

**Teacher Retirement System
Summary of Recommendations - Senate**

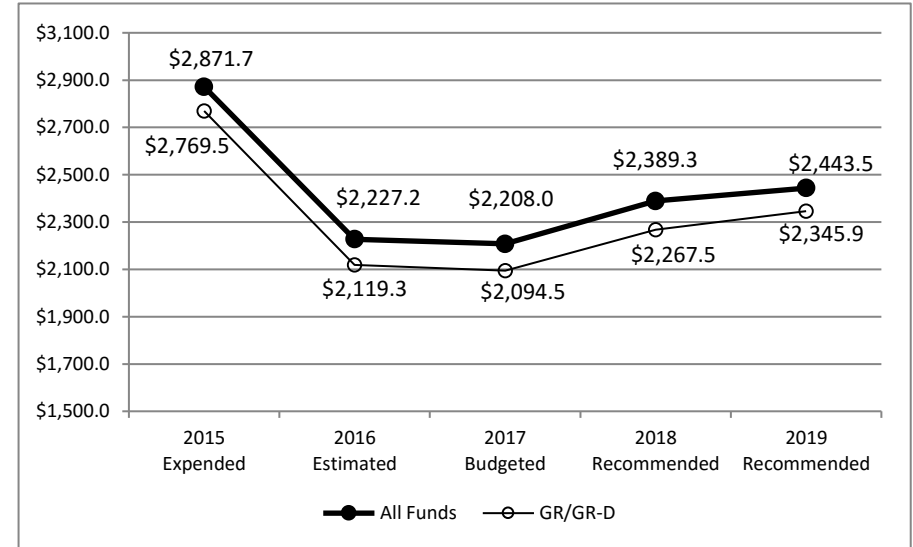
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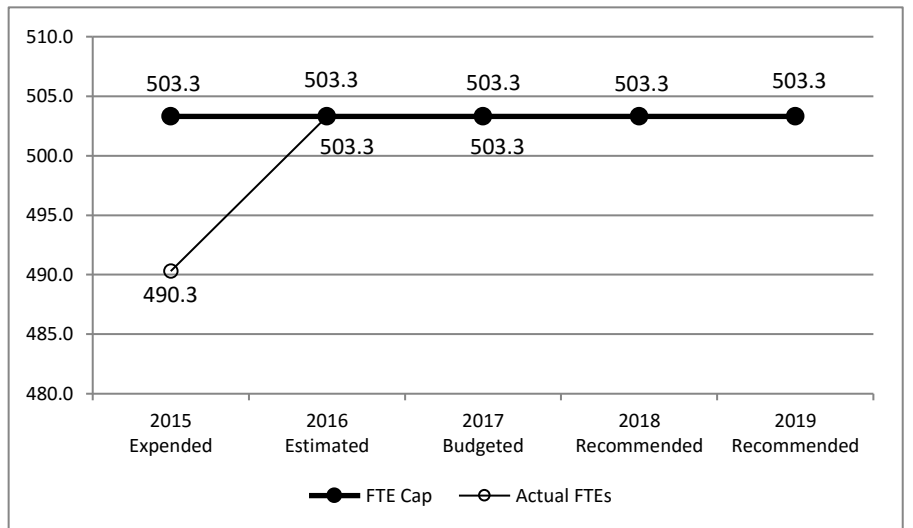
Method of Financing	2016-17 Base	2018-19 Recommended	Biennial Change (\$)	Biennial Change (%)
General Revenue Funds	\$4,127,445,321	\$4,515,961,727	\$388,516,406	9.4%
GR Dedicated Funds	\$86,376,320	\$97,451,314	\$11,074,994	12.8%
Total GR-Related Funds	\$4,213,821,641	\$4,613,413,041	\$399,591,400	9.5%
Federal Funds	\$0	\$0	\$0	0.0%
Other	\$221,358,544	\$219,439,257	(\$1,919,287)	(0.9%)
All Funds	\$4,435,180,185	\$4,832,852,298	\$397,672,113	9.0%

	FY 2017 Budgeted	FY 2019 Recommended	Biennial Change	Percent Change
FTEs	503.3	503.3	0.0	0.0%

Historical Funding Levels (Millions)



Historical Full-Time-Equivalent Employees (FTEs)



The bill pattern for this agency (2018-19 Recommended) represents an estimated 2.8% of the agency's estimated total available funds for the 2018-19 biennium.

Teacher Retirement System
Summary of Funding Changes and Recommendations - Senate

Funding Changes and Recommendations for the 2018-19 Biennium compared to the 2016-17 Base Spending Level (in millions)		General Revenue	GR-Dedicated	Federal Funds	Other Funds	All Funds	Strategy in Appendix A
SIGNIFICANT Funding Changes and Recommendations (each issue is explained in Section 3 and additional details are provided in Appendix A):							
A)	Retirement (K-12): Increase funding for state retirement contributions for K-12 employees due to the growth of covered payroll in public education.	\$336.1	\$0.0	\$0.0	\$0.0	\$336.1	A.1.1.
B)	Retirement (Higher Education): Decrease General Revenue funding and increase General Revenue-Dedicated funding for retirement contributions to Higher Education in accordance with payroll growth trends of higher education employees covered by state funds.	(\$14.2)	\$11.1	\$0.0	\$0.0	(\$3.1)	A.1.2.
C)	TRS-Care: Increase funding for Retiree Health due to the growth of covered payroll in public education.	\$66.7	\$0.0	\$0.0	\$0.0	\$66.7	A.2.1.
OTHER Funding Changes and Recommendations (these issues are not addressed in Section 3 but details are provided in Appendix A):							
F)	Decrease funding for Administrative Operations due to lower funding needs for the TRS Enterprise Application Modernization (TEAM) project in the amount of (\$10,379,906); increase by \$2,070,000 for additional capital projects; and increase by \$5,205,290 for other Administrative operations attributable to increased membership, the growing complexity of investment management, and the implementation of the final phase of the TRS Enterprise Application Modernization (TEAM) project.	\$0.0	\$0.0	\$0.0	(\$3.1)	(\$3.1)	A.1.3.
G)	Increase funding for TRS Employee Retirement due to the growth of covered payroll resulting mainly from the increased staff related to the TRS Enterprise Application Modernization (TEAM) project. TEAM staff are exempted from the agency's FTE cap by TRS Rider 8, Enterprise Application Modernization FTE Exemption.	\$0.0	\$0.0	\$0.0	\$1.2	\$1.2	A.1.2.
TOTAL SIGNIFICANT & OTHER Funding Changes and Recommendations (in millions)		\$388.6	\$11.1	\$0.0	(\$1.9)	\$397.8	As Listed
SIGNIFICANT & OTHER Funding Increases		\$402.8	\$11.1	\$0.0	\$1.2	\$404.0	As Listed
SIGNIFICANT & OTHER Funding Decreases		(\$14.2)	\$11.1	\$0.0	(\$3.1)	(\$6.2)	As Listed

