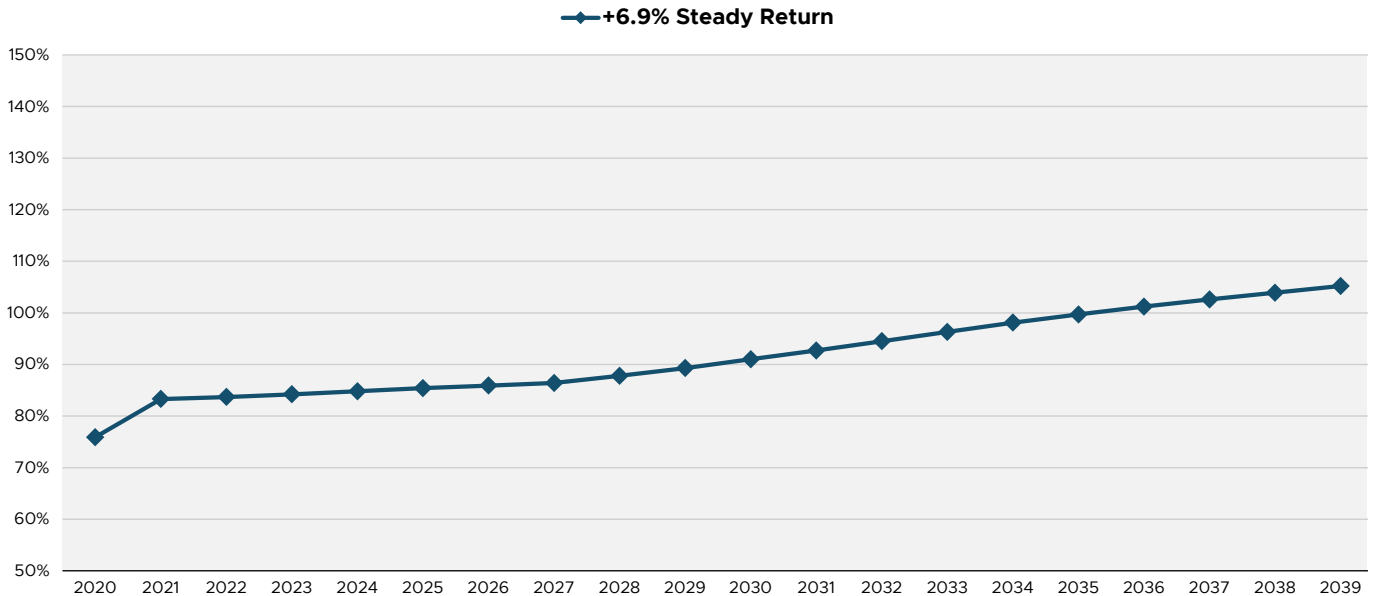
About 71% of PERS' total accrued liability is for members who are no longer working in PERS-covered employment (retired and inactive members).



3. System Funding Level and Status (continued)

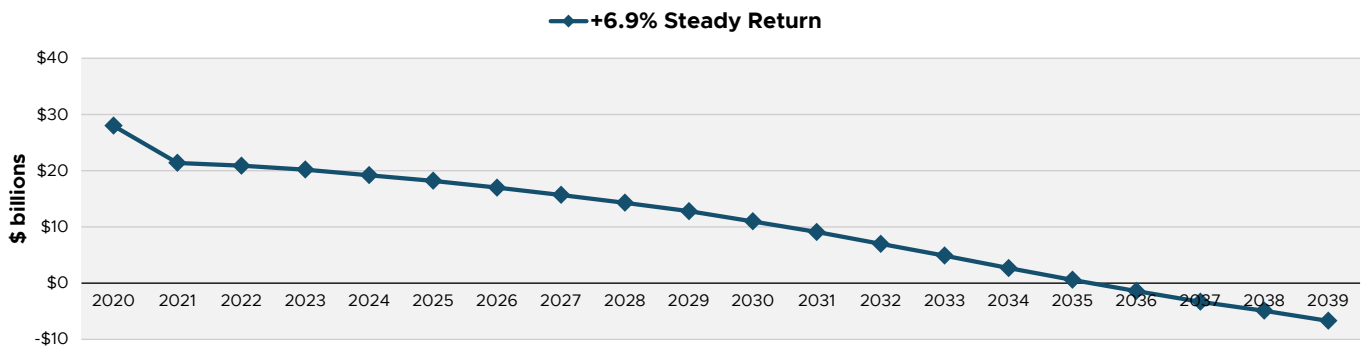
The following projections from the PERS actuaries reflect legislative directives in SB 1049 (2019) that include a one-time re-amortization of the Tier One/Tier Two UAL, creation of new side accounts by participation in the Employer Incentive Fund, and a partial redirection of employee contributions to new Employee Pension Stability Accounts.

Projected system-funded status (including side accounts)



- 2021 funded status increases due to estimated year-end 2021 investment returns.
- Funded status projected to reach 100% in 2036 with steady +6.9% returns.

Projected UAL (unfunded actuarial liability) excluding side accounts



- 2021 UAL decreases due to estimated year-end 2021 investment returns.
- At steady +6.9% returns, UAL remains relatively level for a couple of years before declining to below \$0 billion at year-end 2036.

4. System Revenue

Member and employer contributions and investment income for calendar years

Year	Member Contributions (\$M)	Employer Contributions (\$M)	Amortization of Employer Side Accounts (\$M)*	Total Employer (\$M)	Net Investment & Other Income (\$M)
1995	287	427	N/A	427	4,110
1996	296	463	N/A	463	4,358
1997	291	473	N/A	473	4,582
1998	318	488	N/A	488	3,978
1999	347	577	N/A	577	7,463
2000	359	654	N/A	654	143
2001	385	689	N/A	689	-2,708
2002	398	725	8	733	-3,460
2003	405	582	97	679	8,866
2004	371**	408	278	686	5,933
2005	434	504	357	861	6,179
2006	456	637	474	1,111	8,163
2007	468	633	466	1,099	5,808
2008	484	669	541	1,210	-17,235
2009	515	561	540	1,101	8,053
2010	502	435	558	993	6,444
2011	510	627	509	1,136	1,935
2012	513	915	443	1,358	7,859
2013	561	942	448	1,390	9,458
2014	524	994	472	1,466	4,819
2015	611	1,185	542	1,727	1,380
2016	610	1,036	628	1,644	4,840
2017	628	1,241	653	1,894	10,633
2018	649	1,808	663	2,471	166
2019	698	2,062	739	2,802	9,936
2020	707	2,108	815	2,923	5,996

*PERS' methodology to track amortization of side accounts began in 2002. Side accounts hold deposits by employers of pension obligation bond proceeds and other lump-sum payments that are amortized to offset that employer's PERS contributions.

**Since January 1, 2004, member contributions have been placed in the Individual Account Program (IAP) instead of the legacy Tier One/Tier Two member accounts.

4. System Revenue (continued)

2020 earnings crediting (\$ millions)

Reserve/Account	Balance Before 2020 Crediting	Final 2020 Crediting	Final Ending Reserve Balance	Crediting Rates
Tier One Member Regular Accounts	2,927.2	210.8	3,138.0	7.20%
Tier One Rate Guarantee Reserve	492.0	34.8	526.8	N/A
Tier Two Member Regular Accounts	973.0	69.9	1,042.9	7.18%
Benefits In Force Reserve	19,449.4	1,396.8	20,846.2	7.18%
Employer Reserves	32,543.3	2,336.9	34,880.2	7.18%
OPSRP Pension	7,039.1	509.8	7,548.9	7.24%
IAP Accounts, as a whole	10,362.5	867.5	11,230.0	8.37%
*JAL Lump-Sum Pmt. Side Accounts	4,778.7	343.3	5,122.0	Various
Contingency Reserve	50.0	-	50.0	N/A
Total	\$78,615.2	\$5,769.8	\$84,385.0	

*Side account earnings rates for lump sums on deposit vary depending on when the deposit was made within the calendar year and are not affected by board reserving or crediting decisions.

Contingency Reserve: This reserve can be used for any purpose the board determines is appropriate so long as the use of the funds furthers the trust's purpose. It is funded in years that investment income exceeds the assumed rate (currently 7.2%). The reserve is capped at \$50 million.

Tier One Rate Guarantee Reserve: This reserve is used to credit the assumed rate on Tier One member regular accounts in years when the fund earns below the assumed rate, and to hold excess earnings from the years when the fund earns more than the assumed rate (currently 7.2%).

Benefits-In-Force Reserve: This reserve is used to pay retired members' benefits and annuities. It is funded by earnings and fund transfers from member accounts and employer reserves associated with retirements processed during a calendar year.

Employer Reserves: Funds from these reserves are moved to the Benefits-In-Force Reserve when a benefit is due to a member.

