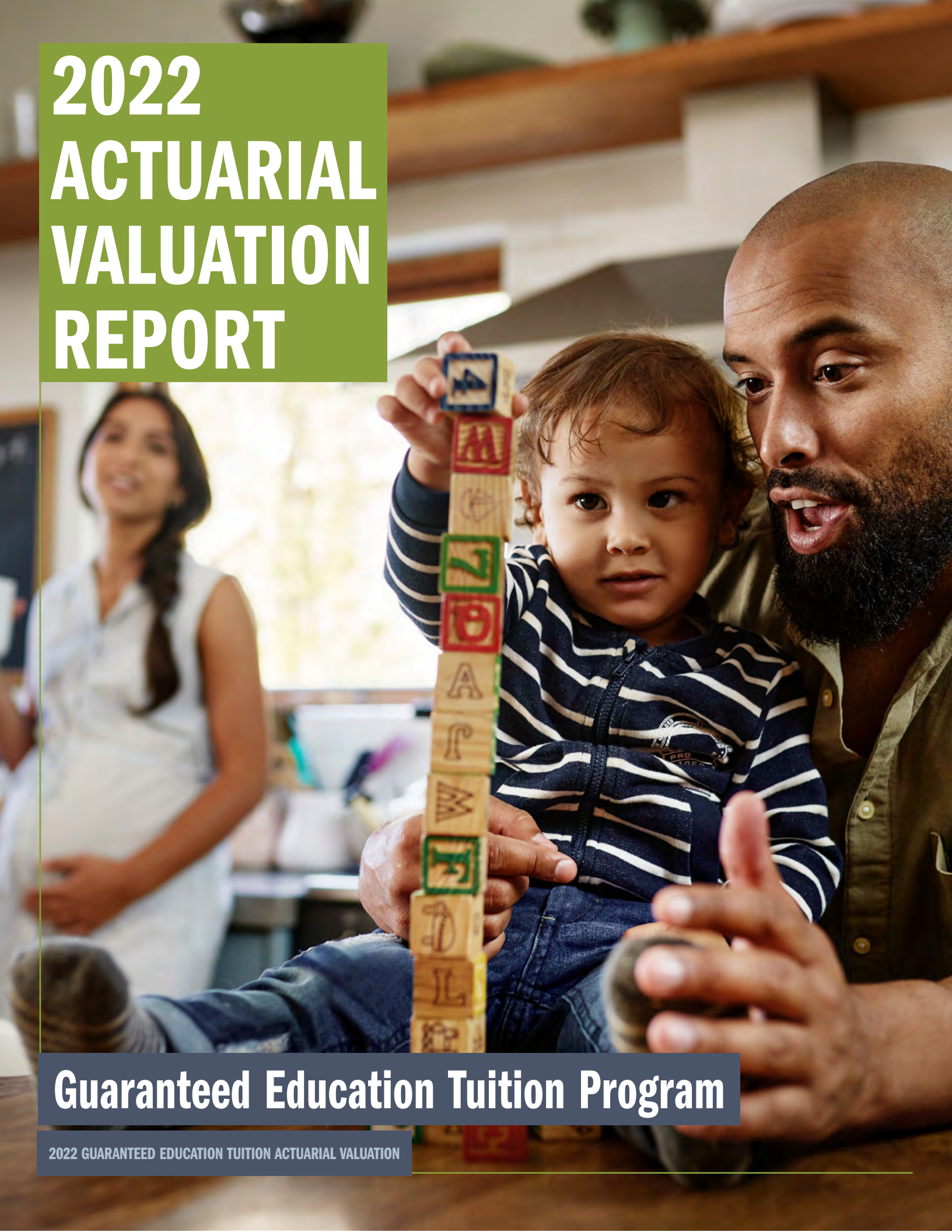


# 2022 ACTUARIAL VALUATION REPORT



## Guaranteed Education Tuition Program

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# Office of the State Actuary

*"Supporting financial security for generations."*

## Letter of Introduction Guaranteed Education Tuition Program Actuarial Valuation Report As of June 30, 2022

November 2022

This report documents the results of an actuarial valuation of the Guaranteed Education Tuition (GET) program. The primary purpose of this report is to update the annual financial status of the program through the calculation of the current and projected funded status for current contracts. This report also provides information on the sensitivity of the valuation results to key assumptions and developments in the program since the last valuation.

This report is organized in the following sections:

- ❖ Executive Summary.
- ❖ Actuarial Certification Letter.
- ❖ Background.
- ❖ Best Estimate Results.
- ❖ Sensitivity of Best Estimate Results.
- ❖ Appendices.

The **Executive Summary** provides the key results for this actuarial valuation. The **Background** section explains how this valuation complements annual Washington College Savings Plans (WA529) communications, how the Office of the State Actuary (OSA) supports the GET program, and provides a general understanding of the GET program. The next two sections provide detailed actuarial asset, liability, and cash flow information. The **Appendices** describe the key assumptions and methods, assets, participant data, and additional information used to prepare this valuation. It also includes information on the most recently adopted unit price including the assumptions and methods that went into the best estimate unit price calculation.

We encourage you to submit any questions you might have concerning this report to our mailing address or our e-mail address at [state.actuary@leg.wa.gov](mailto:state.actuary@leg.wa.gov). We also invite you to visit [OSA's website](#) for other reports on this program as well as [WA529's website](#) for further information regarding Washington's GET program.

Sincerely,

Luke Masselink, ASA, EA, MAAA  
Senior Actuary Senior

Graham Dyer  
Actuarial Analyst



# EXECUTIVE SUMMARY





# EXECUTIVE SUMMARY

## INTENDED USE

The purpose of this report is to provide an annual update of the financial status of the GET program based on a June 30, 2022, measurement date. This report provides valuation results of the funded status for current contracts, the projected funded status, and developments in the program over the past year. This report also discloses the data, assumptions, and methods we – OSA – used to develop the valuation results and shows the sensitivity of the valuation results to key assumptions.

This report is one of several key documents related to the GET program prepared throughout a fiscal year and should not be used in isolation to understand the ongoing health of the GET program. Rather, this document should be used together with OSA's unit price-setting analysis, and any other relevant studies or reports created by WA529 staff or OSA. This report is also not intended to replace program information supplied by WA529 staff or other analysis supplied by OSA, including analysis provided for the annual comprehensive financial report. Please replace this report when a more recent report becomes available.

## COMMENTS ON 2022 RESULTS

Many factors can influence how actuarial valuation results change from one measurement date to the next. Those factors include: changes in the covered population; changes in program provisions, assumptions, and methods; and experience that varies from our expectations.

Significant factors for this year's valuation include investment experience and certain program changes. Please note that the change due to investment experience impacts the funded status to a much greater extent than the other two noted changes.

- ❖ Investment returns of (11.45) percent, which was less than the expected 4.75 percent for the plan year ending June 30, 2022, (decrease to funded status);
- ❖ WA529 Committee action in the September 2021 meeting adopting a retroactive price decrease to \$114.01 for account holders who made lump sum unit purchases or entered custom monthly contracts during the 2019-20 and 2020-21 enrollment period, (decrease to funded status);
- ❖ WA529 Committee action in the May 2022 meeting adopting a contribution guarantee for contracts in place as of May 11, 2022, such that all contract holders will receive a total account payout no less than the total contributions made to the program, including payment processing fees and custom monthly plan finance charges, (decrease to funded status).

This valuation reflects unredeemed purchased or contracted units at June 30, 2022. Please see the **Gain/Loss Analysis** in the Best Estimate Results section for information on other factors.

Every year we review our key valuation assumptions for reasonableness. As part of our review, we considered the impact of the current high inflation environment. We believe it may place added pressure on the cost of instruction, future state funding for Higher Education, and the current tuition policy. Per the Revised Code of Washington (RCW) [28B.15.067 \(2\)](#), current tuition policy manages inflation volatility by limiting annual tuition growth to the growth in a 14-year average of the Washington State median hourly wage. Sustained high inflation could result in an increase to this average or in a change to tuition policy. We considered changes to our assumed tuition growth and the investment return assumption, as both are informed by inflation expectations. Ultimately, we made no assumption changes for the current valuation. We will continue to monitor these assumptions and may make changes in future valuations.

