# State of Alaska <br> ALASKA RETIREMENT MANAGEMENT BOARD <br> Relating to the actuarial experience analysis for the Public Employees' Retirement System, Teachers' Retirement System, Judicial Retirement System, and Alaska National Guard and Naval Militia Retirement System 

Resolution 2022-01

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for the funds of the Public Employees' Retirement System, Teachers' Retirement System, Judicial Retirement System, and Alaska National Guard and Naval Militia Retirement System; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability;

WHEREAS, AS 37.10.220(a)(9) requires the Board to conduct an experience analysis of the retirement systems not less than once every four years, except for health cost assumptions which shall be reviewed annually, and that the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second actuary before presentation to the board;

NOW THEREFORE BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Public Employees' Retirement System's, Teachers' Retirement System's, Judicial Retirement System's, and Alaska National Guard and Naval Militia Retirement System's Actuarial Experience Analysis as of June 30, 2021, as well as the assumption and method changes recommended therein, prepared by Buck be approved.

DATED at Anchorage, Alaska this 16th day of June, 2022.


## ATTEST:

[^0]
## State of Alaska Retirement Systems

Alaska Retirement Management Board (ARMB)

2021 Experience Study - Current and Adopted Assumptions
June 27, 2022

## Summary of 2021 Experience Study Process

- Current study is based on 4 years of experience -7/1/17 to 6/30/21
- New assumptions adopted by the ARMB will be used beginning with the June 30, 2022 valuations
- Economic and demographic assumptions were discussed at the December 2021 meeting, March 2022 meeting, May 2022 teleconference, and June 2022 meeting
- This document summarizes the current assumptions and the new assumptions adopted by the ARMB on June 17, 2022


## Current and Adopted Assumptions - Economic

## PERS/TRS/JRS

|  | Current | Adopted |
| :--- | :---: | :---: |
| Nominal Return, net of investment expenses | $7.38 \%$ | $7.25 \%$ |
| Inflation Rate | $2.50 \%$ | $2.50 \%$ |
| Real Rate of Return (nominal return less inflation) | $4.88 \%$ | $4.75 \%$ |
| Payroll Growth Rate (inflation plus 25 bp) | $2.75 \%$ | $2.75 \%$ |

NGNMRS

|  | Current | Adopted |
| :--- | :---: | :---: |
| Nominal Return, net of investment expenses | $7.00 \%$ | $5.75 \%$ |
| Inflation Rate | $2.50 \%$ | $2.50 \%$ |
| Real Rate of Return (nominal return less inflation) | $4.50 \%$ | $3.25 \%$ |

## Current and Adopted Assumptions - Economic (cont'd)

## Salary Increase Rates

PERS/PERS DCR - Peace/Fire

| Service | Current | Adopted | Service | Current | Adopted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 7.75\% | 8.50\% | 10 | 3.55\% | 4.95\% |
| 1 | 7.25\% | 7.75\% | 11 | 3.45\% | 4.85\% |
| 2 | 6.75\% | 7.25\% | 12 | 3.35\% | 4.75\% |
| 3 | 6.25\% | 7.00\% | 13 | 3.25\% | 4.65\% |
| 4 | 5.75\% | 6.75\% | 14 | 3.15\% | 4.55\% |
| 5 | 5.25\% | 6.25\% | 15 | 3.05\% | 4.45\% |
| 6 | 4.75\% | 5.75\% | 16 | 2.95\% | 4.35\% |
| 7 | 4.25\% | 5.50\% | 17 | 2.85\% | 4.25\% |
| 8 | 3.75\% | 5.25\% | 18 | 2.75\% | 4.05\% |
| 9 | 3.65\% | 5.05\% | 19 | 2.75\% | 4.05\% |
|  |  |  | 20+ | 2.75\% | 3.85\% |

PERS/PERS DCR - Others

| Service | Current | Adopted |
| :---: | :---: | :---: |
| 0 | $6.75 \%$ | $6.75 \%$ |
| 1 | $6.25 \%$ | $6.00 \%$ |
| 2 | $5.75 \%$ | $5.50 \%$ |
| 3 | $5.25 \%$ | $5.00 \%$ |
| 4 | $4.75 \%$ | $4.75 \%$ |
| 5 | $4.25 \%$ | $4.25 \%$ |
| 6 | $3.75 \%$ | $4.05 \%$ |
| 7 | $3.65 \%$ | $3.95 \%$ |
| 8 | $3.55 \%$ | $3.75 \%$ |
| 9 | $3.45 \%$ | $3.55 \%$ |


| Service | Current | Adopted |
| :---: | :---: | :---: |
| 10 | $3.35 \%$ | $3.45 \%$ |
| 11 | $3.25 \%$ | $3.25 \%$ |
| 12 | $3.15 \%$ | $3.10 \%$ |
| 13 | $3.05 \%$ | $3.05 \%$ |
| 14 | $2.95 \%$ | $3.00 \%$ |
| 15 | $2.85 \%$ | $2.95 \%$ |
| 16 | $2.75 \%$ | $2.90 \%$ |
| $17+$ | $2.75 \%$ | $2.85 \%$ |

## Current and Adopted Assumptions - Economic (cont'd)

## Salary Increase Rates (cont'd)

TRS

| Service | Current | Adopted |
| :---: | :---: | :---: |
| 0 | $6.75 \%$ | $7.00 \%$ |
| 1 | $6.25 \%$ | $6.50 \%$ |
| 2 | $5.75 \%$ | $6.00 \%$ |
| 3 | $5.25 \%$ | $5.75 \%$ |
| 4 | $4.75 \%$ | $5.50 \%$ |
| 5 | $4.25 \%$ | $5.25 \%$ |
| 6 | $3.75 \%$ | $5.00 \%$ |
| 7 | $3.65 \%$ | $4.75 \%$ |
| 8 | $3.55 \%$ | $4.50 \%$ |
| 9 | $3.45 \%$ | $4.25 \%$ |
| 10 | $3.35 \%$ | $4.00 \%$ |


| Service | Current | Adopted |
| :---: | :---: | :---: |
| 11 | $3.25 \%$ | $3.75 \%$ |
| 12 | $3.15 \%$ | $3.50 \%$ |
| 13 | $3.05 \%$ | $3.45 \%$ |
| 14 | $2.95 \%$ | $3.35 \%$ |
| 15 | $2.85 \%$ | $3.25 \%$ |
| 16 | $2.75 \%$ | $3.15 \%$ |
| 17 | $2.75 \%$ | $3.05 \%$ |
| 18 | $2.75 \%$ | $3.00 \%$ |
| 19 | $2.75 \%$ | $2.95 \%$ |
| $20+$ | $2.75 \%$ | $2.85 \%$ |

Current: 0\% per year through FY24, 3.62\% per year thereafter Adopted: 0\% per year through FY24, 3.00\% per year thereafter

TRS DCR

| Service | Current | Adopted |
| :---: | :---: | :---: |
| 0 | $6.75 \%$ | $7.25 \%$ |
| 1 | $6.25 \%$ | $6.75 \%$ |
| 2 | $5.75 \%$ | $6.25 \%$ |
| 3 | $5.25 \%$ | $5.75 \%$ |
| 4 | $4.75 \%$ | $5.25 \%$ |
| 5 | $4.25 \%$ | $5.00 \%$ |
| 6 | $3.75 \%$ | $4.75 \%$ |
| 7 | $3.65 \%$ | $4.50 \%$ |
| 8 | $3.55 \%$ | $4.25 \%$ |
| 9 | $3.45 \%$ | $4.00 \%$ |
| 10 | $3.35 \%$ | $3.75 \%$ |


| Service | Current | Adopted |
| :---: | :---: | :---: |
| 11 | $3.25 \%$ | $3.50 \%$ |
| 12 | $3.15 \%$ | $3.25 \%$ |
| 13 | $3.05 \%$ | $3.05 \%$ |
| 14 | $2.95 \%$ | $3.00 \%$ |
| 15 | $2.85 \%$ | $2.95 \%$ |
| 16 | $2.75 \%$ | $2.90 \%$ |
| 17 | $2.75 \%$ | $2.85 \%$ |
| $18+$ | $2.75 \%$ | $2.85 \%$ |

## Current and Adopted Assumptions - Economic (cont'd)

## Healthcare Trend Rates

| Current |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal | Medical <br> Year | Medical <br> Post-65 | Prescription <br> Drugs / EGWP |
| 2022 | $6.30 \%$ | $5.40 \%$ | $7.10 \%$ |
| 2023 | $6.10 \%$ | $5.40 \%$ | $6.80 \%$ |
| 2024 | $5.90 \%$ | $5.40 \%$ | $6.40 \%$ |
| 2025 | $5.80 \%$ | $5.40 \%$ | $6.10 \%$ |
| 2026 | $5.60 \%$ | $5.40 \%$ | $5.70 \%$ |
| $2027-2040$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ |
| 2041 | $5.30 \%$ | $5.30 \%$ | $5.30 \%$ |
| 2042 | $5.20 \%$ | $5.20 \%$ | $5.20 \%$ |
| 2043 | $5.10 \%$ | $5.10 \%$ | $5.10 \%$ |
| 2044 | $5.10 \%$ | $5.10 \%$ | $5.10 \%$ |
| 2045 | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ |
| 2046 | $4.90 \%$ | $4.90 \%$ | $4.90 \%$ |
| 2047 | $4.80 \%$ | $4.80 \%$ | $4.80 \%$ |
| 2048 | $4.70 \%$ | $4.70 \%$ | $4.70 \%$ |
| 2049 | $4.60 \%$ | $4.60 \%$ | $4.60 \%$ |
| $2050+$ | $4.50 \%$ | $4.50 \%$ | $4.50 \%$ |