4. System Revenue (continued)

System-wide average employer contribution rates, excluding retiree health insurance (RHIA/RHIPA)

Valuation Year	Rate Effective Dates	Average Rate w/ Side Accounts (%)	Average Rate w/o Side Accounts (%)	Annualized Salary (\$M)
1975	Various	11.21	11.21	1,014.5
1977	Various	11.87	11.87	1,226.8
1979	Various	10.97	10.97	1,488.0
1982	Various	10.13	10.13	2,062.1
1985	Various	10.87	10.87	2,428.3
1987	Various	11.30	11.30	2,764.7
1989	Various	9.74	9.74	3,199.4
1991	Various	9.19	9.19	3,887.5
1993	Various	9.15	9.15	4,466.8
1995	Various	9.42	9.42	4,848.1
1997	Various	11.40	11.40	5,161.6
1999	7/1/01 – 6/30/03	10.74	10.74	5,676.6
2001	7/1/03 – 6/30/05	10.64	10.64	6,256.5
2003*	7/1/05 – 6/30/07	14.47*	18.89*	6,248.5
2005**	7/1/07 – 6/30/09	8.22	15.01	6,792.0
2007	7/1/09 – 6/30/11	4.73	12.42	7,721.8
2009	7/1/11 – 6/30/13	10.8	16.3	8,512.0
2011***	7/1/13 – 6/30/15	10.8	16.5	8,600.0
2013	7/1/15 – 6/30/17	10.6	17.5	8,699.0
2015	7/1/17 – 6/30/19	14.23	20.85	10,100.0
2017	7/1/19 – 6/30/21	18.32	25.23	10,825.0

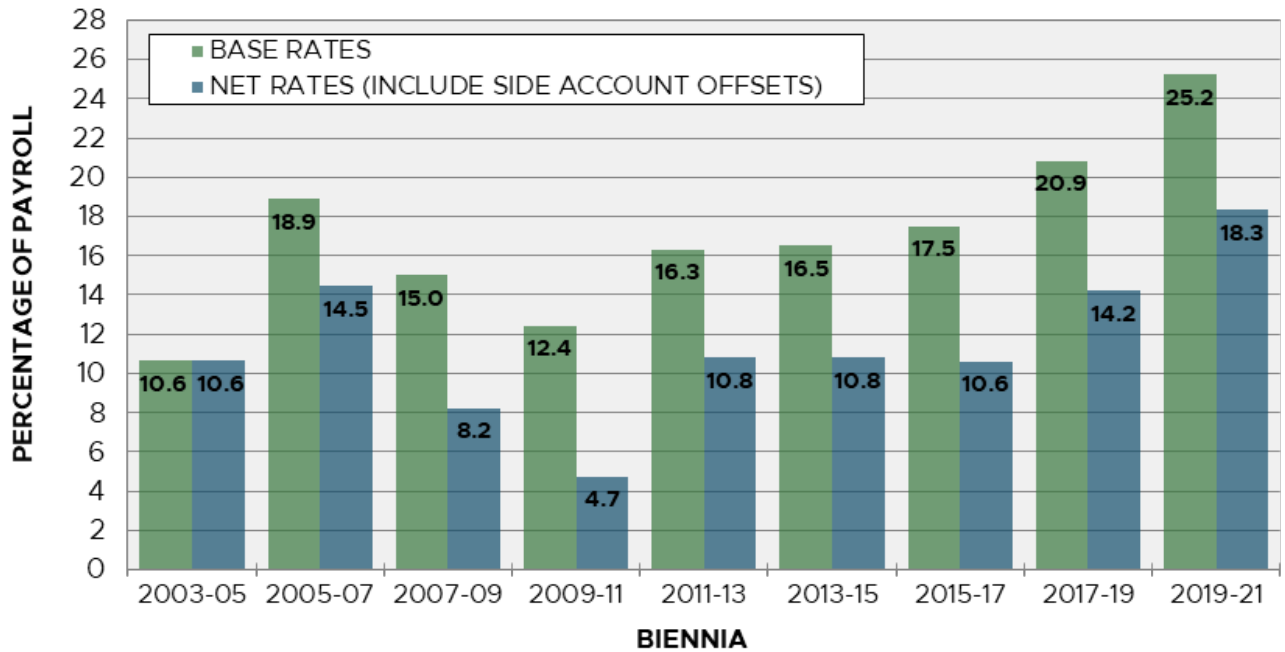
*December 31, 2003, rates were phased in. Actual rate paid averaged 10.58% with employer side accounts and 15.10% without employer side accounts.

**Includes weighted average rate for Tier One/Tier Two and OPSRP beginning in 2005.

***Includes liability reduction and rate deferral from Senate Bill 822 (2013).

4. System Revenue (continued)

System-wide average employer contribution rates as a percent of covered salary (net rates include side account offsets)



- Excludes 6% member contributions and pension obligation bond debt service payments.
- Includes Tier One, Tier Two, and OPSRP.
- 2005-07 rates (from December 31, 2003, valuation) were phased in. Actual rate paid averaged 10.58% with employer side accounts and 15.10% without employer side accounts.
- 2017-19 rates reflect, among other things, the Moro decision, assumed rate decrease from 7.75% to 7.5%, and all other assumption changes and actuarial experience.
- 2019-21 rates reflect investment returns for 2016 and 2017, assumed rate decrease from 7.5% to 7.2%, updated mortality assumptions, expected increase in UAL in 2016 and 2017, and all other assumption changes and actuarial experience.
- Does not include RHIA/RHIPA (health insurance).

2023-2025 employer contribution rate increase projections (2020 valuation data)

(Does not reflect the impact of SB 1049 or take into account the impact of Member Redirect contribution that reduces employer contributions by \$280 million)

(\$ millions)	Projected 2021-23 Payroll*	(A) Projected 2021-23 Contribution	Projected 2023-25 Payroll*	(B) Projected 2023-25 Total Contribution**	(B) - (A) Projected Contribution Increase
State Agencies	\$7,620	\$1,520	\$8,150	\$1,885	\$365
School Districts	\$7,905	\$1,260	\$8,450	\$1,595	\$335
All Others	\$9,385	\$1,915	\$10,035	\$2,390	\$475
Total	\$24,910	\$4,695	\$26,635	\$5,870	\$1,175

*Assumes payroll growth at 3.4% annually based on 12/31/2020 active member census, reflecting proportional payroll composition (Tier One/Tier Two vs. OPSRP) as of 12/31/2020.

**Collared net rates are used to project 2023-25 employer contributions.

4. System Revenue (continued)

Employer side accounts (does not reflect the impact of SB 1049)

When an employer makes a lump-sum payment to prepay its pension obligations, the money is placed in a “side account.” This account reduces the paying employer’s pension contribution rates.

Administrative costs for side accounts are limited by statute. PERS assesses \$1,500 per side account in the first year and \$500 annually thereafter, regardless of the size of the side account.

As of December 31, 2020, 219 employers have side accounts. Of these, 60 employers have multiple side accounts: five counties, four cities, six special districts, three community colleges, and 38 school districts. Additionally, two state agencies each have their own side accounts in addition to the State Government Side Account.

Employer Type	# w/ Side Accounts
Independent Locals (not a member of a pool)	15
State Government (all, including universities)	3
Pooled Counties	15
Pooled Cities	24
Pooled Special Districts	23
Community Colleges	17
School Districts	122

As of December 31, 2020, side account assets totaled \$5.12 billion.

Side Accounts by Employer Type as of December 31, 2020	
Employer Type	Balance (Millions)
Independent	\$126.6
State Government	\$1,502.6
Pooled Counties	\$236.3
Pooled Cities	\$65.8
Pooled Special Districts	\$210.9
Community Colleges	\$507.8
School Districts	\$2,471.8

Side accounts established prior to December 31, 2009, are amortized through December 31, 2027. For side accounts established after this date, the fixed amortization period ends 18 years after the first rate-setting valuation following its creation. However, with the adoption of Senate Bill (SB) 1566 by the 2017 Oregon Legislature, employers making a lump-sum payment of at least \$10 million dollars now have the option of selecting a shorter amortization schedule of six years, 10 years, 16 years, or 20 years for new side accounts. Using this option does not affect the amortization period of the employer’s UAL.

Side account rate offsets are recalculated every two years, taking into consideration how much of the side account has been used, what earnings have been credited, and changes to the individual employer’s payroll.

4. System Revenue (continued)

Side account earnings

Side accounts are invested in the PERS Fund and receive the Fund's actual earnings or losses. These earnings or losses are posted to side accounts at the end of each year.