NOTE: Totals may not sum due to rounding.

**Teacher Retirement System
Selected Fiscal and Policy Issues - Senate**

- Retirement: State Contributions to the Retirement Trust Fund and Payroll Growth Assumptions.** Funding recommendations for retirement contributions for the 2018-19 appropriations bill as introduced total \$3.97 billion, an increase of \$375.5 million from the 2016-17 base. This increase is 84.7 percent of the agency’s All Funds biennial increase and is primarily due to payroll growth. Recommendations include funding sufficient to provide a 6.8 percent state contribution rate to the retirement trust fund for public education and higher education employees in each year of the 2018-19 biennium, which is the same rate as the 2016-17 biennium. For the purpose of estimating state contributions to the retirement trust fund, recommendations assume payroll growth of 3.5 percent for eligible public education employees and 2.9 percent (composite weighted average) for higher education employees covered by state funds in each year of the 2018-19 biennium.

Figure 1 2018-19 Contribution Rates to TRS Pension Trust Fund	
State	6.8%
Employee	7.7%
Districts not participating in Social Security	1.5%

NOTES: State and employee contribution rates for 2018-19 remain the same as the contribution rates in 2017. Employer contributions for districts not participating in Social Security were set at 1.5% by Senate Bill 1458, 83rd Legislature.

The historical trend data for public education reflects average annual payroll growth of 4.09 percent over the last ten years, and 4.14 percent since post-Recession funding trends began in the 2012-13 school year (FY 2013), driven by population growth, rising student enrollment, and the increase of educational staff in school districts across the state. The assumed growth rate for the 2018-19 biennium tempers these growth rates to 3.5 percent on the expectation that the funding trend has stabilized.

In higher education, state contributions to TRS retirement consist of two components: General Revenue (GR), which is growing slowly; and General Revenue-Dedicated (GR-D), or statutory tuition, which is growing rapidly. For the purpose of estimating state contributions to the retirement trust fund, the two methods of finance are calculated separately based on the historic growth trends of retirement contributions covered by each method of finance. General Revenue contributions to higher education retirement have grown modestly at an annual rate of 0.9 percent since fiscal year 2013. The assumed growth rate for the 2018-19 biennium is 1.0 percent, based on the expectation that the recent growth trend will continue. GR-D contributions have grown by a compound annual rate of 7.5 percent between 2002 and 2016, and at a rate of 11.25 percent annually over the last five years. The GR-D growth assumption for the 2018-19 biennium is 10.0 percent each fiscal year, based on these trends. When the General Revenue and GR-D portions of TRS higher education retirement are added together and projected through the 2018-19 biennium, the composite weighted average growth rate is 2.9 percent.

Figure 2 Payroll Growth Trends of TRS Pension Trust Fund Members		
	Public Education (GR)	Higher Education (GR & GR-D)
Assumptions in Each Year, 2017-19	3.5%	2.9%
Historical Trends		
Since Funding Recovery (FY 2013)	4.14%	3.03%
Ten-year Average	4.09%	-1.52%
Since 2002	4.78%	0.62%

NOTE: Higher Education growth rates are a composite of payroll growth covered by General Revenue (GR) and General Revenue Dedicated (GR-D).

Recommendations include the limitations required by Senate Bill 1812, Eighty-third Legislature, for contributions to Public Junior and Community Colleges. These include a cap on state appropriations of 50 percent of the employer contribution for eligible Instructional and Administrative employees. In addition, the number of employees eligible to receive state contributions may not be adjusted in a proportion greater than the change in student enrollment at each community college district. Districts that experience a decline in enrollment may petition the Legislative Budget Board to maintain eligible employees up to 98 percent of the employee level of the previous biennium.

2. **Actuarial Valuation.** The Eighty-third Legislature enacted changes in Senate Bill 1812 that improved the amortization period and thus the actuarial condition of the TRS Pension Trust Fund. These included an increase in the minimum retirement age from 60 to 62 for an unreduced annuity for members who were vested on or after September 1, 2014. Senate Bill 1812 also established stair-step increases for employee contributions, which increased from 6.4 percent in 2014, to 6.7 in fiscal year 2015, to 7.2 percent in 2016, and to 7.7 percent in 2017. In addition, the bill established a new 1.5 percent contribution for districts that do not participate in Social Security, and granted a three percent cost-of-living increase, capped at \$100 per month, for those retired by August 31, 2004.