The WA529 Committee, at their September 2022 meeting, adopted a new unit price of \$116.63 for the 2022-23 enrollment period—a price equivalent to the unit payout value at the time of adoption. Please see **Appendix D** for more information regarding the unit price adoption.

The results of the valuation exclude the impacts of differential, or tiered tuition. Under a differential tuition model that could potentially impact GET, a public Washington university would charge different levels of resident, undergraduate tuition or fees based on the student field of study, market value of degree, student demand for the major, or the cost of instruction. If differential tuition were implemented and included in the GET unit payout value, the results of this valuation could materially change.

## FUNDED STATUS OF CURRENT CONTRACTS

The following table summarizes the key measures of the program’s funded status as of the current and prior year’s valuation dates using both a market fund value and actuarial fund value. This table provides a point-in-time estimate of the health of the program and should not be considered in isolation or as the sole measure of the program’s status.

Funded Status Summary				
	Market Fund Value		Actuarial Fund Value	
<i>(Dollars in Millions)</i>	2022	2021	2022	2021
<b>Present Value of Future Obligations</b>	\$1,152	\$1,092	\$1,152	\$1,092
<b>Present Value of Fund</b>	\$1,620	\$1,813	\$1,704	\$1,652
<b>Funded Status</b>	140.6%	166.1%	147.9%	151.4%
<b>Reserve/(Deficit)</b>	\$468	\$722	\$552	\$561

Each fund value measure provides a different assessment of the funded status. The market fund value relies on the market value of assets as its core component, while the actuarial fund value similarly relies on the actuarial value of assets.

The actuarial fund value is based on a method that smooths (or defers) unexpected annual asset experience over a period of eight years. This method serves to reduce the volatility in the funded status measure due to investment experience. Please see the **Program Assets** section in the Best Estimate Results for more information, and **Appendix B** for a comparison of recent funded status measures under both asset methods.

## RISK INHERENT IN ACTUARIAL MEASUREMENTS

Readers should exercise caution when interpreting and reaching conclusions based on a single, point-in-time measurement. In the course of conducting actuarial analyses, we make many assumptions. In some cases, small changes in these assumptions, or experience that plays out differently than expected, can lead to significant changes in the measurements.

For example, the program's funded status is highly sensitive to changes in tuition policy and associated changes in assumed tuition growth. The program's funded status is also sensitive to changes to the long-term assumed rate of investment return.

To evaluate how the point-in-time measurements may change, we perform sensitivity analysis—a process for assessing the impact of a change in an actuarial assumption or method on an actuarial measurement. Please see the **Sensitivity of Best Estimate Results** section for more information.

## PROJECTION OF CURRENT CONTRACTS

The next table shows a projection of the program's funded status at future even-year measurement dates assuming no future unit sales, aside from unit purchases already under contract. Along with the funded status, the table shows the expected assets, net cash flows, and present value of obligations (so the reader can assess the size of the program). The net cash flow represents the sum of expected receivables for custom monthly contracts, expected investment returns, expected unit payouts including the contribution guarantee payments, and expected administrative expenses. A more detailed version of this table can be found in the **Best Estimate Results** section.





Projection of Current Contracts Only (If All Assumptions Are Realized)				
(Dollars in Millions); EOY = End of Year				
Fiscal Year	EOY			
Ending June 30	Funded Status	Obligation Value	EOY Fund Value	Net Cash Flow
2022	141%	\$1,152	\$1,620	N/A
2024	148%	1,059	1,572	(\$21)
2026	162%	914	1,476	(44)
2028	185%	727	1,344	(58)
2030	220%	565	1,243	(44)
2032	276%	422	1,166	(30)
2034	363%	311	1,127	(12)
2036	501%	223	1,119	1
2038	765%	148	1,130	9
2040	*	83	1,161	18
2042	*	34	1,216	32
2044	*	8	1,306	49
2046	*	\$0	\$1,424	\$62

\*Funded Status exceeds 1,000% due to very small obligation value.

The funded status continues to grow under this projection because we assume the current reserve of \$468 million will continue to grow with the long-term expected 4.75 percent rate of investment return each year. All other actuarial assumptions are realized under this projection and we further assume no future program changes. Actual experience may vary. Additionally, if the program were permanently closed or terminated in the future, the program's asset allocation may change, leading to a lower assumed rate of investment return.

Please see the **Sensitivity of Best Estimate Results** section for how these results could change under different assumptions.

## KEY ASSUMPTIONS

The results of this valuation are based on several assumptions that include both economic and demographic factors. We summarize the key assumptions in the next table. Please see **Appendix A** for how we developed the assumptions used in this valuation. Note that the investment return assumption reflects the 2021 Capital Market Assumptions (CMAs) from the Washington State Investment Board (WSIB) and the Tuition Growth assumption reflects the results of the [2021 GET Experience Study](#).

Key Assumptions	
Investment Return	
All Years	4.75%
Tuition Growth	
2022-23*	2.3%
2023-25	2.7%
2025-26+	4.0%

\*Actual tuition growth.

## CONTRACT DATA

The following table summarizes the current contract and unit data used in this valuation for the plan year ending June 30, 2022, as well as for the prior year. Please see the **Participant Data** in the Best Estimate Results section for a table reconciling outstanding GET units from last year to this year. Please also see **Appendix C** for additional information on when units were purchased and their expected use years.

Contract Summary		
	2022	2021
<b>Number of Current Contracts</b>	67,701	67,820
<b>Number of Units Outstanding</b>	10,410,078	10,299,430





# ACTUARIAL CERTIFICATION LETTER







# Office of the State Actuary

*"Supporting financial security for generations."*

## Actuarial Certification Letter Guaranteed Education Tuition Program Actuarial Valuation Report As of June 30, 2022

November 2022

This report documents the results of an actuarial valuation for the Washington Guaranteed Education Tuition (GET) Program defined under [Chapter 28B.95](#) of the Revised Code of Washington (RCW). The primary purpose of this report is to update the annual financial status of the program through the calculation of the funded status for current contracts, in combination with the projection of the expected funded status in future years. This report also provides information on developments in the program since the last valuation and the sensitivity of the valuation results to key assumptions. This report should not be used for other purposes. Please replace this report with a more recent report when available.

The results summarized in this report involve calculations that require assumptions about future economic and demographic events. With the exception of the Investment Return and Tuition Growth assumptions, we developed the assumptions used in this valuation during the [2021 GET Experience Study](#). We provide supporting information for the Investment Return and Tuition Growth assumptions in **Appendix A** of this report.

Actuarial standards of practice that specifically apply to the measurement of obligations under prepaid tuition programs have not been defined within the actuarial profession. We used the standards of practice for pension systems where possible to guide the actuarial valuation of the GET program. In our opinion, the assumptions, methods, and calculations used in the valuation are reasonable and appropriate for the primary purpose as stated above and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this publication. 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.

The results of the valuation exclude the potential impacts of differential tuition. If differential tuition were implemented and included in the GET unit payout value, the results of this valuation could materially change. This analysis will need to be updated in the future if changes are made to the GET program or the Legislature modifies current tuition policy.

Washington College Savings Plans (WA529) staff provided the participant and projected administrative expense data to us. We checked the data for reasonableness as appropriate based on the purpose of this valuation. The Washington State Investment Board (WSIB) provided financial and asset information.



We did not audit the data and relied on all the information provided as complete and accurate. In our opinion, this information is adequate and substantially complete for the purposes of this valuation.

No members of the WA529 Committee or their respective staff attempted to bias our work product. We are not aware of any matters that impacted the independence and objectivity of our work.

We advise readers of this valuation to seek professional guidance as to its content and interpretation, and not to rely upon this communication without such guidance. Please read the analysis shown in this valuation as a whole. Distribution of, or reliance on, only parts of this valuation could result in its misuse and may mislead others.

Consistent with the Code of Professional Conduct that applies to actuaries, we must disclose any potential conflict of interest as required under Precept 7. We, the undersigned, purchased and have unredeemed units in GET; however, this does not impair our ability to act fairly and objectively.

The undersigned, with actuarial credentials, meet 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, ASA, EA, MAAA  
Senior Actuary

Michael T. Harbour, ASA, MAAA  
Actuary

# BACKGROUND







# BACKGROUND

## PROGRAM HISTORY AND GOALS

The Washington State Legislature created the GET program in 1997. The program sold units annually from September 1, 1998, through June 30, 2015, when the, then named GET Committee, suspended new unit sales. The program reopened (and sold new units) starting on November 1, 2017.