Average Side Account Earnings 2007 to 2020	
Calendar Year	Average Earnings/Loss
2007	10.22%
2008	-27.83%
2009	19.52%
2010	13.13%
2011	2.96%
2012	15.39%
2013	16.67%
2014	7.79%
2015	2.25%
2016	7.65%
2017	16.71%
2018	0.56%
2019	13.92%
2020	7.18%

4. System Revenue (continued)

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

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 1989-2013
- 7.75% for 2014-2015
- 7.5% for 2016-2017
- 7.2% 2018-2021

Year	Earnings (%)	Distributions (%)			
		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	

(continued next page)

4. System Revenue (continued)

Year	Earnings (%)	Distributions (%)			
		Tier One	Tier Two	Variable Account	IAP
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	37.57	18.47
2010	12.44	8.00	12.44	15.17	12.13
2011	2.21	8.00	2.21	-7.80	2.15
2012	14.29	8.00	14.68	18.43	14.09
2013	15.76	8.00	15.62	25.74	15.59
2014	7.29	7.75	7.24	4.29	7.05
2015	2.21	7.75	1.87	-1.61	1.85
2016	6.9	7.50	7.15	8.76	7.13
2017	15.3	7.50	15.23	26.48	14.72
2018	0.19	7.20	0.23	-10.03	****
2019	13.32	7.20	13.27	28.80	****
2020	7.18	7.20	7.18	11.77	****

*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%.

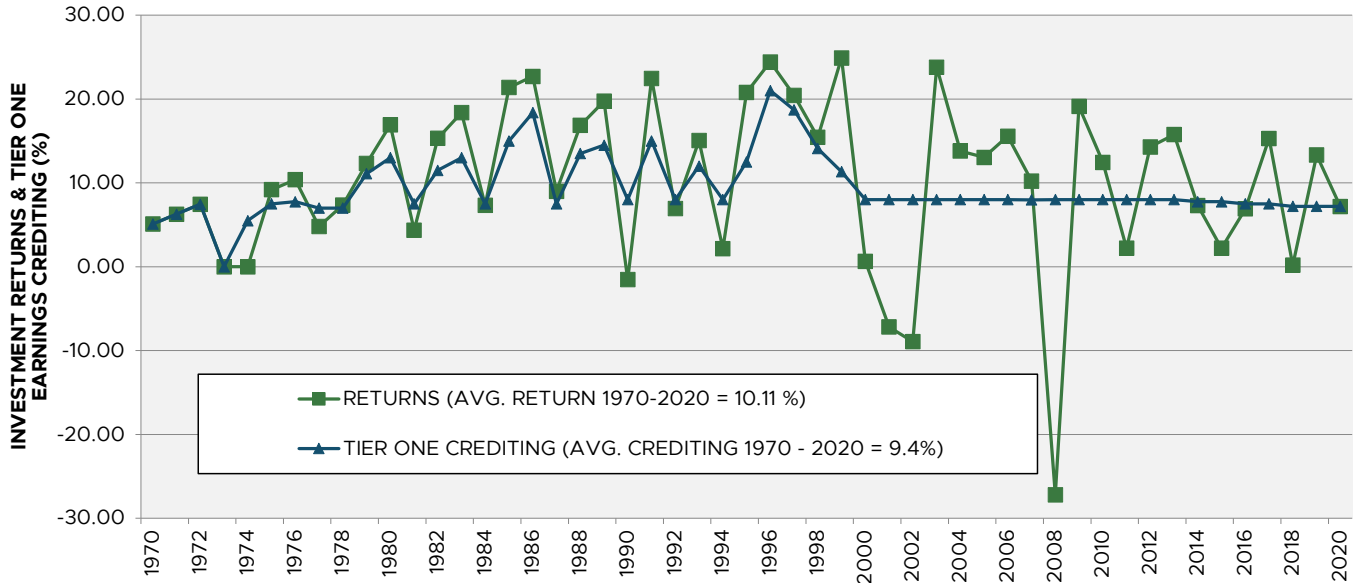
****Various Target-Date Fund returns.

4. System Revenue (continued)

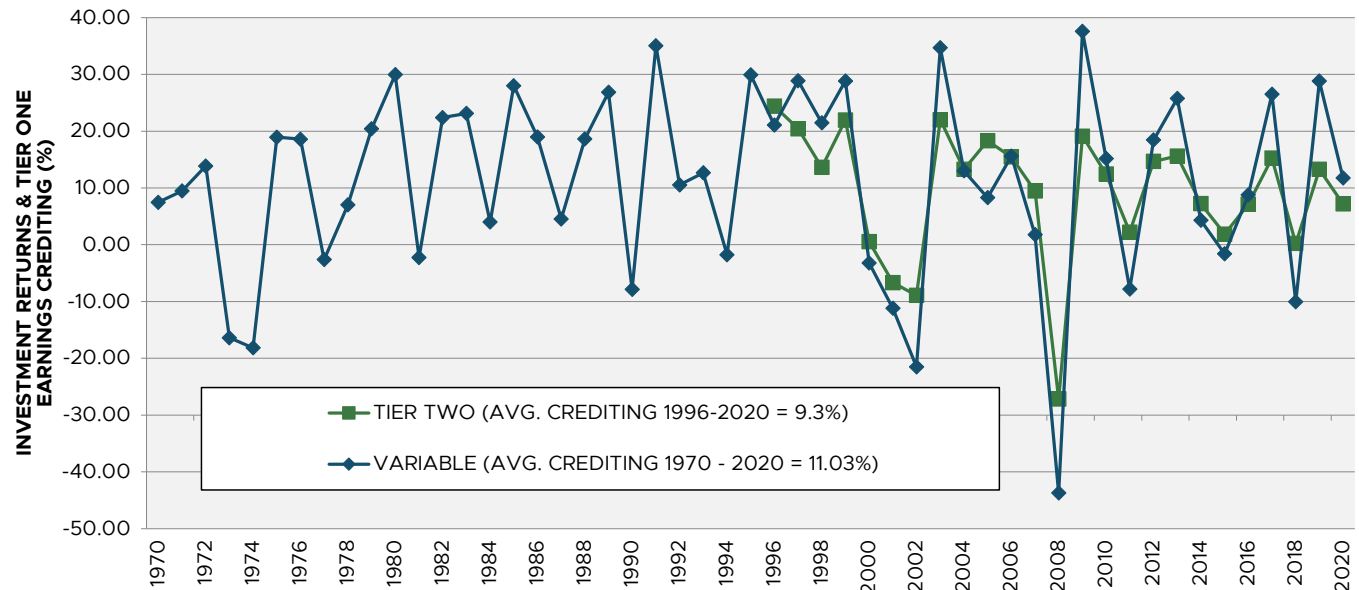
Tier One/Tier Two earnings crediting

Before January 1, 2004, Tier One/Tier Two member contributions were made to member accounts used to pay for part of their pension. These accounts continue to accrue annual earnings and losses until the member retires. Tier One member accounts receive the assumed earnings rate on an annual basis.

Regular account earnings available for crediting and actual distributions to Tier One member regular accounts, based on 2020 earnings



Actual distributions to Tier Two member regular accounts and to Tier One/Tier Two member variable accounts (invested in an equity-only portfolio), based on 2020 earnings



5. Economic Impact of PERS Monthly Benefit Payments in 2020

Oregon PERS monthly benefits contribute to Oregon's economy

Oregon PERS paid approximately \$4.27 billion in benefits (not including benefit payments from the Individual Account Program (IAP)) to PERS retirees living in Oregon in 2020. Funding for these benefits came mostly from investment earnings on contributions previously paid by members and public employers. These retirees spent a significant portion of this money on goods and services in Oregon, which helped support local businesses. These businesses then purchased goods, in part, from other local vendors, adding to the Oregon workforce and economy.

