Higher Education SUPPLEMENTAL RETIREMENT PLAN

2023 Actuarial Valuation

October 2023

OSA
Office of the State Actuary

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Letter of Introduction
Supplemental Retirement Plan
Actuarial Valuation
As of June 30, 2023

October 2023

As required under the Revised Code of Washington (RCW) Chapter 28B.10.423, and in accordance with the reporting requirements of the Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67/68), this report documents the results of an actuarial valuation of the Supplemental Retirement Plan (SRP). We prepared actuarial valuations for each of the following higher education institutions.

- Central Washington University (CWU).
- Eastern Washington University (EWU).
- State Board for the Community and Technical Colleges (CTC).
- The Evergreen State College (TESC).
- The University of Washington (UW).
- Washington State University (WSU).
- Western Washington University (WWU).

The primary purpose of this valuation is to provide information to the Office of Financial Management (OFM) and the higher education institutions in order to meet the financial reporting requirements under GASB 67/68 for the Fiscal Year (FY) ending June 30, 2023.

This report is organized into five sections. The **Summary of Key Results** provides a high-level summary of the key valuation results. The **Background** section provides information on GASB 67/68 as well as the SRP benefit. The **Actuarial Exhibits** provides the results of this valuation including the actuarial exhibits required to satisfy GASB 67/68. The **Participant Data** section details the demographics of current SRP participants, both active and inactive members. The **Appendices** provide a summary of the principal actuarial assumptions and methods, a summary of the major plan provisions, and additional information used to prepare this valuation. It also includes a glossary of actuarial terms used throughout this report.

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We encourage you to submit any questions you might have concerning this report to our e-mail address at state.actuary@leg.wa.gov.

Sincerely,

Luke Masselink, ASA, EA, MAAA
Senior Actuary

Mitch DeCamp
Senior Actuarial Analyst

SUMMARY OF KEY RESULTS

SUMMARY OF KEY RESULTS

The Office of the State Actuary (OSA) provided the enclosed information to satisfy the reporting requirements of GASB 67/68 for FY ending June 30, 2023.

The following table provides key GASB results:

- The Total Pension Liability (TPL), measured in today's dollars, represents the amount of SRP benefits, earned as of the measurement date, expected to be paid to current and future retirees.
- The Net Pension Liability (NPL) is the difference between the TPL and the Plan Fiduciary Net Position (PFNP). The PFNP represents the amount of assets available to pay for SRP benefits.[1]
- The Pension Expense is the summation of components including benefits earned during the FY, interest on the TPL, investment earnings, and amortization of unexpected plan participant or investment experience and assumption changes.

Additional detail on these figures is provided in the **Actuarial Exhibits** section of this report. For more information on GASB 67/68 requirements and the SRP benefit calculation, please see the **Background** section.

GASB 68 Key Results				
	Net Pension Liability		Pension Expense	
(Dollars in Thousands)	2023	2022	2023	2022
University of Washington	$161,773	$219,138	($39,809)	($37,820)
Washington State University	$32,292	$38,036	($7,585)	($8,500)
Western Washington University	$10,326	$15,255	($1,302)	($1,319)
Eastern Washington University	$5,862	$9,399	($629)	($436)
The Evergreen State College	$2,180	$3,573	($567)	($551)
Central Washington University	$795	$1,794	$105	($864)
Community and Technical Colleges	$54,491	$68,737	($3,130)	($3,121)

The following table displays key economic assumptions used in the actuarial valuation for FY 2023, along with information from the last measurement. The Total Salary Growth assumption is based on the *August 2021 Higher Education SRP Experience Study*. The TIAA and CREF increase rates represent the assumed investment return on primary investments that play a key role in the SRP benefit calculation.

Key Assumptions		
All Institutions	2023	2022
Discount Rate	7.00%	7.00%
TIAA Increase Rate	4.00%	4.00%
CREF Increase Rate	6.25%	6.25%
Total Salary Growth		
UW	4.00%	4.00%
WSU	3.50%	3.50%
WWU	3.75%	3.75%
EWU	3.50%	3.50%
TESC	3.50%	3.50%
CWU	3.50%	3.50%
CTC	3.50%	3.50%

[1]*Please see RCW 41.50.280 for conditions when assets may be used to pay plan benefits.*

Comments on 2023 Results

Short-term actuarial gains or losses occur when actual economic and demographic experience differs from what we assume in the valuation. Actuarial gains reduce the TPL and NPL; actuarial losses increase the TPL and NPL. Under a reasonable set of actuarial assumptions and methods, actuarial gains and losses offset over long-term experience periods.

Significant changes in plan provisions or actuarial assumptions and methods also impact the TPL. Significant factors that impacted the results of this valuation include the following:

- ❖ We reflected the new January 1, 2023, participant data file. This update changed the valuation date from June 30 to January 1. The new data file decreased the TPL for all institutions. Some of the larger experience items that impacted the TPL was actual salary growth being generally lower than assumed and SRP benefits for new retirees were lower than estimated.
- ❖ We updated some assumptions used to estimate SRP benefits for future retirees based on input from TIAA and our professional judgment. These assumption changes decreased the TPL for all institutions.

A more detailed analysis of the gain/loss can be found in the **Actuarial Exhibits** section. For a list of assumption changes, please see the Changes in Methods and Assumptions since the Last Valuation in the **Appendices**.

BACKGROUND

GASB Statements No. 67 and 68

GASB 67/68 are the required financial reporting standard for pension plans that are administered through trusts or equivalent arrangements. These standards require employers and plan sponsors to disclose key financial measures for the plan including the NPL and pension expense. GASB 67/68 require the use of the Entry Age Normal actuarial cost method to measure the Actuarial Accrued Liability, which is referred to as the TPL. The discount rate is generally based on the long-term expected rate of return of plan assets. For more information, please refer to GASB's website.

Supplemental Retirement Plan

The SRP is a defined benefit retirement plan administered by the higher education public institutions in Washington State. It works in conjunction with the defined contribution Higher Education Retirement Plan (HERP) to provide a minimum retirement guarantee based upon a one-time calculation at each eligible employee's retirement date.

SRP retirement calculations are performed for members that leave active employment after attaining age 62 and ten Years Of Service (YOS). A member's supplemental benefit is equal to their Goal Income minus their Assumed Income.

- **Goal Income** – The defined benefit calculation is equal to 2 percent, times the member's highest two-year average pay, times their YOS. Benefit service is capped at 25 years.
- **Assumed Income** – The assumed income looks at actual member contributions to the HERP over their career and estimates the lifetime benefit they would receive had they invested their contributions equally between a fixed income and a variable income annuity investment. The Plan Administrator models the fixed income investment by the TIAA Traditional Annuity and the variable income investment by the CREF Stock Account. HERP contribution rates are fixed and vary by employee age.

If the Goal Income is greater than the Assumed Income, a lifetime supplemental benefit is paid. If the Assumed Income is greater than or equal to the Goal Income, no supplemental benefit is paid.

In addition, members with state retirement system service that meet certain criteria will have that service included in the Goal Income calculation and their state retirement system benefit included in the Assumed Income calculation. For information on how we reflect state retirement system service in this valuation, please see the Actuarial Methods and Assumptions in the **Appendices**.

Since this is a one-time calculation, market conditions leading up to a member's retirement date can greatly impact the likelihood a member will earn a supplemental benefit and the size of that benefit. In particular, the CREF investment is sensitive to market fluctuations as it is an equity-based investment. For example, during the years following the Great Recession in 2008, the number of members eligible for a supplemental benefit greatly increased compared to years prior to the Great Recession because their assumed income was reduced due to the market downturn.

See the Summary of Plan Provisions in the **Appendices** for additional information on the SRP benefit.

Funding Policy

A funding policy helps manage financial risk and often relies on pre-funding to reduce future costs through investment income earned on contributions. The higher education institutions that participate in the SRP are currently pre-funding these benefits by contributing at the rates listed in the following table into their respective SRP trust funds.

SRP Contribution Rates	
UW	0.38%
WSU	0.30%
WWU	0.21%
EWU	0.28%
TESC	0.23%
CWU	0.28%
CTC	0.13%

However, the SRP benefit funds are currently restricted from paying SRP benefits and are not expected to pay benefits until approximately 2035.[2] Until this time, SRP benefit payments are paid out of the operating budgets at each of the higher education institutions on a pay-as-you-go basis, meaning employers pay these benefits as they occur. Beyond the SRP trust, the institutions may have set aside additional money to pre-fund SRP benefits; however, it is not in a dedicated trust. OSA may prepare separate reports to inform future funding decisions, like contribution rates, and the results in those reports may look different than the information contained in this report.

