



South Dakota Department of Labor Retirement Plan

July 1, 2016 Valuation Assumption Discussion

Deloitte Consulting LLP

April 6, 2017

Mortality Assumption Update

- Proposed: Generational mortality improvements using Scale MP-2016.
- Current: Generational mortality improvements using Scale MP-2015.
- The Retirement Plan Experience Committee (“RPEC”) of the Society of Actuaries released a Mortality Improvement Scale MP-2016 as an update to Scale MP-2015 currently used for funding, accounting and lump sum calculations
 - The MP-2016 scale includes three additional years (2012, 2013 and 2014) of Social Security Administration experience compared to the experience considered in the development of Scale MP-2015, and therefore incorporates the most current available information from the Social Security Administration.
 - The base RP-2014 mortality rates implicitly reflect Scale MP-2014 assumptions for years 2007 through 2014 as such, the RP-2014 tables have been adjusted back to 2006 with scale MP-2014 before reflecting the update mortality improvement rates of Scale MP-2016.
- Section 8.3 of the Society of Actuaries’ Retirement Plans Experience Committee (“RPEC”) Response to Comments suggests the RP-2014 mortality table projected generationally as the new generally recommended mortality table.
- Final version of tables was released in October of 2016

Economic Assumptions

- Investment Return
 - Proposed: 4.75%
 - Current: 6.50%
- Settlement Year
 - Unchanged: 2027
- Settlement Rate
 - Proposed: 4.00%
 - Current: 5.00%
- Inflation
 - Proposed: 2.00%
 - Current: 3.00%

Expected COLA in future years – Current and proposed economic assumption

- Based on the July 1, 2016 asset value of \$56.0 million

YEAR	CURRENT	PROPOSED
2017	1.6%	0.6%
2018	1.8%	0.7%
2019	2.0%	0.7%
2020	2.1%	0.8%
2021	2.3%	0.9%
2022	2.5%	1.0%
2023	2.6%	1.1%
2024	2.8%	1.2%
2025	3.0%	1.3%
2026	3.2%	1.4%
2027+	3.3%	1.5%

Estimated Cost of Living Adjustment for July 2017 – Current Economic Assumptions

Based on the February 28, 2017 asset value, the estimated asset value as of April 2017 is **\$57.0 million**. This would provide for a **2.0%** COLA to be paid on July 1, 2017 if approved by the Board

Present Value of Future Benefits for Related Cost of Living Adjustments as of April 15, 2017

COLA	PVFB	COLA	PVFB	COLA	PVFB
0.1%	\$47,345,000	1.3%	\$52,985,000	2.5%	\$59,690,000
0.2%	\$47,780,000	1.4%	\$53,500,000	2.6%	\$60,304,000
0.3%	\$48,221,000	1.5%	\$54,022,000	2.7%	\$60,928,000
0.4%	\$48,667,000	1.6%	\$54,552,000	2.8%	\$61,562,000
0.5%	\$49,121,000	1.7%	\$55,090,000	2.9%	\$62,205,000
0.6%	\$49,580,000	1.8%	\$55,635,000	3.0%	\$62,859,000
0.7%	\$50,046,000	1.9%	\$56,189,000	3.1%	\$63,522,000
0.8%	\$50,519,000	2.0%	\$56,751,000	3.2%	\$64,196,000
0.9%	\$50,998,000	2.1%	\$57,321,000	3.3%	\$64,881,000
1.0%	\$51,484,000	2.2%	\$57,900,000	3.4%	\$65,576,000
1.1%	\$51,977,000	2.3%	\$58,488,000	3.5%	\$66,282,000
1.2%	\$52,478,000	2.4%	\$59,084,000		