Annual PERS monthly benefits generate \$4.55 billion in total economic value

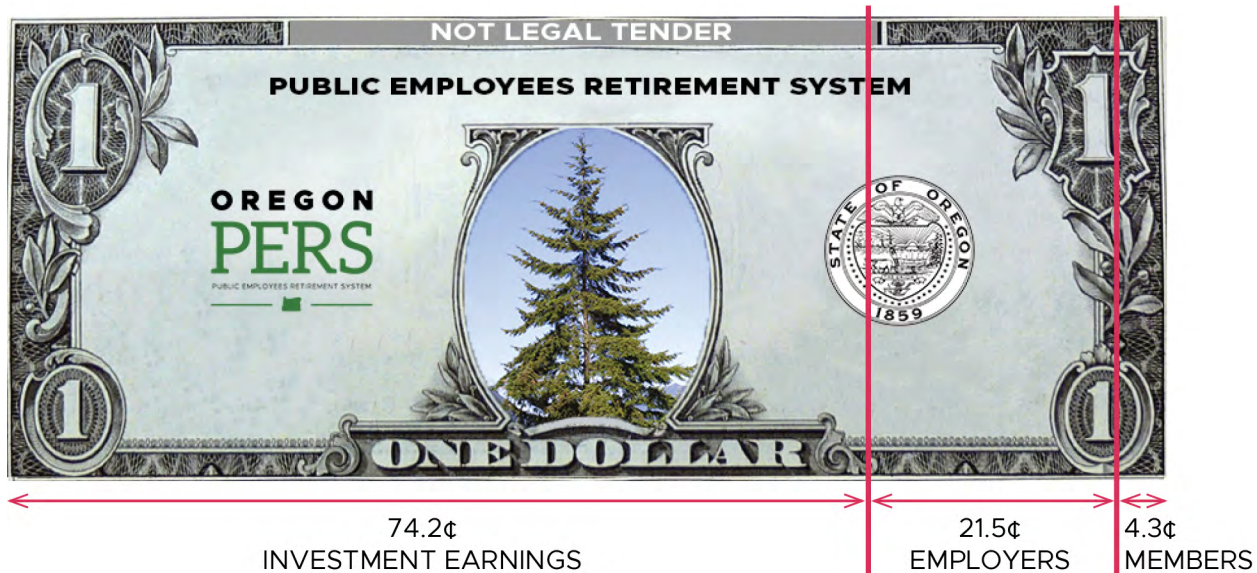
The \$4.27 billion in annual benefit payments multiply to \$4.55 billion in total economic value to Oregon when the full financial impact of these dollars spent in local communities is considered (based upon economic multipliers provided by the U.S. Department of Commerce's Bureau of Economic Analysis).

These benefit payments sustained an estimated 33,063 Oregon jobs and added approximately \$1.36 billion in wages to Oregon's economy.

Additionally, the state of Oregon collected an estimated \$252 million in income taxes on PERS retiree monthly benefits during 2020.

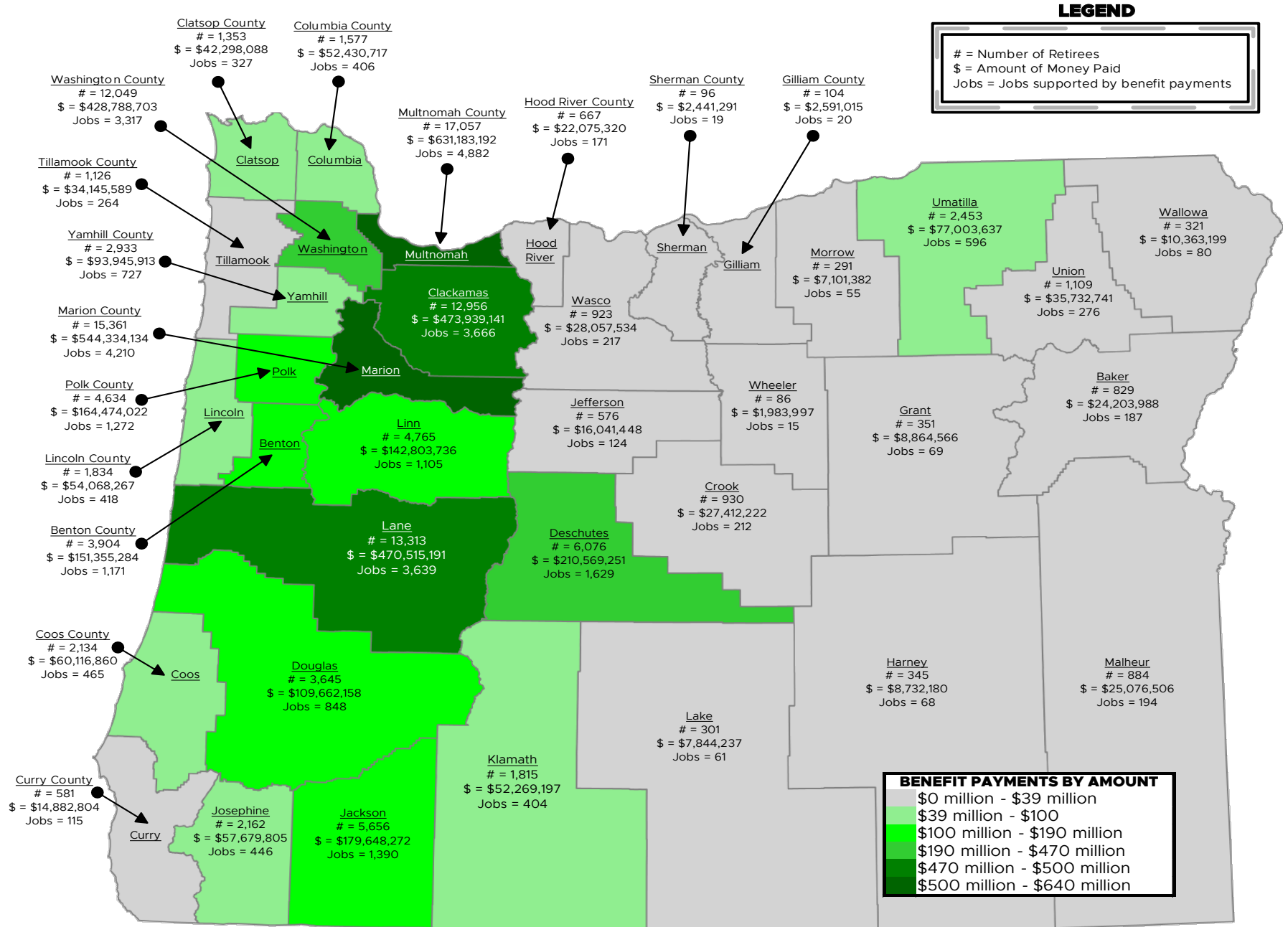
Since 1970, total pension revenues have come from three sources: investment income (74.2%), employer contributions (21.5%), and member contributions (4.3%).

Money for PERS benefit payments comes from three sources (1970-2020)



5. Economic Impact of PERS Benefit Payments in 2020 (continued)

Oregon PERS benefit payments by county (2020 calendar year)

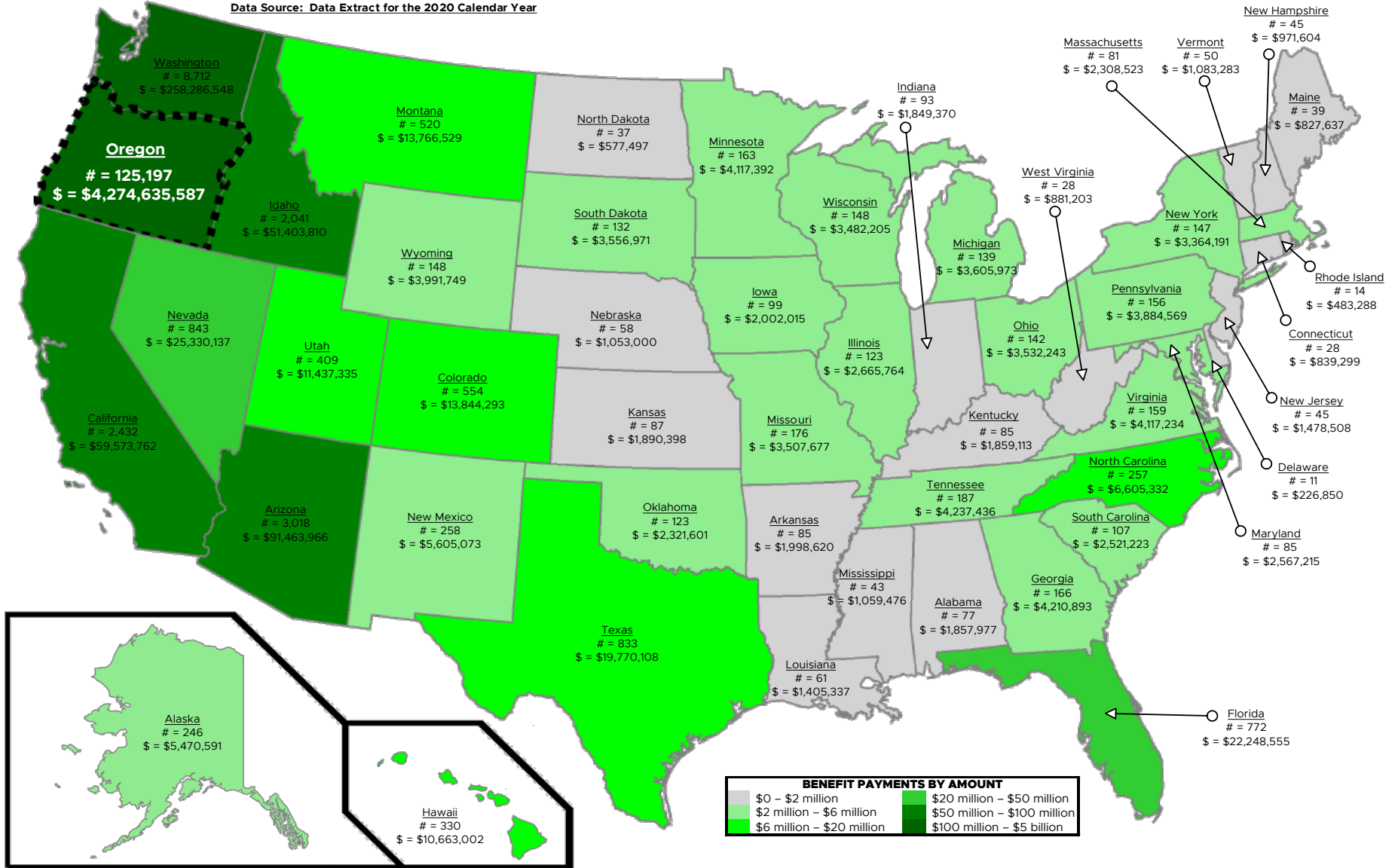


5. Economic Impact of PERS Benefit Payments in 2020 (continued)

Oregon PERS benefit payments by state (2020 calendar year)