[2]*See RCW 28B.10.423.*

ACTUARIAL
EXHIBITS

Office of the State Actuary

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Actuarial Certification Letter
Supplemental Retirement Plan
Actuarial Valuation
As of June 30, 2023

October 2023

This report documents the results of an actuarial valuation of the Supplemental Retirement Plans (SRPs) defined under the [Revised Code of Washington (RCW) 28B.10.400](https://app.leg.wa.gov/RCW/default.aspx?cite=28B.10.400) for the following higher education institutions.

- Central Washington University (CWU).
- Eastern Washington University (EWU).
- State Board for the Community and Technical Colleges (CTC).
- The Evergreen State College (TESC).
- The University of Washington (UW).
- Washington State University (WSU).
- Western Washington University (WWU).

These plans supplement the expected defined contribution retirement savings accumulated under each institution's HERP.

The primary purpose of this actuarial valuation is to provide information to each institution to satisfy the reporting requirements of the Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67/68). The information in this report should not be used for any other purpose. Please replace the information in this report with the information from our next actuarial valuation for financial reporting when available.

This actuarial valuation should not be used to determine the contribution requirements of the SRP. We may prepare separate actuarial valuation reports for funding purposes. The assumptions and methods used in future funding valuations may vary from the assumptions and methods used in this accounting valuation.

For the Total Pension Liability (TPL), we relied on a valuation date of January 1, 2023, and projected the TPL to the measurement date of June 30, 2023, reflecting the expected service cost, assumed interest, and benefit payments made. We relied on participant data provided by staff at each institution to perform this actuarial valuation.

The Washington State Investment Board (WSIB), the Office of Financial Management (OFM), and the Department of Retirement Systems (DRS) provided financial and asset information as of June 30, 2023.

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We did not receive accrued benefit service or individual Assumed Income account balances for this actuarial valuation. We estimated these data items using the assumptions and methods disclosed in the report. We believe replacing the assumed data with actual data could improve the quality of future actuarial valuations.

We checked the participant data and assets for reasonableness as appropriate based on the purpose of this valuation. We relied on the information provided as complete and accurate. In our opinion, this information is adequate and substantially complete for the purposes of this valuation.

The valuation results summarized in this report involve calculations that require assumptions about future economic and demographic events. We believe the assumptions and methods used in the underlying valuation are reasonable and appropriate for the primary purpose stated above. The use of another set of assumptions and methods, however, could also be reasonable and could produce materially different results. Actual results may vary from our expectations.

Besides the discount rate, the assumptions used in this valuation were developed in our *August 2021 Higher Education SRP Experience Study*. Some TIAA assumptions have been updated since that study based on input from TIAA and our professional judgment. We determined the discount rate based on the *2021 Economic Experience Study* for the Washington State retirement plans and based on the results of the GASB 67/68 required crossover test. As of this measurement date, all SRPs are projected to have sufficient assets to pay for current member benefits based on the assumptions and methods described in the **Appendices**. We therefore relied on the long-term expected rate of return of plan assets, or 7.0 percent, to measure the TPL. In our opinion, all methods, assumptions, and calculations are reasonable and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this letter. Please see the **Appendices** for a description of the assumptions and methods relied on for this valuation.

The undersigned, with actuarial credentials, meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While this report is intended to be complete, we are available to offer extra advice and explanations as needed.

Sincerely,

Luke Masselink

Luke Masselink, ASA, EA, MAAA
Senior Actuary

GASB 67/68 Actuarial Information

The following table shows the development of the NPL at June 30, 2023. It also reconciles the TPL and the PFNP between two measurement dates, June 30, 2022 (beginning), and June 30, 2023 (ending). The table breaks down the difference between the two measurements into the various buckets required under GASB 67/68. The reconciliation of the TPL from one year to the next is also used to calculate the components of the SRP's pension expense.

Development of Net Pension Liability							
(Dollars in Thousands)	**UW**	**WSU**	**WWU**	**EWU**	**TESC**	**CWU**	**CTC**
Total Pension Liability							
Service Cost	$5,068	$857	$327	$210	$72	$24	$1,985
Interest	22,106	3,916	1,454	920	349	373	7,167
Changes of Benefit Terms	-	-	-	-	-	-	-
Differences Between Expected and Actual Experience	(31,360)	(669)	(3,236)	(2,820)	(1,152)	(181)	(5,760)
Changes of Assumptions	(26,643)	(4,222)	(2,251)	(1,040)	(361)	(273)	(11,407)
Benefit Payments	(10,989)	(3,228)	(594)	(366)	(155)	(493)	(3,008)
Net Change in Total Pension Liability	**(41,818)**	**(3,345)**	**(4,300)**	**(3,096)**	**(1,245)**	**(550)**	**(11,024)**
Total Pension Liability—Beginning	**316,127**	**56,679**	**20,743**	**13,119**	**4,994**	**5,545**	**101,882**
Total Pension Liability—Ending (a)	**$274,309**	**$53,334**	**$16,443**	**$10,023**	**$3,748**	**$4,995**	**$90,859**
Plan Fiduciary Net Position*							
Contributions - Employer	$8,358	$1,040	$234	$172	$46	$178	$862
Contributions - Member	-	-	-	-	-	-	-
Net Investment Income	7,189	1,358	395	269	102	271	2,361
Benefit Payments	-	-	-	-	-	-	-
Administrative Expense	-	-	-	-	-	-	-
Other**	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Net Change in Plan Fiduciary Net Position	**$15,547**	**$2,398**	**$630**	**$441**	**$148**	**$449**	**$3,223**
Plan Fiduciary Net Position—Beginning	**96,989**	**18,643**	**5,488**	**3,720**	**1,421**	**3,751**	**33,145**
Plan Fiduciary Net Position—Ending (b)	**$112,536**	**$21,041**	**$6,117**	**$4,161**	**$1,569**	**$4,200**	**$36,368**
Plan's Net Pension Liability (Asset)—Ending (a) - (b)	**$161,773**	**$32,292**	**$10,326**	**$5,862**	**$2,180**	**$795**	**$54,491**
Covered-Employee Payroll*	2,199,526	346,733	111,703	61,516	20,197	63,515	660,066
Net Pension Liability as Percentage of Covered-Employee Payroll	7%	9%	9%	10%	11%	1%	8%
Recognition Period for Amortization of Experience and Assumption Differences	6.2	5.1	6.2	5.9	5.3	1.4	6.5
Recognition Period for Amortization of Differences Between Expected and Actual Earnings on Plan Investments	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Note: Figures may not total due to rounding.

**Asset information provided by Office of Financial Management. Payroll provided by the Department of Retirement Systems.*

***2023 figure includes balancing item to account for 2022 Plan Fiduciary Net Position - Beginning restatement.*

Two itemized components of the TPL reconciliation are differences between expected and actual experience and the changes in assumptions. These lines capture actuarial gains and losses and can lead to significant changes in the TPL.

Primary sources of the difference between actual and expected experience is due to reflecting updated SRP member files and the actual returns on the TIAA and CREF investments used in the Assumed Income. For a list of assumption changes since the last measurement date, please see the Changes in Methods and Assumptions since the Last Valuation in the **Appendices**.

Similar to the TPL reconciliation, the PFNP information in the table represents the change in assets from the prior measurement date to this one. The NPL equals the TPL minus the PFNP. A positive/negative NPL means there are less/more assets on hand compared to the plan's accrued liability as of the measurement date.

The following table captures the pension expense components. The service cost and interest cost line items are taken directly from the TPL reconciliation. The amortization of differences between expected and actual experience, and the amortization of changes in assumptions, relies on the gain and loss components in the previous table as well as prior gains and losses that are still being amortized. Instead of recognizing the entire gain or loss immediately in the pension expense, the gain or loss is amortized over a specific timeframe. Under GASB 67/68, the timeframe equals the average of the expected remaining service lives of all employees (active and inactive) that are provided pensions through this plan. To calculate the amortization component, we divided the gain or loss to be amortized by the average expected future service. For example, if there was a gain of $20,000 and the amortization factor was 5.0 years, $4,000 ($20,000 divided by five years) would be recognized in the pension expense this year and the remaining $16,000 over the next four years.