RCW 28B.95 outlines the purpose of the GET program along with general guidelines regarding how it is administered. It includes the following goals:

- ❖ Help make higher education affordable and accessible to all citizens of the state of Washington;
- ❖ Provide an additional financial option for individuals, organizations, and families to save for college;
- ❖ Encourage savings and enhance the ability of Washington citizens to obtain financial access to institutions of higher education;
- ❖ Encourage elementary and secondary school students to do well in school as a means of preparing for and aspiring to higher education attendance; and
- ❖ Promote a well-educated and financially secure population to the ultimate benefit of all citizens of the state of Washington.

The statute establishes the five member Committee on Advanced Tuition Payment and College Savings also known as the WA529 Committee. The WA529 Committee meets regularly to discuss the goals and status of the program, make administrative decisions, and set the unit price for each enrollment period.

WA529 staff supports the functions of the program and the WA529 Committee by administering the program and staffing WA529 Committee meetings. WA529 staff also prepare studies and reports that are directed to the WA529 Committee by the Legislature. Communications from WA529 staff can be found on the Washington Student Achievement Council (WSAC) [website](#).

OSA assists the WA529 Committee and the Legislature by providing actuarial services and consulting. OSA's three primary services for WA529 include:

- ❖ Prepare an annual actuarial valuation of GET (this document) for the WA529 Committee.
- ❖ Prepare unit price-setting analysis for the WA529 Committee.
- ❖ Consult, price, and communicate the effects of potential changes to the GET program for the WA529 Committee or the Legislature.

### PLAN DESCRIPTION

The terms of the GET program are a combination of RCW 28B.95 (determined by the Legislature) and the GET participant agreement (determined by the WA529 Committee). Statute provides general guidelines and certain rules for the WA529 Committee, whereas the GET participant agreement states all specific details for the purchaser.

The main plan provisions are outlined in the following graphic so the reader can get a sense for what cash flows occur, what parties are involved, and what drives the results of the actuarial valuation. For a complete description of the plan provisions, we direct you to the GET website, which includes both summarized plan provisions and the full GET participant agreement. If the following summary conflicts with relevant statute or the GET participant agreement, the relevant statute and participant agreement supersede this summary.

The following graphic also illustrates the standard yearly process when new unit sales are allowed and under normal refund rules.



### Unit Price Is Set

- WA529 Committee sets the price annually in September for the upcoming enrollment period.
- Based on adopted price-setting guidelines and applicable law.
- Price limited to no more than 10 percent greater than unit payout value at the time of unit price adoption when the program's funded status exceeds 120 percent and if current tuition policy remains in effect.

### Units Are Purchased

- Open enrollment typically runs from November 1 to May 31.
- Maximum of 800 units.
- Can be purchased either through a lump sum payment or a monthly contract (with finance charges).
- New monthly contracts not available for the 2022-23 enrollment period.

### Money Is Invested

- Investment returns on the proceeds from unit sales are expected to pay a portion of the future unit value and lowers the price of the unit today.
- Invested by the Washington State Investment Board.

### Units Are Redeemed

- Unit Value (specific dollar amount) equals 1 percent of annual resident undergraduate tuition and state mandated fees at most expensive public Washington university at time of unit use.
- Maximum of 200 units per year, plus any unused units from a prior year.
- Used at any eligible in-state or out-of-state higher education institution based on Unit Value, or
- Refunded based on Unit Value or transferred to another eligible beneficiary.

The WA529 Committee adopted a contribution guarantee for contracts in place as of May 11, 2022, such that all contract holders will receive a total account payout no less than the total contributions made to the program, including payment processing fees and custom monthly plan finance charges.

## TERMINATED PROGRAM

The WA529 Committee or Legislature has the ability to close or terminate the program in the future under RCW 28B.95.090. Under a termination scenario, all outstanding units outside four years of unit use would be refunded at the current unit value. All participants within four years of unit use could remain in the program and redeem units over the following ten years. Projected obligations and assets under a terminated program scenario can be prepared upon request.



# BEST ESTIMATE RESULTS







# BEST ESTIMATE RESULTS

This section provides details on our best estimate of the GET present value of obligations, assets, cash flows, and funded status information for outstanding units at June 30, 2022. Also provided in this section is a summary of the participant data used to derive these estimates.

The first subsection, **Participant Data**, shows an overview of the program's participant data as of the valuation date. We use this data to determine how many units will be redeemed in a given year for current contract holders (participants). These future unit redemptions, along with program expenses and expected contribution guarantee payments, make up the program liabilities described in the second subsection.

In the second subsection, **Actuarial Liabilities**, we show the expected value, as of the valuation date, of obligations for all future payments from the program for current contracts only. The future payments represent unit payout values, contribution guarantee payments, and expenses (please see the **Appendices** for further details on the expenses included in this valuation). We discount future payments to the valuation date using the expected rate of investment return to determine the present value of those future payments. To see how obligations differed from our expectations in the prior year, we include an actuarial gain/loss from Fiscal Year 2021 to 2022.

The third subsection, **Program Assets**, shows the market value of the fund along with the actuarial value. That is, the assets currently set aside for the contracts sold as of the valuation date (market value), along with the smoothed measure of assets of the program (actuarial value). The present value of the fund represents both assets currently on hand and the present value of monthly contract receivables. Similar to program obligations, we provide the actuarial gain/loss for assets over the prior fiscal year.

The final two subsections consist of the **Funded Status** and the **Program Projections**. We compare the obligations and assets to produce the program funded status as of the valuation date. We also show how the funded status changed over the year and review a history in graphical form. Lastly, we show our projections for various program measures including obligations, assets, and expected future cashflows under a closed program.

## PARTICIPANT DATA

Program obligations are based on the participant data supplied by GET staff. In the following table, we provide a summary of all outstanding units by the initial “use year” for the plan year ending June 30, 2022, along with a reconciliation of units from last year’s valuation. The projected use year, provided by contract holders when an account is established, represents the first year the student beneficiary is expected to enter college and/or turn 18 years old. We include units with use years prior to the valuation date in the first year of the table. The table shows units corresponding to the use year provided in the data and does not represent how units are expected to be redeemed when we apply our redemption assumption through the valuation. For more information on the expected outflow of units, please see the Projection of Current Contracts Only table in the **Program Projections** subsection of this report.

Number of Units Outstanding by Use Year		
Use Year	Expected Unit Value	Units Starting to be Used
2022*	\$117	3,274,659
2023	120	835,771
2024	123	839,788
2025	128	821,950
2026	133	794,362
2027	138	680,366
2028	144	595,631
2029	150	445,293
2030	156	387,676
2031	162	315,814
2032	168	269,147
2033	175	221,947
2034	182	197,878
2035	189	190,630
2036	197	173,262
2037	205	140,566
2038	213	109,309
2039	222	80,967
2040	230	35,060

\*Includes contracts that already started using units.





Change in Number of Outstanding Units	
Number of Outstanding Units at June 30, 2021	10,299,430
New Units Purchased	735,322
Units Redeemed <sup>1</sup>	(540,215)
Units Refunded, Defaulted, or Downgraded <sup>2</sup>	(115,190)
Units Rolled Over to Other 529 Plans <sup>3</sup>	(22,390)
Unit Repricing Adjustments and SB 5430 Final Adjustment <sup>4</sup>	53,194
Other	(74)
Number of Outstanding Units at June 30, 2022	10,410,078

<sup>1</sup> Includes adjustments for unused distributions in prior fiscal year.

<sup>2</sup> Includes total units in refunded account. Unit downgrades are performed upon customer request.

<sup>3</sup> Includes rollovers to DreamAhead and other states' 529 plans.

<sup>4</sup> Units granted under the 2019-20 and 2020-21 enrollment retroactive purchase price adjustments adopted by WA529 Committee action in September 2021. Also, includes a small adjustment for completed implementation of SB 5430 that were not reflected in the 2021 GAVR.