Oregon PERS Benefits Go Coast to Coast: 2020 Benefits Paid

Data Source: Data Extract for the 2020 Calendar Year



Pension System Terms

Accrued liability: The net present value of projected future benefits allocated to service already completed in accordance with the actuarial cost method.

Actuarial asset value: The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with a smoothing method.

Actuarial assumptions: Assumptions as to the occurrence of future events affecting pension costs, such as mortality, withdrawal, disablement, retirement, and rates of investment earnings. Actual experience will vary from assumption, and at times the variance will be substantial.

Actuarial cost method: A technique used by actuaries to allocate the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial liability (UAL). Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Base employer contribution rates: Consists of the normal cost rate plus the UAL rate. This is paid by a combination of employer contributions and side account transfers. Base rates do not reflect the effects of side account rate offsets.

Combined valuation payroll: Projected payroll for the calendar year following the valuation date for Tier One, Tier Two, and Oregon Public Service Retirement Plan (OPSRP) active members. This payroll is used to calculate UAL rates.

Funded ratio or funded status: The actuarial value of assets expressed as a percentage of the accrued liability.

Individual Account Program (IAP): An account-based benefit that contains member contributions made on or after January 1, 2004.

Net employer contribution rates: The rate funded by employer contributions, consisting of the base employer contribution rate minus the effect of side account rate offsets.

Normal cost: The annual cost assigned to the current year under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

Oregon Public Service Retirement Plan (OPSRP) Pension Program: The pension program covering members hired after August 28, 2003.

Rate collar: A methodology that limits the maximum allowable period-to-period change in employer contribution rates. The width of the rate collar is determined by the current contribution rate and funded status.

Side accounts: Side accounts are established for employers who make supplemental payments (a lump-sum payment in excess of the required employer contribution). For State and Local Government Rate Pool (SLGRP) employers, this supplemental payment is first applied toward the employer's transition liability, if any, with the remainder going into a side account. Side accounts are treated as prepaid contributions. Employer contribution rates are first determined excluding side accounts (base employer contribution rate). Then, an amortized portion of the side account is used to offset the contribution otherwise required for each individual employer that has a side account (net employer contribution rate). While side accounts are excluded from valuation assets in determining contribution rates for pools and nonpooled employers, side accounts are included in valuation assets for financial reporting purposes such as the reporting of funded status.

Total liability: The net present value of all projected future benefits attributable to all anticipated service (past and future) for current active and inactive members.

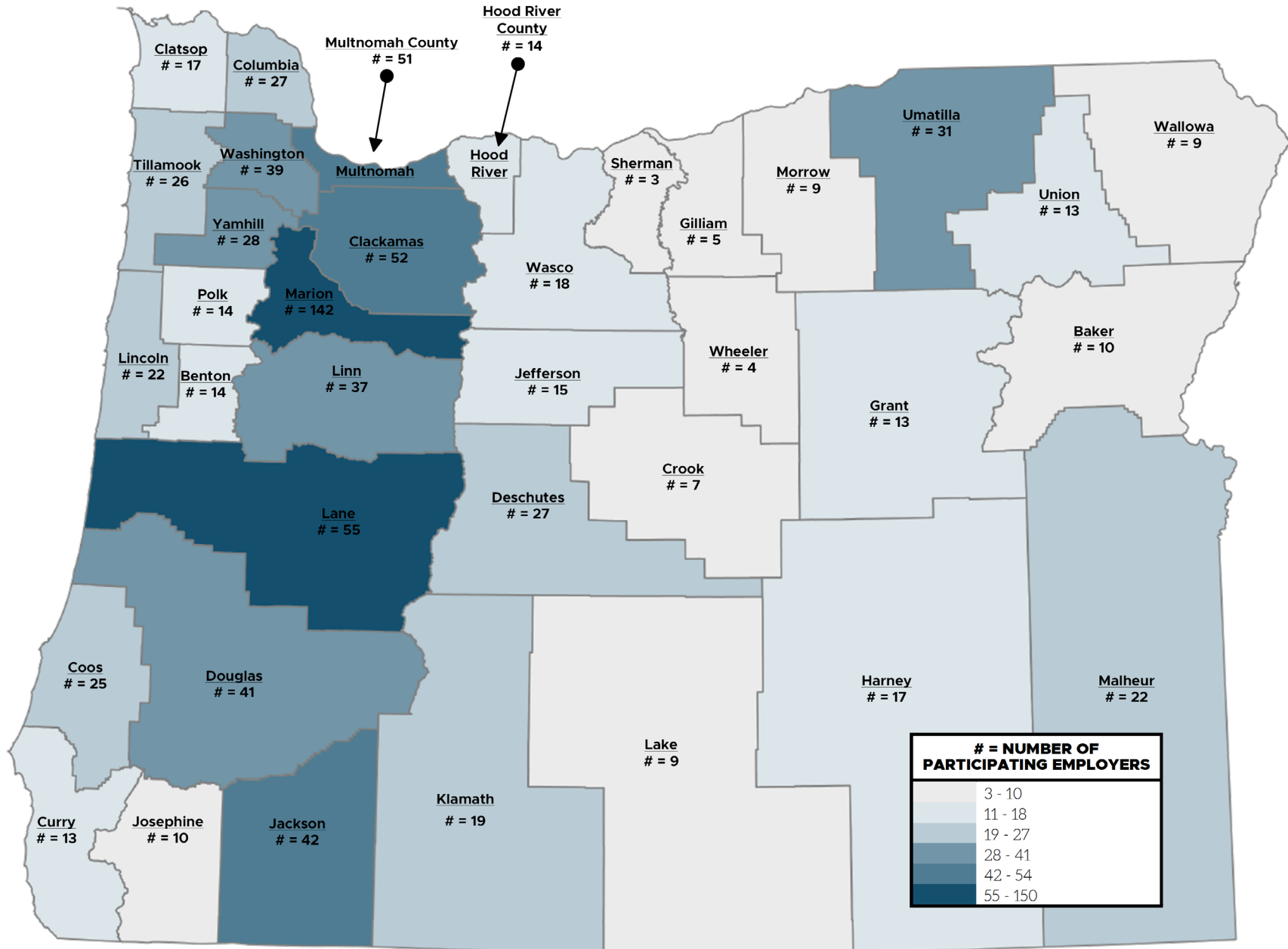
Tier One: The pension program covering members hired before January 1, 1996.

Tier Two: The pension program covering members hired from January 1, 1996, through August 28, 2003.

Unfunded actuarial liability (UAL): The excess of the actuarial accrued liability over the actuarial value of assets. The UAL is amortized over a fixed period of time to determine the UAL rate component of employer contribution rates.