Pension Expense

(Dollars in Thousands)	UW	WSU	WWU	EWU	TESC	CWU	CTC
a. Service Cost	$5,068	$857	$327	$210	$72	$24	$1,985
b. Interest Cost	22,106	3,916	1,454	920	349	373	7,167
c. Amortization of Differences between Expected and Actual Experience	(43,974)	(7,820)	(2,137)	(761)	(685)	162	(4,399)
d. Amortization of Changes of Assumptions	(13,774)	(2,763)	(423)	(643)	(167)	(98)	(4,713)
e. Changes of Benefit Terms	0	0	0	0	0	0	0
f. Employee Contributions	0	0	0	0	0	0	0
g. Expected Earnings on Plan Investments	(7,077)	(1,341)	(392)	(266)	(101)	(269)	(2,350)
h. Amortization of Differences between Projected and Actual Earnings on Plan Investments	(2,159)	(435)	(131)	(88)	(35)	(88)	(820)
i. Administrative Expenses	0	0	0	0	0	0	0
j. Other Changes in Fiduciary Net Position	0	0	0	0	0	0	0
k. Pension Expense	**($39,809)**	**($7,585)**	**($1,302)**	**($629)**	**($567)**	**$105**	**($3,130)**

Additional items in the pension expense related to plan assets are the expected earnings on plan investments, which decreases plan expense, and the amortization of differences between projected and actual earnings on plan investments. Similar to the liability gains and losses, this captures investment gains or losses versus what was assumed. GASB 67/68 requires investment gains and losses to be amortized over a fixed five-year period.

The remaining portion of gains and losses that will be recognized in pension expense in future years are referred to as deferred outflows of resources and deferred inflows of resources. Deferred outflows of resources will increase future pension expense, while deferred inflows of resources will decrease future pension expense. The following table provides the total deferred outflows and deferred inflows for the various gain and loss components.

Deferred Resources		
(Dollars in Thousands)	**Outflows**	**Inflows**
University of Washington		
Difference Between Expected and Actual Experience	$100,648	$259,025
Changes of Assumptions	95,609	158,992
Differences between Projected and Actual Earnings on Plan Investments	4,094	7,092
Total	**$200,351**	**$425,109**
Washington State University		
Difference Between Expected and Actual Experience	$10,002	$27,896
Changes of Assumptions	11,973	21,938
Differences between Projected and Actual Earnings on Plan Investments	791	1,405
Total	**$22,766**	**$51,239**
Western Washington University		
Difference Between Expected and Actual Experience	$4,922	$11,496
Changes of Assumptions	3,664	6,622
Differences between Projected and Actual Earnings on Plan Investments	234	420
Total	**$8,821**	**$18,537**
Eastern Washington University		
Difference Between Expected and Actual Experience	$2,867	$6,404
Changes of Assumptions	2,155	4,872
Differences between Projected and Actual Earnings on Plan Investments	158	283
Total	**$5,180**	**$11,559**

Deferred Resources *(Continued)*		
(Dollars in Thousands)	**Outflows**	**Inflows**
The Evergreen State College		
Difference Between Expected and Actual Experience	$790	$2,596
Changes of Assumptions	753	1,535
Differences between Projected and Actual Earnings on Plan Investments	61	110
Total	**$1,604**	**$4,241**
Central Washington University		
Difference Between Expected and Actual Experience	$0	$52
Changes of Assumptions	0	78
Differences between Projected and Actual Earnings on Plan Investments	159	283
Total	**$159**	**$413**
Community and Technical Colleges		
Difference Between Expected and Actual Experience	$21,378	$26,607
Changes of Assumptions	18,280	41,924
Differences between Projected and Actual Earnings on Plan Investments	1,419	2,591
Total	**$41,077**	**$71,122**

The amount of deferred outflows and deferred inflows of resources that will be recognized in future pension expense is summarized in the following table. It provides the net impact to pension expense annually over the next five years and combines the impact beyond five years.

Future Transactions						
(Dollars in Thousands)	**2024**	**2025**	**2026**	**2027**	**2028**	**Thereafter**
UW	($59,906)	($46,326)	($37,008)	($71,315)	($8,332)	($1,871)
WSU	(8,317)	(7,622)	(8,409)	(4,756)	630	0
WWU	(1,918)	(1,908)	(2,993)	(2,261)	(461)	(177)
EWU	(1,127)	(1,581)	(2,078)	(1,005)	(589)	0
TESC	(780)	(808)	(818)	(146)	(86)	0
CWU	(218)	(88)	53	(1)	0	0
CTC	($8,284)	($5,812)	($5,199)	($10,285)	$856	($1,321)

As required by GASB 67/68, this table shows the NPL as of June 30, 2023, measured at a discount rate 1 percent higher and 1 percent lower than the assumed discount rate.

Net Pension Liability—Interest Rate Sensitivity			
(Dollars in Thousands)	1% Decrease	Current Discount Rate	1% Increase
UW	$192,736	$161,773	$135,272
WSU	$37,566	$32,292	$27,743
WWU	$12,124	$10,326	$8,783
EWU	$6,966	$5,862	$4,917
TESC	$2,568	$2,180	$1,845
CWU	$1,178	$795	$459
CTC	$64,572	$54,491	$45,842

The following table reports the Contractually Required Contributions (CRC) and Actuarially Determined Contributions (ADC).

- ❖ The CRC equals the employer contributions provided by WSIB and OFM staff. These are the same values as the Contributions – Employer figures in the Development of Net Pension Liability table.
- ❖ The ADC is calculated by multiplying the covered HERP employee payroll, provided by DRS, by the contribution rates calculated in our analysis for HB 1661, from the 2020 Legislative Session.[3] Please note, statute requires CWU to contribute 0.28 percent of pay, however our analysis calculated a rate of 0.00 percent.

Schedule of Employer Contributions		
	Contractually Required Contributions (CRC)	Actuarially Determined Contributions (ADC)
UW	8,358	8,358
WSU	1,040	1,040
WWU	234	235
EWU	172	172
TESC	46	46
CWU	178	0
CTC	862	858

[3]*See our fiscal note on HB 1661, page 47, for additional information.*

The following table displays the money-weighted investment rate of return over the prior year.

Schedule of Investment Returns		
Annual Money-Weighted Rates of Return Net of Investment Expense		
	6/30/2023	6/30/2022
UW	7.16%	0.12%
WSU	7.13%	0.14%
WWU	7.09%	0.14%
EWU	7.11%	0.16%
TESC	7.08%	0.16%
CWU	7.11%	0.14%
CTC	7.07%	0.18%

Actuarial Gain/Loss Analysis

Actuaries use gain/loss analysis to compare actual changes to assumed changes in liabilities and to determine the source of changes since the prior valuation. Gain/loss analysis can also be used by actuaries to determine the reasonability of the assumptions used in the valuation.

An actuarial "gain" will decrease liabilities and an actuarial "loss" will increase the liabilities. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over the long term.

In the following table, we roll forward the TPL beginning balance from the June 30, 2022, measurement date to determine the expected June 30, 2023, TPL. We then account for all experience and assumption changes that impacted the final June 30, 2023, TPL.

Expected Change in Total Pension Liability				
	UW	WSU	WWU	EWU
(1) June 30, 2022, TPL	$316,127,000	$56,679,000	$20,743,000	$13,119,000
Service Cost	5,068,000	857,000	327,000	210,000
Interest Cost	22,106,000	3,916,000	1,454,000	920,000
Benefit payments	(10,989,000)	(3,228,000)	(594,000)	(366,000)
2023 Expected TPL	**$332,311,000**	**$58,225,000**	**$21,930,000**	**$13,883,000**
(2) Expected Change in TPL	**$16,184,000**	**$1,546,000**	**$1,188,000**	**$764,000**

Note: Figures may not agree due to rounding.

Expected Change in Total Pension Liability *(Continued)*			
	TESC	CWU	CTC
(1) June 30, 2022, TPL	$4,994,000	$5,545,000	$101,882,000
Service Cost	72,000	24,000	1,985,000
Interest Cost	349,000	373,000	7,167,000
Benefit payments	(155,000)	(493,000)	(3,008,000)
2023 Expected TPL	**$5,261,000**	**$5,449,000**	**$108,026,000**
(2) Expected Change in TPL	**$267,000**	**($96,000)**	**$6,144,000**

Note: Figures may not agree due to rounding.

The Change in Total Pension Liability by Source table demonstrates the sources of liability gains/losses that occurred since the last measurement date. The table is broken into four sections:

1. June 30, 2022, Total Pension Liability,
2. Expected Change in TPL,
3. Differences Between Expected and Actual Experience, and
4. Changes in Assumptions.

The totals for sections three and four are also line items in the TPL reconciliation table. All values are displayed in dollars.