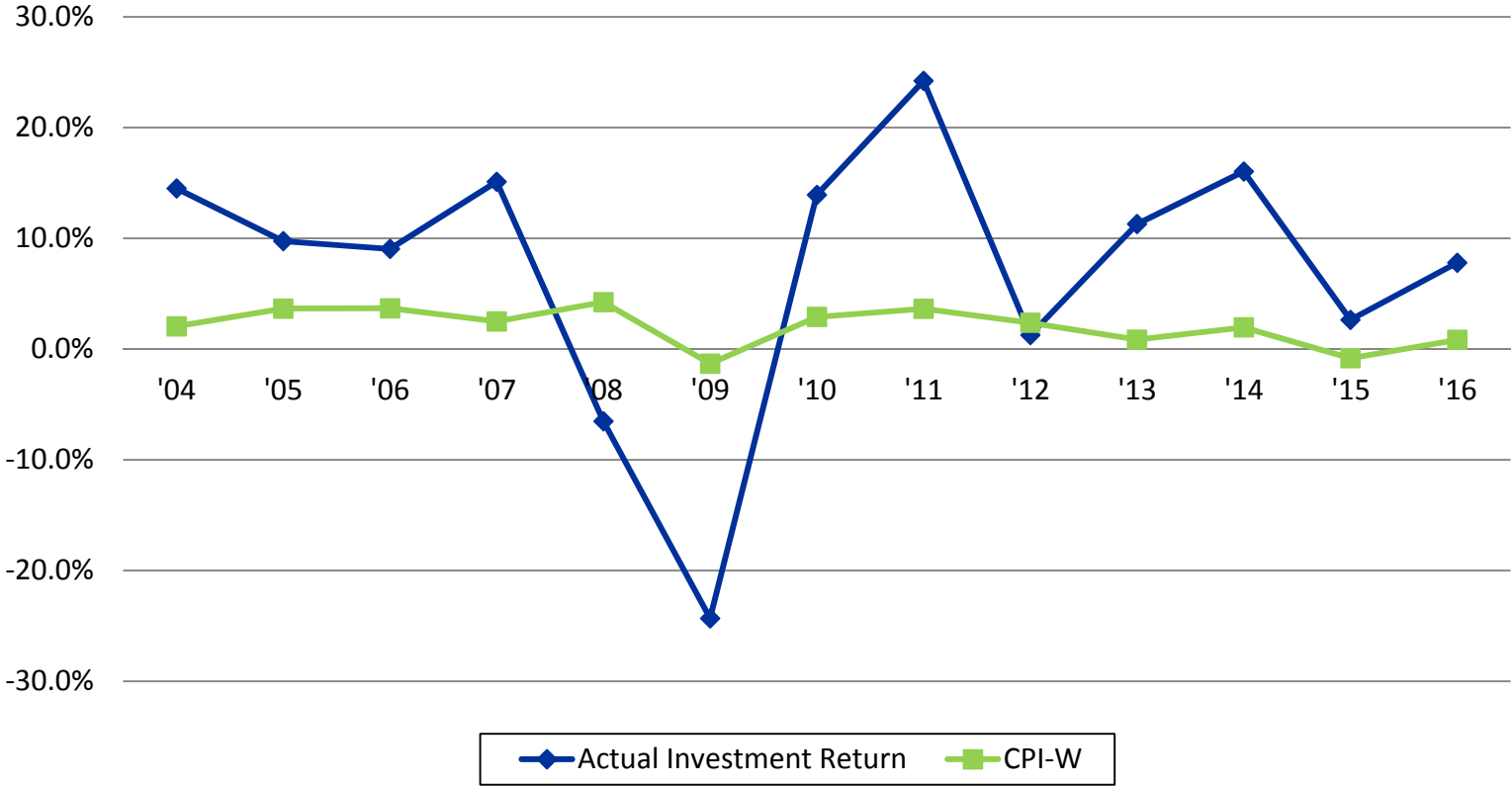
Estimated Cost of Living Adjustment for July 2017 – Proposed Economic Assumptions

Based on the February 28, 2017 asset value, the estimated asset value as of April 2017 is **\$57.0 million**. This would provide for a **1.1% COLA** to be paid on July 1, 2017 if approved by the Board