## ACTUARIAL LIABILITIES

The following table shows the actuarial liabilities (program obligations). The obligations are the sum of the present value of future unit redemptions, contribution guarantee payments<sup>1</sup>, and administrative expenses for all unredeemed units as of June 30, 2022. Contribution guarantee payments represent approximately 1 percent of program obligations and are contained within the value shown for unit redemptions. The obligations are measured under a closed program and exclude tuition payments or administrative costs from new units purchased after June 30, 2022. Please see **Appendix A** for further details.

Present Value of Obligations	
<i>(Dollars in Millions)</i>	
Present Value of Unit Redemptions	\$1,120
Present Value of Administrative Expenses	32
2022 Present Value of Obligations	1,152
2021 Present Value of Obligations	\$1,092

WA529 staff provide the expected administrative expenses of the program and expected revenue from service-based fees under a closed-plan scenario. They represent the anticipated net expenses of the program for each year until all current outstanding units are redeemed based on our current assumptions. Service-based fees represent revenue from fees charged to participants for specific purposes, such as dishonored payments. We subtract this fee revenue from future expenses because our model does not include those future payment streams.

<sup>1</sup> Contracts in place as of May 11, 2022, will receive a total account payout no less than the total contributions made to the program, including payment processing fees and custom monthly plan finance charges. Account holders with a qualifying contract may receive a contribution guarantee payment equivalent to the balance between the amount receive in program disbursements and the eligible amount they paid into the program.

We then calculate the present value of those net expenses. In the following table, we outline the development of the present value of this obligation along with the underlying expense and fee revenue values.

<b>Development of Expenses</b>				
<b>Fiscal Year</b>	<b>Administrative Expenses</b>	<b>Expected Fee Revenue</b>	<b>Net Expenses</b>	<b>PV of Net Expenses</b>
<b>2023</b>	\$5,872,197	\$442,600	\$5,429,597	\$5,305,539
<b>2024</b>	3,307,800	332,000	2,975,800	2,775,950
<b>2025</b>	2,600,700	249,000	2,351,700	2,094,285
<b>2026</b>	2,180,400	186,800	1,993,600	1,694,876
<b>2027</b>	1,681,600	140,100	1,541,500	1,251,092
<b>2028</b>	1,737,800	105,100	1,632,700	1,265,022
<b>2029</b>	1,692,700	78,800	1,613,900	1,193,753
<b>2030</b>	1,744,200	59,100	1,685,100	1,189,897
<b>2031</b>	1,798,700	44,300	1,754,400	1,182,656
<b>2032</b>	1,742,900	33,200	1,709,700	1,100,261
<b>2033</b>	1,808,300	24,900	1,783,400	1,095,646
<b>2034</b>	1,883,700	18,700	1,865,000	1,093,821
<b>2035</b>	1,945,700	14,000	1,931,700	1,081,567
<b>2036</b>	2,010,700	10,500	2,000,200	1,069,136
<b>2037</b>	2,078,600	7,900	2,070,700	1,056,629
<b>2038</b>	2,163,600	5,900	2,157,700	1,051,096
<b>2039</b>	2,046,900	4,400	2,042,500	949,860
<b>2040</b>	2,117,800	3,300	2,114,500	938,752
<b>2041</b>	2,192,000	2,500	2,189,500	927,971
<b>2042</b>	2,269,500	1,900	2,267,600	917,491
<b>2043</b>	2,152,200	1,400	2,150,800	830,771
<b>2044</b>	1,848,100	1,100	1,847,000	681,074
<b>2045</b>	1,470,100	1,000	1,469,100	517,160
<b>2046</b>	1,522,200	1,000	1,521,200	511,217
<b>PV of Expenses</b>				<b>\$31,775,523</b>

*Note: PV means Present Value.*

The following table demonstrates actuarial gains and losses for program obligations. We use gain/loss analysis to compare actual changes to assumed changes in the assets and obligations. We also use this analysis to determine:

- ❖ The accuracy of our valuation model and annual processing;
- ❖ Why obligations and assets changed; and,
- ❖ The reasonableness of the actuarial assumptions.

Actuarial gains will increase funded status; actuarial losses will decrease funded status. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over long-term experience periods. Please see the following subsection for the gains and losses for program assets.

<b>Gain/(Loss) Analysis</b>	
<b>Change in Obligations by Source</b>	
<i>(Dollars in Millions)</i>	
<b>2021 Present Value of Obligations</b>	<b>\$1,092</b>
<b>Changes in 2022</b>	
<b>Expected Change</b>	<b>(\$30)</b>
<b>Program Gains/Losses</b>	
<b>Tuition Payments and Account Changes*</b>	<b>\$2</b>
<b>New Units Purchased or Contracted</b>	<b>74</b>
<b>Update of Administrative Expenses</b>	<b>2</b>
<b>Other</b>	<b>(1)</b>
<b>Total Program Obligations Gains/Losses</b>	<b>\$78</b>
<b>Additional Changes**</b>	
<b>Payout Value Update</b>	<b>(\$4)</b>
<b>Retroactive Price Adjustment</b>	<b>5</b>
<b>Contribution Guarantee</b>	<b>12</b>
<b>Total Additional Changes Gains/Losses</b>	<b>\$12</b>
<b>Total Changes in 2022</b>	<b>\$61</b>
<b>2022 Present Value of Obligations</b>	<b>\$1,152</b>

*Note: Dollars in millions. Totals may not agree due to rounding.*

*\*Includes other unit changes such as refunds, conversions, and rollovers.*

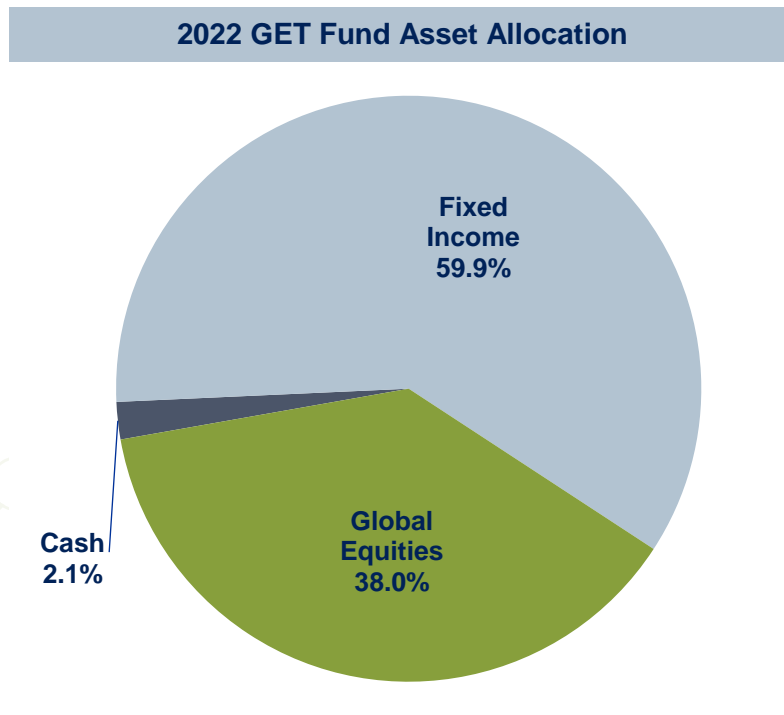
*\*\*Additional changes are listed in the order performed. A different order would produce the same total changes but the measured impact for each individual change could differ in both magnitude and direction.*





## PROGRAM ASSETS

The following chart shows how GET program assets were invested as of June 30, 2022. In late 2019, WSIB adopted the current asset allocation. The target asset allocation is 40 percent global equity and 60 percent fixed income. Under current investment policy, the program is allowed to allocate up to 5 percent in cash with a long-term target of 0 percent. The following figures reflect the actual asset allocation at the valuation date.



**Cash:** Highly liquid, very safe investments that can be easily converted into cash, such as Treasury Bills and money-market funds.

**Fixed Income\*:** Securities representing debt obligations and usually having fixed payments and maturities. Different types of fixed income securities include government and corporate bonds, mortgage-backed securities, asset-backed securities, convertible issues, and may also include money-market instruments.

**Global Equities:** Shares of U.S. and non-U.S. corporations that trade on public exchanges or "over-the-counter." The ownership of a corporation is represented by shares that are claimed on the corporation's earnings and assets.