Figure 3 Actuarial Valuations of the TRS Pension Trust Fund					
	Funded Ratio	Unfunded Actuarial Accrued Liability (UAAL)	Amortization Period	Investment Return (fiscal year)	Fund Net Position
As of August 31, 2014 (FY 2014)	80.2%	\$31.6 billion	29.8 years	16.8%	\$132.8 billion
As of August 31, 2015 (FY 2015)	80.2%	\$33.0 billion	33.3 years	-0.3	\$128.5 billion
As of August 31, 2016 (FY 2016)	79.7%	\$35.5 billion	33.6 years	7.3%	\$134.0 billion

NOTES: The increased amortization period at fiscal year-end 2016 is the result of deferred investment losses of \$4.8 billion, and stair-stepped member contribution rates that did not reach their final levels until fiscal year 2017. The funded ratio does not include net deferred losses.

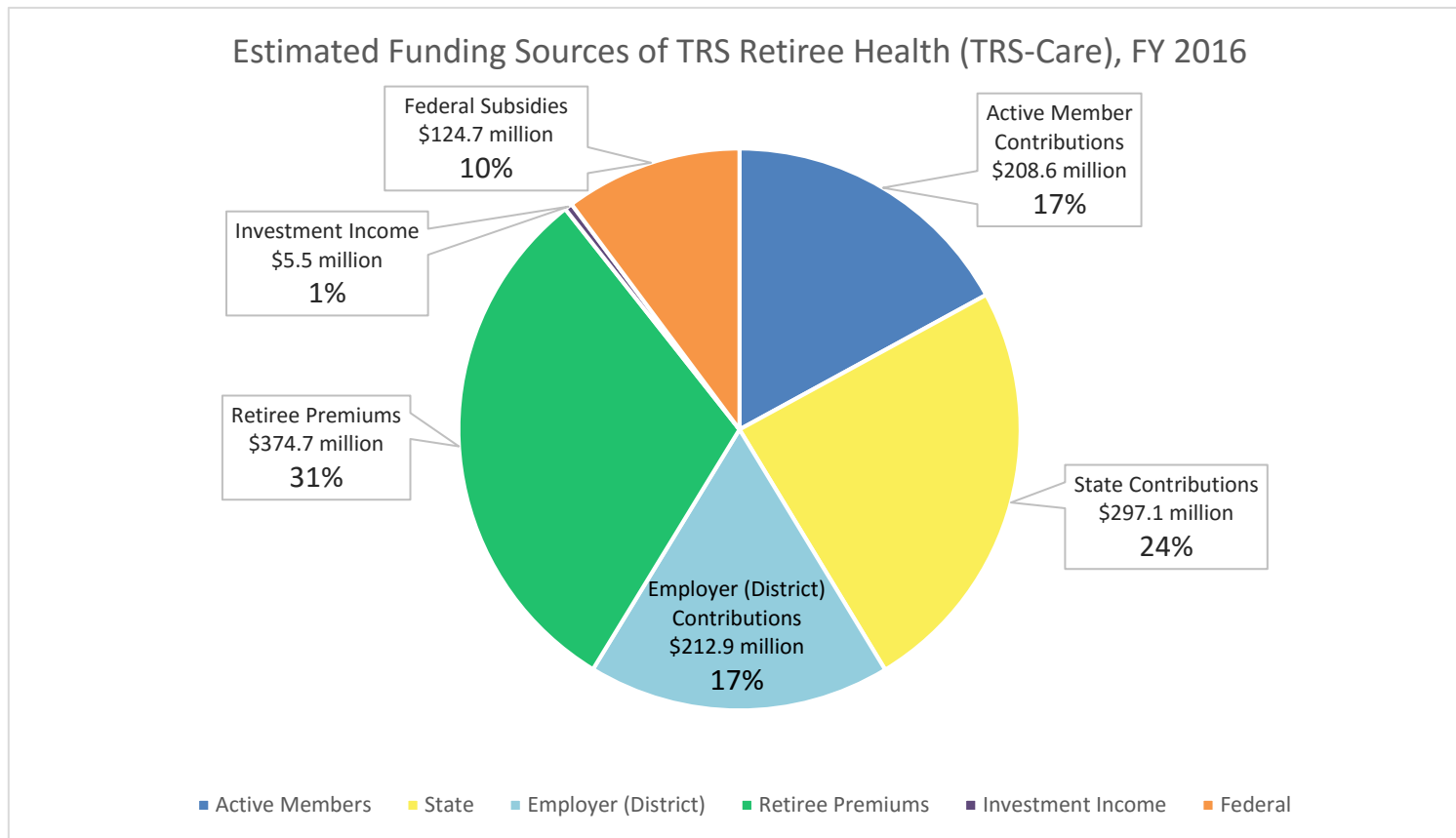
The actuarial valuation as of August 31, 2016 reveals that the funded ratio of the TRS Pension Trust Fund is 79.7 percent. The System’s unfunded actuarial accrued liability (UAAL) increased from \$33.0 billion in 2015 to \$35.5 billion in 2016 and its funded ratio fell below 80 percent as a result of underperforming its targeted investment return of 8.0 percent in both years, adjusted demographic assumptions, and deferred investment losses currently at \$4.8 billion. Despite this, the payroll from which the TRS Pension Trust Fund receives contributions grew faster than expected, offsetting the impact of investment and liability experience. The result is that the amortization period as of August 31, 2016 increased only slightly to 33.6 years. Because of the deferred investment losses, the amortization period is expected to increase in the short term as deferred investment losses are recognized, and then to decrease in the future.

Investment performance of the TRS Pension Trust Fund in fiscal year 2016 was 7.3 percent. The TRS Pension Trust Fund has averaged annualized returns of 8.0 percent over five years and 6.0 percent over ten years. The long-term actuarial assumption of the TRS Pension Trust is 8.0 percent.