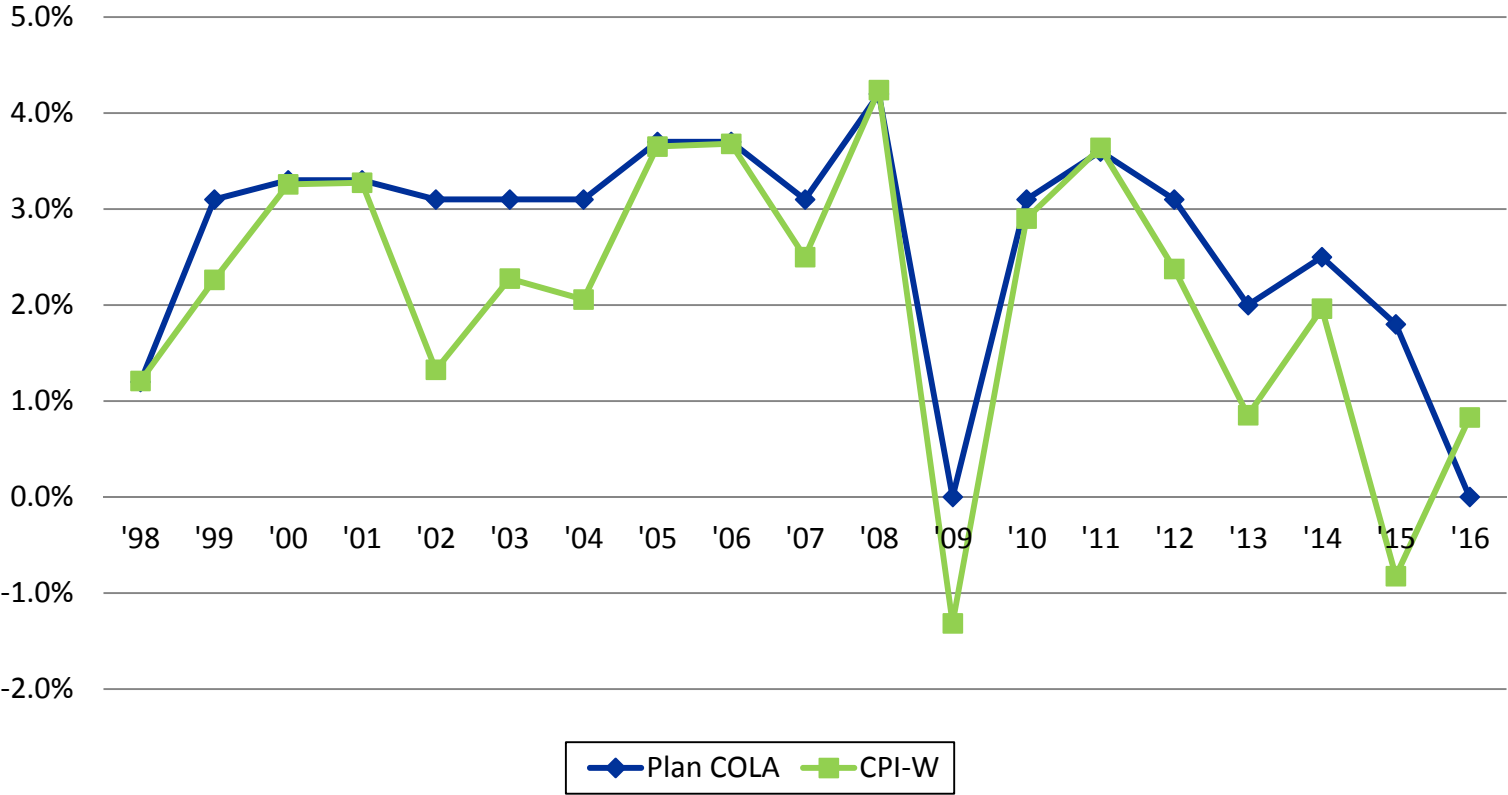
Present Value of Future Benefits for Related Cost of Living Adjustments as of April 15, 2017

COLA	PVFB	COLA	PVFB	COLA	PVFB
0.1%	\$51,567,000	1.3%	\$58,089,000	2.5%	\$65,909,000
0.2%	\$52,068,000	1.4%	\$58,687,000	2.6%	\$66,629,000
0.3%	\$52,576,000	1.5%	\$59,294,000	2.7%	\$67,361,000
0.4%	\$53,091,000	1.6%	\$59,910,000	2.8%	\$68,105,000
0.5%	\$53,614,000	1.7%	\$60,536,000	2.9%	\$68,860,000
0.6%	\$54,145,000	1.8%	\$61,172,000	3.0%	\$69,628,000
0.7%	\$54,684,000	1.9%	\$61,817,000	3.1%	\$70,409,000
0.8%	\$55,230,000	2.0%	\$62,473,000	3.2%	\$71,202,000
0.9%	\$55,785,000	2.1%	\$63,139,000	3.3%	\$72,009,000
1.0%	\$56,348,000	2.2%	\$63,815,000	3.4%	\$72,828,000
1.1%	\$56,920,000	2.3%	\$64,502,000	3.5%	\$73,661,000
1.2%	\$57,500,000	2.4%	\$65,200,000		