*\*As disclosed in their 2021 Capital Markets White Paper, WSIB uses the Intermediate Credit Fixed Income asset class for the GET trust fund. We refer to this asset class as simply Fixed Income throughout this report.*

The following table shows the GET market fund value, which includes (1) the Market Value of Assets held by the WSIB, (2) the present value of the monthly contract receivables, and (3) the additional funds held in a state Treasury account. The Treasury account assets are available to pay program obligations, such as upcoming fall tuition unit disbursements or for other GET program purposes. We assume mid-valuation year timing on payments in and out of the fund for purposes of this valuation.

<b>Market Fund Value</b>	
<i>(Dollars in Millions)</i>	
<b>Market Value of Assets at 6/30/2022</b>	
<b>Cash</b>	\$31
<b>Global Equities</b>	578
<b>Fixed Income</b>	912
<b>2022 WSIB Reported Assets</b>	<b>\$1,521</b>
<b>Additional Funds Held in State Treasury Account*</b>	\$2
<b>2022 Market Value of Assets</b>	<b>\$1,524</b>
<b>Present Value of Monthly Contracts</b>	\$96
<b>Total 2022 Fund Value</b>	<b>\$1,620</b>

\*Additional funds available to pay program obligations such as upcoming tuition disbursements.

The next two tables show reconciliations from last year to this year for the Market Value of Assets and Present Value (PV) of Monthly Contracts.

<b>Change in Market Value of Assets</b>	
<i>(Dollars in Millions)</i>	
<b>2021 Market Value of Assets</b>	<b>\$1,714</b>
<b>2021 Funds Held in State Treasury Account*</b>	(5)
<b>2021 WSIB Reported Assets</b>	<b>\$1,709</b>
<b>Changes in Net Asset Value</b>	
<b>Revenue</b>	
<b>Lump Sum Unit Purchases</b>	\$66
<b>Custom Monthly Unit Purchases</b>	18
<b>Investment Return</b>	(193)
<b>Other Revenue</b>	0
<b>Total Revenue</b>	<b>(\$109)</b>
<b>Disbursements</b>	
<b>Refunds</b>	(\$11)
<b>Redemptions</b>	(62)
<b>Other Disbursements</b>	(6)
<b>Total Disbursements</b>	<b>(\$79)</b>
<b>Net Cash Flow</b>	<b>(\$188)</b>
<b>2022 WSIB Reported Assets</b>	<b>\$1,521</b>
<b>2022 Funds Held in State Treasury Account*</b>	2
<b>2022 Market Value of Assets</b>	<b>\$1,524</b>

\*Additional funds available to pay program obligations such as upcoming tuition disbursements.

<b>Change in PV of Monthly Contract Receivables</b>	
<i>(Dollars in Millions)</i>	
<b>PV of Monthly Contracts at June 30, 2021</b>	<b>\$99</b>
<b>Changes in PV Monthly Contracts</b>	
<b>Actual Payments Received in 2022</b>	<b>(\$17)</b>
<b>Interest Adjustment</b>	<b>4</b>
<b>Account Conversions*</b>	<b>(6)</b>
<b>PV of Monthly Contracts for New Units in 2022</b>	<b>18</b>
<b>Other**</b>	<b>0</b>
<b>Preliminary PV Receivables at June 30, 2022</b>	<b>\$98</b>
<b>Assumption Changes or Program Changes***</b>	<b>(2)</b>
<b>PV of Monthly Contracts at June 30, 2022</b>	<b>\$96</b>

\*Conversion of Custom Monthly accounts to Lump-Sum accounts. Includes voluntary refunds.

\*\*Includes account downgrades, interest on advanced payments, and unexplained changes.

\*\*\*Units granted under the 2019-20 and 2020-21 retroactive purchase price adjustments adopted by WA529 Committee action in September 2021. Also, includes a small adjustment for completed implementation of RCW 28B.95.030 that was not reflected in the 2021 GAVR.

Similar to the program obligations, we measure actuarial gains and losses for the program assets as illustrated in the following table. The gain/loss on investment earnings represents the gain or loss on all investment income including investment gain/loss on contributions and disbursements.

<b>Gain/(Loss) Analysis</b>	
<b>Change in Assets by Source</b>	
<i>(Dollars in Millions)</i>	
<b>a) 2021 Market Value of Fund</b>	<b>\$1,813</b>
<b>Changes in 2022</b>	
<b>b) Expected Change</b>	<b>\$6</b>
<b>Program Assets Gains/Losses</b>	
<b>Distributions</b>	<b>(\$1)</b>
<b>Contributions</b>	
Existing Contracts	(1)
New Unit Sales	67
<b>Contract Receivables</b>	
Existing Contracts	(6)
New Unit Sales	18
<b>Investment Earnings</b>	<b>(275)</b>
<b>Other</b>	<b>0</b>
<b>c) Total Program Assets Gains/(Losses)</b>	<b>(\$197)</b>
<b>Additional Changes</b>	
<b>Retroactive Price Adjustment</b>	<b>(\$2)</b>
<b>d) Total Additional Changes</b>	<b>(\$2)</b>
<b>e) Total Change in 2022 (b + c + d)</b>	<b>(\$193)</b>
<b>f) 2022 Market Value of Fund (a + e)</b>	<b>\$1,620</b>

Note: Totals may not agree due to rounding.



The following table shows the actuarial fund value, or smoothed fund value. The actuarial fund value extends the recognition of annual investment gains and losses (returns above or below expected) in order to limit the volatility due to year-to-year market fluctuation. For the purposes of this calculation, we smooth each gain or loss over an eight-year recognition period and limit the resulting actuarial value of assets to within 30 percent of the actual market value of assets as of the valuation date. We then add the best estimate present value of receivables to get the actuarial fund value.

We use the market fund value (which is based on the market value of assets) to calculate the best estimate funded status. We provide the actuarial value of assets to help readers evaluate how much a single, point-in-time measurement impacts the program's assets and funded status. Please see the **Executive Summary** section for a funded status calculation based on the actuarial fund value. The use of another asset valuation method may also be reasonable and could produce materially different results. We believe the selected approach (as noted in the prior paragraph) is reasonable given its intended use and may not be appropriate for other uses.

<b>Calculation of Actuarial Fund Value</b>			
<i>(Dollars in Millions)</i>			
<b>a) Market Value at 6/30/2022*</b>			<b>\$1,524</b>
<b>Deferred Gains and (Losses)</b>			
<b>Program Year Ending</b>	<b>Years Remaining</b>	<b>Total Deferral</b>	<b>Remaining Deferral</b>
<b>6/30/2022</b>	7	(\$275)	(\$240)
<b>6/30/2021</b>	6	175	131
<b>6/30/2020</b>	5	29	18
<b>6/30/2019</b>	4	(13)	(7)
<b>6/30/2018</b>	3	20	7
<b>6/30/2017</b>	2	99	25
<b>6/30/2016</b>	1	(150)	(19)
<b>b) Total Deferral</b>			<b>(\$84)</b>
<b>c) Market Value less Deferral 6/30/2022 (a - b)</b>			<b>\$1,608</b>
<b>d) 70% of Market Value of Assets</b>			<b>1,067</b>
<b>e) 130% of Market Value of Assets</b>			<b>1,981</b>
<b>f) Actuarial Value of Assets</b>			<b>1,608</b>
<b>g) PV of Receivables</b>			<b>96</b>
<b>h) Actuarial Fund Value (f + g)</b>			<b>\$1,704</b>

\*Includes approximately \$2 million held in State Treasury account.

## FUNDED STATUS

The funded status helps readers evaluate the health of the GET program at a single point in time. A history of funded status measured consistently over a defined period helps readers evaluate a plan's long-term ability to accurately assess and react to experience. A plan more/less than 100 percent funded is not automatically considered over-funded/at-risk. The following table calculates the program's funded status and reserve.