Change in Total Pension Liability by Source

	UW	WSU	WWU	EWU
(1) June 30, 2022, TPL	**$316,127,000**	**$56,679,000**	**$20,743,000**	**$13,119,000**
(2) Expected Change in TPL	**$16,184,000**	**$1,546,000**	**$1,188,000**	**$764,000**
(3) Differences between Expected and Actual Experience ([Gains]/Losses)				
2023 Participant Data File				
Salaries	($9,472,000)	($109,000)	($856,000)	($150,000)
Mortality	1,580,000	847,000	(68,000)	(145,000)
Retirement - Number of Retirees	(10,645,000)	364,000	115,000	15,000
Retirement - Amount of Benefits	(12,956,000)	(1,832,000)	(2,091,000)	(1,929,000)
Termination	8,420,000	(222,000)	715,000	100,000
Disability	(1,488,000)	(5,000)	(155,000)	(80,000)
Rehires or Retiree Pickups	2,010,000	643,000	213,000	160,000
Other Liabilities	(8,809,000)	(355,000)	(1,109,000)	(791,000)
Total	**($31,360,000)**	**($669,000)**	**($3,236,000)**	**($2,820,000)**
(4) Change in TIAA/CREF Assumptions [(Gains)/Losses]	**($26,643,000)**	**($4,222,000)**	**($2,251,000)**	**($1,040,000)**
June 30, 2023, TPL (1 + 2 + 3 + 4)	**$274,309,000**	**$53,334,000**	**$16,443,000**	**$10,023,000**

Note: Figures may not agree due to rounding.

Change in Total Pension Liability by Source *(Continued)*	TESC	CWU	CTC
(1) June 30, 2022, TPL	**$4,994,000**	**$5,545,000**	**$101,882,000**
(2) Expected Change in TPL	**$267,000**	**($96,000)**	**$6,144,000**
(3) Differences between Expected and Actual Experience ([Gains]/Losses)			
2023 Participant Data File			
Salaries	$244,000	($124,000)	$4,232,000
Mortality	(158,000)	110,000	37,000
Retirement - Number of Retirees	(363,000)	106,000	(4,364,000)
Retirement - Amount of Benefits	(473,000)	(386,000)	(10,848,000)
Termination	(103,000)	13,000	4,899,000
Disability	(35,000)	(34,000)	(702,000)
Rehires or Retiree Pickups	0	166,000	672,000
Other Liabilities	(264,000)	(32,000)	314,000
Total	**($1,152,000)**	**($181,000)**	**($5,760,000)**
(4) Change in TIAA/CREF Assumptions [(Gains)/Losses]	**($361,000)**	**($273,000)**	**($11,407,000)**
June 30, 2023, TPL (1 + 2 + 3 + 4)	**$3,748,000**	**$4,995,000**	**$90,859,000**

Note: Figures may not agree due to rounding.

Key reasons for the larger liability gains/losses include:

- Active member salary growth in the 2023 participant data files was less than assumed for most institutions. Larger/smaller salaries lead to higher/lower projected supplemental benefits, especially when large salary changes occur near the end of a member's career.
- Our model estimates SRP benefits for future retirees. Actual SRP benefits for new retirees in the 2023 data file were lower than estimated.
- We updated assumptions for the benefit calculation performed by TIAA based on information provided by TIAA and our professional judgment. Changes to these assumptions impact our estimate of SRP benefits for future retirees. The new assumptions decreased expected benefits and the TPL for all institutions.

For a complete description of all assumptions and methods, as well as changes since the last valuation, please see the Changes in Methods and Assumptions in the **Appendices**.

Projected Benefit Payments

The following tables provide estimated annual SRP benefit payments for the next ten years, split between current annuitants and future annuitants (or current active employees). The future annuitant results can change significantly from one valuation to the next depending on actual salary growth, actual TIAA and CREF investment returns, changes to market conditions, and members retiring.

(Dollars in Thousands) **Projected Benefit Payments**

	UW			WSU			WWU		
Fiscal Year	Current Annuitants*	Future Annuitants**	Total	Current Annuitants*	Future Annuitants**	Total	Current Annuitants*	Future Annuitants**	Total
2024	$10,967	$1,618	$12,585	$3,258	$219	$3,476	$683	$116	$799
2025	10,836	3,245	14,081	3,220	448	3,668	674	229	902
2026	10,694	4,897	15,591	3,178	688	3,866	664	341	1,005
2027	10,538	6,565	17,103	3,134	934	4,068	654	450	1,104
2028	10,369	8,244	18,613	3,085	1,183	4,268	642	549	1,192
2029	10,185	9,937	20,122	3,032	1,426	4,459	631	642	1,273
2030	9,985	11,630	21,615	2,975	1,654	4,629	618	732	1,350
2031	9,768	13,302	23,069	2,911	1,864	4,775	605	819	1,424
2032	9,532	14,945	24,476	2,842	2,056	4,899	590	906	1,496
2033	$9,276	$16,545	$25,822	$2,768	$2,232	$4,999	$575	$994	$1,569

*Includes benefit payments from pending members expected to earn a benefit.

**Estimated based on OSA's valuation system.

(Dollars in Thousands) **Projected Benefit Payments**

	EWU			TESC		
Fiscal Year	Current Annuitants*	Future Annuitants**	Total	Current Annuitants*	Future Annuitants**	Total
2024	$425	$62	$487	$171	$23	$195
2025	420	124	545	169	45	213
2026	415	188	603	166	65	230
2027	410	251	661	163	86	249
2028	404	313	717	159	109	268
2029	398	372	770	155	135	290
2030	391	428	820	151	161	312
2031	384	485	869	147	188	335
2032	376	543	919	142	213	355
2033	$368	$596	$964	$137	$234	$371

*Includes benefit payments from pending members expected to earn a benefit.

**Estimated based on OSA's valuation system.

(Dollars in Thousands)	Projected Benefit Payments					
	CWU			CTC		
Fiscal Year	Current Annuitants*	Future Annuitants**	Total	Current Annuitants*	Future Annuitants**	Total
2024	$483	$14	$497	$2,532	$910	$3,442
2025	474	25	498	2,511	1,783	4,294
2026	463	34	497	2,487	2,610	5,097
2027	452	40	493	2,460	3,394	5,854
2028	441	46	486	2,430	4,124	6,554
2029	428	50	478	2,397	4,794	7,191
2030	415	54	469	2,360	5,408	7,768
2031	401	56	458	2,319	5,966	8,284
2032	386	58	444	2,273	6,475	8,748
2033	$371	$58	$429	$2,223	$6,939	$9,163

**Includes benefit payments from pending members expected to earn a benefit.*

***Estimated based on OSA's valuation system.*

PARTICIPANT DATA

Overview of Plan Membership

Each higher education institution administers the SRP benefits for its eligible members. The SRP covers faculty and other positions as designated by each higher education institution. The SRP is closed to new participants. For more information, see the Summary of Plan Provisions in the **Appendices**.

The following table shows SRP membership changes from the prior participant file to the current participant file. We divide the participant data into three main categories:

- **Active Members** – Members who could earn a SRP benefit in the future.
- **Pending Calculation Members** – Former active members who recently left employment after reaching retirement eligibility. As of the valuation date, it is unclear if they will be eligible for a lifetime SRP benefit. We maintain these records in the valuation for two years, to account for administrative delay in performing a final SRP benefit calculation. After two years, if they continue to not be reported on the participant file, we remove them from the valuation.
- **Annuitants** – Retirees and beneficiaries receiving lifetime benefits from the plan.

Reconciliation of Participant Data

	UW	WSU	WWU	EWU	TESC	CWU	CTC
2020 Active Members	5,081	1,591	483	290	144	81	4,623
Active Pickups	7	1	0	0	1	1	54
New Annuitants	(178)	(74)	(8)	(13)	(3)	(3)	(46)
New Pending	(341)	(166)	(49)	(33)	(15)	(14)	(328)
Other Exits without Benefit	(452)	(279)	(24)	(27)	(14)	(2)	(232)
2023 Active Members	**4,117**	**1,073**	**402**	**217**	**113**	**63**	**4,071**
2020 Pending Members	160	53	3	59	13	4	325
New Pending	341	166	49	33	15	14	328
New Annuitants	(44)	(7)	0	(9)	(5)	(2)	(62)
Ineligible for Benefit	(116)	(46)	(2)	(50)	(8)	(2)	(198)
2023 Pending Members	**341**	**166**	**50**	**33**	**15**	**14**	**393**
2020 Annuitants	1,076	399	79	57	28	64	293
New Annuitants	222	81	8	22	8	5	108
Annuitant Pickups	33	20	3	4	2	4	15
Annuitant Death	(42)	(21)	(6)	(13)	(5)	(3)	(9)
2023 Annuitants	**1,289**	**479**	**84**	**70**	**33**	**70**	**407**

While the SRP is closed to new participants, "Active Pickups" can occur when members were not included or reported in the prior data file but the current data file suggests they are SRP members. Similarly, "Annuitant Pickups" occur when a new annuitant is reported in the latest data file without a corresponding active or pending record in the prior valuation. An annuitant pickup could also be a new beneficiary receiving a lifetime benefit after the retiree passed away.