Adopted

| Fiscal <br> Year | Medical <br> Pre-65 | Medical <br> Post-65 | Prescription <br> Drugs /EGWP |
| :---: | :---: | :---: | :---: |
| 2022 | $6.30 \%$ | $5.40 \%$ |  |
| 2023 | $7.00 \%$ | $5.50 \%$ | $7.10 \%$ |
| 2024 | $6.70 \%$ | $5.50 \%$ | $7.20 \%$ |
| 2025 | $6.40 \%$ | $5.40 \%$ | $6.90 \%$ |
| 2026 | $6.20 \%$ | $5.40 \%$ | $6.65 \%$ |
| 2027 | $6.05 \%$ | $5.35 \%$ | $6.35 \%$ |
| 2028 | $5.85 \%$ | $5.35 \%$ | $6.10 \%$ |
| 2029 | $5.65 \%$ | $5.30 \%$ | $5.80 \%$ |
| 2030 | $5.45 \%$ | $5.30 \%$ | $5.55 \%$ |
| $2031-2038$ | $5.30 \%$ | $5.30 \%$ | $5.30 \%$ |
| 2039 | $5.25 \%$ | $5.25 \%$ | $5.25 \%$ |
| 2040 | $5.20 \%$ | $5.20 \%$ | $5.20 \%$ |
| 2041 | $5.10 \%$ | $5.10 \%$ | $5.10 \%$ |
| 2042 | $5.05 \%$ | $5.05 \%$ | $5.05 \%$ |
| 2043 | $4.95 \%$ | $4.95 \%$ | $4.95 \%$ |
| 2044 | $4.90 \%$ | $4.90 \%$ | $4.90 \%$ |
| 2045 | $4.80 \%$ | $4.80 \%$ | $4.80 \%$ |
| 2046 | $4.75 \%$ | $4.75 \%$ | $4.75 \%$ |
| 2047 | $4.70 \%$ | $4.70 \%$ | $4.70 \%$ |
| 2048 | $4.60 \%$ | $4.60 \%$ | $4.60 \%$ |
| 2049 | $4.55 \%$ | $4.55 \%$ | $4.55 \%$ |
| $2050+$ | $4.50 \%$ | $4.50 \%$ | $4.50 \%$ |
|  |  |  |  |

## Current and Adopted Assumptions - Demographic

## Pre-Commencement Mortality

| Plan | Current Assumption |  | Adopted Assumption |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Base Table | Mortality Improvement | Base Table ${ }^{1}$ | Mortality Improvement |
| PERS and PERS DCR |  |  |  |  |
| - Peace/Fire | RP-2014 | MP-2017 | Pub-2010 Safety | MP-2021 ${ }^{2}$ |
| - Others | RP-2014 | MP-2017 | Pub-2010 General | MP-2021 ${ }^{2}$ |
| TRS and TRS DCR | RP-2014 White Collar | MP-2017 | Pub-2010 Teachers | MP-2021 ${ }^{2}$ |
| JRS | RP-2014 White Collar | MP-2017 | Pub-2010 General AboveMedian ${ }^{3}$ | MP-2021 ${ }^{2}$ |
| NGNMRS | RP-2014 | MP-2017 | Pub-2010 Safety | MP-2021 ${ }^{2}$ |

1. Amount-weighted version for pension, headcount-weighted version for healthcare.
2. We will annually update the mortality improvement scale to the most recently-published scale as of the valuation date. The MP-2021 scale was published in October 2021.
3. Above-Median Income table based on salary of the active participant.

## Current and Adopted Assumptions - Demographic (cont'd)

## Post-Commencement Mortality (Pension)

| Plan | Current Assumption |  | Adopted Assumption - Pension |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Base Table | Mortality Improvement | Base Table ${ }^{1}$ | Mortality Improvement |
| PERS and PERS DCR |  |  |  |  |
| - Peace/Fire | $\begin{gathered} \text { RP-2014 } \\ \text { (91\% male, } 96 \% \text { female) } \end{gathered}$ | MP-2017 | Pub-2010 Safety (100\% male, 100\% female) | MP-2021 ${ }^{2}$ |
| - Others | RP-2014 (91\% male, $96 \%$ female) | MP-2017 | Pub-2010 General (98\% male, 106\% female) | MP-2021 ${ }^{2}$ |
| TRS and TRS DCR | RP-2014 White Collar (93\% male, $90 \%$ female) | MP-2017 | Pub-2010 Teachers (97\% male, $97 \%$ female) | MP-2021 ${ }^{2}$ |
| JRS | RP-2014 White Collar (93\% male, 90\% female) | MP-2017 | Pub-2010 General AboveMedian ${ }^{3}$ | MP-2021 ${ }^{2}$ |
| NGNMRS | RP- 2014 ( $91 \%$ male, $96 \%$ female) | MP-2017 | Pub-2010 Safety (100\% male, $100 \%$ female) | MP-2021 ${ }^{2}$ |

1. Amount-weighted version. For beneficiaries, Contingent Annuitant table will be used with adjusted rates (not shown here) based on experience and partial credibility.
2. We will annually update the mortality improvement scale to the most recently-published scale as of the valuation date. The MP-2021 scale was published in October 2021.
3. Above-Median Income table based on benefit of the retired participant.

## Current and Adopted Assumptions - Demographic (cont'd)

Post-Commencement Mortality (Healthcare)

| Plan | Current Assumption |  | Adopted Assumption - Healthcare |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PERS and PERS DCR | Base Table | Mortality Improvement |  |  |

## Current and Adopted Assumptions - Demographic (cont'd)

## Retirement - PERS Peace/Fire

Current

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 47 | N/A | N/A | 8.80\% | 6.00\% |
| 47 | N/A | N/A | 8.80\% | 15.00\% |
| 48 | N/A | N/A | 14.30\% | 15.00\% |
| 49 | N/A | N/A | 14.30\% | 15.00\% |
| 50 | 5.00\% | 5.00\% | 16.50\% | 15.00\% |
| 51 | 5.00\% | 7.00\% | 16.50\% | 15.00\% |
| 52 | 7.00\% | 7.00\% | 20.35\% | 15.00\% |
| 53 | 7.00\% | 7.00\% | 20.35\% | 15.00\% |
| 54 | 7.00\% | 35.00\% | 20.35\% | 25.00\% |
| 55 | 7.00\% | 8.00\% | 27.50\% | 20.00\% |
| 56 | 7.00\% | 8.00\% | 27.50\% | 15.00\% |
| 57 | 7.00\% | 8.00\% | 27.50\% | 15.00\% |
| 58 | 7.00\% | 8.00\% | 27.50\% | 15.00\% |
| 59 | 20.00\% | 20.00\% | 27.50\% | 15.00\% |
| 60 | N/A | N/A | 33.00\% | 25.00\% |
| 61 | N/A | N/A | 27.50\% | 20.00\% |
| 62 | N/A | N/A | 27.50\% | 30.00\% |
| 63 | N/A | N/A | 27.50\% | 50.00\% |
| 64 | N/A | N/A | 22.00\% | 50.00\% |
| 65 | N/A | N/A | 22.00\% | 50.00\% |
| 66 | N/A | N/A | 27.50\% | 50.00\% |
| 67 | N/A | N/A | 55.00\% | 50.00\% |
| 68 | N/A | N/A | 55.00\% | 50.00\% |
| 69 | N/A | N/A | 55.00\% | 50.00\% |
| 70+ | N/A | N/A | 100.00\% | 100.00\% |

Adopted

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 47 | N/A | N/A | 9.00\% | 7.50\% |
| 47 | N/A | N/A | 13.00\% | 18.50\% |
| 48 | N/A | N/A | 13.00\% | 18.50\% |
| 49 | N/A | N/A | 13.00\% | 18.50\% |
| 50 | 5.00\% | 5.00\% | 20.00\% | 21.00\% |
| 51 | 5.00\% | 5.00\% | 20.00\% | 21.00\% |
| 52 | 7.00\% | 7.00\% | 20.00\% | 21.00\% |
| 53 | 7.00\% | 7.00\% | 20.00\% | 21.00\% |
| 54 | 7.00\% | 7.00\% | 20.00\% | 21.00\% |
| 55 | 7.50\% | 7.50\% | 29.00\% | 20.00\% |
| 56 | 7.50\% | 7.50\% | 29.00\% | 20.00\% |
| 57 | 7.50\% | 7.50\% | 29.00\% | 20.00\% |
| 58 | 7.50\% | 7.50\% | 29.00\% | 20.00\% |
| 59 | 20.00\% | 20.00\% | 29.00\% | 20.00\% |
| 60 | N/A | N/A | 29.00\% | 31.50\% |
| 61 | N/A | N/A | 29.00\% | 31.50\% |
| 62 | N/A | N/A | 29.00\% | 31.50\% |
| 63 | N/A | N/A | 29.00\% | 31.50\% |
| 64 | N/A | N/A | 29.00\% | 31.50\% |
| 65 | N/A | N/A | 45.00\% | 45.00\% |
| 66 | N/A | N/A | 45.00\% | 45.00\% |
| 67 | N/A | N/A | 45.00\% | 45.00\% |
| 68 | N/A | N/A | 45.00\% | 45.00\% |
| 69 | N/A | N/A | 45.00\% | 45.00\% |
| 70+ | N/A | N/A | 100.00\% | 100.00\% |