2022 Funded Status	
<i>(Dollars in Millions)</i>	
<b>Obligations</b>	
a) Present Value of Unit Redemptions	\$1,120
b) Present Value of Administrative Expenses	\$32
c) Present Value of Obligations (a + b)	\$1,152
<b>Market Fund Value</b>	
d) Assets	\$1,524
e) Present Value of Monthly Contract Receivables	\$96
f) Present Value of Fund (d + e)	\$1,620
<b>Calculation of Funded Status</b>	
g) Present Value of Fund (f)	\$1,620
h) Present Value of Obligations (c)	\$1,152
i) Ratio of Market Fund Value to Obligations (g / h)	140.6%
j) Reserve / (Deficit) (g - h)	\$468

The Reserve/(Deficit) indicates the excess/shortfall of the fund assets on hand to cover the program's expected obligations at the valuation date if all assumptions are realized. The reserve level can be interpreted similarly to the funded status.

A self-sustaining program that collects all cash inflows up front, like the GET program, may want to aim for a long-term reserve of approximately 15 percent (or 115 percent funded status) in order to protect against unexpected adverse outcomes over the life of the program. The program may require a reserve above 15 percent under future circumstances that vary from today's environment.

The following table shows the impact to the funded status under each major change outlined in the **Executive Summary**.

2022 Funded Status Change	
June 30, 2021 Funded Status	166%
2022 Contract Data*	1%
Payout Value Update	1%
Retroactive Price Adjustment	(1%)
Contribution Guarantee	(2%)
Fiscal Year 2022 Actual Investment Returns	(24%)
Other**	(1%)
June 30, 2022 Funded Status	141%

\*Includes existing and new contracts.

\*\*Includes updates to administrative expenses.



The following chart demonstrates the program's funded status history over the past 15 years. A full history of the program's funded status can be found in **Appendix B**.

### Funded Status





## PROGRAM PROJECTIONS

The following tables show how the program is expected to fare beyond the valuation date, assuming no future unit sales other than those purchased through existing monthly payment contracts. Under a closed program scenario, all existing customers with unredeemed units can redeem those units under current program terms, but the program would sell no additional units.

We advise readers to exercise caution when using, distributing, or relying on this projection. As with any projection, these results will only remain accurate if all assumptions are realized. Furthermore, this projection represents current contracts only (no future unit sales) and assumes no future changes to current program provisions. Actual experience may vary.

A large, expected reserve develops under this projection because we assume the current reserve of \$468 million will continue to grow with the long-term expected 4.75 percent rate of investment return each year. However, if the program is permanently closed or terminated, WSIB may change the program's asset allocation. That in turn may lead to a lower assumed rate of investment return. A lower assumed rate of return would increase the present value of program obligations and lower the program's reserve and funded status.

Projection of Current Contracts Only (If All Assumptions Are Realized)								
(Dollars in Millions); EOY = End of Year								
Fiscal Year	Funded	Unit	Number of	EOY	Market	EOY	EOY	Net Cash
Ending	Status	Value <sup>1</sup>	Units Used	Obligation	Fund	MVA	PV of	Flow
June 30				Value	Value		Receivables	
2022 <sup>2</sup>	141%	N/A	N/A	\$1,152	\$1,620	\$1,524	\$96	N/A
2023	144%	\$117	721,783	1,115	1,605	1,522	83	(\$2)
2024	148%	120	860,759	1,059	1,572	1,501	71	(21)
2025	154%	123	905,753	993	1,530	1,470	60	(31)
2026	162%	128	947,813	914	1,476	1,426	51	(44)
2027	172%	133	999,927	819	1,409	1,367	42	(59)
2028	185%	138	914,573	727	1,344	1,310	35	(58)
2029	200%	144	766,967	645	1,292	1,264	28	(45)
2030	220%	150	704,807	565	1,243	1,221	22	(44)
2031	245%	156	622,517	490	1,200	1,183	17	(38)
2032	276%	162	530,374	422	1,166	1,153	13	(30)
2033	315%	168	441,579	362	1,141	1,132	9	(21)
2034	363%	175	363,614	311	1,127	1,120	6	(12)
2035	423%	182	301,855	265	1,120	1,116	4	(4)
2036	501%	189	257,773	223	1,119	1,116	2	1
2037	609%	197	224,198	184	1,122	1,121	1	5
2038	765%	205	197,294	148	1,130	1,130	1	9
2039	*	213	173,319	114	1,143	1,143	0	14
2040	*	222	150,254	83	1,161	1,161	0	18
2041	*	230	123,019	55	1,185	1,185	0	24
2042	*	240	90,165	34	1,216	1,216	0	32
2043	*	249	59,015	18	1,257	1,257	0	41
2044	*	259	34,105	8	1,306	1,306	0	49
2045	*	270	15,109	2	1,362	1,362	0	56
2046	*	\$280	3,506	\$0	\$1,424	\$1,424	\$0	\$62

<sup>1</sup> Shown in Dollars (not in Millions).

<sup>2</sup> Please see **Participant Data** and **Program Assets** for actual experience in FY 2022.

\*Funded Status exceeds 1,000% due to very small obligation value.

The net cash flows used in the preceding table are based on expected inflows and outflows as illustrated in the next table.

<b>Projection of Current Contracts Only (If All Assumptions Are Realized)</b>						
<i>(Dollars in Millions)</i>						
<b>Fiscal Year Ending June 30</b>	<b>Net Cash Flow</b>	<b>Cash Inflows</b>			<b>Cash Outflows</b>	
		<b>Monthly Contracts</b>	<b>Investment Return</b>	<b>State Contributions</b>	<b>Unit Use</b>	<b>Expense</b>
2023	(\$2)	\$17	\$71	\$0	(\$85)	(\$5)
2024	(21)	16	70	0	(103)	(3)
2025	(31)	14	69	0	(112)	(2)
2026	(44)	12	67	0	(121)	(2)
2027	(59)	11	65	0	(133)	(2)
2028	(58)	9	62	0	(128)	(2)
2029	(45)	8	60	0	(112)	(2)
2030	(44)	7	58	0	(107)	(2)
2031	(38)	6	56	0	(98)	(2)
2032	(30)	5	54	0	(87)	(2)
2033	(21)	4	53	0	(76)	(2)
2034	(12)	3	52	0	(66)	(2)
2035	(4)	3	52	0	(57)	(2)
2036	1	2	52	0	(51)	(2)
2037	5	1	52	0	(46)	(2)
2038	9	1	52	0	(41)	(2)
2039	14	0	53	0	(37)	(2)
2040	18	0	53	0	(33)	(2)
2041	24	0	54	0	(28)	(2)
2042	32	0	56	0	(22)	(2)
2043	41	0	57	0	(15)	(2)
2044	49	0	59	0	(9)	(2)
2045	56	0	62	0	(4)	(1)
2046	\$62	\$0	\$65	\$0	(\$1)	(\$2)

\*Includes expected Contribution Guarantee payments.

# SENSITIVITY OF BEST ESTIMATE RESULTS







# SENSITIVITY OF BEST ESTIMATE RESULTS

The best estimate results are sensitive to the key assumptions used in the valuation. In this section, we calculated the results after varying the assumed rates of investment return and tuition growth to illustrate the sensitivity of the results to these assumptions.

## CLOSED PROGRAM SCENARIO SENSITIVITY

The following table shows the best estimate results assuming no units are purchased in the future. This scenario is consistent with our best estimate results shown elsewhere in the report.

Sensitivity of Results to Key Assumptions							
(Dollars in Millions)	+1% Tuition	Best Estimate	-1% Tuition	-2% Return	-1% Return	Best Estimate	+1% Return
<b>PV of Fund</b>	\$1,620	\$1,620	\$1,620	\$1,628	\$1,624	\$1,620	\$1,616
<b>PV of Obligations</b>	\$1,219	\$1,152	\$1,093	\$1,319	\$1,231	\$1,152	\$1,082
<b>Reserve/(Deficit)</b>	\$401	\$468	\$527	\$309	\$393	\$468	\$534
<b>2022 Funded Status</b>	133%	141%	148%	123%	132%	141%	149%

Note: PV means Present Value.

## CLOSED PROGRAM CURRENT LAW SENSITIVITY

Chapter 36, Laws of 2015, 3rd Special Legislative Session, ([2ESSB 5954](#)), established a policy to limit resident, undergraduate annual tuition growth to no more than the average annual percentage change in the median hourly wage for Washington over the previous fourteen years. For our best estimate Tuition Growth assumption, we assume continuation of this policy over a two biennial period consistent with the state budget. Beyond this period, we assume our long-term tuition growth rate. For more information, please see the *2021 GET Experience Study*.

