SOUTH DAKOTA INVESTMENT COUNCIL

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MEMORANDUM

TO: South Dakota Investment Council

FROM: Matthew L. Clark, CFA, State Investment Officer MLC
Tammy V. Otten, CPA, CFA, Assistant Investment Officer TVO

DATE: May 29, 2018

RE: Investment Performance Incentive Plan changes effective Fiscal Year 2019

This memo provides an overview and calculation details effective for the Fiscal Year 2019 (payable in FY 2020) incentive plan program for **Matthew Carey and Makenzie Smook**.

All incentives sum to 200% of base pay as follows: The first 100% of base pay is one-third on the one-year regular and two-thirds on the four-year regular. The second 100% of base pay is one-third on the ten-year regular, one-half on the four-year stretch and one-sixth on the ten-year stretch. All returns are time-weighted.

Global Equity: Matthew Carey

The incentive calculation will be based 40% on the individual global sector equity portfolio, 40% on the global core equity portfolio, and 20% on the SDRS total fund net return. FY 19 will be the first full year of managing an individual global sector equity portfolio so the one-year return will be used for the one, four and ten-year individual portfolio piece. FY 19 will be the third year for the global core equity portfolio piece since he worked in the global equity group during FY 17 & 18 so the three-year number will be used in the four and ten-year composite piece. Each year thereafter an additional year will be added until there are four and ten years respectively. For FY 19 the SDRS total fund will be based on the three-year number for the four and ten-year piece. For each year after FY19, an additional year will be added until there are four and ten years respectively.

The **one-year regular** incentive consists of three parts:

1) Forty percent is based on the one-year return of the individual global sector equity portfolio relative to the one-year return of the individual global sector equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule.

2) Forty percent is based on the one-year return of the global core equity portfolio relative to the one-year return of the global core equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule.
3) Twenty percent is based on the one-year net return of the SDRS total fund relative to the one-year return of the capital markets benchmark (CMB) with the difference applied to the CMB 1-3 years regular breakpoint schedule.

The **four-year regular** incentive consists of three parts:

1) Forty percent is based on the four-year annualized return of the individual global sector equity portfolio relative to the four-year annualized return of the individual global sector equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
2) Forty percent is based on the four-year annualized return of the global core equity portfolio relative to the four-year annualized return of the global core equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
3) Twenty percent is based on the four-year annualized net return of the SDRS total fund relative to the four-year annualized CMB return with the difference applied to the CMB 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.

The **ten-year regular** incentive consists of three parts:

1) Forty percent is based on the ten-year annualized return of the individual global sector equity portfolio relative to the ten-year annualized return of the individual global sector equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
2) Forty percent is based on the ten-year annualized return of the global core equity portfolio relative to the ten-year annualized return of the global core equity benchmark with the difference applied to the global equity 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
3) Twenty percent is based on the ten-year annualized return of the SDRS total fund relative to the ten-year annualized CMB return with the difference applied to the CMB 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.

The **four-year stretch** incentive consists of three parts:

1) Forty percent is based on the four-year annualized return of the individual global sector equity portfolio relative to the four-year annualized return of the individual global equity benchmark with the difference applied to the global equity 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
2) Forty percent is based on the four-year annualized return of the global core equity portfolio relative to the four-year annualized return of the global core equity benchmark with the difference applied to the global equity 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
3) Twenty percent is based on the four-year annualized net return of the SDRS total fund relative to the four-year annualized CMB return with the difference applied to the CMB 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.

The **ten-year stretch** incentive consists of three parts:

1) Forty percent is based on the ten-year annualized return of the individual global sector equity portfolio relative to the ten-year annualized return of the individual global equity benchmark with the difference applied to the global equity 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
2) Forty percent is based on the ten-year annualized return of the global core equity portfolio relative to the ten-year annualized return of the global core equity benchmark with the difference applied to the global equity 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
3) Twenty percent is based on the ten-year annualized return of the SDRS total fund relative to the ten-year annualized CMB return with the difference applied to the CMB 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.

Formula

One-year regular: Salary x ((1 yr individual equity incentive x 40%) + (1 yr global core equity incentive x 40%) + (1 yr CMB total fund incentive x 20%)) x 33 1/3%

Four-year regular: Salary x ((4 yr individual equity incentive x 40%) + (4 yr global core equity incentive x 40%) + (4 yr CMB total fund incentive x 20%)) x 66 2/3%

Ten-year regular: Salary x ((10 yr individual equity incentive x 40%) + (10 yr global core equity incentive x 40%) + (10 yr CMB total fund incentive x 20%)) x 33 1/3%

Four-year stretch: Salary x ((4 yr individual equity stretch incentive x 40%) + (4 yr global core equity stretch incentive x 40%) + (4 yr CMB total fund stretch incentive x 20%)) x 50%
Ten-year stretch: Salary x ((10 yr individual equity stretch incentive x 40%) + (10 yr global core equity stretch incentive x 40%) + (10 yr CMB total fund stretch incentive x 20%)) x 16 2/3%

Plan Implementation Schedule:
Sum of all parts x 50% for total earned incentive for FY 19; x 70% for FY 20; x 90% for FY 21; x 100% for FY 22

Small/Midcap Equity: Makenzie Smook
The incentive calculation will be based 40% on the individual small/midcap equity portfolio, 20% on the small/midcap equity composite, 20% on the total global equity composite, and 20% on the SDRS total fund net return. FY 19 will be the first full year of managing an individual small/midcap equity portfolio so the one-year return will be used for the one, four and ten-year individual portfolio piece. FY 19 will be the third year for the small/midcap equity composite piece since she worked in the small/midcap equity group during FY 17 & 18 so the three-year number will be used in the four and ten-year composite piece. Each year thereafter an additional year will be added until there are four and ten years respectively. For FY 19 the total global equity benchmark will be the three-year since she worked in the equity area during FY 17 & 18 so the three-year number will be used in the four and ten-year composite piece. For FY 19 the SDRS total fund will be based on the three-year number for the four and ten-year piece. For each year after FY19, an additional year will be added until there are four and ten years respectively.