Summary of Plan Participants

The following tables show summary information for plan participants included in the prior and current valuation. Since we do not know if the Pending Calculation Members have earned a benefit, we assume each retired on the valuation date and rely on our valuation model to estimate their SRP benefit. The valuation model may calculate a $0 SRP benefit for these members. Whether a member is expected to earn a supplemental benefit depends largely on their pay history, YOS, and historical TIAA-CREF investment returns during their career.

Summary of Plan Participants

(Dollars in Millions)	UW		WSU		WWU		EWU	
	1/1/2023	6/30/2020	1/1/2023	6/30/2020	1/1/2023	6/30/2020	1/1/2023	6/30/2020
Active Members								
Number	4,117	5,081	1,073	1,591	402	483	217	290
Total Salaries	$623.5	$697.3	$120.5	$157.0	$45.4	$51.4	$25.1	$30.8
Average Age	57.0	55.4	57.0	55.4	57.5	56.1	56.4	55.7
Average Service	21.4	19.4	20.6	18.0	21.7	19.7	20.6	18.9
Average Salary	$151,456	$137,230	$112,271	$98,677	$112,865	$106,315	$115,571	$106,137
Average Hypothetical TIAA-CREF Balance	$756,382	$584,649	$607,671	$458,306	$557,153	$434,702	$525,417	$437,952
Pending Calculation Members								
Number	341	160	166	53	50	3	33	59
Average Age	70.5	64.3	69.5	69.5	68.8	71.8	70.2	62.1
Assumed Average Annual Benefit*	$1,110	$4,415	$598	$2,017	$1,958	$4,529	$674	$2,279
Annuitants (Retirees and Beneficiaries)								
Number of Annuitants	1,289	1,076	479	399	84	79	70	57
Average Age	72.7	71.7	72.9	72.6	73.9	72.6	72.3	74.4
Average Annual Benefit, All Annuitants	$8,305	$7,936	$6,664	$6,330	$7,069	$6,385	$5,826	$5,313

**Estimated based on OSA's valuation system and may calculate a $0 SRP benefit for these members.*

Summary of Plan Participants *(Continued)*						
(Dollars in Millions)	TESC		CWU		CTC	
	1/1/2023	6/30/2020	1/1/2023	6/30/2020	1/1/2023	6/30/2020
Active Members						
Number	113	144	63	81	4,071	4,623
Total Salaries	$10.0	$12.0	$6.9	$8.8	$318.0	$329.9
Average Age	58.9	57.3	63.6	61.7	58.0	56.4
Average Service	20.4	19.2	28.5	26.9	18.3	16.2
Average Salary	$88,582	$83,225	$109,229	$108,612	$78,117	$71,361
Average Hypothetical TIAA-CREF Balance	$422,793	$351,667	$839,849	$676,319	$396,013	$303,401
Pending Calculation Members						
Number	15	13	14	4	393	325
Average Age	70.4	67.5	68.0	67.2	69.4	68.9
Assumed Average Annual Benefit*	$0	$3,325	$1,660	$3,370	$1,530	$2,155
Annuitants (Retirees and Beneficiaries)						
Number of Annuitants	33	28	70	64	407	293
Average Age	73.5	71.9	75.5	73.9	71.9	70.8
Average Annual Benefit, All Annuitants	$5,269	$5,507	$6,687	$6,473	$4,786	$4,745

**Estimated based on OSA's valuation system and may calculate a $0 SRP benefit for these members.*

APPENDICES

Actuarial Methods and Assumptions

Under the SRP, an eligible member will receive a supplemental benefit if their Goal Income is larger than the sum of their Assumed Income and their state retirement system benefit, if applicable. Not all state retirement system benefits are eligible for inclusion in the SRP benefit calculation. We rely on the assumptions and methods presented below to determine if a member is expected to earn a supplemental benefit.

Actuarial Methods

The actuarial cost method will determine the allocation of costs attributable to past periods of employment and to future service. GASB 67/68 states the Entry Age Normal actuarial cost method should be used and costs should be allocated as a level percentage of payroll.

Plan assets and investments are measured at their fair market value.

Service Credit

We do not receive YOS credit for SRP members from the institutions. For this reason, we estimate the First Contribution Date to the HERP as well as the Credit Service Date when the member began accruing service eligible for the supplemental benefit. The Credit Service Date precedes the First Contribution Date only if a member has eligible prior state retirement system service (see rules below). If a member has no state retirement system service, then the Credit Service Date will equal the First Contribution Date. Given SRP members must be contributing to the HERP, we use HERP information to estimate First Contribution and Credit Service Dates.

We relied on the following rules to determine a member's First Contribution Date and Credit Service Date within the SRP.

1. First Contribution Date is the earlier of the retirement plan date of participation, if provided by the institutions, or the earliest contribution date to their HERP account provided by TIAA and Fidelity, the two vendors that administer the HERP.

2. When members are either not vested in a state retirement system or their State Retirement System End Date occurred more than two years before their First Contribution Date, we assume their Credit Service Date is equal to their First Contribution Date.

3. If members have a vested state retirement system benefit or their State Retirement System End Date is within two years of their First Contribution Date, we include their state retirement system benefit and service in the calculation of the SRP benefit. To determine the member's Credit Service Date, we subtract their state retirement system service from the First Contribution Date.

Eligibility for the SRP

We developed eligibility criteria to determine which actives (or members currently on leave) to include in the SRP valuation. The criteria relies on the calculated First Contribution Date, the institution's SRP closure date (Plan Closure Date), and the employee's date of hire. Starting with the census files provided to us by the institutions, we relied on the following rules to determine who should be included or excluded from the valuation.

1. An active employee must be participating in the HERP to be eligible for a SRP benefit.
2. If an active employee has a First Contribution Date that occurs prior to the Plan Closure Date, they are included on the valuation file.
3. If an active employee has a First Contribution Date that occurs on or after the Plan Closure Date, they are included on the valuation file only if their date of hire is before the Plan Closure Date.
4. All other active employees were excluded from the valuation file. They were either reported with a date of hire and First Contribution Date that occurred on or after the Plan Closure Date or they were reported with no HERP contribution information.

We continue to work with the institutions to ensure we are capturing the correct eligible population.

Assumed Income

The Assumed Income reflects a hypothetical account balance and a member's state retirement system benefit, if applicable. The Assumed Income, calculated when a member retires, is subtracted from the Goal Income in the SRP benefit calculation. The account balance reflects the amount a member would have accumulated if they divided their employer and non-voluntary employee HERP contributions equally between a fixed income and a variable annuity investment option. TIAA performs this calculation once an eligible SRP member retires. They gather actual contribution amounts made to the HERP from their own records, and other eligible financial vendors, to perform these calculations.

To estimate the account balance at the valuation date, we calculated the member's HERP contributions each year based on a member's salary (up to the salary limit) and the age-based required contribution rates. The account balance model assumes 50 percent of the contributions were allocated to TIAA and 50 percent of the contributions were allocated to CREF. TIAA provided historical accumulation rates for each investment which were used to accrue the contributions to the valuation date. We also gather input from TIAA to help us set TIAA and CREF assumptions that we use to project member account balances and annuitize the balances at retirement.

The account balances are accumulated to a member's retirement date and annuitized using assumptions described in the **Actuarial Assumptions** section below.

Compensation History

When available, we rely on actual historical compensation to estimate employee contributions to the account balance. For years when historical compensation is missing, we projected the most recent known salary backwards. For information on this backwards projection assumption, please see the *April 2016 SRP Experience Study*.

Actuarial Assumptions

The economic and demographic assumptions are summarized in the following tables.

Economic Assumptions

Economic Assumptions							
Annual Salary Increases							
	UW	**WSU**	**WWU**	**EWU**	**TESC**	**CWU**	**CTC**
Growth Rates	4.00%	3.50%	3.75%	3.50%	3.50%	3.50%	3.50%
June 30, 2022, Total Pension Liability Assumptions							
Annual Interest Rate	7.00% (All Institutions)						
Annual Accumulation Rates							
TIAA Account	4.00% (All Institutions)						
CREF Account	6.25% (All Institutions)						
Conversion Rates							
TIAA Pre 2002	6.00% (All Institutions)						
TIAA Post 2001	3.25% (All Institutions)						
CREF	4.00% (All Institutions)						
June 30, 2023, Total Pension Liability Assumptions							
Annual Interest Rate	7.00% (All Institutions)						
Annual Accumulation Rates							
TIAA Account	4.00% (All Institutions)						
CREF Account	6.25% (All Institutions)						
Conversion Rates							
TIAA Pre 2006	7.00% (All Institutions)						
TIAA Post 2005	4.00% (All Institutions)						
CREF	4.00% (All Institutions)						

Demographic Assumptions

Demographic Assumptions	
Mortality Rates	
Base Mortality Table*	Pub T.H-2010
Age Offset	0 Years
Mortality Improvements	MP-2017 (Ultimate Rate)**
Assumed Income Annuity Conversion Mortality Rates	
Base Mortality Table	2012 IAM Period with Weighted 50% Male and 50% Female Blending.
Age Offset	1 Year
Mortality Improvements	None
Projection Period	None
Termination Rates	***
Retirement Rates	***
Disability Rates	***

**Disabled mortality rates are based on the Pub NS. H-2010 table for disabled lives.*

***Predicts approximately a 1 percent per year mortality improvement over most ages.*

****Please see **Additional Assumptions** section.*

Additional Assumptions

We relied on data from DRS to determine if state retirement system members have a Washington State retirement system benefit. We rely on DRS early retirement factors to estimate state retirement system benefits commencing before normal retirement age and the following assumptions for the Joint and Survivor optional form adjustment factors: 0.842 for males and 0.878 for females.