## Current and Adopted Assumptions - Demographic (cont'd)

## Retirement - PERS Others

Current

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 50 | N/A | N/A | 11.00\% | 11.00\% |
| 50 | 6.00\% | 8.00\% | 33.00\% | 38.50\% |
| 51 | 6.00\% | 8.00\% | 35.75\% | 38.50\% |
| 52 | 9.00\% | 8.00\% | 35.75\% | 38.50\% |
| 53 | 6.00\% | 8.00\% | 35.75\% | 38.50\% |
| 54 | 20.00\% | 15.00\% | 38.50\% | 38.50\% |
| 55 | 6.00\% | 6.00\% | 33.00\% | 33.00\% |
| 56 | 6.00\% | 6.00\% | 22.00\% | 22.00\% |
| 57 | 6.00\% | 6.00\% | 22.00\% | 19.80\% |
| 58 | 6.00\% | 6.00\% | 22.00\% | 19.80\% |
| 59 | 15.00\% | 20.00\% | 22.00\% | 19.80\% |
| 60 | N/A | N/A | 22.00\% | 23.10\% |
| 61 | N/A | N/A | 22.00\% | 22.00\% |
| 62 | N/A | N/A | 22.00\% | 22.00\% |
| 63 | N/A | N/A | 22.00\% | 22.00\% |
| 64 | N/A | N/A | 22.00\% | 22.00\% |
| 65 | N/A | N/A | 24.75\% | 28.60\% |
| 66 | N/A | N/A | 27.50\% | 28.60\% |
| 67 | N/A | N/A | 22.00\% | 24.20\% |
| 68 | N/A | N/A | 24.75\% | 24.20\% |
| 69 | N/A | N/A | 27.50\% | 24.20\% |
| 70 | N/A | N/A | 27.50\% | 24.20\% |
| 71 | N/A | N/A | 27.50\% | 24.20\% |
| 72 | N/A | N/A | 27.50\% | 27.50\% |
| 73 | N/A | N/A | 27.50\% | 27.50\% |
| 74 | N/A | N/A | 27.50\% | 38.50\% |
| 75 | N/A | N/A | 55.00\% | 55.00\% |
| 76 | N/A | N/A | 55.00\% | 55.00\% |
| 77 | N/A | N/A | 55.00\% | 55.00\% |
| 78 | N/A | N/A | 55.00\% | 55.00\% |
| 79 | N/A | N/A | 55.00\% | 55.00\% |
| 80+ | N/A | N/A | 100.00\% | 100.00\% |

Adopted

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 50 | N/A | N/A | 11.50\% | 11.50\% |
| 50 | 7.00\% | 8.50\% | 37.50\% | 40.50\% |
| 51 | 7.00\% | 8.50\% | 37.50\% | 40.50\% |
| 52 | 11.00\% | 8.50\% | 37.50\% | 40.50\% |
| 53 | 11.00\% | 8.50\% | 37.50\% | 40.50\% |
| 54 | 24.00\% | 16.50\% | 37.50\% | 40.50\% |
| 55 | 7.00\% | 6.50\% | 25.50\% | 24.00\% |
| 56 | 7.00\% | 6.50\% | 25.50\% | 24.00\% |
| 57 | 7.00\% | 6.50\% | 25.50\% | 24.00\% |
| 58 | 7.00\% | 6.50\% | 25.50\% | 24.00\% |
| 59 | 18.00\% | 22.00\% | 25.50\% | 24.00\% |
| 60 | N/A | N/A | 26.50\% | 24.50\% |
| 61 | N/A | N/A | 26.50\% | 24.50\% |
| 62 | N/A | N/A | 26.50\% | 24.50\% |
| 63 | N/A | N/A | 26.50\% | 24.50\% |
| 64 | N/A | N/A | 26.50\% | 24.50\% |
| 65 | N/A | N/A | 30.50\% | 28.50\% |
| 66 | N/A | N/A | 30.50\% | 28.50\% |
| 67 | N/A | N/A | 30.50\% | 28.50\% |
| 68 | N/A | N/A | 30.50\% | 28.50\% |
| 69 | N/A | N/A | 30.50\% | 28.50\% |
| 70 | N/A | N/A | 27.50\% | 27.50\% |
| 71 | N/A | N/A | 27.50\% | 27.50\% |
| 72 | N/A | N/A | 27.50\% | 27.50\% |
| 73 | N/A | N/A | 27.50\% | 27.50\% |
| 74 | N/A | N/A | 27.50\% | 27.50\% |
| 75 | N/A | N/A | 50.00\% | 50.00\% |
| 76 | N/A | N/A | 50.00\% | 50.00\% |
| 77 | N/A | N/A | 50.00\% | 50.00\% |
| 78 | N/A | N/A | 50.00\% | 50.00\% |
| 79 | N/A | N/A | 50.00\% | 50.00\% |
| 80+ | N/A | N/A | 100.00\% | 100.00\% |

## Current and Adopted Assumptions - Demographic (cont'd)

## Retirement - TRS

## Current

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 45 | N/A | N/A | 3.0\% | 3.0\% |
| 45 | N/A | N/A | 5.0\% | 5.0\% |
| 46 | N/A | N/A | 5.0\% | 8.0\% |
| 47 | N/A | N/A | 5.0\% | 8.0\% |
| 48 | N/A | N/A | 5.0\% | 8.0\% |
| 49 | N/A | N/A | 5.0\% | 8.0\% |
| 50 | 10.0\% | 10.0\% | 5.0\% | 14.0\% |
| 51 | 10.0\% | 10.0\% | 8.0\% | 13.0\% |
| 52 | 10.0\% | 10.0\% | 15.0\% | 13.0\% |
| 53 | 10.0\% | 12.0\% | 15.0\% | 14.0\% |
| 54 | 10.0\% | 12.0\% | 15.0\% | 15.0\% |
| 55 | 15.0\% | 8.0\% | 20.0\% | 17.0\% |
| 56 | 10.0\% | 8.0\% | 17.0\% | 17.0\% |
| 57 | 10.0\% | 8.0\% | 15.0\% | 17.0\% |
| 58 | 10.0\% | 8.0\% | 20.0\% | 17.0\% |
| 59 | 10.0\% | 8.0\% | 20.0\% | 23.0\% |
| 60 | N/A | N/A | 25.0\% | 23.0\% |
| 61 | N/A | N/A | 18.0\% | 23.0\% |
| 62 | N/A | N/A | 18.0\% | 21.0\% |
| 63 | N/A | N/A | 18.0\% | 21.0\% |
| 64 | N/A | N/A | 18.0\% | 26.0\% |
| 65 | N/A | N/A | 30.0\% | 21.0\% |
| 66 | N/A | N/A | 25.0\% | 21.0\% |
| 67 | N/A | N/A | 25.0\% | 21.0\% |
| 68 | N/A | N/A | 25.0\% | 26.0\% |
| 69 | N/A | N/A | 35.0\% | 26.0\% |
| 70 | N/A | N/A | 30.0\% | 26.0\% |
| 71 | N/A | N/A | 30.0\% | 37.0\% |
| 72 | N/A | N/A | 30.0\% | 37.0\% |
| 73 | N/A | N/A | 30.0\% | 37.0\% |
| 74 | N/A | N/A | 30.0\% | 37.0\% |
| 75-79 | N/A | N/A | 50.0\% | 50.0\% |
| 80+ | N/A | N/A | 100.0\% | 100.0\% |

Adopted

| Age | Reduced |  | Unreduced |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| < 45 | N/A | N/A | 3.00\% | 3.00\% |
| 45 | N/A | N/A | 5.50\% | 7.00\% |
| 46 | N/A | N/A | 5.50\% | 7.00\% |
| 47 | N/A | N/A | 5.50\% | 7.00\% |
| 48 | N/A | N/A | 5.50\% | 7.00\% |
| 49 | N/A | N/A | 5.50\% | 7.00\% |
| 50 | 5.00\% | 5.00\% | 12.50\% | 13.00\% |
| 51 | 5.00\% | 5.00\% | 12.50\% | 13.00\% |
| 52 | 5.00\% | 10.00\% | 12.50\% | 13.00\% |
| 53 | 5.00\% | 5.00\% | 12.50\% | 13.00\% |
| 54 | 10.00\% | 5.00\% | 12.50\% | 13.00\% |
| 55 | 14.50\% | 11.00\% | 20.00\% | 17.50\% |
| 56 | 9.50\% | 11.00\% | 20.00\% | 17.50\% |
| 57 | 9.50\% | 11.00\% | 20.00\% | 17.50\% |
| 58 | 9.50\% | 11.00\% | 20.00\% | 17.50\% |
| 59 | 9.50\% | 11.00\% | 20.00\% | 17.50\% |
| 60 | N/A | N/A | 19.50\% | 23.50\% |
| 61 | N/A | N/A | 19.50\% | 23.50\% |
| 62 | N/A | N/A | 19.50\% | 23.50\% |
| 63 | N/A | N/A | 19.50\% | 23.50\% |
| 64 | N/A | N/A | 19.50\% | 23.50\% |
| 65 | N/A | N/A | 28.00\% | 23.50\% |
| 66 | N/A | N/A | 28.00\% | 23.50\% |
| 67 | N/A | N/A | 28.00\% | 23.50\% |
| 68 | N/A | N/A | 28.00\% | 23.50\% |
| 69 | N/A | N/A | 28.00\% | 23.50\% |
| 70 | N/A | N/A | 30.00\% | 36.00\% |
| 71 | N/A | N/A | 30.00\% | 36.00\% |
| 72 | N/A | N/A | 30.00\% | 36.00\% |
| 73 | N/A | N/A | 30.00\% | 36.00\% |
| 74 | N/A | N/A | 30.00\% | 36.00\% |
| 75-79 | N/A | N/A | 50.00\% | 50.00\% |
| 80+ | N/A | N/A | 100.00\% | 100.00\% |