- 3. TRS-Care: Funding and Contribution Rates.** Senate Bill 1 as Introduced provides TRS-Care with \$647.6 million in General Revenue Funds, an 11.5 percent increase above the 2016-17 base, attributable to an assumed public education payroll growth rate of 3.5 percent annually. This level of funding maintains the same contribution rates in 2018-19 as in the 2016-17 biennium, including funding sufficient to provide a state contribution rate of 1.0 percent of payroll for TRS-Care in compliance with statute. The active employee contribution rate is 0.65 percent, and the school district contribution rate is 0.55 percent. There are 261,528 participants in TRS-Care.

In addition, Senate Bill 1 as Introduced deletes Rider 15 of the 2016-17 General Appropriations Act, “Legislative Intent Relating to Retiree Health Insurance Premiums,” which had expressed the intent of the Legislature not to raise retiree premiums during the 2016-17 biennium.

Based on current contribution rates, the TRS-Care Trust Fund received funding in fiscal year 2016 as shown below.



4. **TRS-Care Shortfall: Projected Insolvency.** The TRS-Care Trust Fund is projected to become insolvent in fiscal year 2018, possibly as early as the last quarter of fiscal year 2017. At the time of the Legislative Appropriations Request (LAR) submission, the TRS-Care funding shortfall in the 2018-19 biennium was estimated at \$1.35 billion, the amount requested as TRS’s first exceptional item. Based on this estimate, TRS requests \$500 million in fiscal year 2018 and \$850 million in fiscal year 2019 to ensure solvency of the TRS-Care Fund through the biennium. The most recent estimates as of January 2017, however, reduce the amount of the shortfall to \$335 million in fiscal year 2018 and \$753 million in fiscal year 2019, for a biennial shortfall of \$1.09 billion. This compares to a shortfall in the 2016-17 biennium of \$768 million, which the Eighty-fourth Legislature funded with a one-time supplemental appropriation in fiscal year 2015. The Joint Interim Committee on TRS Health Benefits examined options for TRS-Care solvency and released its report in December 2016. In addition, TRS staff presented options to the Joint Interim Committee during hearings held in March 2016. Estimates of the TRS-Care shortfall will be updated by TRS staff throughout the Eighty-fifth Legislative Session.

Recommendations do not include an increase in state contributions related to the TRS-Care shortfall in the appropriations bill as introduced. The resource material below is provided to the Legislature to help address this issue.

There are five funding levers that can be manipulated to increase revenue, decrease costs, and thereby affect the solvency of the TRS-Care Trust Fund.

Figure 4 TRS-Care Funding Levers		
	Contribution Rate	Limitations and Other Considerations
1. Increase State Contributions	1.0%	Increasing state contributions would require the Legislature to amend statute to increase the state contribution rate above 1.0 percent.
2. Increase Active Member Contributions	0.65%	Increasing active member contributions would require the Legislature to amend statute to increase the active member contribution rate above 0.65 percent. An additional consideration is that active members are enrolled in TRS-ActiveCare, the costs of which have increased significantly for employees since 2002.
3. Increase District Contributions	0.55%	Increasing district contributions would require the Legislature to set the district contribution rate higher in the General Appropriations Act. Statute currently sets the range of district contributions between 0.25 percent and 0.75 percent.
4. Increasing Retiree Premiums	-	The Legislature may consider including a new rider in the 2018-19 General Appropriations Act requiring TRS to take appropriate actions to ensure solvency of the fund, such as premium increases and further plan design changes, to offset at least 25% of the projected cost of maintaining the TRS-Care fund’s solvency during the next biennium. The Texas Insurance Code, §1575.211 requires that Retired Members contribute no less than 30 percent to the fund.
5. Reduce Retiree Benefits	-	As with retiree premiums, the Legislature may consider including a rider in the 2018-19 General Appropriations Act requiring TRS to take appropriate actions to ensure solvency of the fund, such as premium increases and further plan design changes. TRS has already introduced several plan design changes, effective September 1, 2016, that are projected to save the fund approximately \$40 million. These changes include increased deductibles and out-of-pocket maximums, changes in prescription drug plans, and a switch to Humana for all Medicare Advantage plans through TRS-Care.

5. **TRS-Care Shortfall: Hypothetical Funding Scenario.** The TRS-Care shortfall is caused by a disjuncture between revenue and costs. Most of the sources that generate revenue for the TRS-Care fund are tied to public education payroll, which grows at a modest rate, while health care costs have risen much faster. The main drivers of health costs are growing medical and prescription drug claims; increasing utilization due to an aging population; an increase in the number of non-Medicare retirees; changes in federal and state legislation, including changes in Medicare coverage; advances in medical technology, testing, and equipment; the development of expensive specialty and biogenetic drugs; and the costs associated with maintaining access and choice in health providers. Revenue has been lower than expenditures since fiscal year 2012, resulting in a projected negative balance that began in fiscal year 2016. The Legislature solved a similar insolvency problem in 2003, when it spread the overall solvency cost by increasing contributions from the state, active members, school districts, and retirees. Combined, these new sources contributed an additional \$1.1 billion for the 2004-05 biennium, including an additional \$546.6 million from the state, and ensured solvency of the fund for a decade.

Figure 5 illustrates a funding scenario similar to 2004-05 that would spread the cost of solvency funding for the biennium, currently estimated at \$1.35 billion, proportionally between the state, retirees, active members, and school districts. The cost of the solvency funding would be allocated as 50 percent to the state, 25 percent to retiree premiums, and 12.5 percent to both active members and school districts. If the Legislature adopts this option, total contributions to TRS-Care in the 2018-19 biennium would equal approximately \$3.73 billion, but the cost-sharing proportions of 50-25-12.5-12.5 proposed in this scenario would apply only to the solvency cost of \$1.35 billion. This solvency funding option would involve the state contribution rate increasing from 1.0 percent to 2.04 percent and generating an additional \$673.5 million during the biennium above the amount at current contribution rates. The active member contribution would increase from 0.65 percent to 0.96 percent and generate an additional \$167 million. The district contribution would increase from 0.55 percent to 0.98 percent and generate an additional \$170.5 million. Finally, the retiree contribution, which could result from either premium increases or benefit reductions, would generate an additional \$337.5 million during the biennium above the amount at current contribution rates. Together, these increases would be sufficient to cover the \$1.35 billion biennial shortfall of the TRS-Care fund.