Additional Assumptions	
Miscellaneous Assumptions	
Rate of Contribution	
Age < 35	5.00%
35 <= Age <= 50	7.50%
Age> 50	10.00%
Spouse	
Likelihood of Spouse	100%
Age Differential	Males 3 years older, females 1 year younger than spouse
Payment Form	
Goal Income	Single Life Annuity
Assumed Income	66.67% First Survivor Benefit with 10-Year Certain Period
Salary Limit*	
Goal Income	None for UW; $305,000 in 2022 for Others
Assumed Income	$305,000 in 2022

**Salary Limit assumed to increase by inflation each year.*

Termination Rates	
Age	**Service >= 3**
Less than 35	12%
35-39	7%
40-44	6%
45 and over	5%

Retirement Rates	
Age	**Rate**
62-64	10%
65-68	20%
69-79	25%
80+	100%

Disability Rates*			
Age	**Rate**	**Age**	**Rate**
22	0.01%	**44**	0.01%
23	0.01%	**45**	0.02%
24	0.01%	**46**	0.02%
25	0.01%	**47**	0.02%
26	0.01%	**48**	0.02%
27	0.01%	**49**	0.02%
28	0.01%	**50**	0.06%
29	0.01%	**51**	0.06%
30	0.01%	**52**	0.06%
31	0.01%	**53**	0.06%
32	0.01%	**54**	0.06%
33	0.01%	**55**	0.12%
34	0.01%	**56**	0.12%
35	0.01%	**57**	0.12%
36	0.01%	**58**	0.12%
37	0.01%	**59**	0.12%
38	0.01%	**60**	0.24%
39	0.01%	**61**	0.24%
40	0.01%	**62**	0.24%
41	0.01%	**63**	0.24%
42	0.01%	**64**	0.24%
43	0.01%	**>=65**	0.00%

**Rates have been rounded.*

TIAA-CREF Historical Accumulation Rates					
Calendar Year*	TIAA Rate	CREF Rate	Calendar Year*	TIAA Rate	CREF Rate
1979	8.40%	15.83%	2001	7.37%	(13.89%)
1980	8.70%	26.58%	2002	7.23%	(20.73%)
1981	9.89%	(1.46%)	2003	6.38%	31.97%
1982	10.53%	21.86%	2004	5.67%	13.03%
1983	10.67%	25.09%	2005	5.20%	7.49%
1984	10.38%	4.69%	2006	5.12%	17.24%
1985	10.81%	32.68%	2007	5.47%	7.99%
1986	10.74%	21.82%	2008	5.53%	(39.68%)
1987	10.18%	5.12%	2009	4.21%	32.04%
1988	9.89%	17.46%	2010	3.94%	15.72%
1989	9.62%	27.98%	2011	4.17%	(4.94%)
1990	9.26%	(5.54%)	2012	4.14%	17.26%
1991	8.93%	30.09%	2013	4.26%	27.83%
1992	8.28%	6.29%	2014	4.41%	6.41%
1993	7.73%	13.90%	2015	4.26%	(0.84%)
1994	7.15%	(0.12%)	2016	4.55%	9.17%
1995	7.10%	30.92%	2017	4.16%	23.43%
1996	7.27%	19.42%	2018	4.27%	0.90%
1997	7.28%	26.36%	2019	4.09%	27.45%
1998	7.28%	22.94%	2020	4.09%	17.91%
1999	7.21%	21.48%	2021	3.58%	18.92%
2000	7.23%	(8.43%)	2022	4.25%	(18.45%)

Historical TIAA-CREF accumulation rates now displayed on calendar instead of fiscal year to correspond with changing the valuation date from June 30 to January 1.

Changes in Methods and Assumptions since the Last Valuation

Below is a summary of the changes in methods and assumptions that occurred between the measurement of the June 30, 2022, TPL and the June 30, 2023, TPL.

- The valuation date was changed from June 30 to January 1. This corresponds with the new data file being provided with participant information as of January 1, 2023.
- We updated annuity conversion assumptions for the TIAA investments based on input from TIAA and our professional judgment. TIAA contributions and investment earnings annuity conversion changed from contributions made pre-2002/post-2001 converted at 6.00 percent/3.25 percent to contributions pre-2006/post-2005 converted at 7.00 percent/4.00 percent.

Crossover Tests

GASB 67/68 requires a crossover test (or asset sufficiency test) to determine whether (or how long) we can use the long-term expected rate of return on assets to measure the TPL for accounting purposes. The results of this test should not be used for other purposes.

Assumptions and Methods

For this test, we relied on the following assumptions and methods to determine projected employer contributions and when the plan assets would be used to pay SRP benefits.

- We relied on the fair market value of assets provided by OFM as of June 30, 2023, and assumed a 7.0 percent annual investment return thereafter. Please see the *2021 Report on Financial Condition and Economic Experience Study* for additional background on how we selected this assumption. We update this study every two years.
- We relied on a discount rate on 7.0 percent to determine plan liabilities.
- We relied on the most recent year's employer contributions into the SRP trust fund, and current law contribution rates defined in RCW 28B.10.423, to estimate total annual HERP compensation. We assumed that compensation amount would grow by 4 percent per year.
- We assumed no SRP benefits would be paid from the plan assets until the program was projected to be approximately 75 percent funded when comparing the projected plan assets to the projected plan's present value of future benefits. This approach mimics the actuarial analysis relied on to determine the contribution rates in current law.[4]
- During the period when the SRP trust fund is not paying SRP benefits, we assumed the institutions would continue paying SRP benefits from their operating budgets.
- We assumed current law contribution rates, as defined in RCW 28B.10.423, are collected until the funded ratio is approximately 75 percent.
- At that time, we assume plan assets begin paying SRP benefits and the institutions continue funding the program by contributing 25 percent of that year's SRP benefit payment into the SRP trust fund.

[4] *See our fiscal note on HB 1661, page 47, for additional information.*

As of this measurement date, all institutions are expected to retain sufficient assets to pay all future benefits for current members using current assumptions and our interpretation of the legislative intent laid out in the plan's funding policy and supporting analysis. The methods and assumptions used for this test may change in the future.

Summarized results from the crossover tests are shared below. As noted above, these tests are relied on to determine the discount rate for the GASB information prepared in this report. Actual funding of the SRP Trust Fund, particularly in the long-term, will likely look different than what is shown below. Complete results of the test are available upon request.

University of Washington

Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$112,535,887
2024	$112,535,887	$12,584,870	$8,692,527	$21,277,397	$12,584,870	$8,176,605	$129,405,019
2025	$129,405,019	$14,081,218	$9,040,228	$23,121,445	$14,081,218	$9,369,408	$147,814,654
2026	$147,814,654	$15,591,155	$9,401,837	$24,992,991	$15,591,155	$10,670,525	$167,887,016
2027	$167,887,016	$17,103,232	$9,777,910	$26,881,142	$17,103,232	$12,088,530	$189,753,456
2028	$189,753,456	$18,613,037	$10,169,027	$28,782,063	$18,613,037	$13,632,638	$213,555,121
2029	$213,555,121	$20,122,215	$10,575,788	$30,698,003	$20,122,215	$15,312,751	$239,443,660
2030	$239,443,660	$21,615,462	$10,998,819	$32,614,281	$21,615,462	$17,139,504	$267,581,983
2031	$267,581,983	$0	$5,767,349	$5,767,349	$23,069,395	$18,135,409	$268,415,346
2032	$268,415,346	$0	$6,119,069	$6,119,069	$24,476,276	$18,157,439	$268,215,578
2033	$268,215,578	$0	$6,455,442	$6,455,442	$25,821,769	$18,108,733	$266,957,985
2034	$266,957,985	$0	$6,761,034	$6,761,034	$27,044,138	$17,989,157	$264,664,039
2035	$264,664,039	$0	$7,024,897	$7,024,897	$28,099,587	$17,801,344	$261,390,692
2045	$204,260,221	$0	$6,964,271	$6,964,271	$27,857,084	$13,579,335	$196,946,743
2055	$147,953,585	$0	$4,161,545	$4,161,545	$16,646,181	$9,927,179	$145,396,128
2065	$160,024,222	$0	$1,555,845	$1,555,845	$6,223,381	$11,041,095	$166,397,781
2075	$274,627,012	$0	$275,076	$275,076	$1,100,305	$19,195,496	$292,997,280