## Current and Adopted Assumptions - Demographic (cont'd)

Retirement - PERS DCR

| Current |  | Adopted |  |
| :---: | :---: | :---: | :---: |
| Age | Rate | Age | Rate |
| < 55 | 2.0\% | < 55 | 2.0\% |
| 55 | 3.0\% | 55 | 3.0\% |
| 56 | 3.0\% | 56 | 3.0\% |
| 57 | 3.0\% | 57 | 3.0\% |
| 58 | 3.0\% | 58 | 3.0\% |
| 59 | 3.0\% | 59 | 3.0\% |
| 60 | 5.0\% | 60 | 5.0\% |
| 61 | 5.0\% | 61 | 5.0\% |
| 62 | 10.0\% | 62 | 10.0\% |
| 63 | 5.0\% | 63 | 5.0\% |
| 64 | 5.0\% | 64 | 5.0\% |
| 65 | 25.0\% | 65 | 25.0\% |
| 66 | 25.0\% | 66 | 25.0\% |
| 67 | 25.0\% | 67 | 25.0\% |
| 68 | 20.0\% | 68 | 20.0\% |
| 69 | 20.0\% | 69 | 20.0\% |
| 70+ | 100.0\% | 70+ | 100.0\% |

Retirement - TRS DCR

| Current <br> Age | Rate |  | Adopted <br> Age |
| :---: | :---: | :---: | :---: |
| 55 | $2.0 \%$ | $<55$ | $2.0 \%$ |
| 55 | $3.0 \%$ | 55 | $3.0 \%$ |
| 56 | $3.0 \%$ | 56 | $3.0 \%$ |
| 57 | $3.0 \%$ | 57 | $3.0 \%$ |
| 58 | $3.0 \%$ | 58 | $3.0 \%$ |
| 59 | $3.0 \%$ | 59 | $3.0 \%$ |
| 60 | $5.0 \%$ | 60 | $5.0 \%$ |
| 61 | $5.0 \%$ | 61 | $5.0 \%$ |
| 62 | $10.0 \%$ | 62 | $10.0 \%$ |
| 63 | $5.0 \%$ | 63 | $5.0 \%$ |
| 64 | $5.0 \%$ | 64 | $5.0 \%$ |
| 65 | $25.0 \%$ | 65 | $25.0 \%$ |
| 66 | $25.0 \%$ | 66 | $25.0 \%$ |
| 67 | $25.0 \%$ | 67 | $25.0 \%$ |
| 68 | $20.0 \%$ | 68 | $20.0 \%$ |
| 69 | $20.0 \%$ | 69 | $20.0 \%$ |
| $70+$ | $100.0 \%$ | $70+$ | $100.0 \%$ |

## Current and Adopted Assumptions - Demographic (cont'd)

Retirement - NGNMRS

| Current | Adopted |  |  |  |  |
| :---: | ---: | ---: | :---: | :---: | :---: |
| Age | Male | Female | Age | Male | Female |
| $\mathbf{c} 51$ | $13.00 \%$ | $13.00 \%$ | $<51$ | $15.34 \%$ | $18.20 \%$ |
| 51 | $13.00 \%$ | $13.00 \%$ | 51 | $15.34 \%$ | $18.20 \%$ |
| 52 | $13.00 \%$ | $13.00 \%$ | 52 | $15.34 \%$ | $18.20 \%$ |
| 53 | $15.00 \%$ | $15.00 \%$ | 53 | $17.70 \%$ | $21.00 \%$ |
| 54 | $20.00 \%$ | $20.00 \%$ | 54 | $23.60 \%$ | $28.00 \%$ |
| 55 | $25.00 \%$ | $25.00 \%$ | 55 | $18.50 \%$ | $16.25 \%$ |
| 56 | $35.00 \%$ | $35.00 \%$ | 56 | $25.90 \%$ | $22.75 \%$ |
| 57 | $40.00 \%$ | $40.00 \%$ | 57 | $29.60 \%$ | $26.00 \%$ |
| 58 | $45.00 \%$ | $45.00 \%$ | 58 | $33.30 \%$ | $29.25 \%$ |
| 59 | $50.00 \%$ | $50.00 \%$ | 59 | $37.00 \%$ | $32.50 \%$ |
| 60 | $55.00 \%$ | $55.00 \%$ | 60 | $40.70 \%$ | $35.75 \%$ |
| 61 | $60.00 \%$ | $60.00 \%$ | 61 | $44.40 \%$ | $35.75 \%$ |
| 62 | $60.00 \%$ | $60.00 \%$ | 62 | $44.40 \%$ | $35.75 \%$ |
| 63 | $60.00 \%$ | $60.00 \%$ | 63 | $44.40 \%$ | $35.75 \%$ |
| 64 | $60.00 \%$ | $60.00 \%$ | 64 | $44.40 \%$ | $35.75 \%$ |
| $65+$ | $100.00 \%$ | $100.00 \%$ | $65+$ | $100.00 \%$ | $100.00 \%$ |

Retirement - JRS

| Current |  | Adopted |  |
| :---: | :---: | :---: | :---: |
| Age | Rate | Age | Rate |
| $<59$ | $3 \%$ | $<59$ | $3 \%$ |
| 59 | $10 \%$ | 59 | $10 \%$ |
| 60 | $20 \%$ | 60 | $20 \%$ |
| 61 | $20 \%$ | 61 | $20 \%$ |
| 62 | $10 \%$ | 62 | $10 \%$ |
| 63 | $10 \%$ | 63 | $10 \%$ |
| 64 | $10 \%$ | 64 | $10 \%$ |
| 65 | $20 \%$ | 65 | $20 \%$ |
| 66 | $20 \%$ | 66 | $20 \%$ |
| 67 | $10 \%$ | 67 | $10 \%$ |
| 68 | $10 \%$ | 68 | $10 \%$ |
| 69 | $10 \%$ | 69 | $10 \%$ |
| $70+$ | $100 \%$ | $70+$ | $100 \%$ |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - PERS Peace/Fire

Current
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $15.00 \%$ | $15.00 \%$ |
| 1 | $12.00 \%$ | $8.00 \%$ |
| 2 | $7.20 \%$ | $6.40 \%$ |
| 3 | $5.67 \%$ | $5.60 \%$ |
| 4 | $6.48 \%$ | $7.20 \%$ |

Ultimate Rates after the First 5 Years of Employment

| Unge | Male | Female |  | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $<23$ | $4.70 \%$ | $6.80 \%$ |  | 39 | $2.04 \%$ | $2.98 \%$ |
| 23 | $4.46 \%$ | $6.80 \%$ | 40 | $1.68 \%$ | $3.39 \%$ |  |
| 24 | $4.22 \%$ | $6.80 \%$ | 41 | $1.67 \%$ | $3.37 \%$ |  |
| 25 | $3.98 \%$ | $6.80 \%$ | 42 | $1.67 \%$ | $3.36 \%$ |  |
| 26 | $3.74 \%$ | $6.80 \%$ | 43 | $1.71 \%$ | $3.33 \%$ |  |
| 27 | $3.50 \%$ | $6.80 \%$ | 44 | $1.76 \%$ | $3.31 \%$ |  |
| 28 | $3.32 \%$ | $6.63 \%$ | 45 | $1.81 \%$ | $3.28 \%$ |  |
| 29 | $3.14 \%$ | $6.46 \%$ | 46 | $1.85 \%$ | $3.25 \%$ |  |
| 30 | $2.96 \%$ | $6.29 \%$ | 47 | $1.90 \%$ | $3.23 \%$ |  |
| 31 | $2.79 \%$ | $6.12 \%$ | 48 | $2.22 \%$ | $3.19 \%$ |  |
| 32 | $2.61 \%$ | $5.95 \%$ | 49 | $2.53 \%$ | $3.15 \%$ |  |
| 33 | $2.50 \%$ | $5.36 \%$ | 50 | $3.18 \%$ | $6.42 \%$ |  |
| 34 | $2.39 \%$ | $4.77 \%$ | 51 | $4.24 \%$ | $6.32 \%$ |  |
| 35 | $2.28 \%$ | $4.18 \%$ | 52 | $4.24 \%$ | $6.19 \%$ |  |
| 36 | $2.17 \%$ | $3.60 \%$ | 53 | $4.24 \%$ | $6.04 \%$ |  |
| 37 | $2.06 \%$ | $3.01 \%$ | 54 | $4.24 \%$ | $3.00 \%$ |  |
| 38 | $2.05 \%$ | $2.99 \%$ | $55+$ | $3.00 \%$ | $2.00 \%$ |  |

## Ultimate Rates after the First 5 Years of Employment

| Ultimate Rates after the First 5 Years of Employment <br> Age <br> 23 | Male | Female | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 23 | $2.40 \%$ | $5.80 \%$ | 39 | $1.60 \%$ | $3.00 \%$ |
| 24 | $2.40 \%$ | $5.80 \%$ | 40 | $1.30 \%$ | $3.00 \%$ |
| 25 | $2.40 \%$ | $5.80 \%$ | 41 | $1.30 \%$ | $3.00 \%$ |
| 26 | $2.40 \%$ | $5.80 \%$ | 42 | $1.30 \%$ | $3.00 \%$ |
| 27 | $2.40 \%$ | $5.80 \%$ | 43 | $1.30 \%$ | $3.00 \%$ |
| 28 | $2.40 \%$ | $5.80 \%$ | 44 | $1.30 \%$ | $3.00 \%$ |
| 29 | $2.40 \%$ | $5.80 \%$ | 45 | $1.50 \%$ | $2.90 \%$ |
| 30 | $2.40 \%$ | $5.80 \%$ | 46 | $1.50 \%$ | $2.90 \%$ |
| 31 | $2.00 \%$ | $5.10 \%$ | 47 | $1.50 \%$ | $2.90 \%$ |
| 32 | $2.00 \%$ | $5.10 \%$ | 48 | $1.50 \%$ | $2.90 \%$ |
| 33 | $2.00 \%$ | $5.10 \%$ | 49 | $1.50 \%$ | $2.90 \%$ |
| 34 | $2.00 \%$ | $5.10 \%$ | 50 | $3.00 \%$ | $5.00 \%$ |
| 35 | $2.00 \%$ | $5.10 \%$ | 51 | $3.00 \%$ | $5.00 \%$ |
| 36 | $1.60 \%$ | $3.00 \%$ | 52 | $3.00 \%$ | $5.00 \%$ |
| 37 | $1.60 \%$ | $3.00 \%$ | 53 | $3.00 \%$ | $5.00 \%$ |
| 38 | $1.60 \%$ | $3.00 \%$ | 54 | $3.00 \%$ | $5.00 \%$ |
|  | $1.60 \%$ | $3.00 \%$ | $55+$ | $2.25 \%$ | $1.80 \%$ |