Appendix A: PERS-Participating Employers

As of fiscal year ending June 30, 2021, by mailing address



PERS-participating employers by county, according to mailing address (900)

BAKER (10)

Baker City, City of
Baker County
Baker County Library District
Baker School District #5J
Baker Valley Irrigation District
Baker Web Academy
Burnt River High School
Huntington School District #16J
Huntington, City of
Pine-Eagle School District #61

BENTON (14)

Adair Village, City of
Alesa School
Benton County
Corvallis School District #509J
Corvallis, City of
Kings Valley Charter School
Monroe Fire Department
Monroe School District #1J
Monroe, City of
Muddy Creek Charter School
Oregon State University
Philomath Fire Department
Philomath School District #17J
Philomath, City of

CLACKAMAS (52)

Alliance Charter Academy
Canby Fire District
Canby School District
Canby Utility Board
Canby, City of
Cascade Heights Public Charter School
Clackamas Community College
Clackamas County
Clackamas County ESD
Clackamas County Fair
Clackamas County Fire District 1
Clackamas County Vector Control District
Clackamas Middle College
Clackamas River Water
Clackamas River Water Providers
Clackamas Web Academy
Colton Fire Department
Colton School District #53
Estacada Cemetery Maintenance District
Estacada Fire Department
Estacada School District #108
Estacada, City of
Gladstone School District #115
Gladstone, City of
Happy Valley, City of
Harmony Academy
Hoodland Fire District #74
Housing Authority of Clackamas County
Lake Oswego School District
Lake Oswego, City of
Milwaukie, City of
Molalla RFPD #73
Molalla River Academy
Molalla River School District
Molalla, City of

Mulino Water District #23
North Clackamas County Water Commission
North Clackamas School District #12
Oak Lodge Water Services District
Oregon City School District #62
Oregon City, City of
Oregon Trail School District #46
Renaissance Public Academy
Sandy Fire Department
Sandy, City of
South Fork Water Board
Springwater Environmental Sciences School
Summit Learning Charter
Sunrise Water Authority
Three Rivers Charter School
West Linn, City of
Wilsonville, City of

CLATSOP (17)

Arch Cape Water/Sanitary District
Astoria, City of
Cannon Beach Academy
Cannon Beach RFPD
Cannon Beach, City of
Clatsop Community College
Clatsop County
Clatsop County School District #1C
Gearhart, City of
Jewell School District #8
Knappa School District #4
Knappa Svensen Burnside RFPD
Port of Astoria
Seaside Schools
Warrenton, City of
Warrenton-Hammond School District
Wickiup Water District

COLUMBIA (27)

Clatskanie Library District
Clatskanie People's Utility District
Clatskanie RFPD
Clatskanie School District #6J
Clatskanie, City of
Columbia City, City of
Columbia County
Columbia County 911 Communications District
Columbia Drainage Vector Control District
Columbia River Fire and Rescue
Columbia River Public Utility District
Greater St. Helens Aquatic District
Mist-Birkenfeld RFPD
Port of Columbia County
Rainier Cemetery District
Rainier School District #13
Rainier, City of
Scappoose Public Library
Scappoose RFPD
Scappoose School District
Scappoose, City of
South Columbia Family School
St. Helens School District #502
St. Helens, City of
Vernonia Fire

Vernonia School District
Vernonia, City of

COOS (25)

Bandon School District
Bandon, City of
Charleston RFPD
Coos Bay School District #9
Coos Bay, City of
Coos County
Coos County Airport District
Coquille School District #8
Coquille, City of
Lakeside Water District
Lakeside, City of
Millington RFPD
Myrtle Point School District #41
Myrtle Point, City of
North Bend City Housing Authority
North Bend Public Schools
North Bend, City of
Oregon Dungeness Crab Commission
Oregon Virtual Academy
Port of Coos Bay
Powers School District
Powers, City of
South Coast ESD Region #7
Southwestern Oregon Community College
The Lighthouse School

CROOK (7)

Crook County
Crook County RFPD 1
Crook County School District
Insight School of Oregon Painted Hills
Ochoco Irrigation District
Powell Butte Community Charter School
Prineville, City of

CURRY (13)

Brookings, City of
Brookings-Harbor School District #17C
Central Curry School District #1
Chetco Community Public Library Board
Curry County
Curry Public Library
Gold Beach, City of
Harbor Water People's Utility District
Nesika Beach-Ophir Water District
Oregon Trawl Commission
Port Orford Public Library District
Port Orford, City of
Port Orford-Langlois School District #2CJ

DESCHUTES (27)

Bend International School
Bend Parks and Recreation
Bend, City of
Bend-La Pine Schools
Black Butte Ranch Police
Black Butte Ranch RFPD
Central Oregon Community College

Central Oregon Intergovernmental Council
 Central Oregon Irrigation District
 Central Oregon Regional Housing Authority
 Cloverdale RFPD
 Deschutes County
 Deschutes Public Library District
 Desert Sky Montessori
 High Desert Education Service District
 Jefferson County Soil and Water Conservation District
 La Pine RFPD
 Oregon Family School
 Redmond Area Parks and Recreation District
 Redmond Fire and Rescue
 Redmond Proficiency Academy
 Redmond School District #2J
 Redmond, City of
 Sisters and Camp Sherman RFPD
 Sisters School District
 Sisters, City of
 Sunriver Service District

DOUGLAS (41)

Camas Valley School District #21
 Canyonville, City of
 Days Creek School District #15
 Douglas County
 Douglas County ESD
 Douglas County Fire District #2
 Douglas County Soil and Water Conservation District
 Drain, City of
 Elkton School District #34
 Elkton, City of
 Glendale School District #77
 Glide Fire Department
 Glide School District #12
 Green Sanitary District
 Myrtle Creek, City of
 North Douglas County Fire and EMS
 North Douglas School District #22
 Oakland School District
 Oakland, City of
 Reedsport School District
 Reedsport, City of
 Riddle School District
 Riddle, City of
 Roseburg Public Schools
 Roseburg Urban Sanitary Authority
 Roseburg, City of
 Salmon Harbor and Douglas County
 South Umpqua School District
 Sutherlin School District #130
 Sutherlin Water Control District
 Sutherlin, City of
 The Phoenix School
 Tri-City Water and Sanitary Authority
 Umpqua Community College
 Winchester Bay Sanitary District
 Winston, City of
 Winston-Dillard Fire District
 Winston-Dillard Schools
 Winston-Dillard Water District
 Yoncalla School District #32
 Yoncalla, City of

GILLIAM (5)

Arlington Public Schools
 Condon Admin. School District #25J
 Condon, City of
 Gilliam County
 North Central ESD

GRANT (13)

Canyon City, Town of
 Dayville School District #16J
 Grant County
 Grant County Emergency Communications Agency
 Grant County ESD
 John Day School District
 John Day, City of
 Long Creek Schools
 Monument School District #8
 Mount Vernon, City of
 Oregon Connections Academy at Prairie City
 Prairie City School District #4
 Prairie City, City of

HARNEY (17)

Burns, City of
 Crane Elementary School
 Crane Union High School
 Diamond School District #7
 Double O School District
 Drewsey School
 Frenchglen School District
 Harney County
 Harney County School District #3
 Harney ESD Region #17
 Harney Hospital
 High Desert Parks and Recreation District
 Hines, City of
 Pine Creek School
 Silvies River Web Academy
 South Harney School District #33
 Suntex School District

HOOD RIVER (14)

Cascade Locks, City of
 Crystal Springs Water District
 East Fork Irrigation District
 Farmers Irrigation District
 Hood River County
 Hood River County School District
 Hood River, City of
 Ice Fountain Water District
 Odell Sanitary District
 Parkdale Fire District
 Port of Cascade Locks
 Port of Hood River
 West Side Fire District
 Wy'East Fire District

JACKSON (42)

Applegate Valley RFPD #9
 Armadillo Technical Institute
 Ashland Parks Commission
 Ashland Public Schools
 Ashland, City of
 Butte Falls School District
 Butte Falls, Town of
 Central Point School District #6

Central Point, City of
 Crater Lake Charter Academy
 Eagle Point School District #9
 Eagle Point, City of
 Evans Valley Fire District #6
 Gold Hill, City of
 Housing Authority of Jackson County
 Jackson County
 Jackson County Fire District #3
 Jackson County Fire District #4
 Jackson County Fire District #5
 Jackson County Vector Control
 Jacksonville, City of
 Logos Public Charter School
 Madrone Trail Public Charter School
 Medford Irrigation District
 Medford School District #549C
 Medford Water Commission
 Medford, City of
 Phoenix, City of
 Phoenix-Talent School District #4
 Pinehurst School
 Prospect School District
 River's Edge Academy Charter School
 Rogue River Fire District
 Rogue River School District
 Rogue River Valley Irrigation District
 Rogue River, City of
 Shady Cove, City of
 Southern Oregon ESD
 Southern Oregon University
 Talent Irrigation District
 Talent, City of
 The Valley School of Southern Oregon

JEFFERSON (15)

Ashwood School
 Black Butte School District
 Crooked River Ranch RFPD
 Culver School District #4
 Culver, City of
 Deschutes Valley Water District
 Jefferson County
 Jefferson County EMS District
 Jefferson County ESD
 Jefferson County Library District
 Jefferson County RFPD #1
 Lake Chinook Fire and Rescue District
 Madras School District
 Madras, City of
 Metolius, City of

JOSEPHINE (10)

Cave Junction, City of
 Grants Pass Irrigation District
 Grants Pass School District
 Grants Pass, City of
 Illinois Valley Fire District
 Josephine County
 Rogue Community College
 Sunny Wolf Charter School
 Three Rivers School District
 Woodland Charter School

KLAMATH (19)

Central Cascades Fire & EMS
 Chiloquin, City of
 Chiloquin-Agency Lake RFPD
 Crescent RFPD