Washington State University

Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$21,041,496
2024	$21,041,496	$3,476,267	$1,081,807	$4,558,074	$3,476,267	$1,510,128	$23,633,431
2025	$23,633,431	$3,667,876	$1,125,079	$4,792,955	$3,667,876	$1,693,052	$26,451,562
2026	$26,451,562	$3,866,069	$1,170,082	$5,036,151	$3,866,069	$1,891,870	$29,513,514
2027	$29,513,514	$4,067,573	$1,216,886	$5,284,459	$4,067,573	$2,107,817	$32,838,216
2028	$32,838,216	$4,268,301	$1,265,561	$5,533,862	$4,268,301	$2,342,221	$36,445,998
2029	$36,445,998	$4,458,618	$1,316,184	$5,774,802	$4,458,618	$2,596,507	$40,358,688
2030	$40,358,688	$4,628,685	$1,368,831	$5,997,516	$4,628,685	$2,872,207	$44,599,726
2031	$44,599,726	$0	$1,193,839	$1,193,839	$4,775,356	$2,998,748	$44,016,957
2032	$44,016,957	$0	$1,224,696	$1,224,696	$4,898,785	$2,954,769	$43,297,637
2033	$43,297,637	$0	$1,249,853	$1,249,853	$4,999,412	$2,901,820	$42,449,898
2034	$42,449,898	$0	$1,268,763	$1,268,763	$5,075,052	$2,840,526	$41,484,135
2035	$41,484,135	$0	$1,280,267	$1,280,267	$5,121,069	$2,771,735	$40,415,068
2045	$28,893,082	$0	$1,027,024	$1,027,024	$4,108,097	$1,916,502	$27,728,511
2055	$21,479,646	$0	$517,763	$517,763	$2,071,050	$1,450,130	$21,376,488
2065	$26,903,239	$0	$160,675	$160,675	$642,700	$1,866,641	$28,287,855
2075	$48,931,014	$0	$25,861	$25,861	$103,442	$3,422,502	$52,275,934

[4] *See our fiscal note on HB 1661, page 47, for additional information.*

Western Washington University							
Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$6,117,305
2024	$6,117,305	$799,197	$243,959	$1,043,156	$799,197	$436,606	$6,797,870
2025	$6,797,870	$902,477	$253,718	$1,156,195	$902,477	$484,581	$7,536,168
2026	$7,536,168	$1,005,268	$263,866	$1,269,134	$1,005,268	$536,611	$8,336,646
2027	$8,336,646	$1,103,763	$274,421	$1,378,184	$1,103,763	$593,007	$9,204,074
2028	$9,204,074	$1,191,912	$285,398	$1,477,309	$1,191,912	$654,105	$10,143,577
2029	$10,143,577	$1,272,693	$296,814	$1,569,507	$1,272,693	$720,263	$11,160,655
2030	$11,160,655	$1,349,811	$308,686	$1,658,497	$1,349,811	$791,867	$12,261,208
2031	$12,261,208	$1,423,524	$321,034	$1,744,557	$1,423,524	$869,331	$13,451,573
2032	$13,451,573	$1,496,070	$333,875	$1,829,945	$1,496,070	$953,098	$14,738,546
2033	$14,738,546	$0	$392,164	$392,164	$1,568,656	$991,217	$14,553,272
2034	$14,553,272	$0	$409,116	$409,116	$1,636,463	$976,498	$14,302,423
2035	$14,302,423	$0	$423,591	$423,591	$1,694,366	$957,445	$13,989,094
2045	$9,473,049	$0	$397,129	$397,129	$1,588,517	$622,120	$8,903,781
2055	$4,368,420	$0	$227,953	$227,953	$911,812	$282,259	$3,966,821
2065	$1,547,007	$0	$80,070	$80,070	$320,279	$100,025	$1,406,823
2075	$1,022,672	$0	$12,730	$12,730	$50,920	$70,273	$1,054,755

Eastern Washington University							
Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$4,161,208
2024	$4,161,208	$487,378	$179,135	$666,513	$487,378	$297,448	$4,637,791
2025	$4,637,791	$544,742	$186,300	$731,042	$544,742	$331,056	$5,155,146
2026	$5,155,146	$602,934	$193,752	$796,686	$602,934	$367,527	$5,716,425
2027	$5,716,425	$660,864	$201,502	$862,366	$660,864	$407,083	$6,325,010
2028	$6,325,010	$717,087	$209,562	$926,649	$717,087	$449,961	$6,984,534
2029	$6,984,534	$770,005	$217,945	$987,950	$770,005	$496,416	$7,698,895
2030	$7,698,895	$819,657	$226,662	$1,046,319	$819,657	$546,722	$8,472,279
2031	$8,472,279	$869,331	$235,729	$1,105,059	$869,331	$601,170	$9,309,178
2032	$9,309,178	$0	$229,759	$229,759	$919,037	$627,926	$9,247,827
2033	$9,247,827	$0	$240,881	$240,881	$963,524	$622,483	$9,147,667
2034	$9,147,667	$0	$250,136	$250,136	$1,000,543	$614,517	$9,011,776
2035	$9,011,776	$0	$257,631	$257,631	$1,030,525	$604,231	$8,843,113
2045	$6,489,713	$0	$242,538	$242,538	$970,150	$429,244	$6,191,344
2055	$4,045,702	$0	$138,677	$138,677	$554,709	$268,884	$3,898,555
2065	$3,654,902	$0	$50,552	$50,552	$202,208	$250,625	$3,753,871
2075	$5,853,106	$0	$10,290	$10,290	$41,160	$408,655	$6,230,892

The Evergreen State College							
Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$1,568,708
2024	$1,568,708	$194,783	$48,311	$243,094	$194,783	$111,472	$1,728,491
2025	$1,728,491	$213,221	$50,244	$263,465	$213,221	$122,723	$1,901,458
2026	$1,901,458	$230,410	$52,253	$282,663	$230,410	$134,900	$2,088,611
2027	$2,088,611	$248,555	$54,344	$302,898	$248,555	$148,073	$2,291,028
2028	$2,291,028	$268,237	$56,517	$324,754	$268,237	$162,317	$2,509,861
2029	$2,509,861	$289,746	$58,778	$348,523	$289,746	$177,713	$2,746,352
2030	$2,746,352	$312,398	$61,129	$373,527	$312,398	$194,348	$3,001,829
2031	$3,001,829	$334,846	$63,574	$398,420	$334,846	$212,316	$3,277,719
2032	$3,277,719	$0	$88,796	$88,796	$355,183	$220,274	$3,231,607
2033	$3,231,607	$0	$92,841	$92,841	$371,365	$216,629	$3,169,712
2034	$3,169,712	$0	$95,781	$95,781	$383,125	$211,993	$3,094,361
2035	$3,094,361	$0	$97,698	$97,698	$390,792	$206,520	$3,007,788
2045	$2,034,275	$0	$80,500	$80,500	$321,999	$134,090	$1,926,866
2055	$1,160,446	$0	$43,757	$43,757	$175,027	$76,715	$1,105,891
2065	$967,660	$0	$13,639	$13,639	$54,556	$66,328	$993,071
2075	$1,574,780	$0	$1,934	$1,934	$7,734	$110,035	$1,679,014

Central Washington University							
Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$4,200,291
2024	$4,200,291	$496,530	$184,956	$681,485	$496,530	$300,384	$4,685,631
2025	$4,685,631	$0	$124,555	$124,555	$498,221	$315,137	$4,627,103
2026	$4,627,103	$0	$124,194	$124,194	$496,777	$311,077	$4,565,597
2027	$4,565,597	$0	$123,167	$123,167	$492,667	$306,878	$4,502,975
2028	$4,502,975	$0	$121,566	$121,566	$486,265	$302,660	$4,440,936
2029	$4,440,936	$0	$119,609	$119,609	$478,435	$298,519	$4,380,629
2030	$4,380,629	$0	$117,259	$117,259	$469,038	$294,540	$4,323,391
2031	$4,323,391	$0	$114,387	$114,387	$457,549	$290,830	$4,271,059
2032	$4,271,059	$0	$111,057	$111,057	$444,228	$287,510	$4,225,398
2033	$4,225,398	$0	$107,295	$107,295	$429,181	$284,702	$4,188,215
2034	$4,188,215	$0	$103,103	$103,103	$412,414	$282,532	$4,161,437
2035	$4,161,437	$0	$98,592	$98,592	$394,369	$281,124	$4,146,784
2045	$4,808,503	$0	$47,996	$47,996	$191,983	$331,641	$4,996,157
2055	$8,079,780	$0	$13,365	$13,365	$53,461	$564,205	$8,603,889
2065	$15,562,972	$0	$2,535	$2,535	$10,141	$1,089,146	$16,644,513
2075	$30,541,196	$0	$1,111	$1,111	$4,446	$2,137,769	$32,675,631