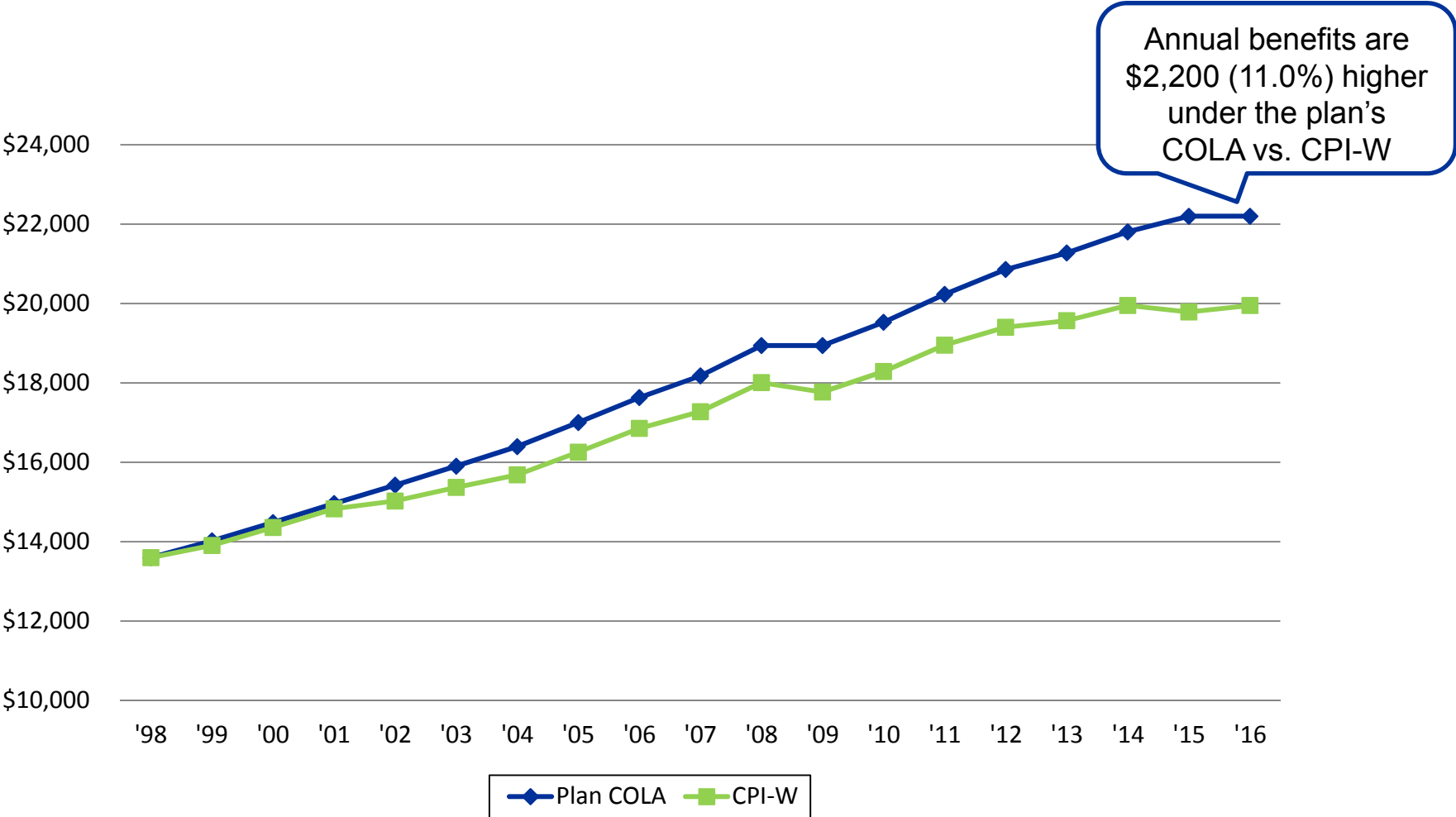
Comparison of Actual Investment Return to Inflation (CPI-W)



Comparison of Actual COLA Rates to Inflation (CPI-W)



Sample Annual Benefit for pre-1999 Retiree* Comparing Actual COLA paid to Inflation (CPI-W)



*Sample retiree with \$22,200 annual benefit as of July 1, 2016

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