Adopted
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | ---: | ---: |
| 0 | $15.00 \%$ | $15.00 \%$ |
| 1 | $12.00 \%$ | $8.00 \%$ |
| 2 | $7.20 \%$ | $6.40 \%$ |
| 3 | $5.67 \%$ | $5.60 \%$ |
| 4 | $6.48 \%$ | $7.20 \%$ |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - PERS Others

Current
Select Rates during the First 5 Years of Employment

| Hire Age Under 35 |  |  | Hire Age Over 35 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Years of Service | Male | Female | Years of Service | Male | Female |
| 0 | 29.00\% | 29.00\% | 0 | 20.00\% | 20.00\% |
| 1 | 16.25\% | 20.00\% | 1 | 12.00\% | 15.00\% |
| 2 | 13.00\% | 16.00\% | 2 | 10.00\% | 12.50\% |
| 3 | 10.40\% | 12.80\% | 3 | 8.50\% | 10.00\% |
| 4 | 8.45\% | 10.40\% | 4 | 8.50\% | 9.00\% |

Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| <23 | 11.40\% | 12.99\% | 39 | 5.47\% | 5.23\% |
| 23 | 10.83\% | 12.21\% | 40 | 4.86\% | 5.65\% |
| 24 | 10.26\% | 11.43\% | 41 | 4.71\% | 5.51\% |
| 25 | 9.69\% | 10.65\% | 42 | 4.56\% | 5.38\% |
| 26 | 9.12\% | 9.87\% | 43 | 4.50\% | 5.19\% |
| 27 | 8.55\% | 9.09\% | 44 | 4.44\% | 4.99\% |
| 28 | 8.30\% | 8.72\% | 45 | 4.39\% | 4.80\% |
| 29 | 8.05\% | 8.34\% | 46 | 4.33\% | 4.60\% |
| 30 | 7.80\% | 7.97\% | 47 | 4.27\% | 4.41\% |
| 31 | 7.54\% | 7.60\% | 48 | 4.26\% | 4.40\% |
| 32 | 7.29\% | 7.23\% | 49 | 4.24\% | 4.39\% |
| 33 | 6.99\% | 6.88\% | 50 | 3.63\% | 4.45\% |
| 34 | 6.69\% | 6.53\% | 51 | 3.60\% | 4.43\% |
| 35 | 6.39\% | 6.17\% | 52 | 3.56\% | 4.40\% |
| 36 | 6.10\% | 5.82\% | 53 | 3.52\% | 4.37\% |
| 37 | 5.80\% | 5.47\% | 54 | 4.17\% | 6.20\% |
| 38 | 5.63\% | 5.35\% | 55+ | 3.00\% | 5.00\% |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - TRS

## Current

Select Rates during the First 8 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $20.40 \%$ | $17.00 \%$ |
| 1 | $20.40 \%$ | $17.00 \%$ |
| 2 | $16.80 \%$ | $14.00 \%$ |
| 3 | $14.40 \%$ | $12.00 \%$ |
| 4 | $12.00 \%$ | $10.00 \%$ |
| 5 | $10.80 \%$ | $9.00 \%$ |
| 6 | $9.00 \%$ | $7.50 \%$ |
| 7 | $7.20 \%$ | $6.00 \%$ |


| Age | Male | Female | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | 2.62\% | 3.79\% | 39 | 2.57\% | 3.74\% |
| 23 | 2.62\% | 3.79\% | 40 | 2.26\% | 2.75\% |
| 24 | 2.61\% | 3.79\% | 41 | 2.26\% | 2.75\% |
| 25 | 2.61\% | 3.79\% | 42 | 2.25\% | 2.74\% |
| 26 | 2.61\% | 3.79\% | 43 | 2.24\% | 2.73\% |
| 27 | 2.60\% | 3.79\% | 44 | 2.23\% | 2.73\% |
| 28 | 2.60\% | 4.27\% | 45 | 2.22\% | 2.72\% |
| 29 | 2.60\% | 4.76\% | 46 | 2.21\% | 2.71\% |
| 30 | 2.60\% | 5.24\% | 47 | 2.20\% | 2.70\% |
| 31 | 2.60\% | 5.73\% | 48 | 2.18\% | 2.69\% |
| 32 | 2.59\% | 6.22\% | 49 | 2.16\% | 2.68\% |
| 33 | 2.59\% | 5.72\% | 50 | 3.43\% | 4.42\% |
| 34 | 2.59\% | 5.23\% | 51 | 3.39\% | 4.39\% |
| 35 | 2.59\% | 4.74\% | 52 | 3.35\% | 4.36\% |
| 36 | 2.58\% | 4.25\% | 53 | 3.30\% | 4.32\% |
| 37 | 2.58\% | 3.75\% | 54 | 3.00\% | 7.56\% |
| 38 | 2.58\% | 3.75\% | 55+ | 2.00\% | 5.00\% |

Adopted
Select Rates during the First 8 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $20.40 \%$ | $17.00 \%$ |
| 1 | $20.40 \%$ | $17.00 \%$ |
| 2 | $16.80 \%$ | $14.00 \%$ |
| 3 | $14.40 \%$ | $12.00 \%$ |
| 4 | $12.00 \%$ | $10.00 \%$ |
| 5 | $10.80 \%$ | $9.00 \%$ |
| 6 | $9.00 \%$ | $7.50 \%$ |
| 7 | $7.20 \%$ | $6.00 \%$ |

Ultimate Rates after the First 8 Years of Employment

| Age | Male | Female | Age | Male | Female |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | $3.60 \%$ | $4.60 \%$ |  | 39 | $3.60 \%$ | $3.90 \%$ |
| 23 | $3.60 \%$ | $4.60 \%$ |  | 40 | $3.10 \%$ | $2.60 \%$ |
| 24 | $3.60 \%$ | $4.60 \%$ |  | 41 | $3.10 \%$ | $2.60 \%$ |
| 25 | $3.60 \%$ | $4.60 \%$ |  | 42 | $3.10 \%$ | $2.60 \%$ |
| 26 | $3.60 \%$ | $4.60 \%$ |  | 43 | $3.10 \%$ | $2.60 \%$ |
| 27 | $3.60 \%$ | $4.60 \%$ |  | 44 | $3.10 \%$ | $2.60 \%$ |
| 28 | $3.60 \%$ | $4.60 \%$ |  | 45 | $3.10 \%$ | $2.60 \%$ |
| 29 | $3.60 \%$ | $4.60 \%$ |  | 46 | $3.10 \%$ | $2.60 \%$ |
| 30 | $3.60 \%$ | $5.40 \%$ |  | 47 | $3.10 \%$ | $2.60 \%$ |
| 31 | $3.60 \%$ | $5.40 \%$ |  | 48 | $3.10 \%$ | $2.60 \%$ |
| 32 | $3.60 \%$ | $5.40 \%$ |  | 49 | $3.10 \%$ | $2.60 \%$ |
| 33 | $3.60 \%$ | $5.40 \%$ | 50 | $4.60 \%$ | $4.80 \%$ |  |
| 34 | $3.60 \%$ | $5.40 \%$ | 51 | $4.60 \%$ | $4.80 \%$ |  |
| 35 | $3.60 \%$ | $3.90 \%$ | 52 | $4.60 \%$ | $4.80 \%$ |  |
| 36 | $3.60 \%$ | $3.90 \%$ |  | 53 | $4.60 \%$ | $4.80 \%$ |
| 37 | $3.60 \%$ | $3.90 \%$ |  | 54 | $4.60 \%$ | $4.80 \%$ |
| 38 | $3.60 \%$ | $3.90 \%$ | $55+$ | $2.80 \%$ | $4.80 \%$ |  |
|  |  |  |  |  |  |  |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - PERS DCR Peace/Fire