Figure 5						
Hypothetical Scenario: Proportional Cost Sharing of the \$1.35 billion 2018-19 TRS-Care Shortfall (in millions)						
Contribution Source	Share of Solvency Cost (est.)	Solvency Funding Cost in 2018-19	New Contribution Rate	Current Shares of Total Funding	New Shares of Total Funding	Percentage Increase from Current Projected Cost
State	50.0%	\$673.5	2.04%	24.3%	35.4%	104.0%
Retirees	25.0%	\$337.5	N/A	30.6%	30.9%	41.3%
Active Members	12.5%	\$167.0	0.96%	17.1%	16.7%	36.7%
School Districts	12.5%	\$170.5	0.98%	17.4%	17.0%	36.7%
Other Sources	N/A	N/A	N/A	10.6%	6.7%	N/A

NOTES:

- (1) Retiree funding includes premiums only and omits out of pocket costs such as deductibles and coinsurance.
- (2) Current shares of total funding reflect fiscal year 2016 amounts for each source.
- (3) Other sources of revenue, primarily federal drug reimbursements, would not change as a result of new funding.

6. **TRS Enterprise Application Modernization (TEAM).** Recommendations include \$25.1 million in Other Funds (Pension Trust Fund) for completion of the TEAM technology initiative in 2018-19. The project replaces legacy systems for benefits administration and accounting, including the pension system, member records, data management, and website redesign. The total project cost is currently estimated at \$114.9 million, with an estimated completion date at the end of fiscal year 2019. Initially, the project was estimated to cost a total of \$94.6 million, with completion scheduled for fiscal year 2017. Once the project commenced, cost projections increased and estimated completion dates were extended, in part to reflect

updated information on additional enhancements to the legacy system that were not included in the original estimates. The Eighty-second Legislature appropriated \$25 million from the Pension Trust Fund for the 2012-13 biennium to begin the project. The Eighty-third Legislature appropriated \$34.6 million, which included \$9.6 million in estimated lapsed funds from the previous biennium. The Eighty-fourth Legislature appropriated \$40.3 million. The total cost to date, as of January 2017, is 82.0 million. The completion timeline has been extended from an original estimate of 66 months to the current estimate of 95 months. Rider 16 of the agency’s bill pattern exempts the FTEs assigned to the TEAM initiative from the agency FTE cap during implementation of TEAM.

- 7. **Administrative Operations.** Recommendations include funding for Administrative Operations associated with pension-related expenses in the amount of \$211.4 million for the biennium in Other Funds (Pension Trust Fund), which is \$3.1 million lower than the 2016-17 base. Recommendations for administrative operations are driven substantially by the TRS Enterprise Application Modernization (TEAM) project, for which the agency requests an additional \$25.1 million in 2018-19, combined with the growth in pension membership and the increased complexity of investment management. Funding for administrative operations associated with other agency functions, such as TRS-Care and TRS-ActiveCare, are not appropriated and are funded from the associated trust funds.

Funding for Administrative Operations in the appropriations bill as introduced excludes \$3.9 million for an additional 25.0 FTEs included in the agency’s baseline request. The request intends to support the permanent transition related to the TEAM project, including ten for Benefits Administration, seven to support permanent IT positions related to the TEAM project, two investment staff, and six support staff in audit, legal, and communications divisions. Although the agency has broad statutory discretion in the purchasing of goods and services with the Pension Trust Fund, recommendations exclude the additional 25 FTEs so that the Legislature may consider the agency’s request and whether to increase its FTE cap. The relevant statute on TRS fiduciary authority is in Government Code, §825.101 and §825.104(d).

- 8. **TRS-ActiveCare Affordability.** Since it is not an appropriation for TRS, the appropriations bill as introduced includes no recommendations related to TRS-ActiveCare. Rather, this section highlights the affordability of the plan and the tendency for health care cost increases to be passed primarily to active members. The ActiveCare plan was created in 2002 as a health care benefits program for certain public school district employees, including active teachers in participating districts, as enacted by the Seventy-seventh Legislature in 2001. Smaller districts with fewer than 500 employees (as of 2001) were required to participate. Medium sized (500-1,000 employees) and larger districts (over 1,000 employees) had a choice to opt in, and many have joined the plan. In order to guard against adverse selection, state law does not allow districts to exit ActiveCare once they have joined. There are approximately 484,316 participants in TRS-ActiveCare, including 56,300 enrolled in Health Management Organization (HMO) plans, as of fiscal year 2016. Of this number, 61.2 percent are employees and the remainder are dependents.

Figure 6 School Districts and Other Employers in TRS-ActiveCare			
Employer: Number of Employees	Employers Eligible	Employers Participating	Percentage Participating
Less than 500	816	801	98.2%
500 – 1,000	102	90	88.2%
More than 1,000	106	56	52.8%
Charter Schools	173	130	75.1%
Regional Service Centers	20	20	100%
Other	5	5	100%

State law requires a minimum contribution by the state of \$75 per member per month, which is distributed as part of the Foundation School Program. The employing district must contribute a minimum of \$150 per member per month toward the premiums of participating members. According to TRS, premium cost increases over time have been significant and largely borne by the participants, while the minimum state and district contributions have not increased since the program's inception, although about two-thirds of districts contribute more than the minimum. Since employer contributions have remained relatively flat, TRS reports that the employee share of premium costs has increased by over 200 percent in the 14 years since the inception of the plan, even while associated benefit plans have been reduced. In fiscal year 2015, the state contributed \$237.1 million, or 13.4 percent of ActiveCare funding; school districts contributed \$474.2 million, or 26.8 percent of funding; and active employees contributed \$1.05 billion, or 59.7 percent of funding, a proportion that is expected to grow. The Joint Interim Committee on TRS Health Benefits examined options to improve TRS-ActiveCare affordability during the interim, and released its report in December 2016.