If future Legislatures continue this policy indefinitely, we would expect future tuition growth rates closer to 2-3 percent per year. The following table illustrates an example of annual tuition growth based on that expectation.

Tuition Growth Assumption		
School Year	Current Law	Best Estimate
2022-23	2.3%	2.3%
2023-24	2.7%	2.7%
2024-25	2.7%	2.7%
2025-26	2.6%	4.0%
2026-27	2.6%	4.0%
2027-28	2.6%	4.0%
2028-29	2.6%	4.0%
2029-30	2.6%	4.0%
2030-31	2.6%	4.0%
2031-32	2.7%	4.0%
2032-33	2.7%	4.0%
2033-34	2.7%	4.0%
2034-35	2.7%	4.0%
2035-36	2.8%	4.0%
2036-37+	2.8%	4.0%

Under the indefinite current law scenario, the 2022 funded status would rise from 141 to 148 percent and the reserve would increase from \$468 to \$524 million.



# APPENDICES





# APPENDICES

## APPENDIX A: ASSUMPTIONS, METHODS, AND DATA

The assumptions used in this report can be divided into two broad categories – economic and behavioral. We discuss the assumptions used in this valuation throughout the next two subsections. For more detailed and supporting information on these assumptions, please see the *2021 GET Experience Study*.

### ECONOMIC ASSUMPTIONS

The two key economic assumptions are (1) expected investment returns and (2) expected tuition growth. The next table shows what we have assumed for this valuation.

Key Economic Assumptions	
Investment Returns	
All Years	4.75%
Tuition Growth (Excludes Differential Tuition)	
2022-23*	2.3%
2023-25	2.7%
2025-26+	4.0%

\*Actual tuition growth.

1. Expected investment returns are based on WSIB's target asset allocation, their 2021 CMAs and simulated returns, and our professional judgment, which includes our consideration for (1) the time-horizon of the program obligations and new unit sales, and (2) the difference in actual and target asset allocations.

We relied on the CMAs provided by WSIB and have reviewed them for reasonableness. We assumed the current 40 percent global equity/60 percent fixed income target portfolio will remain unchanged throughout the projection period.

The assumed rate of investment returns is used as the discount rate to calculate the expected present value of program payments, expenses, and receivables. It's also used to calculate the expected future investment returns in our closed program projections. For additional information on the program's assets and our return assumption, see the **Best Estimate Results** section and **Appendix B**.

2. We updated our tuition growth model with the 2021 GET Experience Study. As detailed in the study's report, we developed a new framework for enacted and expected tuition growth rates consistent with current law tuition policy to help assist with setting annual Tuition Growth assumptions. Under this framework, we set the first three to four years of assumed tuition growth rates (depending on the biennial budget cycle) consistent with the enacted budget and the current tuition policy. Beyond that period, we set rates that consist of our long-term assumed growth rate plus a potential adjustment for past differences between higher education inflationary costs and historical higher education budget growth.

We reviewed but made no adjustment to either the Investment Return or the Tuition Growth assumption for this actuarial valuation.

## BEHAVIORAL ASSUMPTIONS

We've made the following assumptions for GET contract holders.

**Rate of Redemption** — The following table shows what percent of a contract holder's total units we expect will be used upon reaching college (or their "use year"). When measuring program obligations, we assume the use year will be half a year later than reported by the account holder.

Redemption Rate	
All Years	20%

## MISCELLANEOUS

For purposes of the valuation, we assume mid-valuation year timing on payments in and out of the fund.

## METHODS

We valued the current unredeemed units and asset values in the GET program by estimating the future tuition payments (cash outflow from unit redemptions), administrative expenses (cash outflow), and monthly contract payments (cash inflow). The estimation of future cash flows required assumptions about:

- ❖ When the contract holder will redeem their units (based on the reported "use year").
- ❖ What tuition will be in future years.
- ❖ What administrative expenses will be over time.
- ❖ The payment amount and payments due for each monthly contract.

We discounted these cash flows to today's value in order to calculate the plan's funded status at the valuation date. Discounting the cash flows to today's value requires an assumption for how invested money will grow over time. In this case, we've assumed an annual growth rate of 4.75 percent, which means \$100.00 today is worth \$104.75 next year due to investment earnings. Discounting moves the opposite way and states that \$104.75 a year from now will be worth \$100.00 today. Discounting all the cash flows to one common year allows for a commensurable comparison of all cash flows.

These calculations were performed using ProVal® software developed by Winklevoss Technologies. This software model was primarily created for use by actuaries when performing valuations and projections of pension and retiree medical plans. We recognize that the structure of a pre-paid tuition program may not be consistent with the model's primary intent, however based on our review and a comparison to our simplified Excel models, we believe the software produces reasonable output for the purposes of this valuation. We are not aware of any known weaknesses or limitations of the model that have a material impact on the results.

## DATA

We used the contract data file provided by WA529 staff. We relied on this data as accurate and complete, and valued each entry in the file. We did not perform an audit of this data but reviewed the data and believe it is reasonable for the purposes of our work. We used data entries such as:

- ❖ **Program Year** — The contract holder's entry year into the program.
- ❖ **Use Year** — When the contract holder expects to start using units for tuition (or other qualified expenses).
- ❖ **Payment Amount** — The monthly amount the contract holder owes on their payment plan.
- ❖ **Payments Due** — The number of monthly payments left on the contract holder's monthly payment plan.
- ❖ **Units Outstanding** — The number of units the contract holder currently owns, and units still being paid for under a monthly payment plan.

When applicable, we made adjustments to the data for certain accounts. When reviewing the difference between the program year and use year, we adjusted the use year such that the minimum difference was 2 years and maximum difference was 22 years. In total, this change affected the use year of about 1 percent of units.

To review our Tuition Growth assumption, we studied the historical tuition data in the following table. We also examined average tuition growth and standard deviation over different time periods.





Historical Tuition Growth			
Year	Tuition Growth	Year	Tuition Growth
		<b>2002-03</b>	16.0%
<b>1982-83</b>	11.0%	<b>2003-04</b>	7.0%
<b>1983-84</b>	11.2%	<b>2004-05</b>	6.6%
<b>1984-85</b>	0.0%	<b>2005-06</b>	6.8%
<b>1985-86</b>	22.7%	<b>2006-07</b>	6.9%
<b>1986-87</b>	0.0%	<b>2007-08</b>	6.8%
<b>1987-88</b>	7.9%	<b>2008-09</b>	6.8%
<b>1988-89</b>	3.8%	<b>2009-10</b>	13.1%
<b>1989-90</b>	1.7%	<b>2010-11</b>	13.1%
<b>1990-91</b>	6.9%	<b>2011-12</b>	19.0%
<b>1991-92</b>	11.5%	<b>2012-13</b>	15.2%
<b>1992-93</b>	3.4%	<b>2013-14</b>	0.0%
<b>1993-94</b>	12.4%	<b>2014-15</b>	0.0%
<b>1994-95</b>	14.8%	<b>2015-16</b>	(5.0%)
<b>1995-96</b>	3.9%	<b>2016-17</b>	(9.1%)
<b>1996-97</b>	4.0%	<b>2017-18</b>	2.1%
<b>1997-98</b>	3.9%	<b>2018-19</b>	2.1%
<b>1998-99</b>	4.0%	<b>2019-20</b>	2.3%
<b>1999-00</b>	3.7%	<b>2020-21</b>	2.4%
<b>2000-01</b>	3.4%	<b>2021-22</b>	2.7%
<b>2001-02</b>	7.1%	<b>2022-23</b>	2.3%

Historical Tuition Growth		
Time Period	Average	Standard Deviation
<b>5-Years</b>	2.3%	0.2%
<b>10-Years</b>	(0.1%)	3.9%
<b>15-Years</b>	4.2%	7.7%
<b>20-Years</b>	4.9%	6.7%
<b>40-Years</b>	5.9%	6.3%

## APPENDIX B: ASSETS

The following table provides information on the types of asset investments, or asset classes, and WSIB 2021 CMAs. For additional information on the program's assets, see the **Best Estimate Results** section.