The **one-year regular** incentive consists of four parts:

1) Forty percent is based on the one-year return of the individual small/midcap equity portfolio relative to the one-year return of the individual small/midcap equity benchmark with the difference applied to the small/midcap equity (SMID) 1-3 years regular breakpoint schedule.
2) Twenty percent is based on the one-year return of the small/midcap equity composite relative to the one-year return of the small/midcap equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule.
3) Twenty percent is based on the one-year return of the total global equity composite relative to the one-year return of the total global equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule.
4) Twenty percent is based on the one-year net return of the SDRS total fund relative to the one-year return of the capital markets benchmark (CMB) with the difference applied to the CMB 1-3 years regular breakpoint schedule.

The **four-year regular** incentive consists of four parts:

1) Forty percent is based on the four-year annualized return of the individual small/midcap equity portfolio relative to the four-year annualized return of the individual small/midcap equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been

reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are four years.

2) Twenty percent is based on the four-year annualized return of the small/midcap equity composite relative to the four-year annualized return of the total small/midcap equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
3) Twenty percent is based on the four-year annualized return of the total global equity composite relative to the four-year annualized return of the total global equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
4) Twenty percent is based on the four-year annualized net return of the SDRS total fund relative to the four-year annualized CMB return with the difference applied to the CMB 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.

The **ten-year regular** incentive consists of four parts:

1) Forty percent is based on the ten-year annualized return of the individual small/midcap equity portfolio relative to the ten-year annualized return of the individual small/midcap equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
2) Twenty percent is based on the ten-year annualized return of the small/midcap equity composite relative to the ten-year annualized return of the small/midcap equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
3) Twenty percent is based on the ten-year annualized return of the total global equity composite relative to the ten-year annualized return of the total global equity benchmark with the difference applied to the SMID 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
4) Twenty percent is based on the ten-year annualized return of the SDRS total fund relative to the ten-year annualized CMB return with the difference applied to the CMB 1-3 years regular breakpoint schedule and then the 4&10 years regular breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.

The **four-year stretch** incentive consists of four parts:

1) Forty percent is based on the four-year annualized return of the individual small/midcap equity portfolio relative to the four-year annualized return of the individual small/midcap benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
2) Twenty percent is based on the four-year annualized return of the small/midcap equity composite relative to the four-year annualized return of the small/midcap equity benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
3) Twenty percent is based on the four-year annualized return of the total global equity composite relative to the four-year annualized return of the total global equity benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.
4) Twenty percent is based on the four-year annualized net return of the SDRS total fund relative to the four-year annualized CMB return with the difference applied to the CMB 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are four years.

The **ten-year stretch** incentive consists of four parts:

1) Forty percent is based on the ten-year annualized return of the individual small/midcap equity portfolio relative to the ten-year annualized return of the individual small/midcap equity benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the one-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
2) Twenty percent is based on the ten-year annualized return of the small/midcap equity composite relative to the ten-year annualized return of the small/midcap equity benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.
3) Twenty percent is based on the ten-year annualized return of the total global equity composite relative to the ten-year annualized return of the total global equity benchmark with the difference applied to the SMID 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.

4) Twenty percent is based on the ten-year annualized return of the SDRS total fund relative to the ten-year annualized CMB return with the difference applied to the CMB 1-3 years stretch breakpoint schedule and then the 4&10 years stretch breakpoint schedule once four years has been reached. For FY 19 the three-year number will be used. For each year after FY 19, an additional year will be added until there are ten years.

<u>Formula</u>

One-year regular: Salary x ((1 yr individual equity incentive x 40%) + (1 yr small/midcap equity composite incentive x 20%) + (1 yr total global equity composite incentive x 20%) + (1 yr CMB total fund incentive x 20%)) x 33 1/3%

Four-year regular: Salary x ((4 yr individual equity incentive x 40%) + (4 yr small/midcap equity composite incentive x 20%) + (4 yr total global equity composite incentive x 20%) + (4 yr CMB total fund incentive x 20%)) x 66 2/3%

Ten-year regular: Salary x ((10 yr individual equity incentive x 40%) + (10 yr small/midcap equity composite incentive x 20%) + (10 yr total global equity composite incentive x 20%) + (10 yr CMB total fund incentive x 20%)) x 33 1/3%

Four-year stretch: Salary x ((4 yr individual equity stretch incentive x 40%) + (4 yr small/midcap equity composite stretch incentive x 20%) + (4 yr total global equity composite stretch incentive x 20%) + (4 yr CMB total fund stretch incentive x 20%)) x 50%

Ten-year stretch: Salary x ((10 yr individual equity stretch incentive x 40%) + (10 yr small/midcap equity composite stretch incentive x 20%) + (10 yr total global equity composite stretch incentive x 20%) + (10 yr CMB total fund stretch incentive x 20%)) x 16 2/3%

Plan Implementation Schedule:

Sum of all parts x 40% for total earned incentive for FY 19; x 60% for FY 20; x 80% for FY 21; x 90% for FY 22; x 100% for FY 23. (Mckenzie began ½ year after Matt)