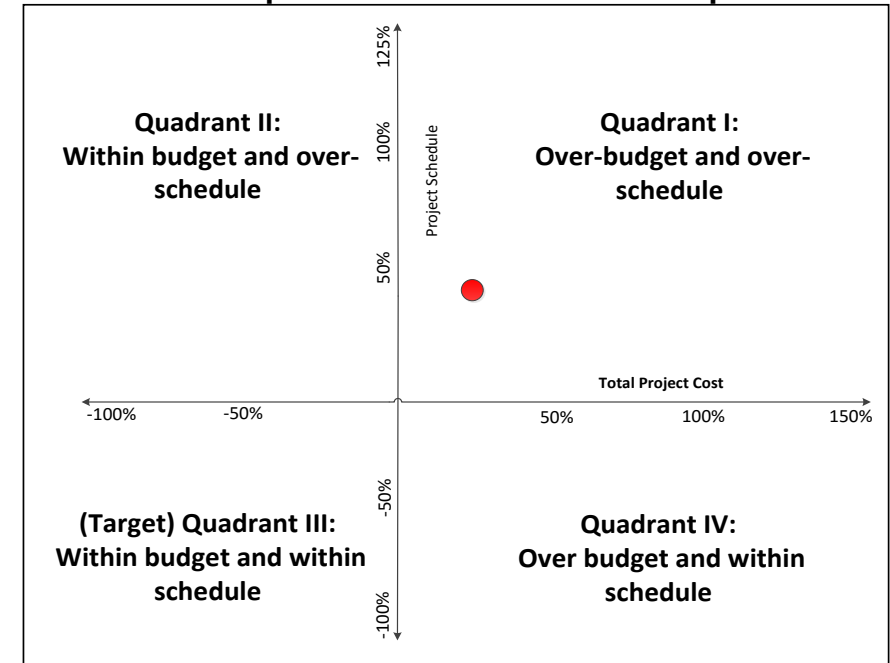
**Teacher Retirement System
Quality Assurance Team Highlights**

Summary of Total Costs (in millions) and Time Frames reported to the Quality Assurance Team*

Project Name	Original Projected Costs	Current Projected Costs	Difference in Costs	Expenditures to Date	Original Timeline in Months	Current Timeline in Months	Difference in Time	% Complete
1 TRS Enterprise Application Modernization (TEAM)	\$96.1	\$114.9	\$18.8	\$82.0	66	95	29	66%
Project Totals (1)	\$96.1	\$114.9	\$18.8	\$82.0				

*Note: The project is 20% over-budget and 43% over-schedule due to updated benefit calculations and the addition of a contingency. The finish date has been extended due to additions to the original program scope.

Major Information Resources Projects



Legend

- Project which is within budget and within schedule
- Project which exceeds budget OR schedule
- Project which is over budget and behind schedule

*Note: These figures reflect all project costs (Capital and Informational) and timelines from self-reported monitoring reports that are sent to the Quality Assurance Team (QAT) for review. QAT includes representatives from the Legislative Budget Board, the State Auditor's Office, and the Department of Information Resources.

**Teacher Retirement System
Quality Assurance Team Highlights**

Significant Project Highlights

1 TRS Enterprise Application Modernization (TEAM)

This project was appropriated \$25.0 million (Trust Funds - 960) for project development and authorized to begin in FY 2012 for a duration of 66 months with initial estimated project costs of \$94.6 million.

The overall goal of the Teacher Retirement System (TRS) Enterprise Application Modernization (TEAM) Program is to implement a cost effective, efficient, and sustainable program to enable TRS to serve the expanding needs of its members, employers, and annuitants.

When the project was initiated, milestones quickly began to slip because the agency did not provide enough time in the initial Request For Offer (RFO) for the Line of Business (LOB) Solution. In August 2012, the agency submitted their Project Plan to the QAT which identified an increase of costs of more than 10%. This increase required the agency to re-submit their project tool set to the QAT. In September 2012 QAT reviewed their new baseline documents and noted several reasons for the cost increase:

- The estimated cost of TRS staff increased by \$8.0 million. The original cost estimate did not include embedding existing IT staff with the contracted vendors during system implementation.
- The Data Management component of the program increased by approximately \$2.0 million to reflect the actual cost of the contract TRS signed with Allied Consulting who was responsible for all assessment deliverables.
- The estimate for the Financial System Replacement increased by \$2.5 million to reflect the cost estimates TRS received from prospective vendors.
- The estimated cost for the Pension LOB Solution increased by \$10.25 million due to the inclusion of service-oriented architecture and the fact that contract estimates had been too low.

The project after the re-baseline was estimated to be completed in August 2018 with project costs estimated to be \$114.9 million. These estimates are still in place and the agency appears to be making progress in the development of this enterprise system.

In November 2016, the finish date for the project was further extended to August 31, 2019. The agency identified additional critical functionality that is needed before phase 1 can be completed. Some of this functionality is a result of missed requirements while others are a result of additional reporting requirements and rule changes that have arisen over the past two years.