Capital Market Assumptions			
Asset	Return	Standard Deviation	Weight
<b>Fixed Income</b>	3.5%	5.7%	60%
<b>Global Equities</b>	8.1%	19.0%	40%
<b>Portfolio</b>	<b>5.3%</b>	<b>9.2%</b>	<b>100%</b>
Correlation	Fixed Income	Global Equities	
<b>Fixed Income</b>	1.0		
<b>Global Equities</b>	0.3	1.0	

The average 5.3 percent portfolio return is a 1-year arithmetic return. As an additional reference point, WSIB provided our office with simulated future investment returns under varying projection periods for the GET fund. When compounded over a 10- and 15-year period, the median (50<sup>th</sup> percentile) simulated geometric return is 4.90 and 4.87 percent, respectively. This may be compared to the average time horizon of remaining payments for a current outstanding unit of roughly 7 years or a new unit sale of approximately 16 years.

WSIB Simulated Investment Returns over Various Projection Periods			
	5 Years	10 Years	15 Years
<b>75th Percentile</b>	7.95%	7.05%	6.65%
<b>50th Percentile</b>	4.85%	4.90%	4.87%
<b>25th Percentile</b>	1.87%	2.79%	3.12%

We considered two adjustments to the WSIB CMAs—an adjustment for inflation and an adjustment for a cash allocation up to 5 percent within the asset allocation policy. However, we do not believe these considerations will materially impact our Investment Return assumption for GET. This is due to (1) the asset classes available to the GET investment portfolio and the current allocation, (2) WSIB's 10- and 15-year projection period more closely aligning with the duration of the GET plan, and (3) our 2.25 percent Inflation assumption for GET being close to WSIB's 2.20 percent inflation assumption.

For this valuation, we reviewed WSIB's 2021 CMAs and corresponding simulated returns, and retained our investment return assumption of 4.75 percent.

The following table shows the historical rates of investment return and program funded status for the GET trust fund since the inception of the program.

<b>Historical Information</b>			
<b>Funded Status</b>			
<b>Fiscal Year</b>	<b>Investment Return</b>	<b>Market Fund Value</b>	<b>Actuarial Fund Value</b>
1999	4.96%*	110.1%	
2000	10.25%	113.4%	
2001	(1.63%)	104.9%	
2002	(2.79%)	89.6%	
2003	7.56%	98.4%	
2004	16.00%	104.5%	
2005	10.07%	108.1%	
2006	8.94%	108.8%	
2007	14.77%	117.4%	
2008	(0.70%)	109.5%	
2009	(16.02%)	84.2%	
2010	12.68%	86.2%	
2011	20.46%	79.1%	
2012	0.07%	78.5%	
2013	9.59%	94.1%	
2014	16.36%	105.8%	
2015	0.83%	140.1%	
2016	0.61%	135.6%	
2017	10.92%	132.8%	
2018	6.35%	130.2%	
2019	5.29%	131.3%	130.0%
2020	7.40%	131.0%	129.2%
2021	16.84%	166.1%	151.4%
2022	(11.45%)	140.6%	147.9%

\*Represents 9-month return.



## APPENDIX C: CONTRACT DATA

The following tables summarize units and contracts by the contract enrollment year and initial contract use year.

Number of Units Sold by Unit Price		
Enrollment Year	Unit Price	Units Sold
1998-99	\$35	1,374,095
1999-00	38	615,327
2000-01	41	523,702
2001-02	42	2,463,500
2002-03	52	2,099,531
2003-04	57	1,896,635
2004-05	61	2,108,360
2005-06	66	2,146,191
2006-07	70	2,339,431
2007-08	74	2,102,305
2008-09	76	3,177,699
2009-10	101	2,624,367
2010-11	117	2,697,696
2011-12	163*	1,503,962**
2012-13	172*	1,038,773
2013-14	172*	741,701
2014-15	172*	618,367
2015-16***	-	0
2016-17***	-	0
2017-18	113	770,665
2018-19	113	639,646
2019-20	121	505,222
2020-21	133	550,062
2021-22	\$114.01	735,322

\*Price includes amortization component that was subsequently refunded.

\*\*Restated number of units sold.

\*\*\*Unit sales suspended.

Number of Units Outstanding by Use Year			
Use Year	Expected Unit Value	Units Starting to be Used	Contracts Starting to be Used
2022*	\$117	3,274,659	23,292
2023	120	835,771	4,224
2024	123	839,788	4,468
2025	128	821,950	4,366
2026	133	794,362	4,373
2027	138	680,366	3,873
2028	144	595,631	3,582
2029	150	445,293	2,901
2030	156	387,676	2,716
2031	162	315,814	2,344
2032	168	269,147	2,038
2033	175	221,947	1,718
2034	182	197,878	1,528
2035	189	190,630	1,492
2036	197	173,262	1,434
2037	205	140,566	1,212
2038	213	109,309	1,032
2039	222	80,967	761
2040	\$230	35,060	347

\*Includes contracts that already started using units.

## APPENDIX D: UNIT PRICE-SETTING GUIDELINES

In 2011, the GET Committee adopted new unit price-setting guidelines that determine how we price future units. These guidelines address the new tuition-setting policy established by the Legislature at that time and were intended to return the program to a fully funded status. The unit price-setting guidelines adopted in 2011 include the following four parts:

- ❖ **Expected Cost** — Covers the expected cost of future tuition and applicable state-mandated fees.
- ❖ **Expenses** — Contributes to the payment of administrative expenses. We calculate this amount as the present value of expected administrative expenses from the prior year's valuation report per outstanding unit and adjust forward for one year of interest.
- ❖ **Reserve** — Covers unexpected future costs such as above-expected tuition growth or below-expected investment returns. This component can be increased or decreased to alter the probability that a unit will ever create an unfunded liability in the future.
- ❖ **Amortization** — An optional component that covers unexpected past costs from significant program or policy changes. This component did not apply to the most recent unit price-setting analysis.

The WA529 Committee, at their September 2022 meeting, adopted a new unit price of \$116.63 for sales during the 2022-23 enrollment period. This price matches the unit payout value at the time of price adoption and is within our best estimate range.

For further details, including sensitivity, best estimate range assumptions, and risk analysis, please see the presentation titled, 2022 GET Unit Price-Setting, in the WA529 September 14, 2022, meeting materials located on the WSAC [website](#).

GET Unit Price Information			
2022-23 Enrollment		2021-22 Enrollment	
Best Estimate			
Unit Price	Range*	Best Estimate	Best Estimate
<b>Expected Cost</b>		\$100.02	\$96.56
<b>Expenses</b>		3.04	3.03
<b>Reserve</b>		15.46	14.94
<b>Amortization</b>		N/A	N/A
<b>Total Unit Price</b>	<b>\$104 – \$134</b>	<b>\$118.00</b>	<b>\$114.00</b>
<b>Unit Price Adopted**</b>		<b>\$116.63</b>	<b>\$114.01</b>

*Note: Totals may not agree due to rounding.*

*\*Best estimate range based on assumptions disclosed in the September 2022 WA529 Committee meeting materials.*

*\*\*Unit price adopted by the WA529 Committee.*

To determine the best estimate unit price and range, we estimate the future payout value of a single unit based on assumptions for future tuition growth and holding periods for the unit (the duration between purchase and redemption). We calculate the present value of this unit by discounting the future payout value using the expected rate of investment return and varying that rate along with tuition growth rates to determine the best estimate range.

We would consider any unit price adoption within the “best estimate” range to be reasonable from an actuarial perspective for pre-funding the cost of a unit. The Committee will have additional policy considerations when selecting a unit price.

This calculation is performed using economic assumptions for tuition growth and investment return matching those used in the valuation. Please see **Appendix A** for more information.

The holding periods for the unit are based on demographic assumptions about new enrollments. We use the new unit sales profile outlined in the following table to estimate the present value cost of future unit payouts associated with the sale of a single unit. Please see the *2021 GET Experience Study* for further details.

<b>New Unit Sales Profile</b>	
<b>Length in Program (Years)</b>	<b>Percent of Single Unit</b>
2	1.0%
3	2.0%
4	2.0%
5	4.0%
6	4.0%
7	6.0%
8	6.0%
9	6.0%
10	6.0%
11	6.0%
12	6.0%
13	7.0%
14	7.0%
15	7.0%
16	7.0%
17	7.0%
18	8.0%
19	8.0%
20	0.0%
<b>Total</b>	<b>100.0%</b>





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