Current
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $\mathbf{1 8 . 9 0 \%}$ | $20.63 \%$ |
| 1 | $14.18 \%$ | $16.50 \%$ |
| 2 | $10.50 \%$ | $13.75 \%$ |
| 3 | $9.45 \%$ | $12.38 \%$ |
| 4 | $8.40 \%$ | $11.00 \%$ |


| Ultimate Rates after the First 5 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Male | Female | Ref | Employment |  |
| $<23$ | $5.52 \%$ | $11.97 \%$ | 44 | Male | Female |
| 23 | $5.65 \%$ | $11.97 \%$ | 45 | $5.78 \%$ | $11.09 \%$ |
| 24 | $5.78 \%$ | $11.97 \%$ | 45 | $5.71 \%$ | $11.03 \%$ |
| 25 | $5.91 \%$ | $11.97 \%$ | 47 | $5.64 \%$ | $10.98 \%$ |
| 26 | $6.04 \%$ | $11.97 \%$ | 48 | $6.57 \%$ | $10.92 \%$ |
| 27 | $6.16 \%$ | $11.97 \%$ | 49 | $6.45 \%$ | $10.84 \%$ |
| 28 | $6.16 \%$ | $11.94 \%$ | 50 | $6.89 \%$ | $10.75 \%$ |
| 29 | $6.15 \%$ | $11.91 \%$ | 51 | $7.32 \%$ | $10.58 \%$ |
| 30 | $6.14 \%$ | $11.88 \%$ | 52 | $7.76 \%$ | $10.50 \%$ |
| 31 | $6.14 \%$ | $11.84 \%$ | 53 | $7.97 \%$ | $10.66 \%$ |
| 32 | $6.12 \%$ | $11.81 \%$ | 54 | $8.18 \%$ | $10.82 \%$ |
| 33 | $6.11 \%$ | $11.79 \%$ | 55 | $8.38 \%$ | $10.98 \%$ |
| 34 | $6.09 \%$ | $11.77 \%$ | 56 | $8.59 \%$ | $11.15 \%$ |
| 35 | $6.08 \%$ | $11.75 \%$ | 57 | $8.80 \%$ | $11.31 \%$ |
| 36 | $6.07 \%$ | $11.72 \%$ | 58 | $9.03 \%$ | $11.47 \%$ |
| 37 | $6.05 \%$ | $11.70 \%$ | 59 | $9.25 \%$ | $11.63 \%$ |
| 38 | $6.03 \%$ | $11.60 \%$ | 60 | $9.48 \%$ | $11.79 \%$ |
| 39 | $6.00 \%$ | $11.50 \%$ | 61 | $9.71 \%$ | $11.95 \%$ |
| 40 | $5.98 \%$ | $11.40 \%$ | 62 | $9.94 \%$ | $12.12 \%$ |
| 41 | $5.95 \%$ | $11.30 \%$ | 63 | $12.37 \%$ | $12.28 \%$ |
| 42 | $5.93 \%$ | $11.20 \%$ | 64 | $14.81 \%$ | $12.44 \%$ |
| 43 | $5.85 \%$ | $11.14 \%$ | $65+$ | $17.25 \%$ | $12.60 \%$ |

Adopted
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | ---: |
| 0 | $17.00 \%$ | $27.00 \%$ |
| 1 | $12.00 \%$ | $21.00 \%$ |
| 2 | $11.00 \%$ | $15.00 \%$ |
| 3 | $11.00 \%$ | $13.00 \%$ |
| 4 | $10.00 \%$ | $9.00 \%$ |

Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| <23 | 6.60\% | 10.20\% | 44 | 6.50\% | 9.50\% |
| 23 | 6.60\% | 10.20\% | 45 | 6.50\% | 9.30\% |
| 24 | 6.60\% | 10.20\% | 46 | 6.50\% | 9.30\% |
| 25 | 6.60\% | 10.20\% | 47 | 6.50\% | 9.30\% |
| 26 | 6.60\% | 10.20\% | 48 | 6.50\% | 9.30\% |
| 27 | 6.60\% | 10.20\% | 49 | 6.50\% | 9.30\% |
| 28 | 6.60\% | 10.20\% | 50 | 8.50\% | 9.10\% |
| 29 | 6.60\% | 10.20\% | 51 | 8.50\% | 9.10\% |
| 30 | 6.80\% | 10.00\% | 52 | 8.50\% | 9.10\% |
| 31 | 6.80\% | 10.00\% | 53 | 8.50\% | 9.10\% |
| 32 | 6.80\% | 10.00\% | 54 | 8.50\% | 9.10\% |
| 33 | 6.80\% | 10.00\% | 55 | 9.80\% | 9.60\% |
| 34 | 6.80\% | 10.00\% | 56 | 9.80\% | 9.60\% |
| 35 | 6.70\% | 9.90\% | 57 | 9.80\% | 9.60\% |
| 36 | 6.70\% | 9.90\% | 58 | 9.80\% | 9.60\% |
| 37 | 6.70\% | 9.90\% | 59 | 9.80\% | 9.60\% |
| 38 | 6.70\% | 9.90\% | 60 | 12.50\% | 10.30\% |
| 39 | 6.70\% | 9.90\% | 61 | 12.50\% | 10.30\% |
| 40 | 6.50\% | 9.50\% | 62 | 12.50\% | 10.30\% |
| 41 | 6.50\% | 9.50\% | 63 | 12.50\% | 10.30\% |
| 42 | 6.50\% | 9.50\% | 64 | 12.50\% | 10.30\% |
| 43 | 6.50\% | 9.50\% | 65+ | 19.20\% | 10.70\% |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - PERS DCR Others

Current
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $24.36 \%$ | $27.98 \%$ |
| 1 | $21.00 \%$ | $22.31 \%$ |
| 2 | $16.80 \%$ | $17.85 \%$ |
| 3 | $13.44 \%$ | $14.28 \%$ |
| 4 | $9.45 \%$ | $12.34 \%$ |

Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female |  | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23 | $13.71 \%$ | $16.50 \%$ |  | 44 | $7.83 \%$ | $8.22 \%$ |
| 23 | $13.71 \%$ | $16.51 \%$ |  | 45 | $7.72 \%$ | $7.90 \%$ |
| 24 | $13.71 \%$ | $16.51 \%$ | 46 | $7.60 \%$ | $7.58 \%$ |  |
| 25 | $13.71 \%$ | $16.52 \%$ | 47 | $7.48 \%$ | $7.26 \%$ |  |
| 26 | $13.71 \%$ | $16.53 \%$ | 48 | $7.68 \%$ | $7.23 \%$ |  |
| 27 | $13.71 \%$ | $16.54 \%$ | 49 | $7.87 \%$ | $7.20 \%$ |  |
| 28 | $13.41 \%$ | $15.94 \%$ | 50 | $8.07 \%$ | $7.17 \%$ |  |
| 29 | $13.21 \%$ | $15.34 \%$ | 51 | $8.26 \%$ | $7.14 \%$ |  |
| 30 | $12.82 \%$ | $17.75 \%$ | 52 | $8.46 \%$ | $7.11 \%$ |  |
| 31 | $12.52 \%$ | $14.15 \%$ | 53 | $8.46 \%$ | $7.26 \%$ |  |
| 32 | $12.22 \%$ | $13.55 \%$ | 54 | $8.47 \%$ | $7.42 \%$ |  |
| 33 | $11.65 \%$ | $12.90 \%$ | 55 | $8.48 \%$ | $7.57 \%$ |  |
| 34 | $11.09 \%$ | $12.24 \%$ | 56 | $8.48 \%$ | $7.72 \%$ |  |
| 35 | $10.52 \%$ | $11.58 \%$ | 57 | $8.49 \%$ | $7.88 \%$ |  |
| 36 | $9.95 \%$ | $10.92 \%$ | 58 | $8.77 \%$ | $8.15 \%$ |  |
| 37 | $9.39 \%$ | $10.26 \%$ | 59 | $9.08 \%$ | $8.42 \%$ |  |
| 38 | $9.12 \%$ | $9.98 \%$ | 60 | $9.32 \%$ | $8.69 \%$ |  |
| 39 | $8.86 \%$ | $9.70 \%$ | 61 | $9.60 \%$ | $8.96 \%$ |  |
| 40 | $8.60 \%$ | $9.42 \%$ | 62 | $9.88 \%$ | $9.24 \%$ |  |
| 41 | $8.32 \%$ | $9.14 \%$ | 63 | $10.28 \%$ | $10.51 \%$ |  |
| 42 | $8.07 \%$ | $8.86 \%$ | 64 | $10.68 \%$ | $11.78 \%$ |  |
| 43 | $7.95 \%$ | $8.54 \%$ | $65+$ | $11.08 \%$ | $13.05 \%$ |  |

Adopted
Select Rates during the First 5 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| $\mathbf{0}$ | $28.00 \%$ | $29.00 \%$ |
| $\mathbf{1}$ | $20.00 \%$ | $24.00 \%$ |
| 2 | $16.00 \%$ | $19.00 \%$ |
| 3 | $14.00 \%$ | $16.00 \%$ |
| $\mathbf{4}$ | $12.00 \%$ | $14.00 \%$ |

Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female | Age | Male | Female |  |
| :---: | ---: | ---: | :--- | :---: | ---: | ---: |
| $\mathbf{2 3}$ | $13.70 \%$ | $15.80 \%$ |  | 44 | $8.50 \%$ | $10.60 \%$ |
| 23 | $13.70 \%$ | $15.80 \%$ |  | 45 | $8.90 \%$ | $8.90 \%$ |
| 24 | $13.70 \%$ | $15.80 \%$ |  | 46 | $8.90 \%$ | $8.90 \%$ |
| 25 | $13.70 \%$ | $15.80 \%$ |  | 47 | $8.90 \%$ | $8.90 \%$ |
| 26 | $13.70 \%$ | $15.80 \%$ |  | 48 | $8.90 \%$ | $8.90 \%$ |
| 27 | $13.70 \%$ | $15.80 \%$ | 49 | $8.90 \%$ | $8.90 \%$ |  |
| 28 | $13.70 \%$ | $15.80 \%$ | 50 | $8.40 \%$ | $8.70 \%$ |  |
| 29 | $13.70 \%$ | $15.80 \%$ | 51 | $8.40 \%$ | $8.70 \%$ |  |
| 30 | $12.20 \%$ | $11.20 \%$ | 52 | $8.40 \%$ | $8.70 \%$ |  |
| 31 | $12.20 \%$ | $11.20 \%$ | 53 | $8.40 \%$ | $8.70 \%$ |  |
| 32 | $12.20 \%$ | $11.20 \%$ | 54 | $8.40 \%$ | $8.70 \%$ |  |
| 33 | $12.20 \%$ | $11.20 \%$ | 55 | $8.70 \%$ | $9.50 \%$ |  |
| 34 | $12.20 \%$ | $11.20 \%$ | 56 | $8.70 \%$ | $9.50 \%$ |  |
| 35 | $9.70 \%$ | $10.20 \%$ | 57 | $8.70 \%$ | $9.50 \%$ |  |
| 36 | $9.70 \%$ | $10.20 \%$ | 58 | $8.70 \%$ | $9.50 \%$ |  |
| 37 | $9.70 \%$ | $10.20 \%$ | 59 | $8.70 \%$ | $9.50 \%$ |  |
| 38 | $9.70 \%$ | $10.20 \%$ | 60 | $10.10 \%$ | $11.80 \%$ |  |
| 39 | $9.70 \%$ | $10.20 \%$ | 61 | $10.10 \%$ | $11.80 \%$ |  |
| 40 | $8.50 \%$ | $10.60 \%$ | 62 | $10.10 \%$ | $11.80 \%$ |  |
| 41 | $8.50 \%$ | $10.60 \%$ | 63 | $10.10 \%$ | $11.80 \%$ |  |
| 42 | $8.50 \%$ | $10.60 \%$ | 64 | $10.10 \%$ | $11.80 \%$ |  |
| 43 | $8.50 \%$ | $10.60 \%$ | $65+$ | $11.20 \%$ | $15.70 \%$ |  |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - TRS DCR