QAT Budget Highlights (in millions)

Project Name	2016-17 Base	2018-19 Requested	2018-19 Recommended
TEAM	\$40.3	\$25.2	\$25.2
Total	\$40.3	\$25.2	\$25.2

* Note: Requested amounts for 2018-19 include all baseline and exceptional item funding requested by the agency. Recommended amounts for 2018-19 include baseline funding only. Funds requested - TRS Trust Fund 960.

**Teacher Retirement System
Rider Highlights - Senate**

Deleted Riders

1. The 2018-19 appropriations bill as introduced deletes Rider 15, "Legislative Intent Relating to Retiree Health Insurance Premiums." The rider expressed the intent of the Legislature not to raise retiree premiums during the 2016-17 biennium. Inclusion of this rider would preclude options available to the Legislature for ensuring the continued solvency of the TRS-Care Fund.

**Teacher Retirement System
Items Not Included in Recommendations - Senate**

	2018-19 Biennial Total			Information Technology Involved?	Contracting Involved?	Estimated Continued Cost 2020-21	
	GR & GR-D	All Funds	FTEs				
Agency Exceptional Items - In Agency Priority Order							
1)	Retiree Health Funding for Solvency - The agency requests \$1.35 billion of General Revenue Funds to maintain solvency of the TRS-Care Trust Fund through the 2018-19 biennium. The request is based on agency estimates of the 2018-19 shortfall at the time of the LAR submission and will be updated throughout Legislative Session.	\$1,350,000,000	\$1,350,000,000	0.0	No	No	\$0
3)	The agency requests an additional 25.0 FTEs at a cost of \$3.9 million (Pension Trust Fund, Other Funds) for Administrative Operations related to the TEAM project transition and other administrative needs. The requested FTEs include seven in Information Technology, ten in benefits administration, two in the Investment Management Division, two in Human Relations, and four in other administrative divisions.	\$0	\$3,901,400	25.0	Yes	No	\$3,901,400
TOTAL Agency Exceptional Items Not Included in Recommendations		\$1,350,000,000	\$1,353,901,400	25.0			\$3,901,400

**Teacher Retirement System
Appendices - Senate**

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* Appendix is not included - no significant information to report

Teacher Retirement System
Funding Changes and Recommendations - Senate, by Strategy -- ALL FUNDS

Strategy/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
TRS - PUBLIC EDUCATION RETIREMENT A.1.1	\$3,208,124,758	\$3,544,224,289	\$336,099,531	10.5%	
TRS - HIGHER EDUCATION RETIREMENT A.1.2	\$431,629,285	\$429,650,690	(\$1,978,595)	(0.5%)	
ADMINISTRATIVE OPERATIONS A.1.3	\$214,484,299	\$211,379,683	(\$3,104,616)	(1.4%)	
RETIREE HEALTH - STATUTORY FUNDS A.2.1	\$580,941,843	\$647,597,636	\$66,655,793	11.5%	
Total, Goal A, TEACHER RETIREMENT SYSTEM	\$4,435,180,185	\$4,832,852,298	\$397,672,113	9.0%	
Grand Total, All Strategies	\$4,435,180,185	\$4,832,852,298	\$397,672,113	9.0%	

**Teacher Retirement System
Funding Changes and Recommendations - Senate, by Strategy -- Supplemental**

Strategy/Fund Type/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
TRS - PUBLIC EDUCATION RETIREMENT A.1.1	\$3,208,124,758	\$3,544,224,289	\$336,099,531	10.5%	Recommendations for Public Education retirement include a state contribution rate of 6.8 percent of active member payroll.
GENERAL REVENUE FUNDS	\$3,208,124,758	\$3,544,224,289	\$336,099,531	10.5%	Estimated appropriations of General Revenue Funds reflect a payroll growth assumption of 5.2 percent in fiscal year 2016 (actual) and 3.5 percent in 2017, 2018, and 2019. The base incorporates 2016 actual expenditures, and 2018-19 recommendations project forward from the updated 2016 base.
GR DEDICATED	\$0	\$0	\$0	0.0%	
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	
OTHER FUNDS	\$0	\$0	\$0	0.0%	
TRS - HIGHER EDUCATION RETIREMENT A.1.2	\$431,629,285	\$429,650,690	(\$1,978,595)	(0.5%)	Recommendations for Higher Education Retirement include a state contribution rate of 6.8 percent of active member payroll and growth assumptions as described below.
GENERAL REVENUE FUNDS	\$338,378,720	\$324,139,802	(\$14,238,918)	(4.2%)	Estimated appropriations of General Revenue Funds reflect a payroll growth assumption of 1.0 percent in fiscal years 2017, 2018, and 2019, based on trending data. The base incorporates 2016 actual expenditures, and 2018-19 recommendations project forward from the updated 2016 base.
GR DEDICATED	\$86,376,320	\$97,451,314	\$11,074,994	12.8%	Estimated appropriations of General Revenue-Dedicated Funds reflect a payroll growth assumption of 10.0 percent in 2017, 2018, and 2019, based on trending data. The base incorporates 2016 actual expenditures, and 2018-19 recommendations project forward from the updated 2016 base.
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	