- EagleRidge High School
- Horsefly Irrigation District
- Klamath Community College
- Klamath County
- Klamath County Emergency Communications District
- Klamath County Fire District #1
- Klamath County School District
- Klamath Falls City Schools
- Klamath Falls, City of
- Klamath Housing Authority
- Klamath Vector Control District
- Malin, City of
- Merrill, City of
- Oregon Institute of Technology
- South Suburban Sanitary District

LAKE (9)

- Adel School District #21
- Lake County
- Lake County ESD
- Lake County Library District
- Lake County School District #7
- Lakeview, Town of
- North Lake School District #14
- Paisley School District
- Plush School District

LANE (55)

- Bethel School District
- Blachly School District
- Bridge Charter Academy
- Coburg Community Charter School
- Coburg RFPD
- Coburg, City of
- Cottage Grove, City of
- Creswell School District #40
- Creswell, City of
- Crow-Applegate-Lorane School District #66
- Dexter RFPD
- Dunes City, City of
- Eugene School District #4J
- Eugene Water and Electric Board
- Eugene, City of
- Fern Ridge Community Library
- Fern Ridge School District
- Florence, City of
- Junction City Fire Department
- Junction City School District #69
- Junction City, City of
- Lane Community College
- Lane Council of Governments
- Lane County
- Lane County ESD
- Lane Fire Authority
- Lowell RFPD
- Lowell School District
- Lowell, City of
- Mapleton School District
- Mapleton Water District
- Marcola School District #79
- McKenzie Fire and Rescue
- McKenzie School District
- Mohawk Valley Fire
- Oakridge School District
- Oakridge, City of
- Pleasant Hill Goshen Fire & Rescue
- Pleasant Hill School District

- Rainbow Water District
- Ridgeline Montessori
- Siuslaw Public Library
- Siuslaw RFPD #1
- Siuslaw School District #97J
- South Lane County Fire and Rescue
- South Lane School District
- Springfield School District #19
- Springfield, City of
- The Village School
- University of Oregon
- Veneta, City of
- West Lane Technical Learning Center
- Western Lane Ambulance District
- Western Lane Fire and EMS Authority
- Westfir, City of

LINCOLN (22)

- Central Oregon Coast Fire and Rescue District
- Depoe Bay RFPD
- Depoe Bay, City of
- Eddyville Charter School
- Greater Toledo Pool
- Lincoln City, City of
- Lincoln County
- Lincoln County School District
- Newport, City of
- North Lincoln Fire and Rescue District #1
- Oregon Coast Community College
- Oregon Salmon Commission
- Port of Newport
- Seal Rock RFPD
- Seal Rock Water District
- Siletz Rural Fire Protection District
- Siletz Valley School
- Southwest Lincoln County Water District
- Toledo, City of
- Waldport, City of
- Yachats RFPD
- Yachats, City of

LINN (37)

- Albany, City of
- Brownsville RFPD
- Central Linn School District #552C
- Community Services Consortium
- Greater Albany Public Schools #8J
- Halsey, City of
- Halsey-Shedd RFPD
- Harrisburg Fire and Rescue
- Harrisburg School District #7
- Harrisburg, City of
- Lebanon Aquatic District
- Lebanon Community School District
- Lebanon Fire District
- Lebanon, City of
- Linn County
- Linn-Benton Community College
- Linn-Benton Housing Authority
- Linn-Benton-Lincoln ESD
- Lourdes Charter School
- Lyons Fire District
- Lyons, City of
- Mill City RFPD
- Mill City, City of
- Millersburg, City of
- Oregon Cascades West Council of

- Governments
- Oregon Connections Academy
- Sand Ridge Charter School
- Santiam Canyon School District
- Scio Fire District
- Scio School District #95C
- Sweet Home Cemetery Maintenance District
- Sweet Home Charter School
- Sweet Home Fire and Ambulance District
- Sweet Home School District #55
- Sweet Home, City of
- Tangent RFPD
- Willamette Connections Academy

MALHEUR (22)

- Adrian School District #61
- Annex Elementary School
- Arock School District #81
- Four Rivers Community School
- Harper School District #66
- Jordan Valley School District #3
- Jordan Valley, City of
- Juntura Grade School
- Malheur County
- Malheur ESD Region #14
- Nyssa Road Assessment District #2
- Nyssa School District #26
- Nyssa, City of
- Ontario School District #8C
- Ontario, City of
- Owyhee Irrigation District
- Rural Road Assessment District #3
- Rural Road District #4
- Treasure Valley Community College
- Vale School District #84
- Vale, City of
- Valley View Cemetery Maintenance District

MARION (142)

- Appraiser Certification and Licensure Board
- Aumsville RFPD
- Aumsville, City of
- Aurora RFPD
- Aurora, City of
- Board of Accountancy
- Board of Architect Examiners
- Board of Chiropractic Examiners
- Board of Examiners for Engineering and Land Surveying
- Board of Geologist Examiners
- Board of Optometry
- Board of Parole and Post-Prison Supervision
- Board of Pharmacy
- Bureau of Labor and Industries
- Cascade School District #5
- Chemeketa Community College
- City County Insurance Services
- Commission on Indian Services
- Commission on Judicial Fitness and Disability
- Construction Contractors Board
- Department of Administrative Services
- Department of Agriculture
- Department of Aviation

Department of Consumer and Business Services
 Department of Corrections
 Department of Education
 Department of Energy
 Department of Environmental Quality
 Department of Human Services
 Department of Justice
 Department of Land Conservation and Development
 Department of Military-Federal Employees
 Department of Revenue
 Department of State Lands
 Department of State Police
 Department of Transportation
 Department of Veterans' Affairs
 District Attorneys Department
 Eagle Charter School
 Employment Department
 Employment Relations Board
 Forestry Department
 Frontier Charter Academy
 Geology and Mineral Industries
 Gervais School District #1
 Gervais, City of
 Health Related Licensing Boards
 Higher Education Coordinating Commission
 Howard Street Charter School, Inc.
 Hubbard RFPD
 Hubbard, City of
 Idanha-Detroit RFPD
 Jefferson RFPD
 Jefferson School District #14CJ
 Jefferson, City of
 Judges PERS
 Judicial Department
 Keizer RFPD
 Keizer, City of
 Land Use Board of Appeals
 Landscape Contractors Board
 League of Oregon Cities
 Legislative Administration Committee
 Legislative Assembly
 Legislative Committees
 Legislative Fiscal Office
 Legislative Policy and Research Committee
 Long Term Care Ombudsman
 Marion Area Multi-Agency Emergency Telecom Center
 Marion County
 Marion County Fire District #1
 Marion County Housing Authority
 Mental Health Regulatory Agency
 Mid-Valley Behavioral Care Network
 Military Department
 Mount Angel, City of
 Mount Angel Fire District
 Mount Angel School District #91
 North Marion School District #15
 North Santiam School District #29J
 NorthWest Senior and Disability Services
 Office of Legislative Counsel
 Office of the Governor
 Office of the State Treasurer
 Oregon Advocacy Commissions Office

Oregon Board of Dentistry
 Oregon Board of Massage Therapists
 Oregon Board of Medical Examiners
 Oregon Business Development Department
 Oregon Commission for the Blind
 Oregon Community College Association
 Oregon Corrections Enterprises
 Oregon Criminal Justice Commission
 Oregon Department of Fish and Wildlife
 Oregon Forest Resources Institute
 Oregon Government Ethics Commission
 Oregon Health Authority
 Oregon Hop Commission
 Oregon Housing and Community Services
 Oregon Liquor Control Commission
 Oregon Municipal Electric Utilities Association
 Oregon Parks and Recreation Department
 Oregon Racing Commission
 Oregon School Boards Association
 Oregon State Board of Nursing
 Oregon State Library
 Oregon Watershed Enhancement Board
 Oregon Youth Authority
 Psychiatric Security Review Board
 Public Defense Services Commission
 Public Employees Retirement System
 Public Safety Standards and Training
 Public Utility Commission
 Real Estate Agency
 Salem Housing Authority
 Salem, City of
 Salem-Keizer Public Schools
 Secretary of State
 Silver Falls Library District
 Silver Falls School District
 Silverton RFPD #2
 Silverton, City of
 St. Paul School District
 State Accident Insurance Fund
 State Board of Clinical Social Workers
 State Board of Tax Practitioners
 State Lottery Commission
 State Marine Board
 Stayton RFPD
 Stayton, City of
 Sublimity RFPD
 Suburban East Salem Water District
 Teacher Standards and Practices Commission
 Travel Information Council
 Turner Fire District
 Turner, City of
 Valley Inquiry Charter School
 Water Resources Department
 Willamette ESD
 Woodburn Fire District
 Woodburn School District
 Woodburn, City of

MORROW (9)