Current
Select Rates during the First 6 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $20.70 \%$ | $21.80 \%$ |
| 1 | $19.55 \%$ | $18.70 \%$ |
| 2 | $16.10 \%$ | $15.40 \%$ |
| 3 | $13.80 \%$ | $13.20 \%$ |
| 4 | $11.50 \%$ | $11.00 \%$ |
| 5 | $7.32 \%$ | $8.05 \%$ |

Ultimate Rates after the First 6 Years of Employment

| Age | Male | Female |  | Age | Male | Female |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 26 | $9.41 \%$ | $8.31 \%$ |  | 45 | $9.05 \%$ | $8.09 \%$ |
| 26 | $9.41 \%$ | $8.32 \%$ |  | 46 | $8.99 \%$ | $8.07 \%$ |
| 27 | $9.40 \%$ | $8.33 \%$ |  | 47 | $8.94 \%$ | $8.04 \%$ |
| 28 | $9.39 \%$ | $8.32 \%$ |  | 48 | $8.86 \%$ | $8.00 \%$ |
| 29 | $9.39 \%$ | $8.32 \%$ | 49 | $8.78 \%$ | $7.95 \%$ |  |
| 30 | $9.38 \%$ | $8.31 \%$ | 50 | $8.70 \%$ | $7.91 \%$ |  |
| 31 | $9.37 \%$ | $8.31 \%$ | 51 | $8.62 \%$ | $7.86 \%$ |  |
| 32 | $9.36 \%$ | $8.30 \%$ | 52 | $8.54 \%$ | $7.82 \%$ |  |
| 33 | $9.35 \%$ | $8.29 \%$ | 53 | $8.37 \%$ | $7.73 \%$ |  |
| 34 | $9.35 \%$ | $8.28 \%$ | 54 | $8.20 \%$ | $7.64 \%$ |  |
| 35 | $9.34 \%$ | $8.27 \%$ | 55 | $8.03 \%$ | $7.55 \%$ |  |
| 36 | $9.34 \%$ | $8.26 \%$ | 56 | $7.86 \%$ | $7.46 \%$ |  |
| 37 | $9.33 \%$ | $8.25 \%$ | 57 | $7.69 \%$ | $7.36 \%$ |  |
| 38 | $9.31 \%$ | $8.24 \%$ | 58 | $7.76 \%$ | $7.50 \%$ |  |
| 39 | $9.29 \%$ | $8.22 \%$ | 59 | $7.82 \%$ | $7.64 \%$ |  |
| 40 | $9.26 \%$ | $8.21 \%$ | 60 | $7.89 \%$ | $7.78 \%$ |  |
| 41 | $9.24 \%$ | $8.19 \%$ | 61 | $7.95 \%$ | $7.92 \%$ |  |
| 42 | $9.22 \%$ | $8.17 \%$ | 62 | $8.02 \%$ | $8.05 \%$ |  |
| 43 | $9.16 \%$ | $8.15 \%$ | 63 | $8.59 \%$ | $8.29 \%$ |  |
| 44 | $9.11 \%$ | $8.12 \%$ | 64 | $9.17 \%$ | $8.52 \%$ |  |
|  |  |  | $65+$ | $9.75 \%$ | $8.75 \%$ |  |

Adopted
Select Rates during the First 6 Years of Employment

| Years of <br> Service | Male | Female |
| :---: | :---: | :---: |
| 0 | $28.00 \%$ | $31.00 \%$ |
| $\mathbf{1}$ | $28.00 \%$ | $21.00 \%$ |
| 2 | $19.00 \%$ | $18.00 \%$ |
| 3 | $17.00 \%$ | $13.00 \%$ |
| $\mathbf{4}$ | $13.00 \%$ | $13.00 \%$ |
| 5 | $13.00 \%$ | $10.00 \%$ |

Ultimate Rates after the First 6 Years of Employment

| Ultimate Rates after the First 6 |  |  |  |  |  | Years of Employment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  | Male | Female | Age | Male | Female |
| 26 | $10.50 \%$ | $8.70 \%$ | 45 | $10.00 \%$ | $8.40 \%$ |  |
| 26 | $10.50 \%$ | $8.70 \%$ | 46 | $10.00 \%$ | $8.40 \%$ |  |
| 27 | $10.50 \%$ | $8.70 \%$ | 47 | $10.00 \%$ | $8.40 \%$ |  |
| 28 | $10.50 \%$ | $8.70 \%$ | 48 | $10.00 \%$ | $8.40 \%$ |  |
| 29 | $10.50 \%$ | $8.70 \%$ | 49 | $10.00 \%$ | $8.40 \%$ |  |
| 30 | $10.50 \%$ | $8.70 \%$ | 50 | $9.50 \%$ | $8.10 \%$ |  |
| 31 | $10.50 \%$ | $8.70 \%$ | 51 | $9.50 \%$ | $8.10 \%$ |  |
| 32 | $10.50 \%$ | $8.70 \%$ | 52 | $9.50 \%$ | $8.10 \%$ |  |
| 33 | $10.50 \%$ | $8.70 \%$ | 53 | $9.50 \%$ | $8.10 \%$ |  |
| 34 | $10.50 \%$ | $8.70 \%$ | 54 | $9.50 \%$ | $8.10 \%$ |  |
| 35 | $10.40 \%$ | $8.60 \%$ | 55 | $8.80 \%$ | $7.90 \%$ |  |
| 36 | $10.40 \%$ | $8.60 \%$ | 56 | $8.80 \%$ | $7.90 \%$ |  |
| 37 | $10.40 \%$ | $8.60 \%$ | 57 | $8.80 \%$ | $7.90 \%$ |  |
| 38 | $10.40 \%$ | $8.60 \%$ | 58 | $8.80 \%$ | $7.90 \%$ |  |
| 39 | $10.40 \%$ | $8.60 \%$ | 59 | $8.80 \%$ | $7.90 \%$ |  |
| 40 | $10.30 \%$ | $8.60 \%$ | 60 | $9.30 \%$ | $8.70 \%$ |  |
| 41 | $10.30 \%$ | $8.60 \%$ | 61 | $9.30 \%$ | $8.70 \%$ |  |
| 42 | $10.30 \%$ | $8.60 \%$ | 62 | $9.30 \%$ | $8.70 \%$ |  |
| 43 | $10.30 \%$ | $8.60 \%$ | 63 | $9.30 \%$ | $8.70 \%$ |  |
| 44 | $10.30 \%$ | $8.60 \%$ | 64 | $9.30 \%$ | $8.70 \%$ |  |
|  |  |  | $65+$ | $10.90 \%$ | $7.40 \%$ |  |

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## Current and Adopted Assumptions - Demographic (cont'd)

Withdrawal - JRS

| Current |  | Adopted |  |
| :---: | :---: | :---: | :---: |
| Years of Service | Rate | Years of Service | Rate |
| 0 | 3\% | 0 | 3\% |
| 1 | 3\% | 1 | 3\% |
| 2 | 3\% | 2 | 3\% |
| 3 | 3\% | 3 | 3\% |
| 4 | 3\% | 4 | 3\% |
| 5 | 3\% | 5 | 3\% |
| 6 | 3\% | 6 | 3\% |
| 7 | 3\% | 7 | 3\% |
| 8 | 3\% | 8 | 3\% |
| 9 | 3\% | 9 | 3\% |
| ${ }^{10+}$ | 1\% | $10+$ | 1\% |

## Current and Adopted Assumptions - Demographic (cont'd)

## Withdrawal - NGNMRS

## Current

Select Rates during the First 5 Years of Employment

| Years of <br> Service | Unisex |
| :---: | :---: |
| 0 | $20.00 \%$ |
| 1 | $10.00 \%$ |
| 2 | $10.00 \%$ |
| 3 | $10.00 \%$ |
| 4 | $10.00 \%$ |

Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female | Age | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | 14.94\% | 18.92\% | 40 | 9.09\% | 11.52\% |
| 21 | 14.13\% | 17.90\% | 41 | 8.87\% | 11.24\% |
| 22 | 13.44\% | 17.03\% | 42 | 8.68\% | 11.00\% |
| 23 | 12.86\% | 16.29\% | 43 | 8.51\% | 10.78\% |
| 24 | 12.40\% | 15.70\% | 44 | 8.31\% | 10.53\% |
| 25 | 12.03\% | 15.24\% | 45 | 8.04\% | 10.18\% |
| 26 | 11.74\% | 14.87\% | 46 | 7.66\% | 9.70\% |
| 27 | 11.52\% | 14.59\% | 47 | 7.13\% | 9.03\% |
| 28 | 11.35\% | 14.37\% | 48 | 6.46\% | 8.19\% |
| 29 | 11.21\% | 14.20\% | 49 | 5.67\% | 7.18\% |
| 30 | 11.09\% | 14.05\% | 50 | 4.89\% | 6.19\% |
| 31 | 10.98\% | 13.91\% | 51 | 4.27\% | 5.42\% |
| 32 | 10.86\% | 13.76\% | 52 | 3.83\% | 4.85\% |
| 33 | 10.73\% | 13.59\% | 53 | 3.51\% | 4.45\% |
| 34 | 10.57\% | 13.39\% | 54 | 3.27\% | 4.15\% |
| 35 | 10.37\% | 13.14\% | 55 | 3.10\% | 3.93\% |
| 36 | 10.15\% | 12.85\% | 56 | 3.02\% | 3.82\% |
| 37 | 9.89\% | 12.53\% | 57 | 3.03\% | 3.84\% |
| 38 | 9.62\% | 12.18\% | 58 | 3.11\% | 3.94\% |
| 39 | 9.35\% | 11.84\% | 59 | 3.27\% | 4.14\% |
|  |  |  | 60 | 3.38\% | 4.29\% |

Adopted
Select Rates during the First 5 Years of Employment


Ultimate Rates after the First 5 Years of Employment

| Age | Male | Female | Age | Male | Female |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | $9.53 \%$ | $9.94 \%$ |  | 40 | $7.73 \%$ | $8.06 \%$ |
| 21 | $9.53 \%$ | $9.94 \%$ |  | 41 | $7.54 \%$ | $7.87 \%$ |
| 22 | $9.53 \%$ | $9.94 \%$ |  | 42 | $7.38 \%$ | $7.70 \%$ |
| 23 | $9.53 \%$ | $9.94 \%$ | 43 | $7.23 \%$ | $7.55 \%$ |  |
| 24 | $9.53 \%$ | $9.94 \%$ | 44 | $7.06 \%$ | $7.37 \%$ |  |
| 25 | $9.53 \%$ | $9.94 \%$ | 45 | $6.83 \%$ | $7.13 \%$ |  |
| 26 | $9.53 \%$ | $9.94 \%$ | 46 | $6.51 \%$ | $6.79 \%$ |  |
| 27 | $9.53 \%$ | $9.94 \%$ | 47 | $6.06 \%$ | $6.32 \%$ |  |
| 28 | $9.53 \%$ | $9.94 \%$ | 48 | $5.49 \%$ | $5.73 \%$ |  |
| 29 | $9.53 \%$ | $9.94 \%$ | 49 | $4.82 \%$ | $5.03 \%$ |  |
| 30 | $9.43 \%$ | $9.84 \%$ | 50 | $4.16 \%$ | $4.33 \%$ |  |
| 31 | $9.33 \%$ | $9.74 \%$ | 51 | $3.63 \%$ | $3.79 \%$ |  |
| 32 | $9.23 \%$ | $9.63 \%$ | 52 | $3.26 \%$ | $3.40 \%$ |  |
| 33 | $9.12 \%$ | $9.51 \%$ | 53 | $2.98 \%$ | $3.12 \%$ |  |
| 34 | $8.98 \%$ | $9.37 \%$ | 54 | $2.78 \%$ | $2.91 \%$ |  |
| 35 | $8.81 \%$ | $9.20 \%$ | 55 | $2.64 \%$ | $2.75 \%$ |  |
| 36 | $8.63 \%$ | $9.00 \%$ | 56 | $2.57 \%$ | $2.67 \%$ |  |
| 37 | $8.41 \%$ | $8.77 \%$ | 57 | $2.58 \%$ | $2.69 \%$ |  |
| 38 | $8.18 \%$ | $8.53 \%$ | 58 | $2.64 \%$ | $2.76 \%$ |  |
| 39 | $7.95 \%$ | $8.29 \%$ | 59 | $2.78 \%$ | $2.90 \%$ |  |
|  |  |  | 60 | $2.88 \%$ | $3.00 \%$ |  |

## Current and Adopted Assumptions - Demographic (cont'd)

- Disability
- Insufficient disability experience; no changes to the current disability rates were adopted
- Occupational-related death and disability

|  | Current | Adopted |
| :--- | :---: | :---: |
| PERS - P/F | $75 \%$ | $70 \%$ |
| PERS - Others | $40 \%$ | $35 \%$ |
| TRS | $15 \%$ | $15 \%$ |

- Withdrawal of contributions upon termination

|  | Current | Adopted |
| :--- | :---: | :---: |
| PERS - P/F | $10 \%$ | $5 \%$ |
| PERS - Others | $5 \%$ | $5 \%$ |
| TRS | $0 \%$ | $0 \%$ |

- Rehires (percentage load to Normal Cost)

|  | Current | Adopted |
| :--- | :---: | :---: |
| PERS - pension | $18.77 \%$ | $15.30 \%$ |
| PERS - healthcare | $17.09 \%$ | $2.40 \%$ |
| TRS - pension | $15.57 \%$ | $12.00 \%$ |
| TRS - healthcare | $12.03 \%$ | $0.20 \%$ |

Comments regarding the rehire assumption:

- The current rehire loads for the DB plans, which were developed based on the 5 years of experience ending in 2017, were too high based on the most recent 4 years of rehire experience. The actual liabilities from rehires during the last 4 years were compared to the current rehire loads, and adjustments were made to the current rehire loads to better match recent experience.
- With lower adopted rehire loads for healthcare, a greater portion of the fixed employer contributions (22\% for PERS and 12.56\% for TRS) will be deposited to the DB pension trusts rather than the DB healthcare trusts. Based on the comparative funded ratios of the DB pension and DB healthcare trusts, we believe it is more prudent to deposit more contributions to the DB pension trusts.
- There have been recent suggestions to implement rehire loads for the DCR plans. Doing so would increase the portion of the fixed employer contributions being deposited to the DCR trusts. Because the DCR trusts are so well funded, they are able to absorb any reasonable losses due to rehires. Therefore, we believe it is more prudent to deposit more contributions to the DB trusts, which implies no rehire loads for the DCR plans.
- No rehire loads were adopted for the DCR plans at this time.


## Current and Adopted Assumptions - Demographic (cont'd)

- Unused sick days (TRS)
- Current: 4.5 days
- Adopted: 5.25 days
- Population growth rate
- Current: 0\%
- Adopted: 0\%
- Alaska residency for COLA

|  | Current | Adopted |
| :--- | :---: | :---: |
| PERS - P/F | $65 \%$ | $60 \%$ |
| PERS - Others | $70 \%$ | $65 \%$ |
| TRS | $60 \%$ | $60 \%$ |

- Part-time service (years)

|  | Current | Adopted |
| :--- | :---: | :---: |
| PERS - P/F | 1.00 | 1.00 |
| PERS - Others | 0.75 | 0.75 |
| TRS | 0.75 | 0.75 |

## Current and Adopted Assumptions - Demographic (cont'd)

- Percent electing lump sums (NGNMRS)

|  | Current | Adopted |
| :--- | :---: | :---: |
| Active | $70 \%$ | $50 \%$ |
| Terminated Vested | $70 \%$ | $50 \%$ |

- Healthcare dependent assumptions
- Dependent spouse medical coverage election

|  | Current |  | Adopted |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\underline{M a l e}$ | $\underline{\text { Female }}$ | $\underline{\text { Male }}$ | Female |
| PERS - P/F | $75 \%$ | $50 \%$ | $75 \%$ | $50 \%$ |
| PERS - Others | $65 \%$ | $60 \%$ | $60 \%$ | $50 \%$ |
| TRS | $65 \%$ | $60 \%$ | $60 \%$ | $50 \%$ |
| JRS | $90 \%$ | $70 \%$ | $80 \%$ | $60 \%$ |

- Spouse age difference

|  | Current |  | Adopted |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| PERS - P/F | 3 | -2 | 3 | -2 |
| PERS - Others | 3 | -2 | 3 | -2 |
| TRS | 3 | -2 | 3 | -2 |
| JRS | 4 | -4 | 4 | -4 |

## Current and Adopted Assumptions - Demographic (cont'd)

- Healthcare participation

|  | Current |  | Adopted |  |
| :--- | :---: | :---: | :---: | :---: |
|  | System paid | Non-System paid | System paid | Non-System paid |
| PERS - P/F | $100 \%$ | $20 \%$ | $100 \%$ | $20 \%$ |
| PERS - Others | $100 \%$ | $20 \%$ | $100 \%$ | $25 \%$ |
| TRS | $100 \%$ | $20 \%$ | $100 \%$ | $20 \%$ |

- Medicare Part B only
- Current: 5\%
- Adopted: 2\%
- Healthcare morbidity

| Age | Current |  | Adopted |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Medical | $\underline{R x}$ | Medical | $\underline{\mathrm{Rx}}$ |
| $0-44$ | $2.0 \%$ | $4.5 \%$ | $2.0 \%$ | $4.5 \%$ |
| $45-54$ | $2.5 \%$ | $3.5 \%$ | $2.5 \%$ | $3.5 \%$ |
| $55-64$ | $2.5 \%$ | $1.5 \%$ | $2.5 \%$ | $1.0 \%$ |
| $65-74$ | $3.0 \%$ | $2.0 \%$ | $2.0 \%$ | $2.1 \%$ |
| $75-84$ | $2.0 \%$ | $-0.5 \%$ | $2.2 \%$ | $-0.3 \%$ |
| $85-94$ | $0.3 \%$ | $-2.5 \%$ | $0.5 \%$ | $-2.5 \%$ |
| $95+$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |




[^0]:    Secretary