**Teacher Retirement System
Funding Changes and Recommendations - Senate, by Strategy -- Supplemental**

Strategy/Fund Type/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
OTHER FUNDS	\$6,874,245	\$8,059,574	\$1,185,329	17.2%	Recommendations reflect employer retirement contributions for TRS employees, appropriated from the Pension Trust Fund (Other Funds). The increase in 2018-19 is due primarily to the growth of TRS payroll associated with the implementation of the TRS Enterprise Application Modernization (TEAM) project, which is scheduled to be completed during the 2018-19 biennium. TEAM staff are exempted from the agency's FTE cap by TRS Rider 8, Enterprise Application Modernization FTE Exemption.
ADMINISTRATIVE OPERATIONS A.1.3	\$214,484,299	\$211,379,683	(\$3,104,616)	(1.4%)	TRS Administrative Operations are funded by the Pension Trust Fund. The net decrease in 2018-19 reflects a reduction of \$10,379,906 related to decreased needs for TEAM, offset by an increase of \$2,070,000 for capital projects, and \$5,205,290 for increased administrative needs attributable to increased membership, the growing complexity of investment management, and the implementation of the final phase of TEAM.
GENERAL REVENUE FUNDS	\$0	\$0	\$0	0.0%	
GR DEDICATED	\$0	\$0	\$0	0.0%	
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	
OTHER FUNDS	\$214,484,299	\$211,379,683	(\$3,104,616)	(1.4%)	
RETIREE HEALTH - STATUTORY FUNDS A.2.1	\$580,941,843	\$647,597,636	\$66,655,793	11.5%	Recommendations for Retiree Health (TRS-Care) include a state contribution rate of 1.0 percent of active member payroll.
GENERAL REVENUE FUNDS	\$580,941,843	\$647,597,636	\$66,655,793	11.5%	Estimated appropriations of General Revenue Funds reflect a payroll growth assumption of 5.2 percent in fiscal year 2016 (actual) and 3.5 percent in 2017, 2018, and 2019, based on trending data. The base incorporates 2016 actual expenditures, and 2018-19 recommendations project forward from the updated 2016 base.

**Teacher Retirement System
Funding Changes and Recommendations - Senate, by Strategy -- Supplemental**

Strategy/Fund Type/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
GR DEDICATED	\$0	\$0	\$0	0.0%	
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	
OTHER FUNDS	\$0	\$0	\$0	0.0%	
Total, Goal A, TEACHER RETIREMENT SYSTEM	\$4,435,180,185	\$4,832,852,298	\$397,672,113	9.0%	See explanations above.
GENERAL REVENUE FUNDS	\$4,127,445,321	\$4,515,961,727	\$388,516,406	9.4%	
GR DEDICATED	\$86,376,320	\$97,451,314	\$11,074,994	12.8%	
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	
OTHER FUNDS	\$221,358,544	\$219,439,257	(\$1,919,287)	(0.9%)	
Grand Total, All Agency	\$4,435,180,185	\$4,832,852,298	\$397,672,113	9.0%	See explanations above.
GENERAL REVENUE FUNDS	\$4,127,445,321	\$4,515,961,727	\$388,516,406	9.4%	
GR DEDICATED	\$86,376,320	\$97,451,314	\$11,074,994	12.8%	
FEDERAL FUNDS	\$0	\$0	\$0	0.0%	
OTHER FUNDS	\$221,358,544	\$219,439,257	(\$1,919,287)	(0.9%)	

**Teacher Retirement System
FTE Highlights - Senate**

Full-Time-Equivalent Positions	Expended 2015	Estimated 2016	Budgeted 2017	Recommended 2018	Recommended 2019
Cap	503.3	503.3	503.3	503.3	503.3
Actual/Budgeted	490.3	503.3	503.3	NA	NA

Schedule of Exempt Positions (Cap)

Executive Director	\$290,000	\$327,443	\$327,443	\$327,443	\$327,443
Chief Investment Officer	\$294,000	\$525,000	\$551,250	\$551,250	\$551,250
Deputy Director Investment Officer	\$340,000	\$340,000	\$340,000	\$340,000	\$340,000
Investment Fund Director	\$360,000	\$360,000	\$360,000	\$360,000	\$360,000
Investment Fund Director	\$360,000	\$360,000	\$360,000	\$360,000	\$360,000
Investment Fund Director	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
Investment Fund Director	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000
Investment Fund Director	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000

Notes:

a) The salaries for both the Executive Director and the Chief Investment Officer reflect TRS board action taken pursuant to Rider 8 of the TRS bill pattern, which authorizes the Board to set the salaries of exempt positions without limitation.

b) Rider 16 in the 2016-17 General Appropriations Act, "Enterprise Application Modernization FTE Exemption," allows FTEs assigned to the TEAM project to be exempt for reporting purposes from the FTE cap established in Article IX, §6.10.

c) The 2015 actual FTE count was below the cap due to vacancies and agency-wide attrition.

**Teacher Retirement System
Performance Measure Highlights - Senate**

	Expended 2015	Estimated 2016	Budgeted 2017	Recommended 2018	Recommended 2019
<ul style="list-style-type: none"> TRS Retirement Fund Benefit Administration Annual Operating Expense Per Total Member and Annuitant in Dollars (Excluding Investment Dollars) <p><i>Measure Explanation: This measure reflects the annual cost per member and annuitant to operate the retirement fund benefit administration. The recommended increases from fiscal years 2015 to 2019 reflect the additional administrative costs related to the TRS Enterprise Application Modernization (TEAM) project, as well as other administrative and capital costs amortized over time. CEM Benchmarking, a firm that conducts data-based analysis and comparisons of pension funds, found that the average of total pension cost per active member and annuitant for TRS peers (i.e., large state pension funds in the United States) was \$92, while the peer median was \$78, making TRS administration cost among the lowest in the CEM database.</i></p>	\$ 24.37	\$ 24.84	\$ 29.00	\$ 29.00	\$ 29.00
<ul style="list-style-type: none"> TRS Retirement Fund Investment Expense as Basis Points of Net Assets <p><i>Measure Explanation: This measure provides a method to compare investment operating efficiencies from year-to-year and comparison to other retirement funds. The increased investment expense relative to net assets from fiscal year 2015 through fiscal year 2019 is primarily the result of weak investment returns of -0.3% in 2015, which reduced the net value of the fund, or the denominator of this measure's calculation, going forward.</i></p>	\$ 19.75	\$ 22.57	\$ 23.00	\$ 24.00	\$ 25.00