State Board for Community and Technical Colleges							
Fiscal Year	(a) Projected Beginning SRP Trust Fund	(b) SRP Benefit Payments Paid By Institution	(c) SRP Trust Fund Contributions	(d) Projected Total Contributions = b + c	(e) Projected SRP Benefit Payments	(f) Projected Investment Earnings	(g) Projected Ending SRP Trust Fund = a + d - e + f
2023							$36,367,823
2024	$36,367,823	$3,441,665	$892,409	$4,334,074	$3,441,665	$2,576,454	$39,836,686
2025	$39,836,686	$4,293,911	$928,106	$5,222,016	$4,293,911	$2,820,502	$43,585,294
2026	$43,585,294	$5,096,971	$965,230	$6,062,200	$5,096,971	$3,084,182	$47,634,706
2027	$47,634,706	$5,853,795	$1,003,839	$6,857,634	$5,853,795	$3,368,970	$52,007,514
2028	$52,007,514	$6,553,593	$1,043,993	$7,597,585	$6,553,593	$3,676,448	$56,727,955
2029	$56,727,955	$7,190,592	$1,085,752	$8,276,344	$7,190,592	$4,008,315	$61,822,022
2030	$61,822,022	$7,767,914	$1,129,182	$8,897,096	$7,767,914	$4,366,395	$67,317,599
2031	$67,317,599	$8,284,343	$1,174,350	$9,458,693	$8,284,343	$4,752,639	$73,244,588
2032	$73,244,588	$8,748,409	$1,221,324	$9,969,733	$8,748,409	$5,169,145	$79,635,056
2033	$79,635,056	$9,162,525	$1,270,177	$10,432,701	$9,162,525	$5,618,158	$86,523,391
2034	$86,523,391	$0	$2,379,250	$2,379,250	$9,516,999	$5,811,041	$85,196,683
2035	$85,196,683	$0	$2,450,411	$2,450,411	$9,801,646	$5,710,826	$83,556,275
2045	$60,777,454	$0	$2,295,042	$2,295,042	$9,180,168	$4,017,518	$57,909,846
2055	$36,295,140	$0	$1,334,831	$1,334,831	$5,339,325	$2,402,873	$34,693,520
2065	$30,337,151	$0	$464,591	$464,591	$1,858,363	$2,075,644	$31,019,022
2075	$47,676,624	$0	$87,753	$87,753	$351,011	$3,328,305	$50,741,671

Summary of Plan Provisions

This table presents a high-level summary and is not meant to be an exhaustive list. For complete details of plan provisions, please refer to the SRP document specific to each higher education institution.

Plan Provisions for Supplemental Plan	
All Institutions	
Eligibility for Supplemental Plan	Employees in eligible positions meeting service requirements. All participants must contribute to the University of Washington Retirement Plan.
Normal Retirement Eligibility	Age 65 with 10 years of service.
Supplemental Benefit	Goal Income less Assumed Income from TIAA-CREF and Washington State Retirement System benefits.
Goal Income	2% times years of service (max of 25 years) times final average salary.
Assumed Income (TIAA-CREF)	Annuitized hypothetical account balance.
Assumed Income (State Retirement System Benefits)	Actual (or estimated) Washington State Retirement System benefit.
Final Average Salary	Average of the two highest consecutive years of earnings. Salary restrictions may apply to the target supplemental benefit. Please see the **Assumptions** section.
Years of Service	Service with the institution begins with the first date the participant begins contributing to the institution's retirement plan. Additional service could be added for participants with Washington State Retirement service that meets requirements.
Early Retirement	
Eligibility	Age 62 with 10 years of service.
Benefit Reduction	6% reduction for each year benefit commences before age 65.
Disability Benefit	
Eligibility	10 years of service.
Benefit Reduction	Unreduced normal retirement benefits.
Death Benefit	
Eligibility	Age 62 with 10 years of service.
Benefit Reduction	Survivor portion of the 66.67% first survivor benefit, assuming the participant had commenced benefits the month following the participant's death.
Deferred Vested Benefit	
Eligibility	N/A
Benefit Reduction	N/A
Normal Form of Benefit	
Unmarried Participants	Single life annuity.
Married Participants	Actuarially equivalent annuity with a death benefit to the spouse.
Option Forms of Payment	In lieu of the normal form of benefit, the participants may elect to receive a 50% joint and survivor annuity, 66.67% first survivor annuity or 100% first survivor annuity.
Date of Closure to New Entrants	
UW	The plan was closed to new participants effective March 1, 2011.
WSU	The plan was closed to new participants effective July 1, 2011.
WWU	The plan was closed to new participants effective July 1, 2011.
EWU	The plan was closed to new participants effective July 1, 2011.
TESC	The plan was closed to new participants effective July 1, 2011.
CWU	The plan was closed to new participants effective September 1, 1998.
CTC	The plan was closed to new participants effective July 1, 2011.

Glossary

ACTIVES
Members who are currently employed and eligible to participate in the SRP.

ACTUARIAL GAIN OR LOSS
Experience, from one year to the next, which differs from that assumed will result in an actuarial gain or loss. For example, an actuarial gain would occur if more members terminate prior to reaching retirement eligibility than assumed since terminated members don't earn a supplemental benefit.

ASSUMED INCOME
Lifetime income that a member's actual Retirement Plan contributions would have generated if the contributions had been invested equally between a fixed dollar and variable dollar annuity.

DECREMENT
The mode in which a member leaves employment. Examples include retirement, termination, disability, or death.

DEFERRED OUTFLOWS/DEFERRED INFLOWS
GASB defines changes in TPL that have not been recognized in pension expense to be either a deferred outflow or a deferred inflow of resources. These amounts will be recognized in pension expense during a future reporting period. Deferred outflows of resources will increase pension expense while deferred inflows of resources will decrease pension expense.

ENTRY AGE NORMAL (EAN) COST METHOD
The EAN cost method is a standard actuarial cost method which allocates the PVFB between the past and future. Two primary components generated by an actuarial cost method are:

- Normal cost.
- Accrued liability.

For the EAN cost method, the normal cost is determined on an individual basis, from a member's age at plan entry, and is often designed to be a level percentage of pay throughout a member's career.

GOAL INCOME
Generally determined by the formula: (2%) times (average compensation) times (eligible years of participation). Eligible years of participation is capped at 25 years.

GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB)
Refers to the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting to the public.

INACTIVES
Retired members or beneficiaries entitled to a benefit.

NET PENSION LIABILITY (NPL)
TPL minus PFNP.

NORMAL COST/SERVICE COST
Computed differently under different cost methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.

PENDING CALCULATION
Former actives that recently retired but a retirement calculation has not yet been performed.

PENSION EXPENSE
Under GASB reporting requirements, the pension expense is reported in the employer's income statement and represents changes in the TPL from one measurement date to the next. Certain changes in TPL are recognized immediately in pension expense, while others are recognized over a period of years. According to GASB, pension expense should not be considered an estimate for contribution levels.

PLAN FIDUCIARY NET POSITION (PFNP)
Fair value of plan assets held in a trust as defined by GASB.

PRESENT VALUE OF FULLY PROJECTED BENEFITS (PVFB)
Computed by projecting the total future benefit cash flows from the plan, using actuarial assumptions (i.e., probability of death, retirement, salary increases, etc.), and discounting the cash flows to the valuation date using the assumed valuation interest rate to determine the present value (today's value).

RETIREMENT PLAN
Defined contribution plan that, for eligible members, works in conjunction with the SRP.

SUPPLEMENTAL RETIREMENT PLAN BENEFIT
Lifetime benefit that is paid when a member's Goal Income is greater than their Assumed Income. The supplemental benefit is equal to the difference between the Goal Income and the Assumed Income. It relies on a one-time calculation made at the member's retirement date.

TOTAL PENSION LIABILITY (TPL)
Under GASB, TPL refers to the accrued liability, which generally represents the portion of the PVFB attributable to service credit that has been earned (or accrued) as of the valuation date. Under GASB 67, the TPL should be calculated using the EAN cost method.

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