Boardman RFPD
 Boardman, City of

Heppner, City of
 Irrigon, City of
 Morrow County
 Morrow County Schools
 North Morrow Vector Control District
 Oregon Trail Library District
 West Extension Irrigation District

MULTNOMAH (51)

Arthur Academy Charter School
 CareOregon
 Centennial School District #28
 Center for Advanced Learning
 Corbett School District #39
 Corbett Water District
 David Douglas School District
 Fairview, City of
 Gresham, City of
 Gresham-Barlow School District #10
 Home Forward
 Kairos PDX
 Knova Learning Oregon
 Le Monde French Immersion Public Charter School
 Lewis and Clark Montessori Charter School
 Metro
 Metro East Web Academy
 Mount Hood Community College
 Multnomah County
 Multnomah County Drainage District
 Multnomah County RFPD #14
 Multnomah ESD
 Multnomah Learning Academy
 Opal School
 Oregon Beef Council
 Oregon Dairy Products Commission
 Oregon Film and Video
 Oregon Health and Science University
 Oregon Patient Safety Commission
 Oregon Potato Commission
 Oregon Tourism Commission
 Oregon Wheat Commission
 Parkrose School District
 Physical Therapist Licensing Board
 Port of Portland
 Portland Community College
 Portland Development Commission
 Portland Public Schools
 Portland State University
 Portland Village School
 Portland, City of
 Reynolds School District
 Riverdale School
 Rockwood Water People's Utility District
 Sauvie Island School
 The Cottonwood School of Civics and Science
 The Emerson School
 The Ivy School
 Troutdale, City of
 West Multnomah Soil and Water Conservation District
 Wood Village, City of

POLK (14)

Central School District #13J
 Dallas Community School

Dallas School District
Dallas, City of
Falls City School District
Falls City, City of
Independence, City of
Luckiamute Valley Charter School
Monmouth, City of
Polk County
Polk County Fire District #1
Polk Soil and Water Conservation
District
West Valley Housing Authority
Western Oregon University

SHERMAN (3)

Moro, City of
Sherman County
Sherman County School District

TILLAMOOK (26)

Bay City, City of
Fairview Water District
Garibaldi, City of
Manzanita, City of
Neah-Kah-Nie School District
Nehalem Bay Fire and Rescue
Nehalem Bay Health District
Nehalem Bay Wastewater Agency
Neskowin Regional Sanitary Authority
Neskowin Regional Water District
Nestucca RFPD
Nestucca Valley School District #101
Netarts Water District
Netarts-Oceanside RFPD
Netarts-Oceanside Sanitary District
Port of Garibaldi
Port of Tillamook Bay
Rockaway Beach, City of
Tillamook Bay Community College
Tillamook County Emergency
Communications District
Tillamook County Soil and Water
Conservation District
Tillamook Fire District
Tillamook People's Utility District
Tillamook Public Schools
Tillamook, City of
Wheeler, City of

UMATILLA (31)

Athena, City of
Athena-Weston School District #29RJ
Blue Mountain Community College
Echo School District
Echo, City of
Helix School District
Helix, City of
Hermiston School District #8R
Hermiston, City of
InterMountain ESD
Ione School District
Milton-Freewater Unified School District
Milton-Freewater, City of
Nixyaawii Community School
Pendleton School District #16R
Pendleton, City of
Pilot Rock School District #2R
Pilot Rock, City of
Port of Umatilla

Stanfield School District
Stanfield, City of
Ukiah School
Umatilla County
Umatilla County Fire District #1
Umatilla County Soil and Water District
Umatilla County Special Library District
Umatilla Fire Department
Umatilla School District #6R
Umatilla, City of
Umatilla-Morrow Radio and Data
District
Weston, City of

UNION (13)

Cove School District
Eastern Oregon University
Elgin School District #23
Elgin, City of
Imbler RFPD
Imbler School District
La Grande Public Schools
La Grande, City of
North Powder, City of
North Powder School District
Northeast Oregon Housing Authority
Tri-County Cooperative Weed
Management
Union County School District

WALLOWA (9)

Enterprise School District #21
Enterprise, City of
Joseph School District #6
Joseph, City of
Troy School District #54
Wallowa County
Wallowa County Region #18 ESD
Wallowa School
Wallowa, City of

WASCO (18)

Columbia Gorge Community College
Columbia Gorge ESD
Dufur Schools
Dufur, City of
Maupin, City of
Mid-Columbia Center for Living
Mid-Columbia Fire and Rescue
Mosier Community School
Mosier Fire District
North Central Public Health District
North Wasco County Parks and
Recreation
North Wasco County School District
#21
Northern Oregon Corrections
Port of The Dalles
South Wasco County School District #1
Wahtonka Community School
Wasco County
Wasco County Soil and Water
Conservation District

WASHINGTON (39)

Arco Iris Spanish Immersion Charter
School
Banks Fire District #13
Banks School District

Banks, City of
Beaverton School District
Beaverton, City of
City View Charter School
Clean Water Services
Cornelius, City of
Durham, City of
Forest Grove Community School
Forest Grove School District
Forest Grove, City of
Gaston Public Schools
Gaston RFPD
Gaston, City of
Hillsboro School District #1J
Hillsboro, City of
Hope Chinese Charter School
King City, City of
Metropolitan Area Communication
Commission
MITCH Charter School
North Plains, City of
Northwest Regional ESD
Oregon State Bar
Oregon State Bar Professional Liability
Fund
Sherwood Charter School
Sherwood, City of
Sherwood School District #88J
Tigard, City of
Tigard-Tualatin School District #23J
Tualatin Valley Fire and Rescue
Tualatin Valley Irrigation District
Tualatin Valley Water District
Tualatin, City of
Washington County
Washington County Consolidated
Communications Agency
West Linn School District
West Slope Water District

WHEELER (4)

Fossil School District #21J
Fossil, City of
Mitchell School
Spray School District #1

YAMHILL (28)

Amity Fire District
Amity School District
Amity, City of
Carlton, City of
Dayton Public Schools
Dayton, City of
Dundee, City of
Eola Hills Charter School
Lafayette, City of
McMinnville Schools
McMinnville Water and Light
Department
McMinnville, City of
Newberg School District #29JT
Newberg, City of
Perrydale School District #21
Sheridan AllPrep Academy
Sheridan Fire District
Sheridan Japanese School Foundation
Sheridan School District #48J
Sheridan, City of
West Valley Fire District

Willamina School District #30J
Willamina, City of
Yamhill Communications Agency
Yamhill County
Yamhill Fire Protection District
Yamhill, City of
Yamhill-Carlton School District #1

Key Acronyms

RFPD = Rural Fire Protection District

ESD = Education Service District

Appendix B: Replacement Ratio Study (RRS) Exclusions and Assumptions

(see pages 10-12)

EXCLUSIONS

Job Class Exclusions

The study is limited to PERS plan retirees in the General Service and Police and Fire job classes from January 1990 through December 2020.

Beneficiaries and alternate payees also were excluded, as the inclusion of these populations would skew the results due to the wide range of payout scenarios related to death and divorce benefits.

Retirement Option Exclusions

All lump-sum benefit types were excluded due to the distorting effect of significant payouts at one time on replacement ratio results.

Other Exclusions

- Any record that fell outside the January 1990-December 2020 retirement date range.
- Any record that had a greater than one-year gap between termination date and retirement date.

ASSUMPTIONS:

For the purposes of this study, the following assumptions were used:

- Any account with a variable balance at the date of retirement was considered a variable account member.
- For final average salary (FAS), we used monthly FAS from the member's actual benefit calculation where available.
- When monthly FAS from the actual benefit calculation could not be obtained, we used the average salary of the three highest calendar years of a member's career. This definition of FAS may not match the definition under which the member's actual benefit was calculated.
- Monthly gross benefit amounts include House Bill (HB) 3349 (1995) and/or Senate Bill (SB) 656 (1991) benefits for qualifying retirees.

SPECIAL NOTES:

The averages and percentages displayed on the Replacement Ratio sheets are based upon the respective actual source data. The calculations on each Replacement Ratio sheet are not directly derived from one another. For instance, if the Average Monthly Gross benefit column is divided by the Average Monthly Salary column, it will not equal the Average Replacement Ratio column because the Average Replacement Ratio is derived from the average of replacement ratios in the source data. This method avoids distortions resulting from averaging averages. This is also the case with all of the median calculations. This method of analyzing the data provides a more accurate picture of the actual dataset being used.

Records of members who retired in previous years and then returned to work only to retire again later were counted in the year of original retirement and again in the year of the second retirement, provided that both retirements are applicable to this study based on the above criteria. Adjusting the historical record in these scenarios would otherwise distort year-over-year results.

Records for members who have retired with both Class 1 (General Service) and Class 2 (Police and Fire) job segments had the General Service job segment removed. Removing these records avoids double counting salaries and members.